

Land cover 2012



Bosnia and Herzegovina



September 2017

Photo: © Toni García, My City/EEA



Land cover 2012

Overview of land cover & change 2006-2012

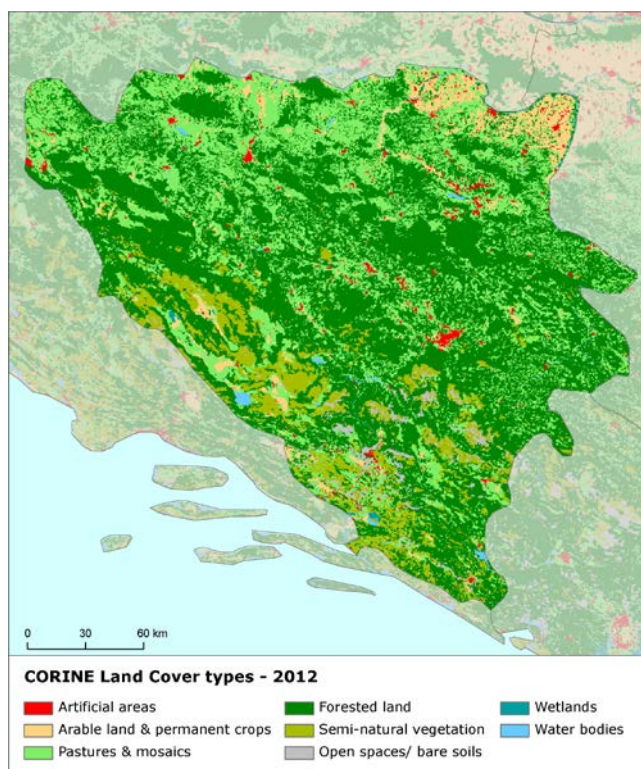
The overall pace of land cover development in Bosnia and Herzegovina is half slower than in previous period, described by annual change rate of 0.06%. This means that it is one of the slowest among European countries. This current slowdown has been caused mostly by rapid decrease of the intensity of forest creation and management – in particular of recent felling and transition – which, in the long term, is by far the most significant driver of land cover change in the country – even after the slowdown.

The other flows with rapid decrease of intensity were urban residential sprawl and internal agricultural conversions. After this shift in distribution of intensity among particular flows, sprawl of economic sites and infrastructures and conversion from forested land to agriculture, both with higher intensity than in 2000-2006, became the other most significant flows behind forest development.

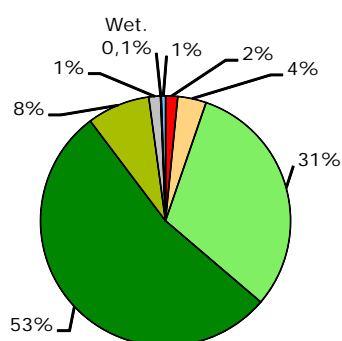
Also the annual artificial land take rate decreased significantly, however, with 0.48% of initial artificial area, it still remains one of the highest in Europe. However, it has to be mentioned here, that the sprawl in the period 2006-2012 has been driven mostly by extension of mining areas and by construction, while residential sprawl – the main driver of artificial development in the previous period – almost disappeared from the landscape.

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.

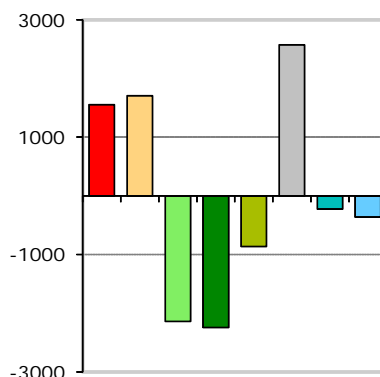
Number of years between CLC2006-CLC2012 data for Bosnia and Herzegovina: 6



