Country fact sheet

Land cover 2012

Slovakia

September 2017

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European Environment Agency

Slovakia

Land cover 2012

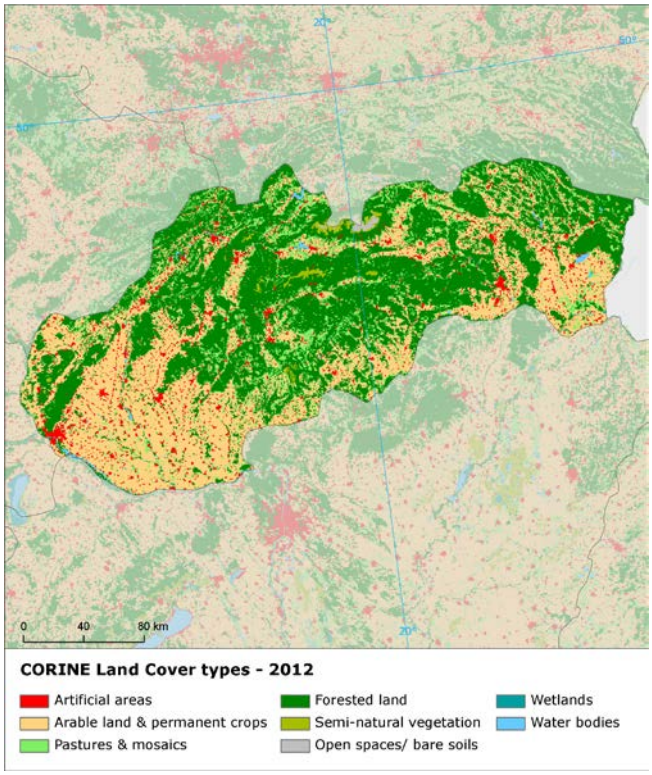
Overview of land cover & change 2006-2012

With the overall land cover change rate of 0.31% of total area, Slovakia is a country with a relatively high dynamics of landscape development. This rate is safely above the European average, comparable with Ireland or Finland. Obviously, the pace of the land cover exchange was in decline during the previous period 2000-2006 (with an annual change rate of 0.25%); however, it was even significantly higher in the period 1990-2000 (0.51%) than now.

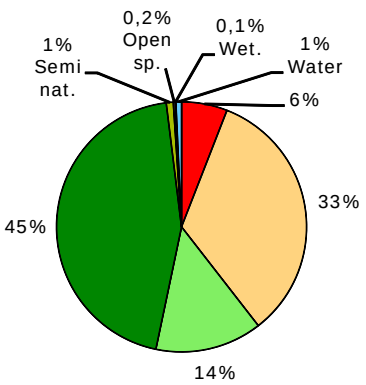
The landscape development in the country is driven mainly by internal conversions of forested land, which intensity significantly increased, compared to the previous period and is comparable with the period 1990-2000. Comparing with the extent of these forest conversions, intensities of other land cover flows in the country are significantly lower. The agricultural internal conversions, which were the second most powerful driver of land cover change in both previous periods, are much less frequent in the period 2006-2012. Also exchanges between agricultural and natural land in both directions show similar trend, with a continuously decreasing intensity.

On the other hand, the artificial sprawl rapidly accelerated, compared to both periods 1990-2000 and 2000-2006. The annual artificial land take rate of 0.41% is slightly above the European average and twice as high as in the previous period. The urban development in the country is driven mainly by the extension of economic sites and infrastructures, namely by construction of highways, but also by accelerated residential and commercial/industrial sprawl. All these types of artificial surfaces are formatted also through the conversion of sites which were under construction already in the period 2000-2006.

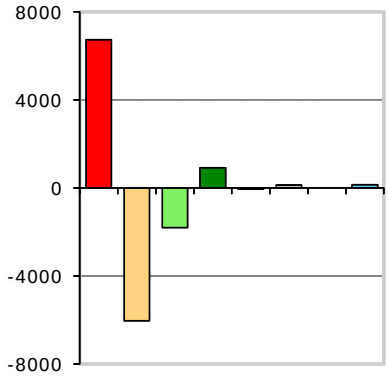
Note: The results presented here are based on a change analysis of 44 land cover types mapped consistently on a 1:100.000 scale across Europe over more than decade between 2000-2006-2012 - see Corine land cover (CLC) programme for details.
Number of years between CLC2006-CLC2012 data for Slovakia: 6



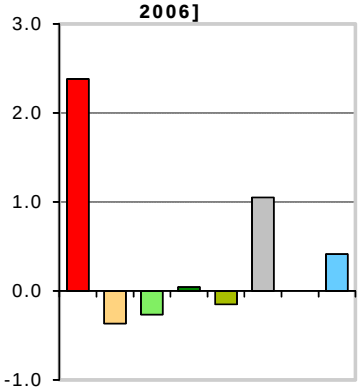
1.1. Land cover 2012 [% of total]



1.2. Net change in land cover 2006-2012 [ha]



1.3. Net change in land cover [% of initial year 2006]



Artificial areas | Arable land & permanent crops | Pastures & mosaics | Forested land
Semi-natural vegetation | Open spaces/ bare soils | Wetlands | Water bodies

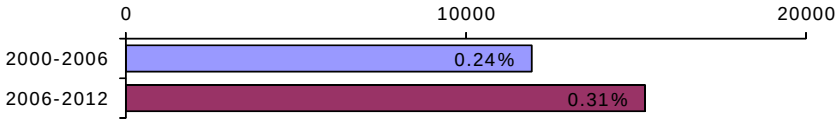
Summary balance table 2006-2012

	Artificial areas	Arable land & permanent crops	Pastures & mosaics	Forested land	Semi-natural vegetation	Open spaces / bare soils	Wetlands	Water bodies	TOTAL [hundreds ha]
Land cover 2006	**2830**	**16492**	**6777**	**21894**	**444**	**119**	**42**	**350**	**48949**
Consumption of initial LC	20.7	78.0	25.2	791.5	0.7	0.0	0.0	0.0	916
Formation of new LC	88.0	17.6	7.1	800.6	0.0	1.3	0.0	1.5	916
Net Formation of LC	**67.3**	**-60.4**	**-18.1**	**9.1**	**-0.7**	**1.3**	**0.0**	**1.5**	**0**
Net formation as % of initial year	*2.4*	*-0.4*	*-0.3*	*0.0*	*-0.2*	*1.0*	*0.0*	*0.4*	
Total turnover of LC	**108.6**	**95.6**	**32.3**	**1592.1**	**0.7**	**1.3**	**0.0**	**1.5**	**1832**
Total turnover as % of initial year	*3.8*	*0.6*	*0.5*	*7.3*	*0.2*	*1.0*	*0.0*	*0.4*	*3.7*
Land cover 2012	**2897**	**16432**	**6759**	**21903**	**443**	**120**	**42**	**352**	**48949**

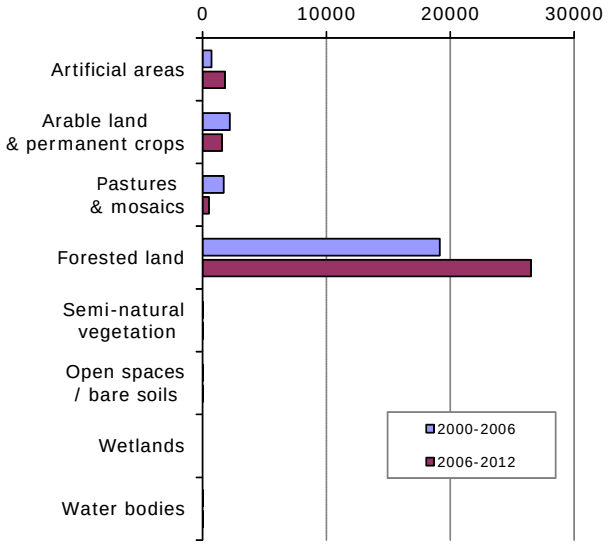
Slovakia

Land cover trends comparison 2000-2006 vs. 2006-2012

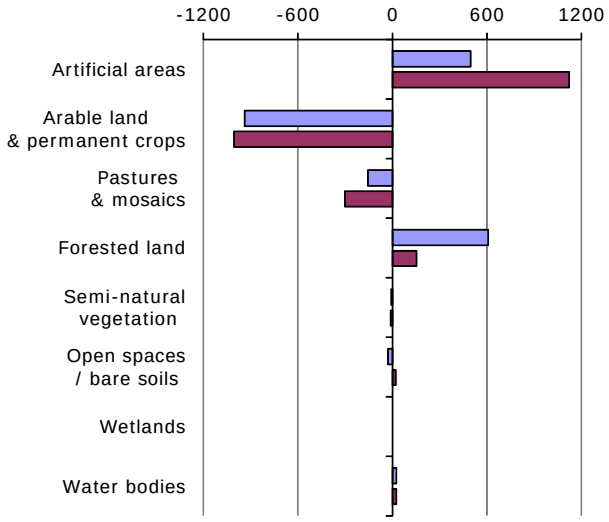
2.4. Annual land cover change [ha/year, % of total area]



2.5. Annual turnover of LC types [ha/year]

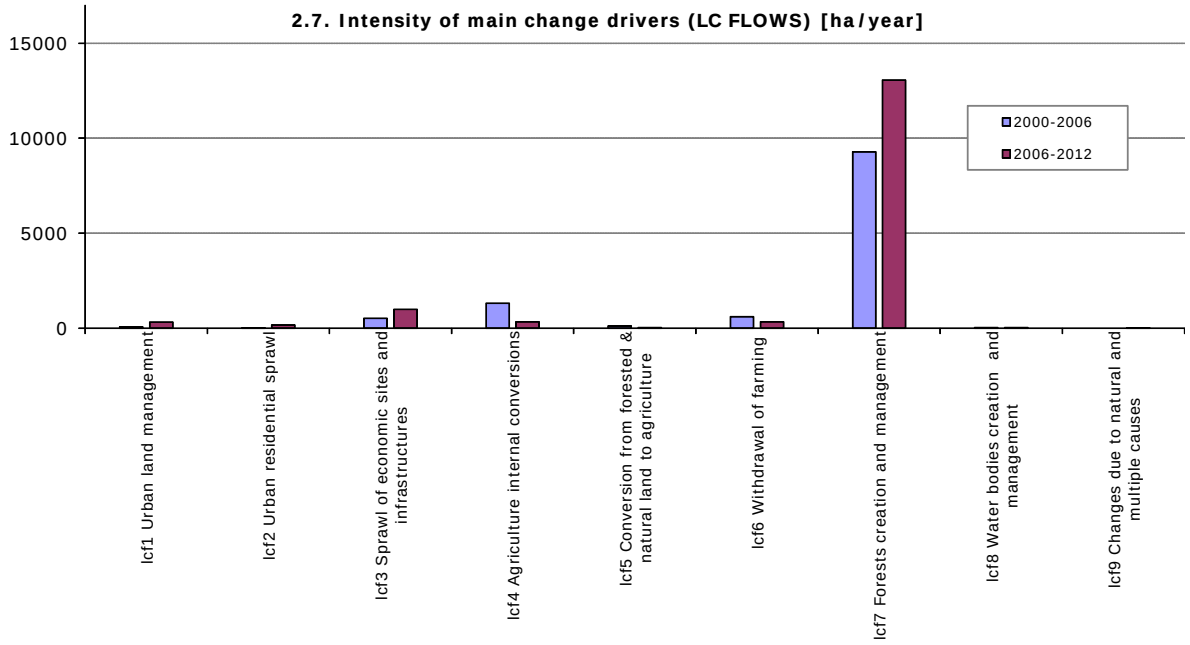


2.6. Net annual change of LC types [ha/year]



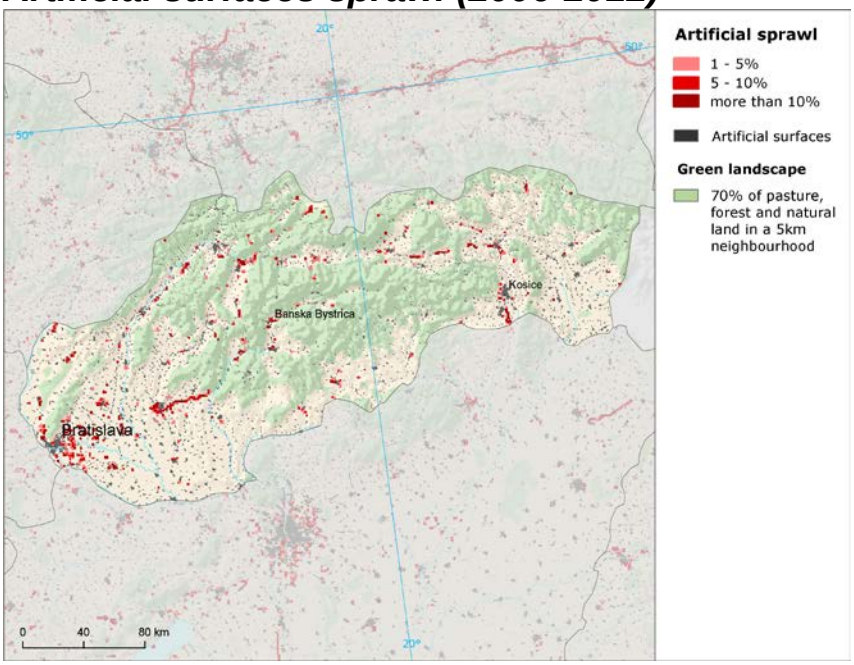
Summary trend figures	2000-2006	2006-2012
Annual land cover change [ha/year]	**11936**	**15267**
Annual land cover change as % of initial year	**0.24%**	**0.31%**
Land uptake by artificial development as mean annual change [ha/year]	541	1147
Agricultural land uptake by urban and infrastructures development as mean annual change [ha/year]	531	1043
Net uptake of forests and semi-natural land by agriculture as mean annual change [ha/year]	-527	-324
Net conversion from pasture to arable land and permanent crops as mean annual change [ha/year]	-495	-16
Forest & other woodland net formation as mean annual change [ha/year]	608	152
Dry semi-natural land cover net formation as mean annual change [ha/year]	-35	10
Wetlands & water bodies net formation as mean annual change [ha/year]	25	24