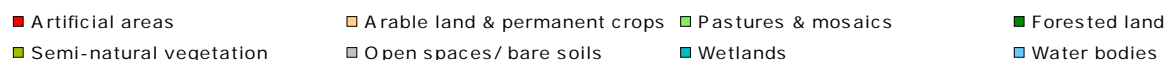
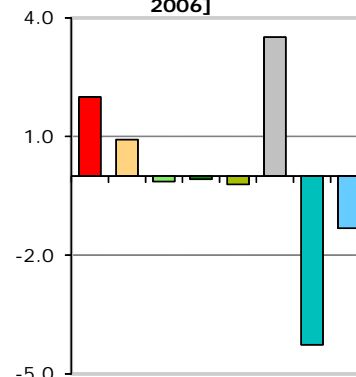
1.1. Land cover 2012 [% of total]



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



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

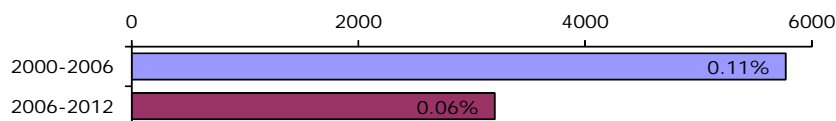


Summary balance table 2006-2012

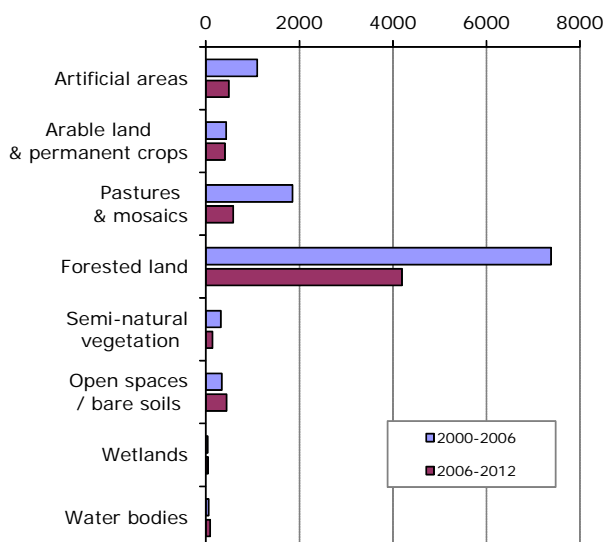
| | Artificial areas | Arable land & permanent crops | Pastures & mosaics | Forested land | Semi-natural vegetation | Open spaces/ bare soils | Wetlands | Water bodies | TOTAL [hundreds ha] |
|-------------------------------------|------------------|-------------------------------|--------------------|---------------|-------------------------|-------------------------|-------------|--------------|---------------------|
| Land cover 2006 | 776 | 1842 | 15627 | 26965 | 4106 | 734 | 52 | 275 | 50377 |
| Consumption of initial LC | 7.0 | 3.8 | 28.3 | 137.1 | 8.7 | 0.5 | 2.4 | 4.5 | 192 |
| Formation of new LC | 22.5 | 20.9 | 6.9 | 114.6 | 0.0 | 26.2 | 0.2 | 0.9 | 192 |
| Net Formation of LC | 15.5 | 17.1 | -21.4 | -22.5 | -8.7 | 25.8 | -2.2 | -3.6 | 0 |
| Net formation as % of initial year | 2.0 | 0.9 | -0.1 | -0.1 | -0.2 | 3.5 | -4.3 | -1.3 | |
| Total turnover of LC | 29.5 | 24.7 | 35.2 | 251.7 | 8.7 | 26.7 | 2.6 | 5.4 | 384 |
| Total turnover as % of initial year | 3.8 | 1.3 | 0.2 | 0.9 | 0.2 | 3.6 | 4.9 | 2.0 | 0.8 |
| Land cover 2012 | 792 | 1859 | 15605 | 26943 | 4097 | 759 | 50 | 271 | 50377 |