2.7. Intensity of main change drivers (LC FLOWS) [ha/year]

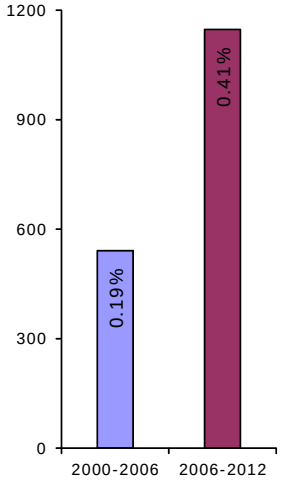


Slovakia

Artificial surfaces sprawl (2006-2012)



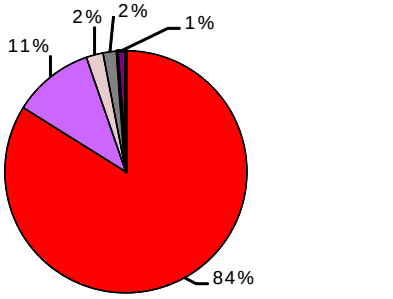
3.8. Artificial land take [ha/year, % of initial year]



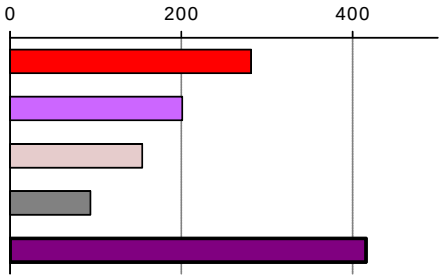
Accelerated sprawl driven by highway construction

A comparison with the period 2000-2006 shows rapid increase of the artificial land take rate in Slovakia. The annual land take rate in the 2006-2012 is two times higher than in the previous period. The sprawl in the country is driven mostly by the construction of the highway network, in particular of the highway which connects the north-western and the north-eastern part of the country. This highway was under construction already during the previous period. There is also visible another new segment of highway, located near the Nitra city in the south-western Slovakia. The other major driver of urban development in the country is the extension of residential fabric, which, after significant decline in the previous period, appears with higher intensity again now. This trend is rather unusual in Europe, while the residential sprawl seems to have slowed down in most European countries in the latest period. As a result of these flows, a significant formation of residential area, industrial, commercial and transportation sites and also of sport and leisure facilities can be observed in Slovakia. Geographically, there is a dense concentration of the sprawl around the capital city Bratislava; however, patches of the sprawl are distributed over the whole country.

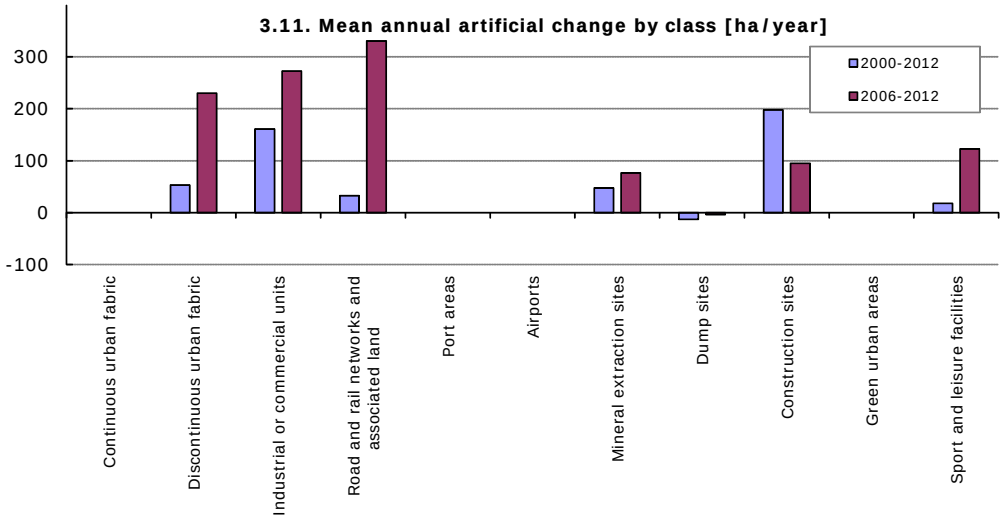
3.9. Artificial surfaces 2012 [% of total area]



3.10. Artificial land take 2006-2012 [ha/year]

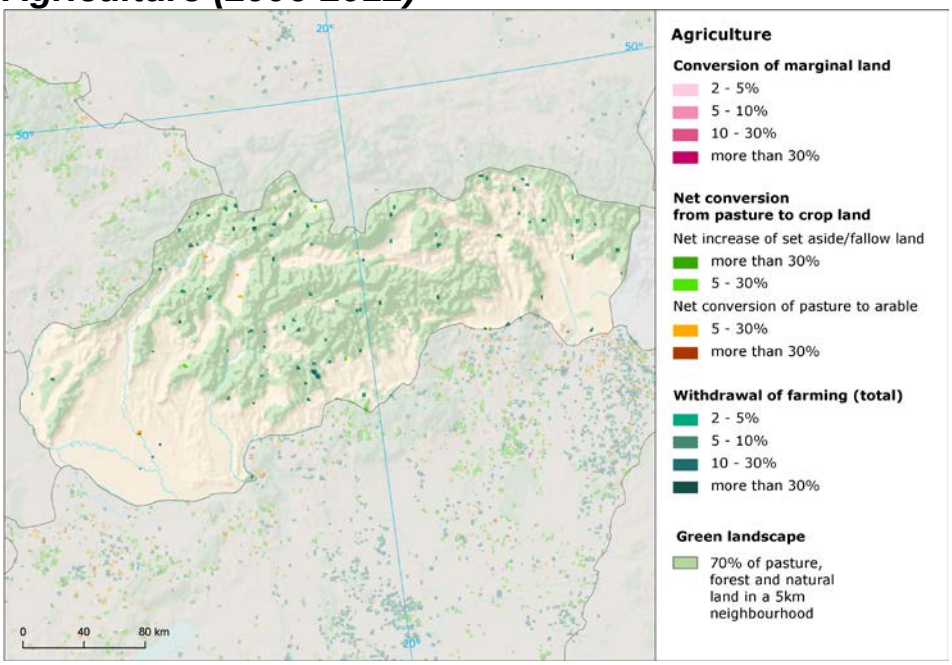


3.11. Mean annual artificial change by class [ha/year]



Slovakia

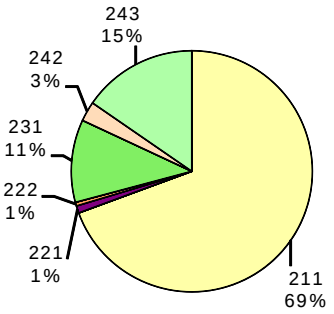
Agriculture (2006-2012)

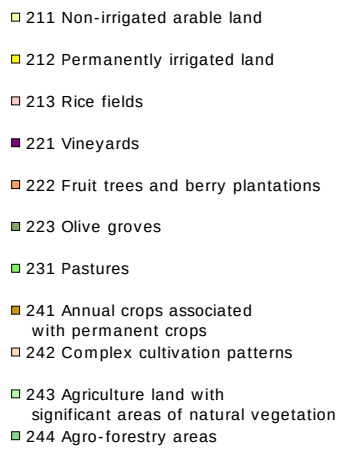


Forest conversions

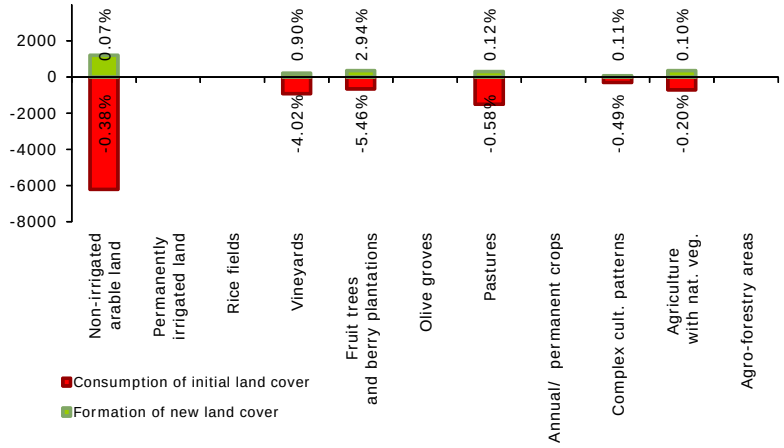
The dynamics of agricultural development in Slovakia has significantly slowed down, compared to both previous periods 1990-2000 and 2000-2006. This slow down involves all main agricultural flows – internal changes and external exchange with natural land in both directions. Concerning the net change, both arable/crop land and pastures show negative balance, with prevailing consumption of land. This consumption is caused firstly by accelerated urban sprawl, and secondly by withdrawal of farming with woodland creation, which, however, shows half lower intensity compared to the previous period. The internal agricultural development lost most of its intensity from previous periods and it is currently driven mostly by conversions between arable land and orchards/vineyards, with prevailing formation of arable; however, also these conversions were more frequent in the period 2000-2006.