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

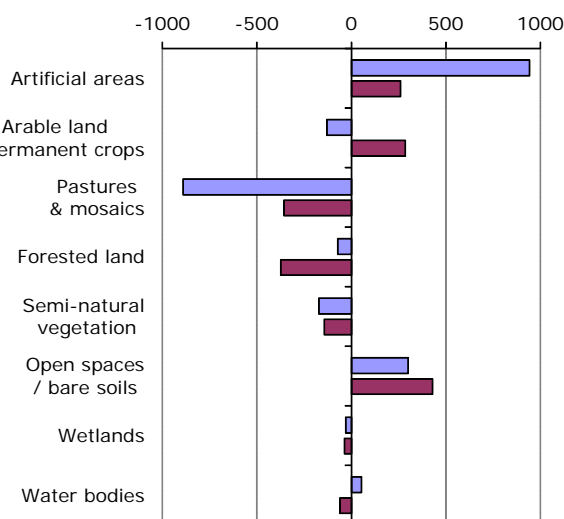
2.4. Annual land cover change
[ha/year, % of total area]



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

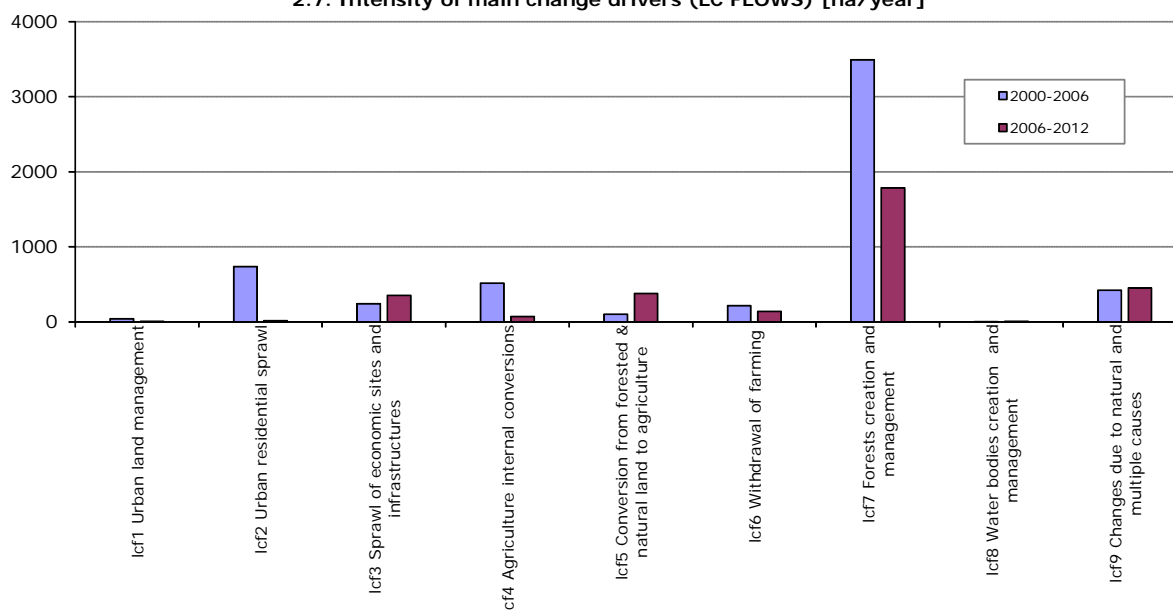


2.6. Net annual change of LC types [ha/year]

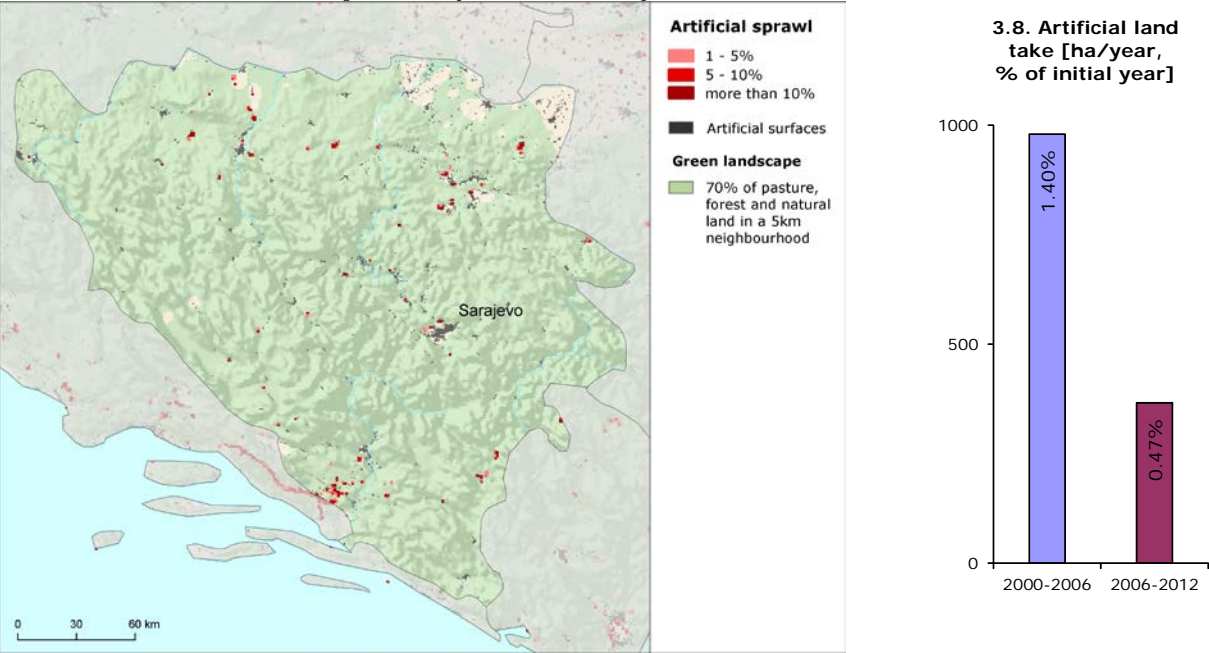


| Summary trend figures | | 2000-2006 | 2006-2012 |
|---|--|-----------|-----------|
| Annual land cover change [ha/year] | | 5769 | 3204 |
| Annual land cover change as % of initial year | | 0.11% | 0.06% |
| Land uptake by artificial development as mean annual change [ha/year] | | 979 | 367 |