4.12. Agricultural areas 2012 [% of total area]

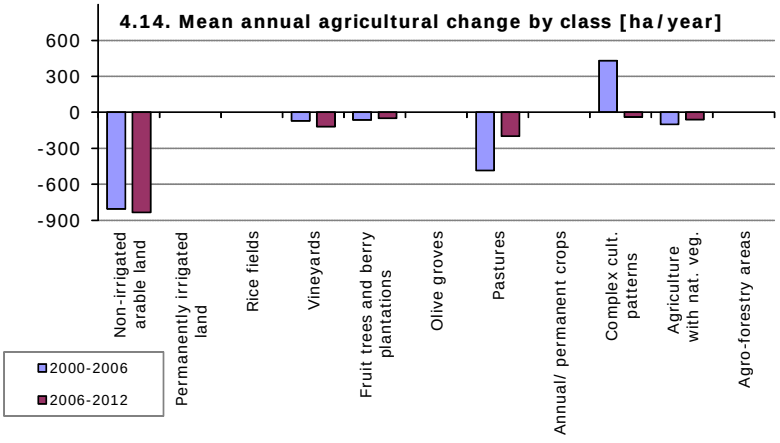




4.13. Development of agricultural areas 2006-2012 – detailed balance [ha]

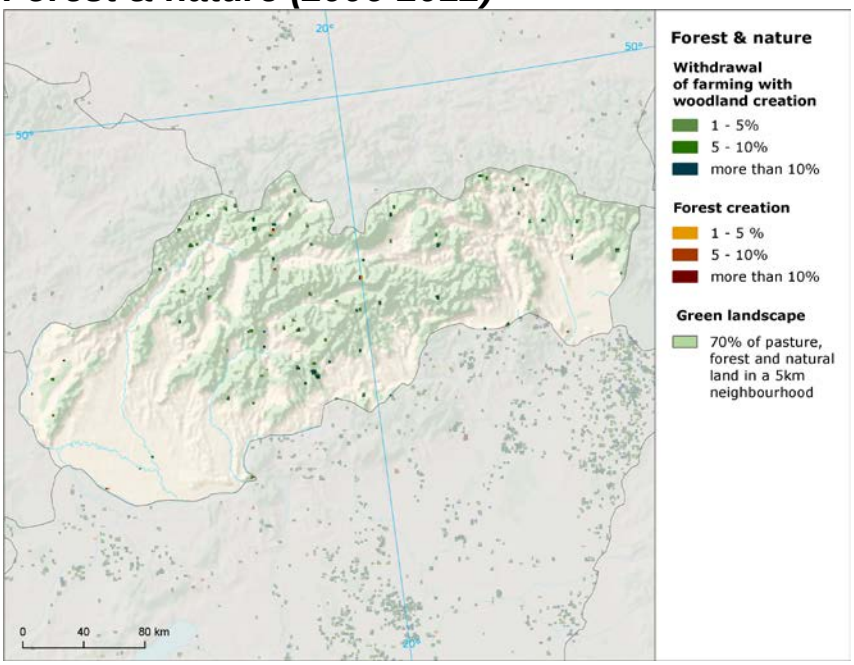


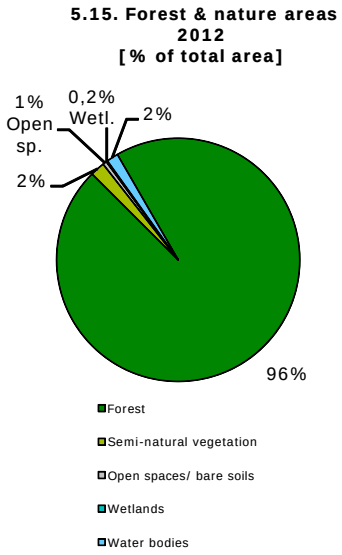
4.14. Mean annual agricultural change by class [ha/year]



Slovakia

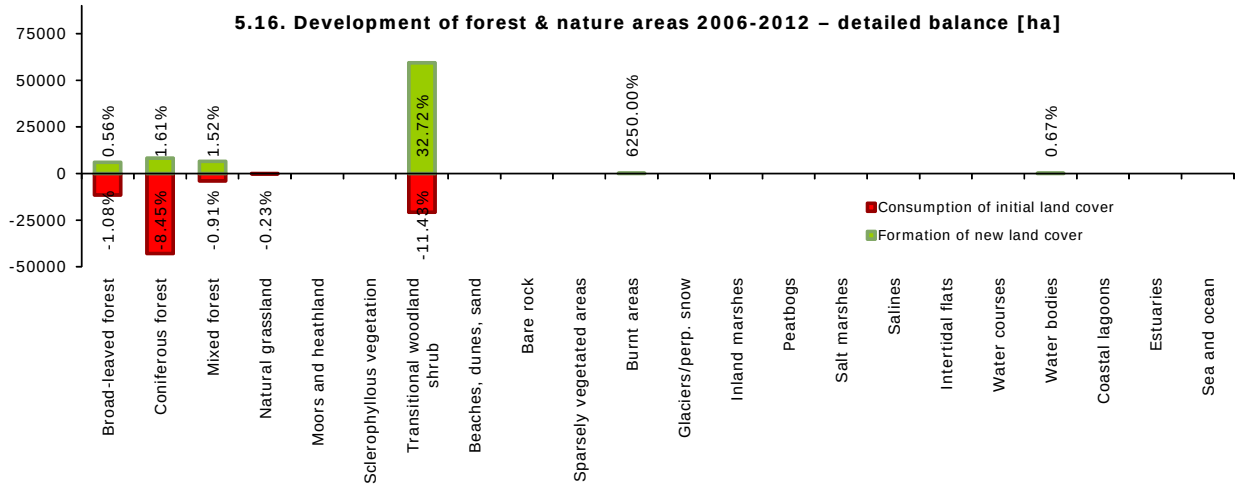
Forest & nature (2006-2012)

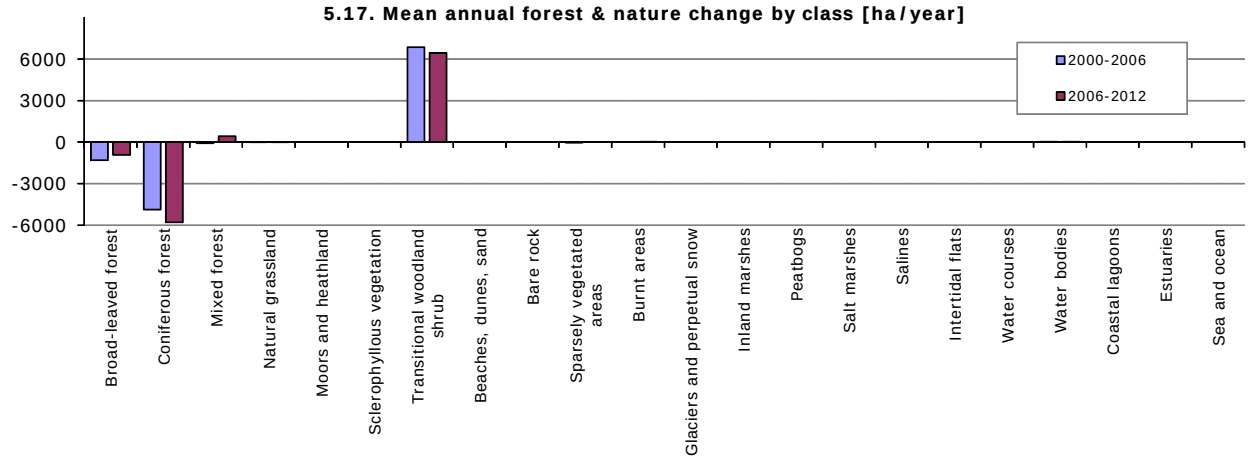




Forest creation through withdrawal of farming slows down

The intensity of the main type of natural land exchange in Slovakia - internal forest conversions - is significantly higher, compared to the period 2000-2006 and similar to the period 1990-2000. In the long term, this change is by far the strongest driver of the land cover development in the country. Although the intensity of conversion from transitional woodland to forest has more than doubled compared to the previous period, the opposite flow of recent felling and transition is still more frequent in Slovakia. External exchange of forested land with other land cover types is represented mostly by the withdrawal of farming with forest creation, in particular transitional woodland and shrub formation over former pasture land. This flow currently shows considerably lower intensity, compared to the period 2000-2006. The resulting net change balance shows significant formation of transitional woodland areas and consumption of mainly coniferous forest on the other hand. This situation was similar in the previous period.

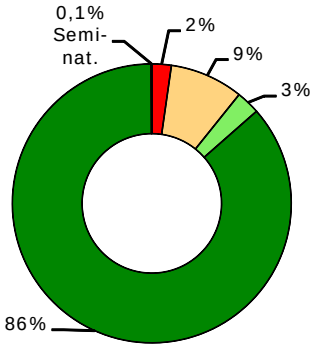




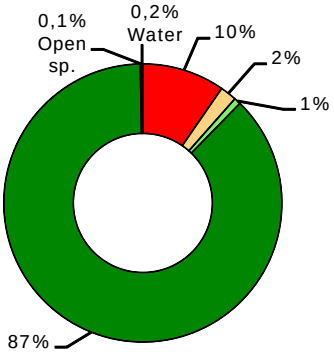
Annex: Land cover flows and trends

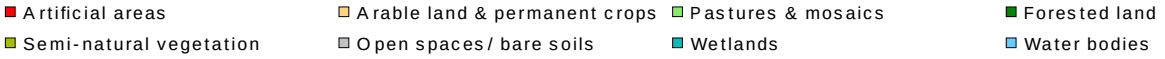
Land cover flows 2006-2012

6.18. Consumption of land cover 2006-2012 [% of total change area]

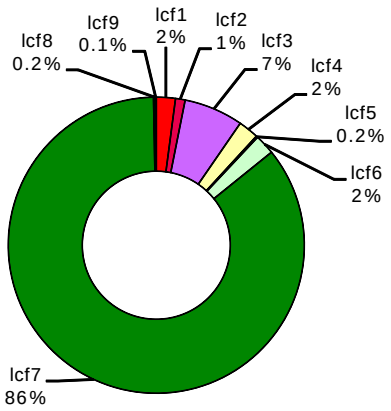


6.19. Formation of land cover 2006-2012 [% of total change area]





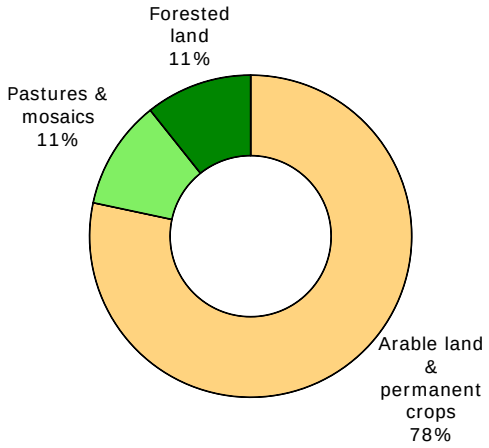
6.20. Drivers of change (LC FLOWS) 2006-2012 [% of total change area]



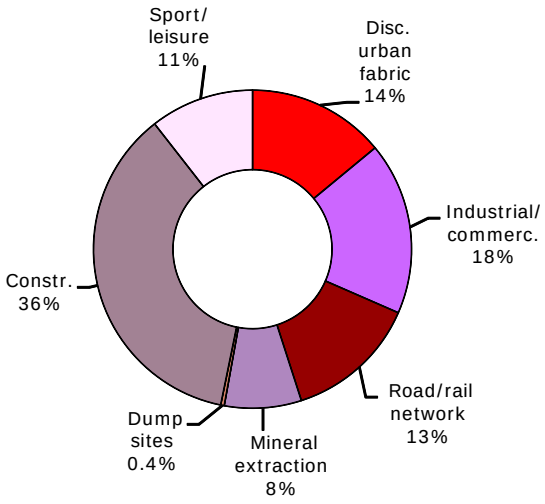
Slovakia

Artificial areas

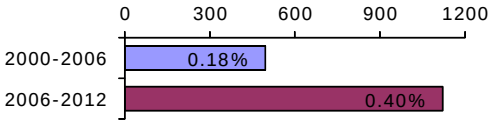
7.21. Consumption by artificial land take 2006-2012 [% of total]



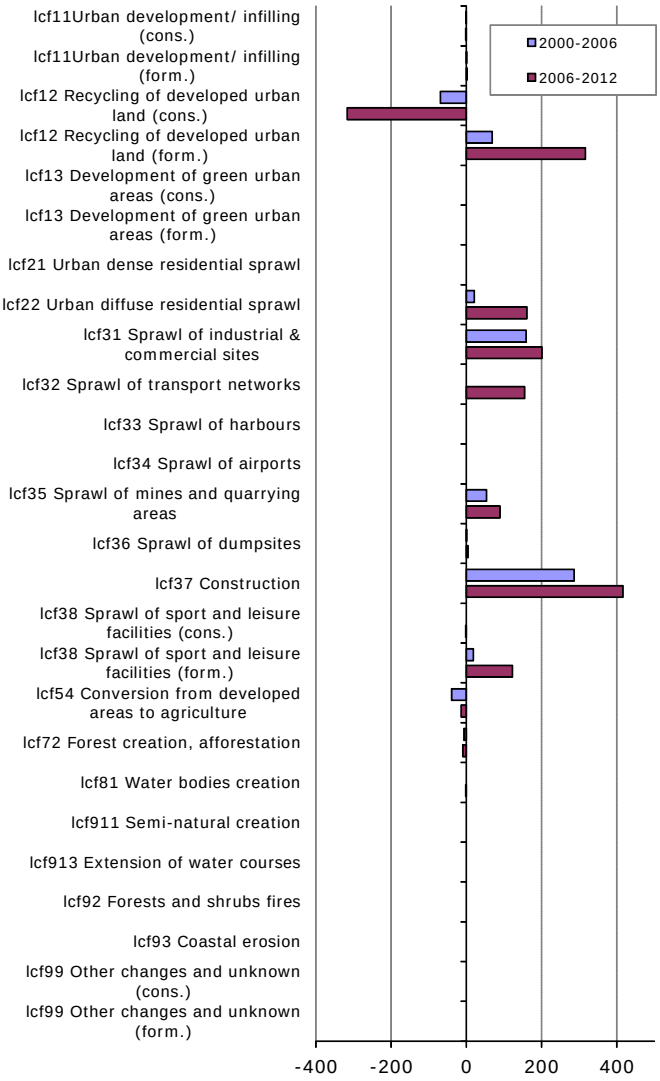
7.22. Formation by artificial land take 2006-2012 [% of total]