| Agricultural land uptake by urban and infrastructures development as mean annual change [ha/year] | | 872 | 198 |
| Net uptake of forests and semi-natural land by agriculture as mean annual change [ha/year] | | -136 | 164 |
| Net conversion from pasture to arable land and permanent crops as mean annual change [ha/year] | | 452 | 44 |
| Forest & other woodland net formation as mean annual change [ha/year] | | -73 | -374 |
| Dry semi-natural land cover net formation as mean annual change [ha/year] | | 128 | 302 |
| Wetlands & water bodies net formation as mean annual change [ha/year] | | 23 | -98 |

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



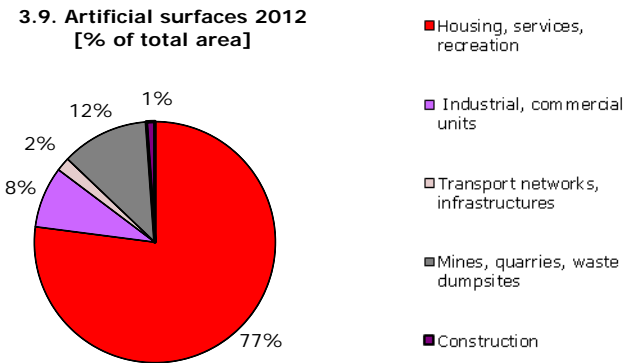
Artificial surfaces sprawl (2006-2012)