7.23. Net formation of artificial area [ha/year, % of initial year]



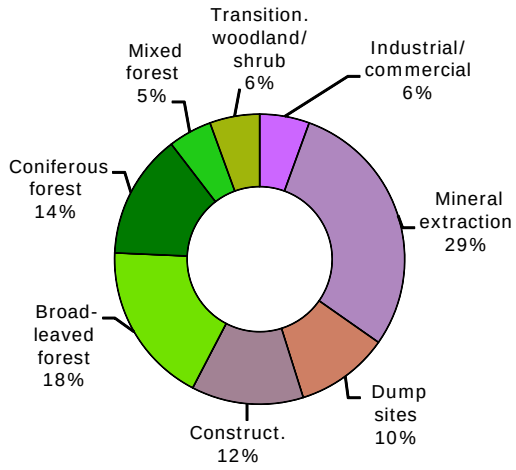
7.24. Artificial development by change drivers (LC FLOWS) [ha/year]



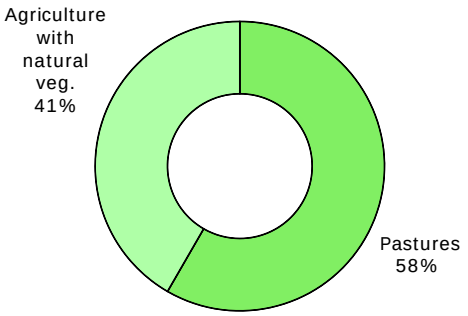
Slovakia

Agriculture

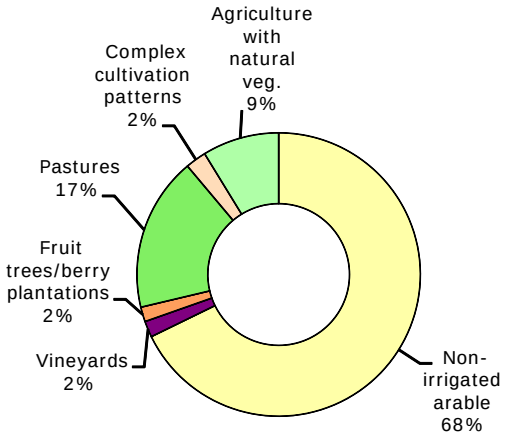
8.25. LC consumed by agriculture 2006-2012 [% of total]



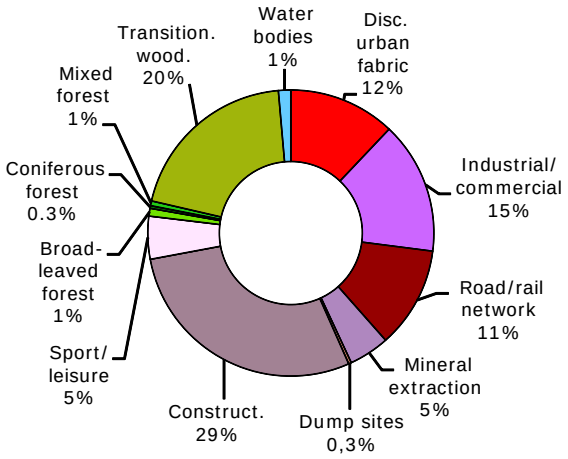
8.26. Formation of agricultural land from non-agriculture 2006-2012 [% of total]



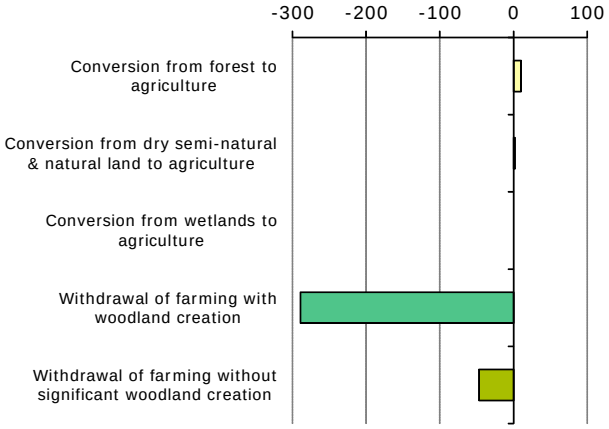
8.27. Consumption of agricultural land by non-agriculture 2006-2012 [% of total]



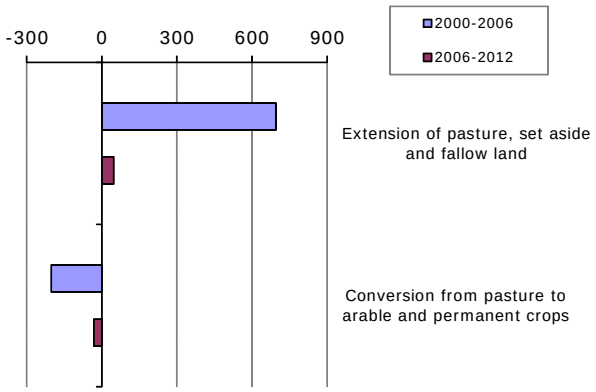
8.28. Formation of non-agricultural land from agriculture 2006-2012 [% of total]



8.29. Main annual conversions between agriculture and forests & semi-natural land 2006-2012 [ha/year]



8.30. Mean annual conversion between arable land and pasture [ha/year]



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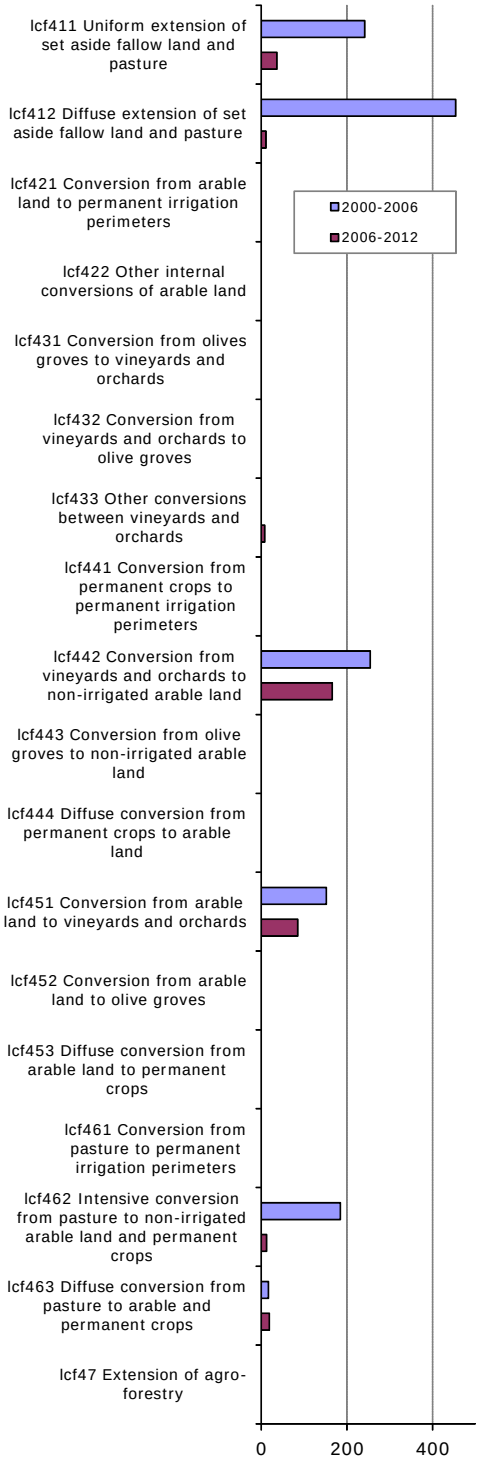
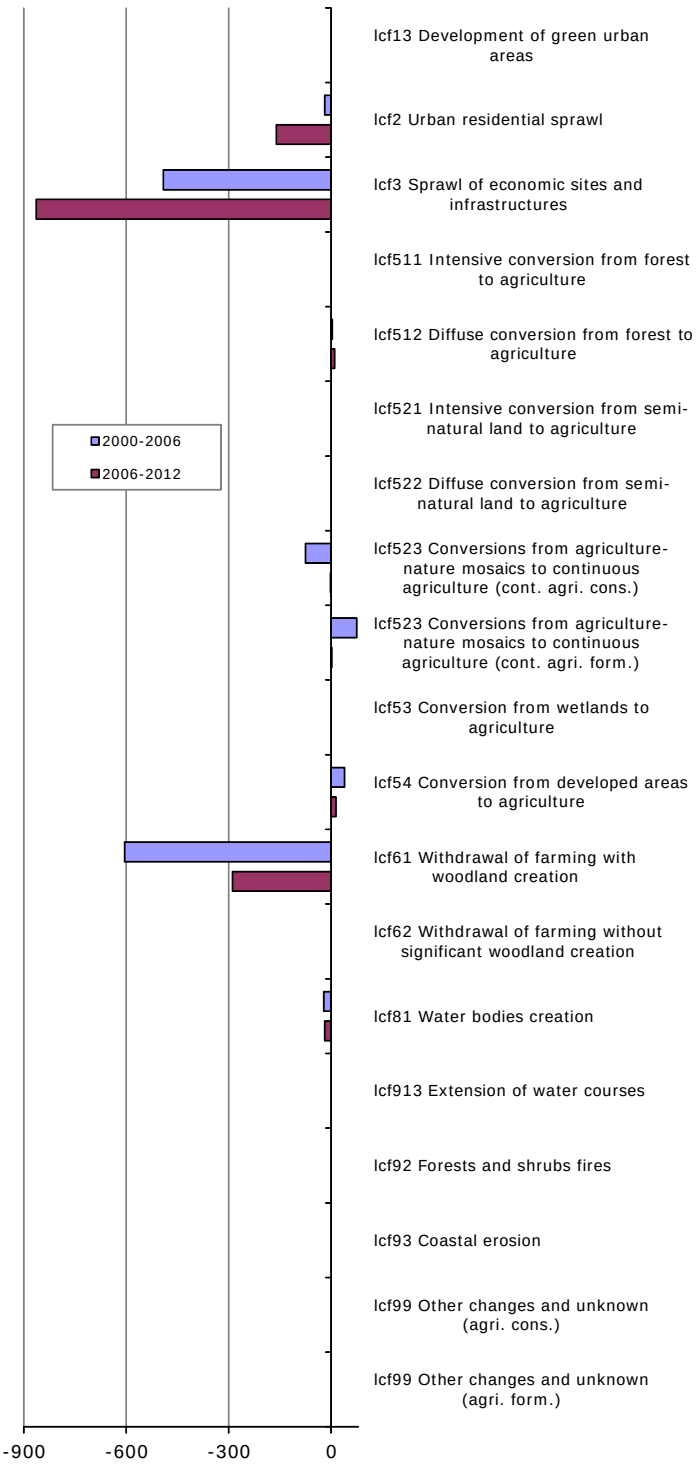
9.31. Mean annual agriculture internal conversions [ha / year]



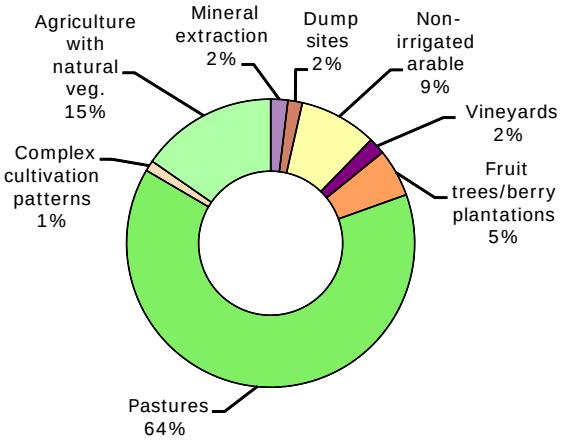
9.32. Mean annual conversions between agriculture and other LC types [ha / year]



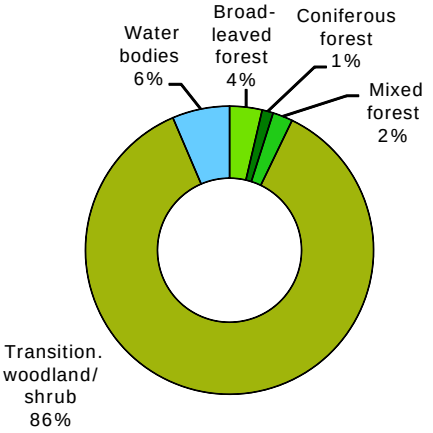
Slovakia

Forest & nature

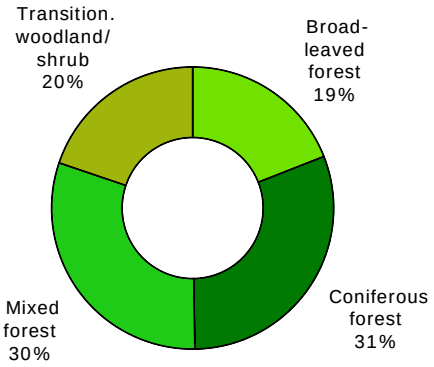
10.33. LC consumed by forest & nature 2006-2012 [% of total]



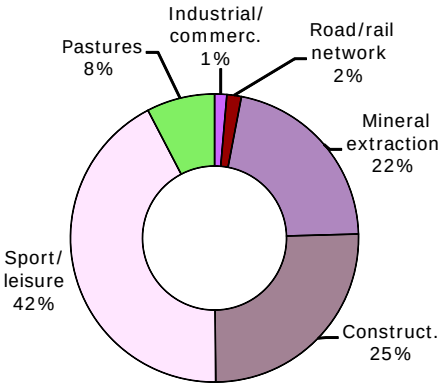
10.34. Formation of forest & nature land from non-forest /nature 2006-2012 [% of total]



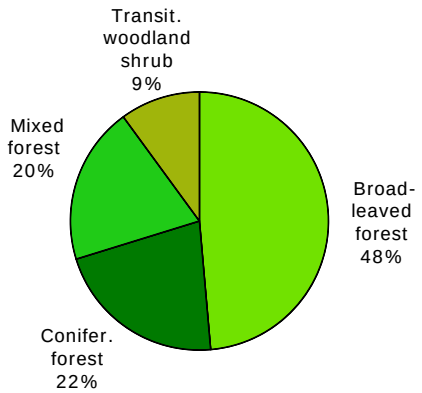
10.35. Consumption of forest & nature land by non-forest/nature 2006-2012 [% of total]



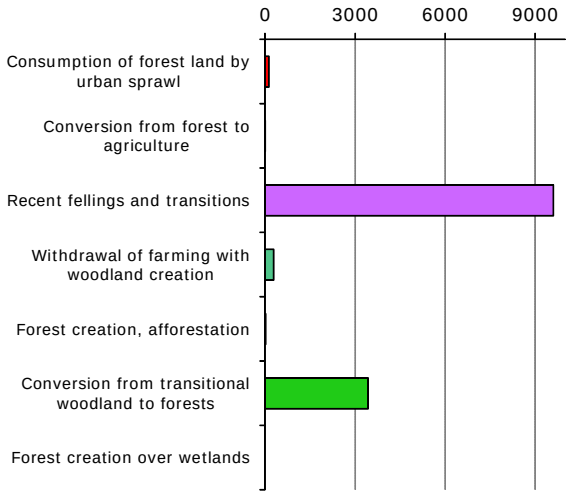
10.36. Formation of non-forest/nature land from forest & nature 2006-2012 [% of total]



10.37. Forested land 2012 [% of total area]



10.38. Main trends in woodland & forests consumption/formation 2006-2012 [ha/year]



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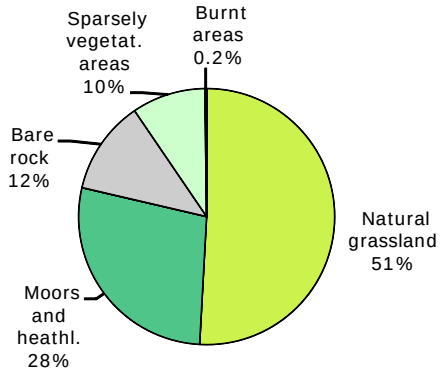
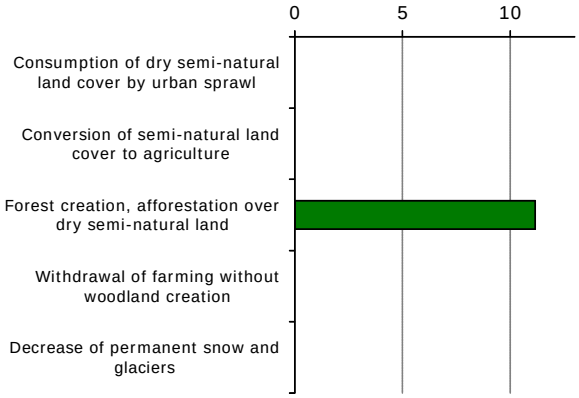
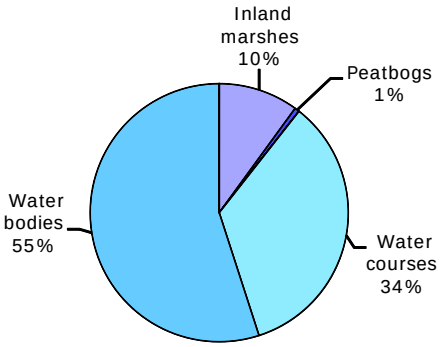
11.39. Dry semi-natural areas 2012 [% of total area]



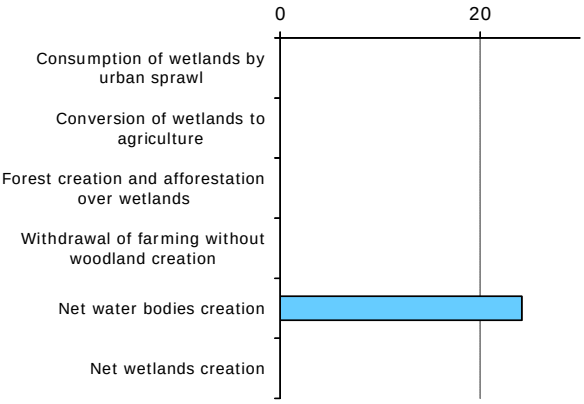
11.40. Main trends in dry semi-natural land consumption/formation 2006-2012 [ha/year]



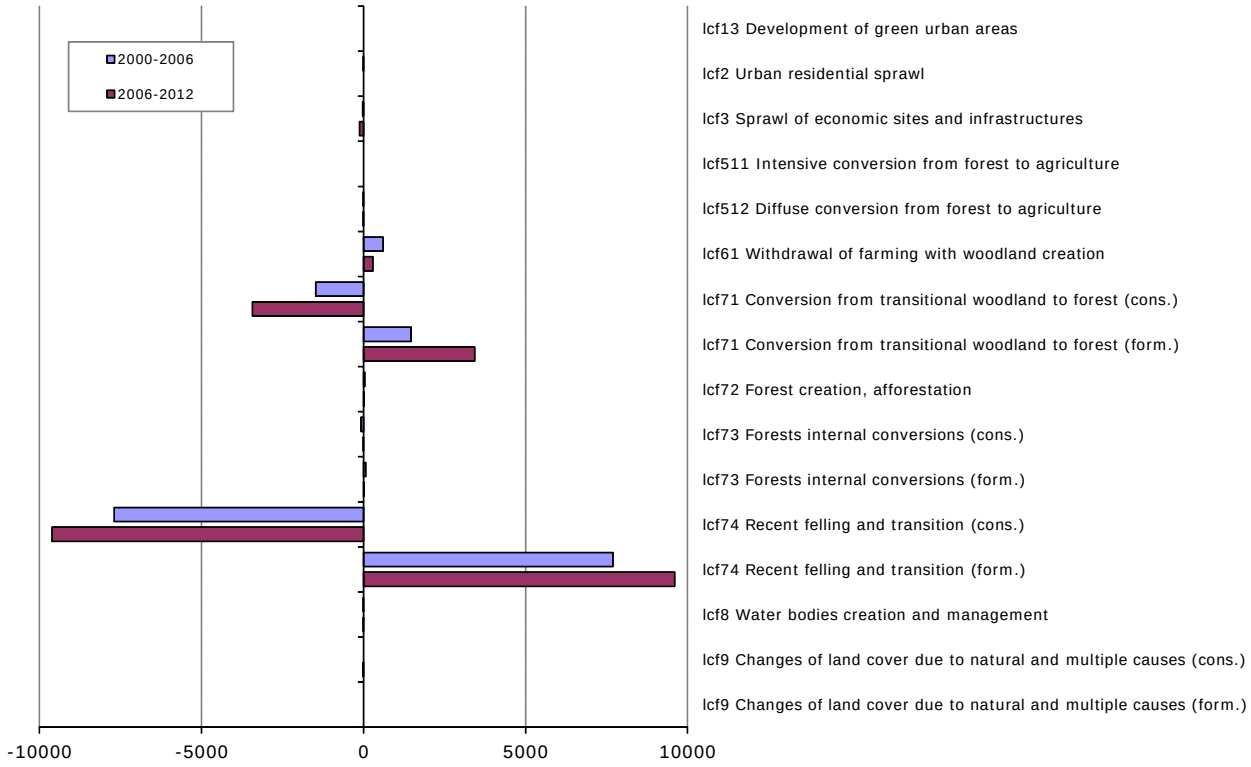
11.41. Wetlands & water 2012 [% of total area]