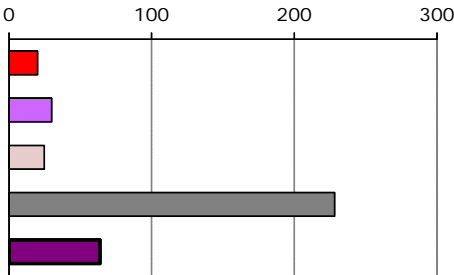
Residential sprawl disappeared

Despite rapid decrease of its intensity, the rate of artificial land take still remains one of the highest among European countries. The diffuse residential sprawl, which was by far the most powerful driver of the artificial development in the previous period 2000-2006, lost most of its intensity and almost disappeared from the landscape. In the period 2006-2012, the sprawl is driven mostly by extension of mines, quarries and waste dumpsites and also by construction. Geographically, the artificial development is distributed over the whole country, with similar pattern as in the previous period, however, with significantly lower intensity. In particular, the central region of the country, including the capital city Sarajevo, shows rapid decrease of sprawl, in comparison with previous period – there is almost no more artificial development in this region in the period 2006-2012.

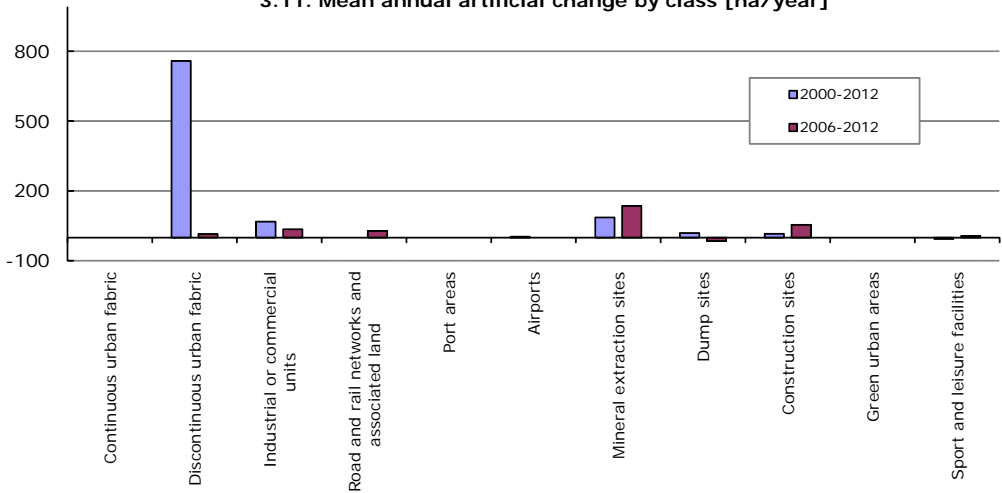
3.9. Artificial surfaces 2012 [% of total area]



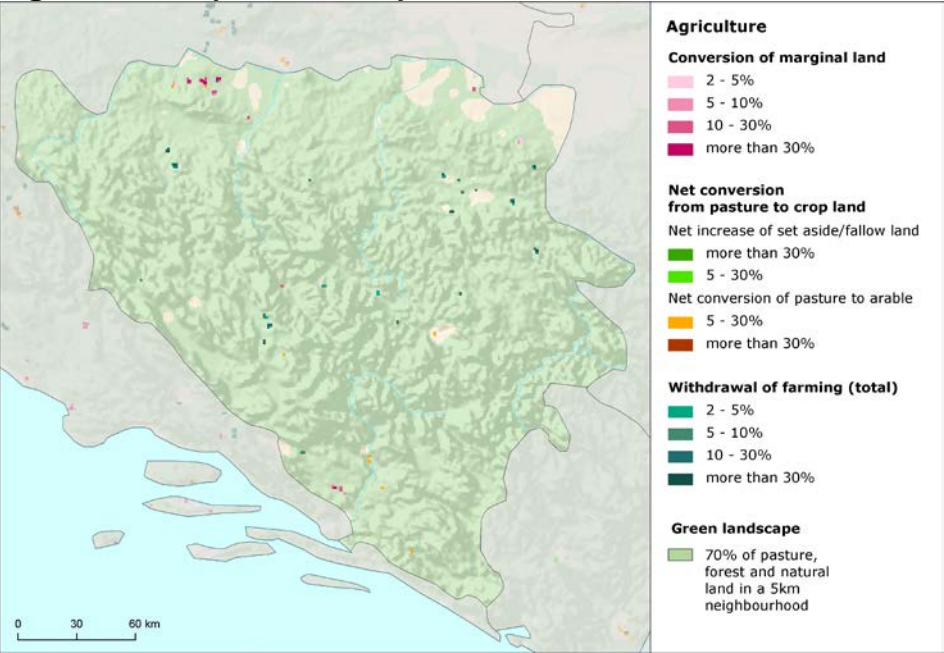
3.10. Artificial land take 2006-2012 [ha/year]