11.42. Main trends in wetlands & water consumption/formation 2006-2012 [ha/year]



11.43. Mean annual conversions of forest & other woodland [ha/year]



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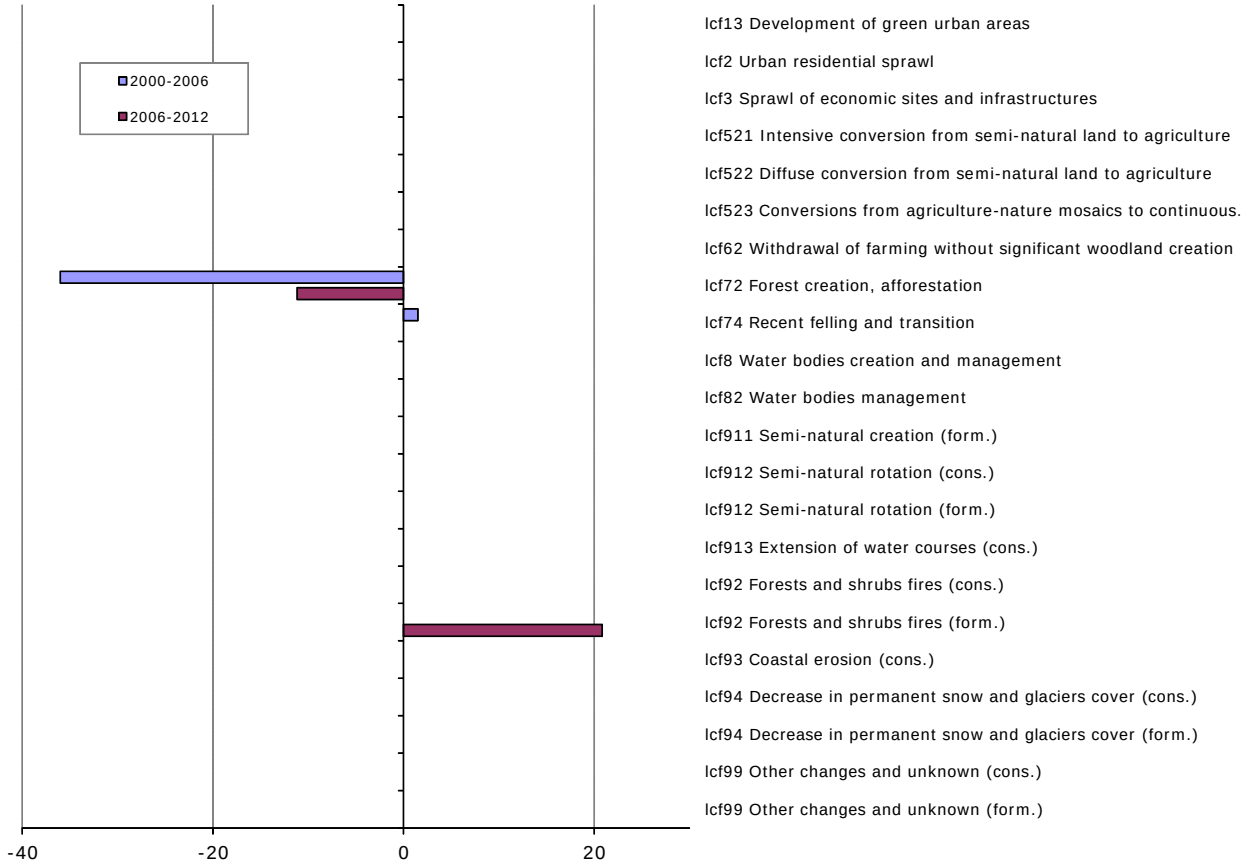
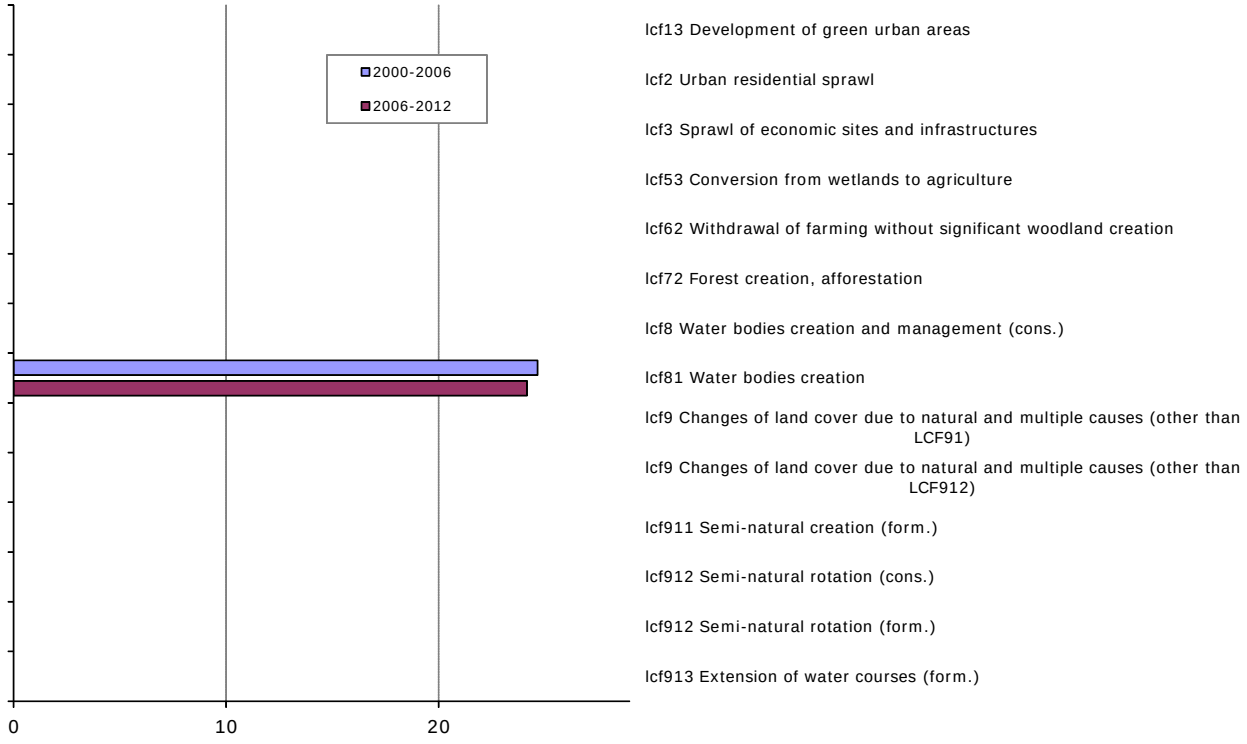
12.44. Mean annual conversions of dry semi-natural LC [ha/year]



12.45. Mean annual conversions of wetlands and water LC [ha/year]



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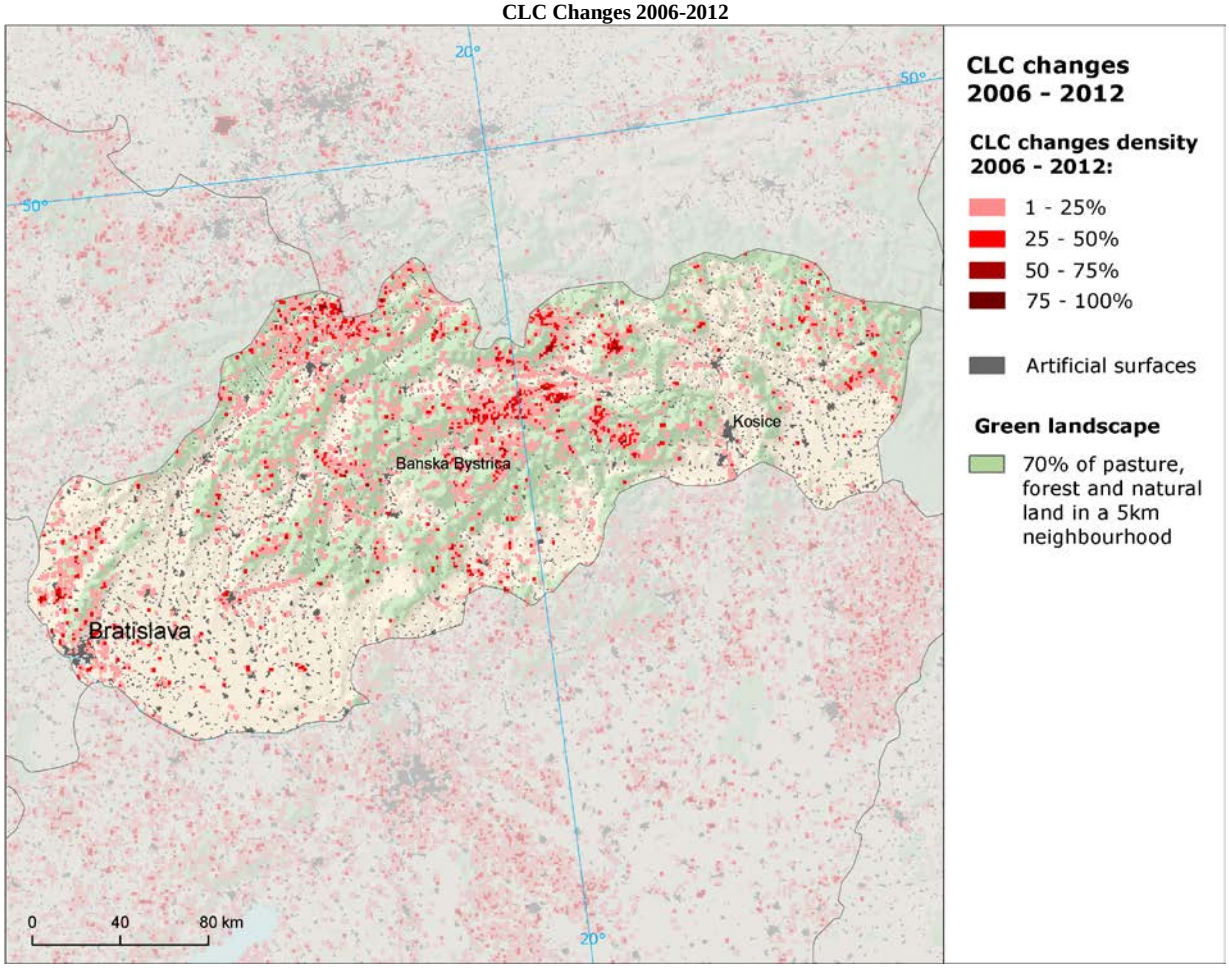
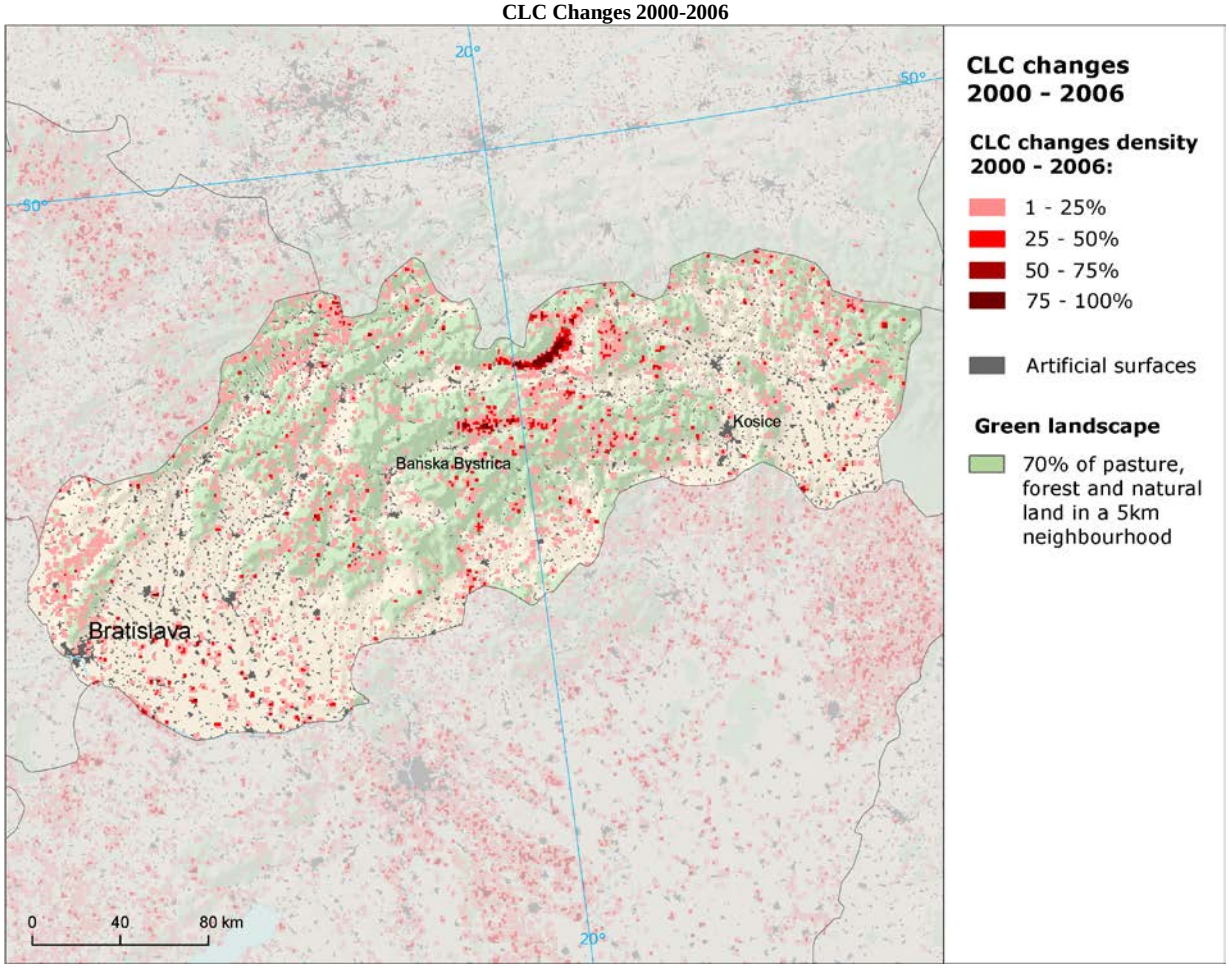
CLC Changes 2006-2012



CLC Changes 2000-2006



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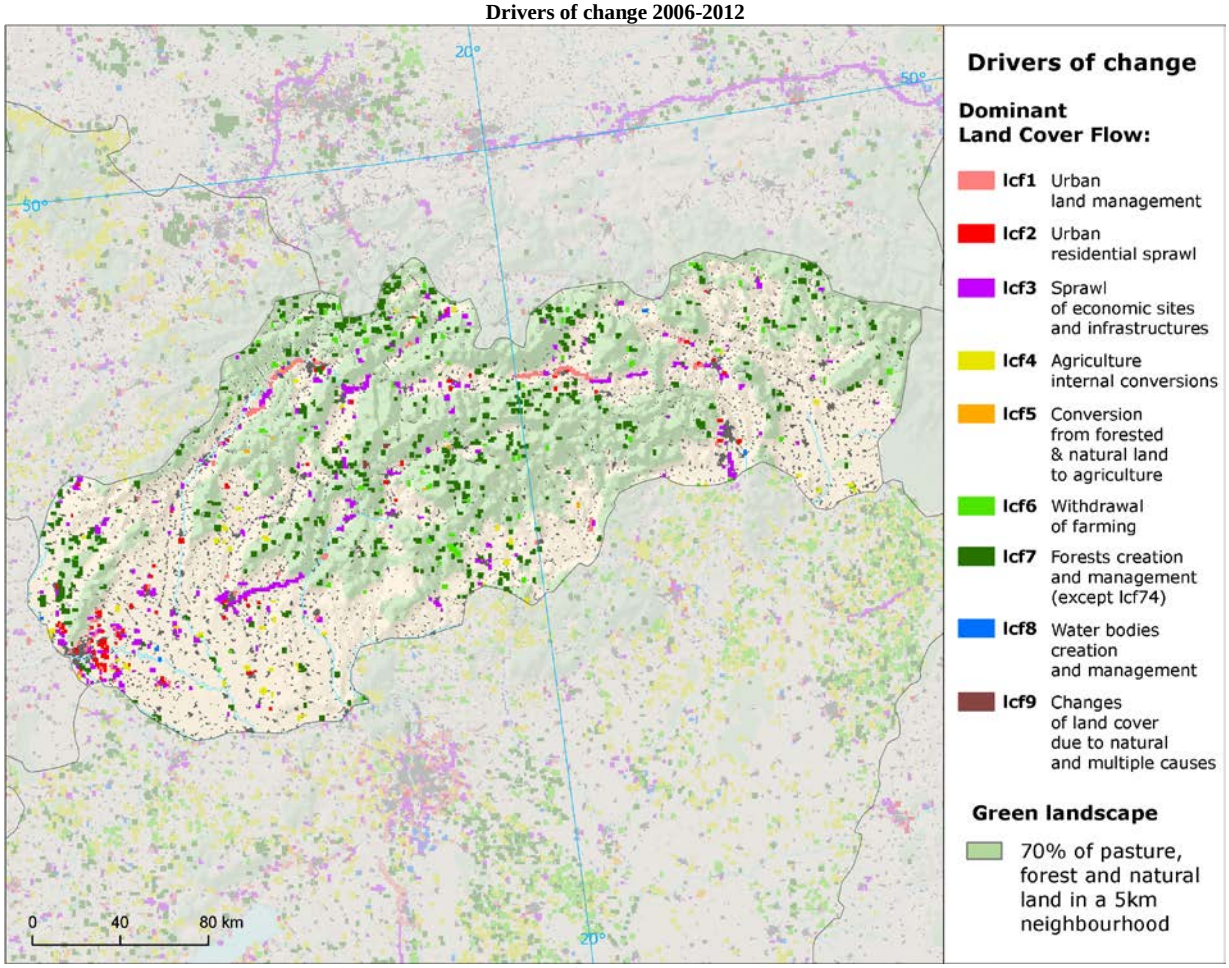
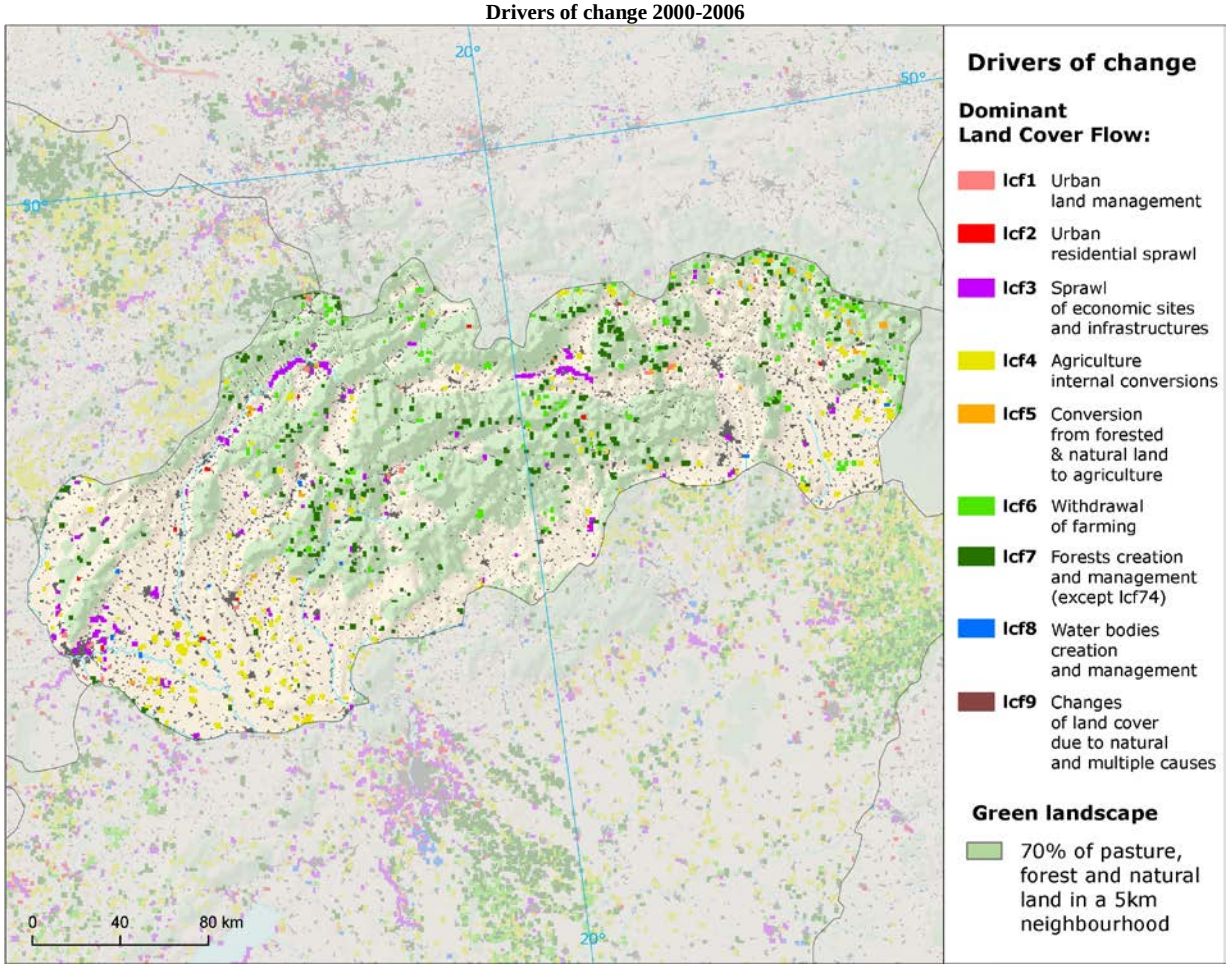
Drivers of change 2006-2012



Drivers of change 2000-2006



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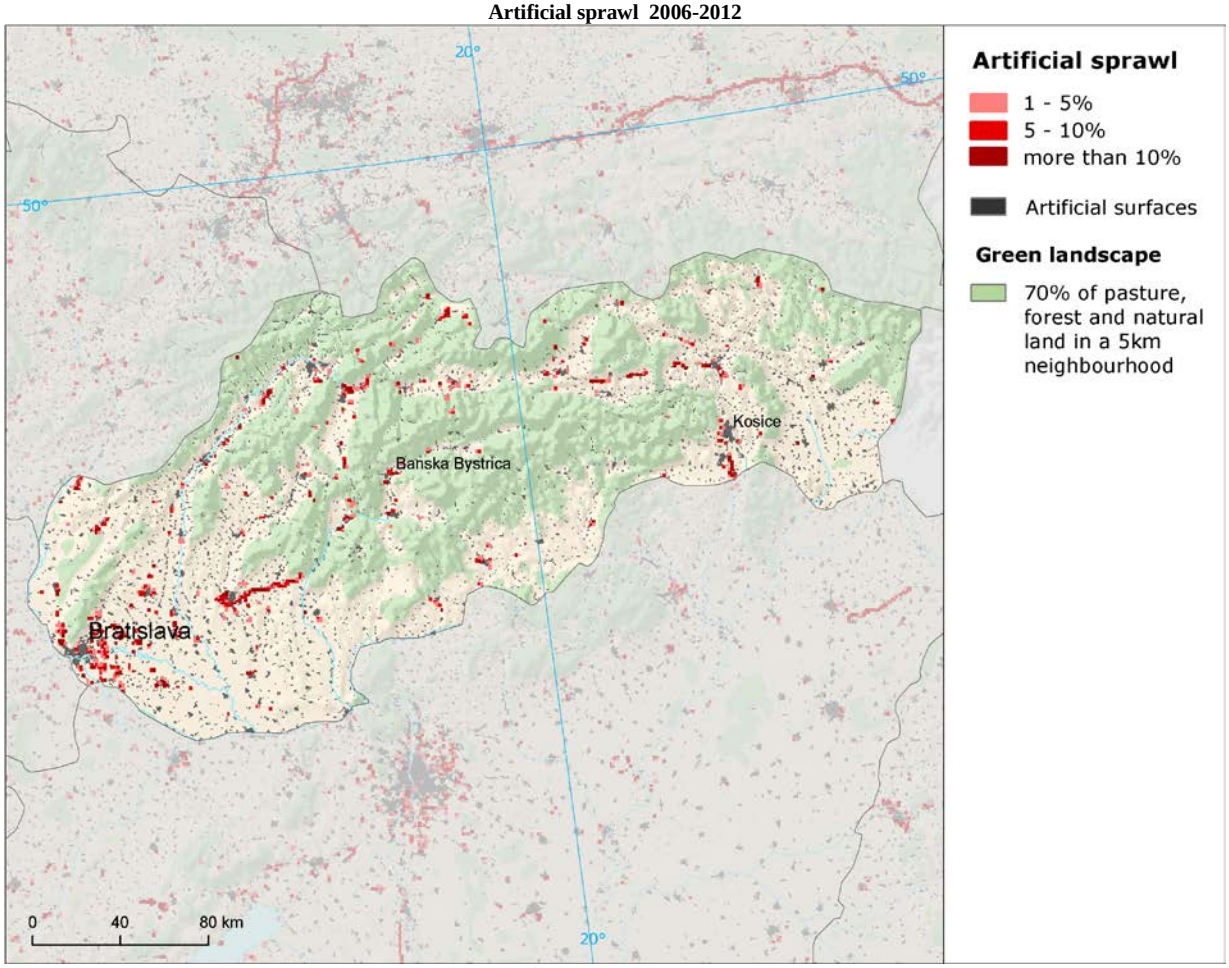
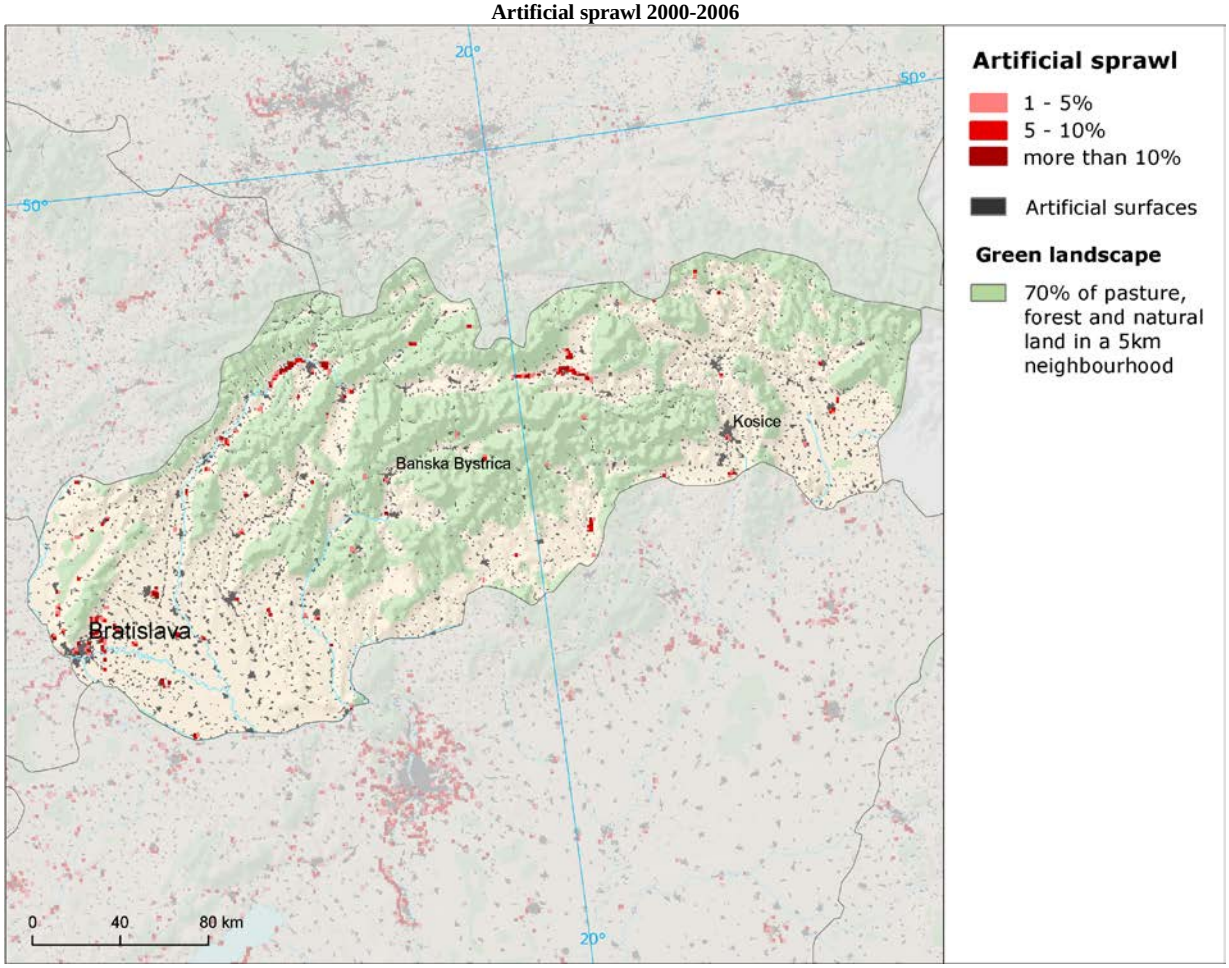
Artificial sprawl 2006-2012