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



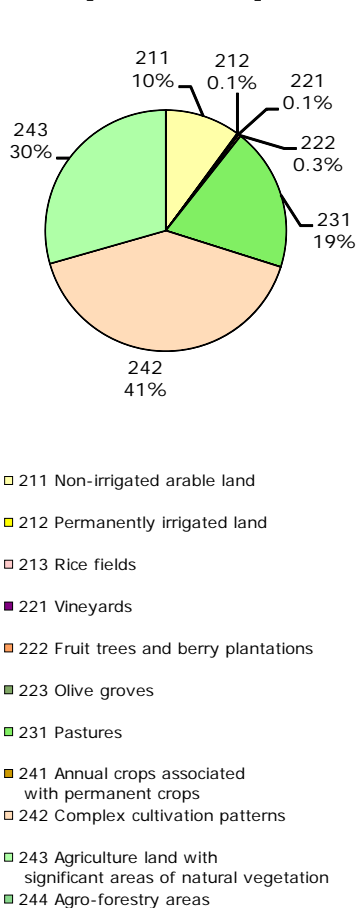
Agriculture (2006-2012)



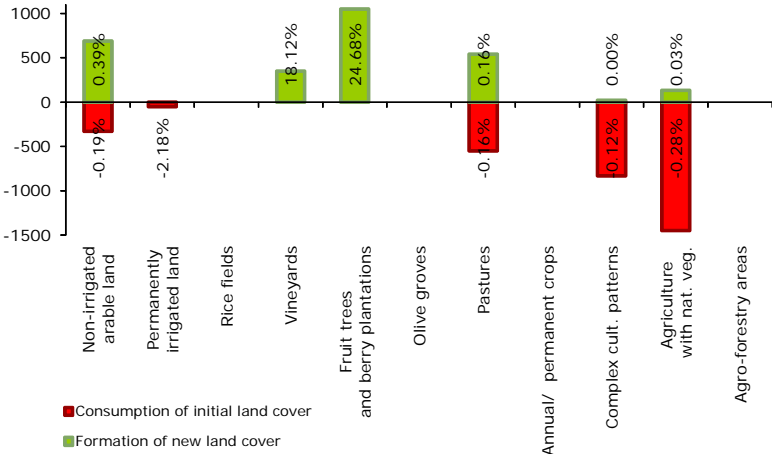
Rapid slowdown of pasture consumption

The pattern of agricultural development in Bosnia and Herzegovina is quite different comparing with previous period. In particular, consumption of pastures, the most significant trend in previous period, ended up. On the other hand, other flows occur which were not observed before, represented by formation of vineyards and fruit and berry plantations. The main reason for this decrease of pasture consumption intensity is the significant slowdown of urban residential sprawl and of internal agricultural conversion from pasture to arable land and permanent crops, as these flows were the main consumers of pasture land in the previous period. In general, agriculture internal conversions almost disappeared from the land cover development in the country.