Artificial sprawl 2000-2006



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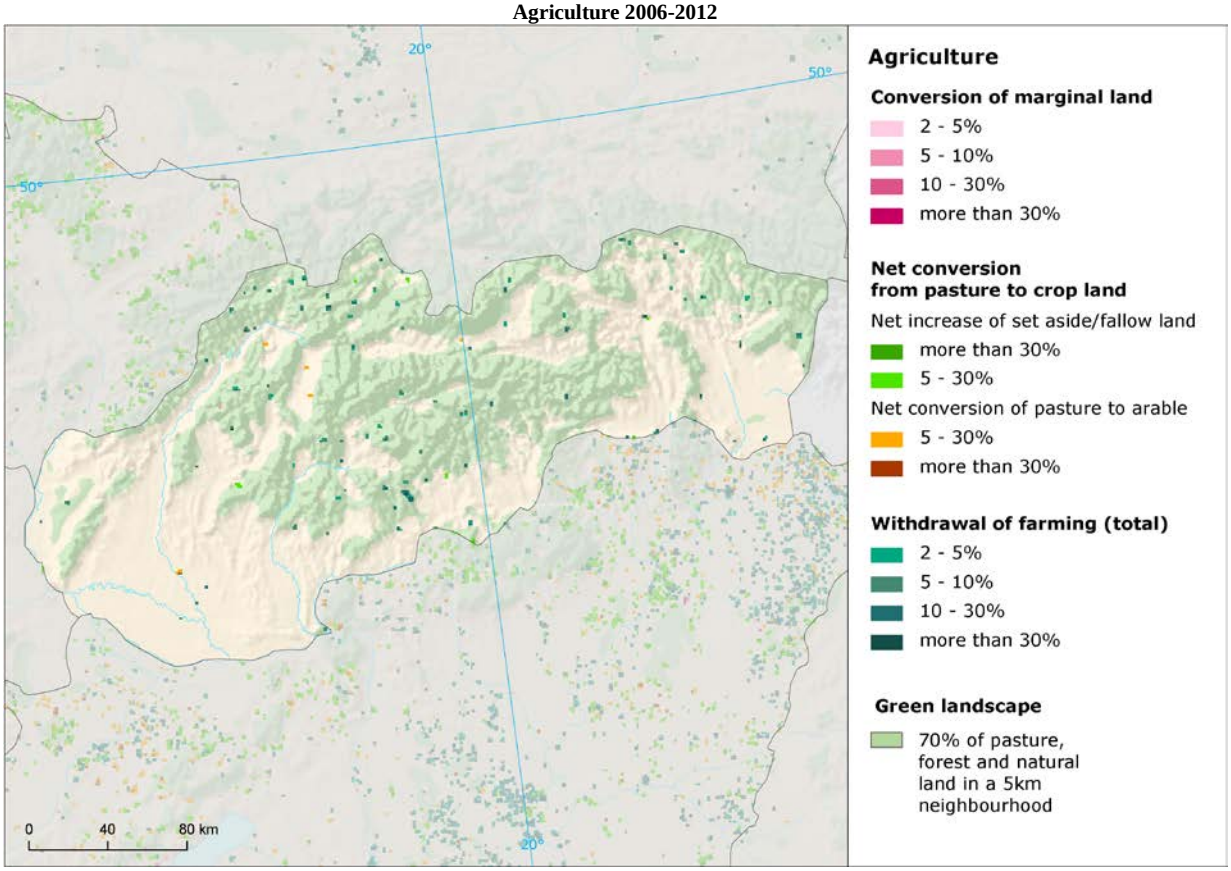
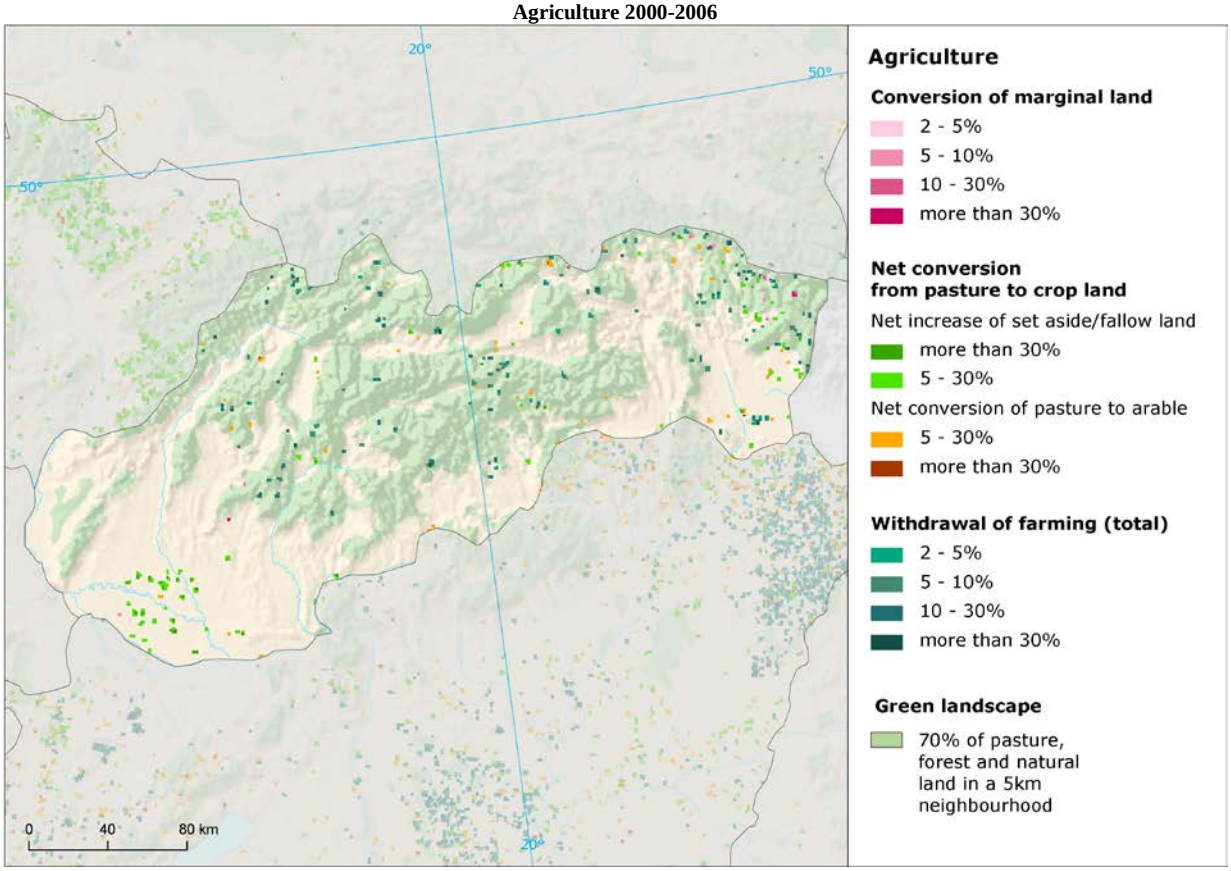
Agriculture 2006-2012



Agriculture 2000-2006



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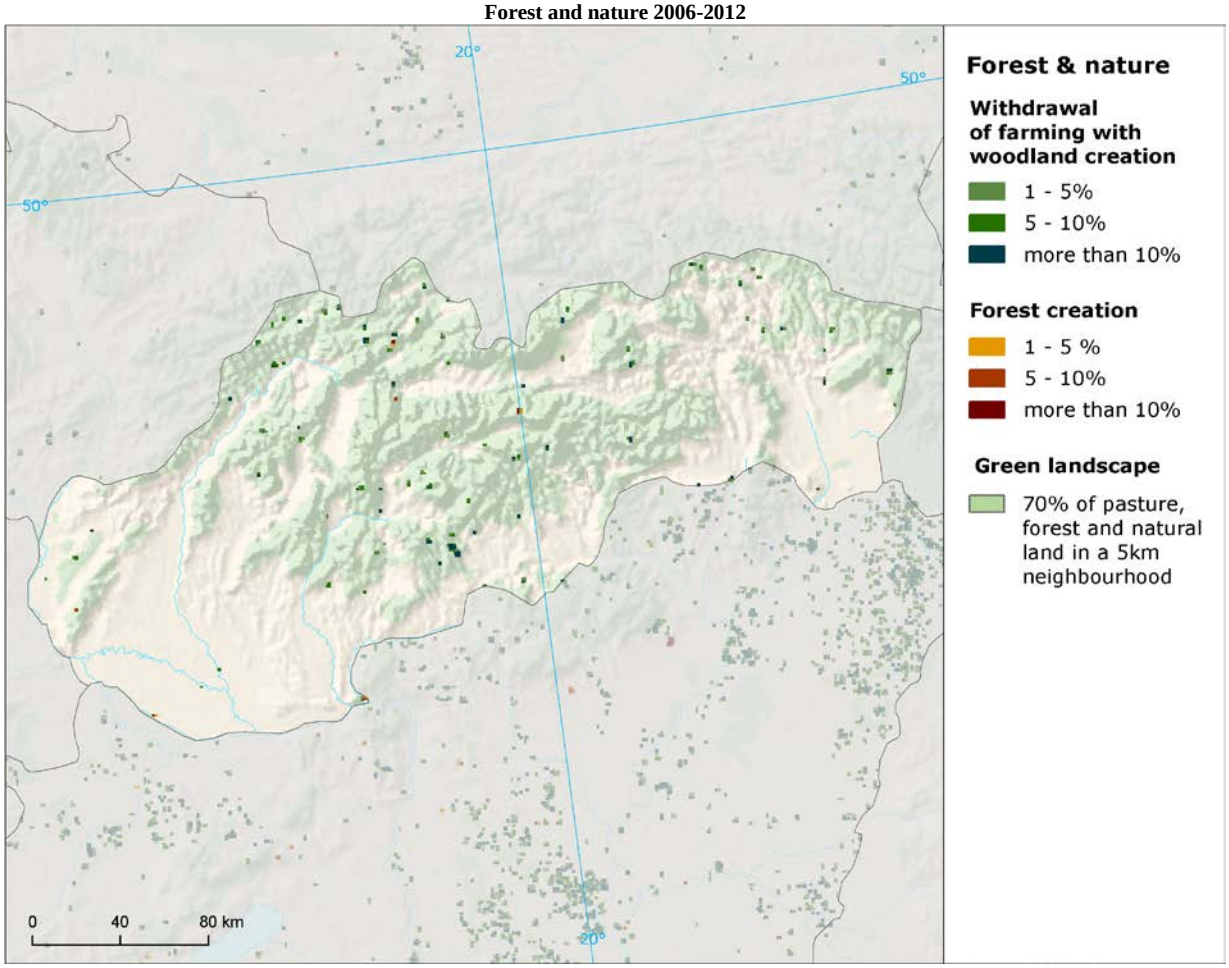
Forest and nature 2006-2012



Forest and nature 2000-2006