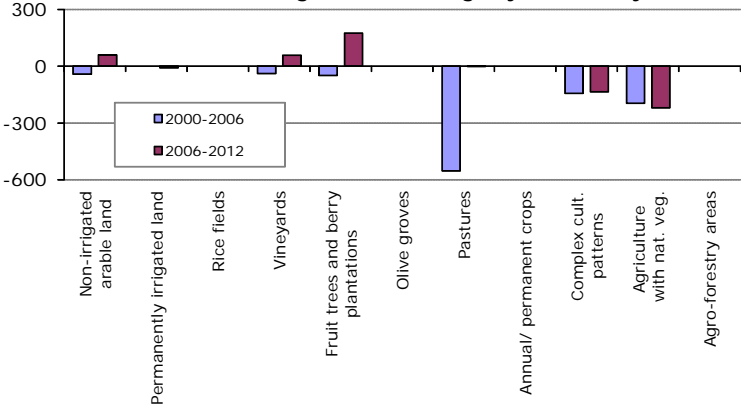
4.12. Agricultural areas 2012 [% of total area]



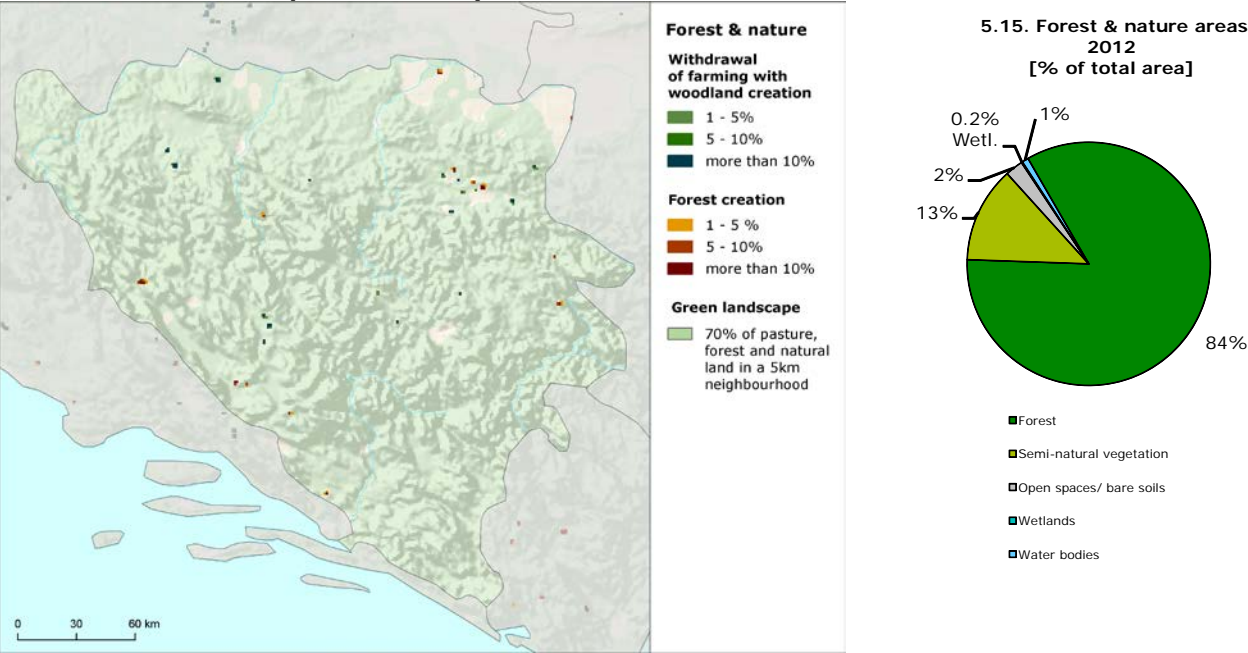
4.13. Development of agricultural areas 2006-2012 – detailed balance [ha]



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

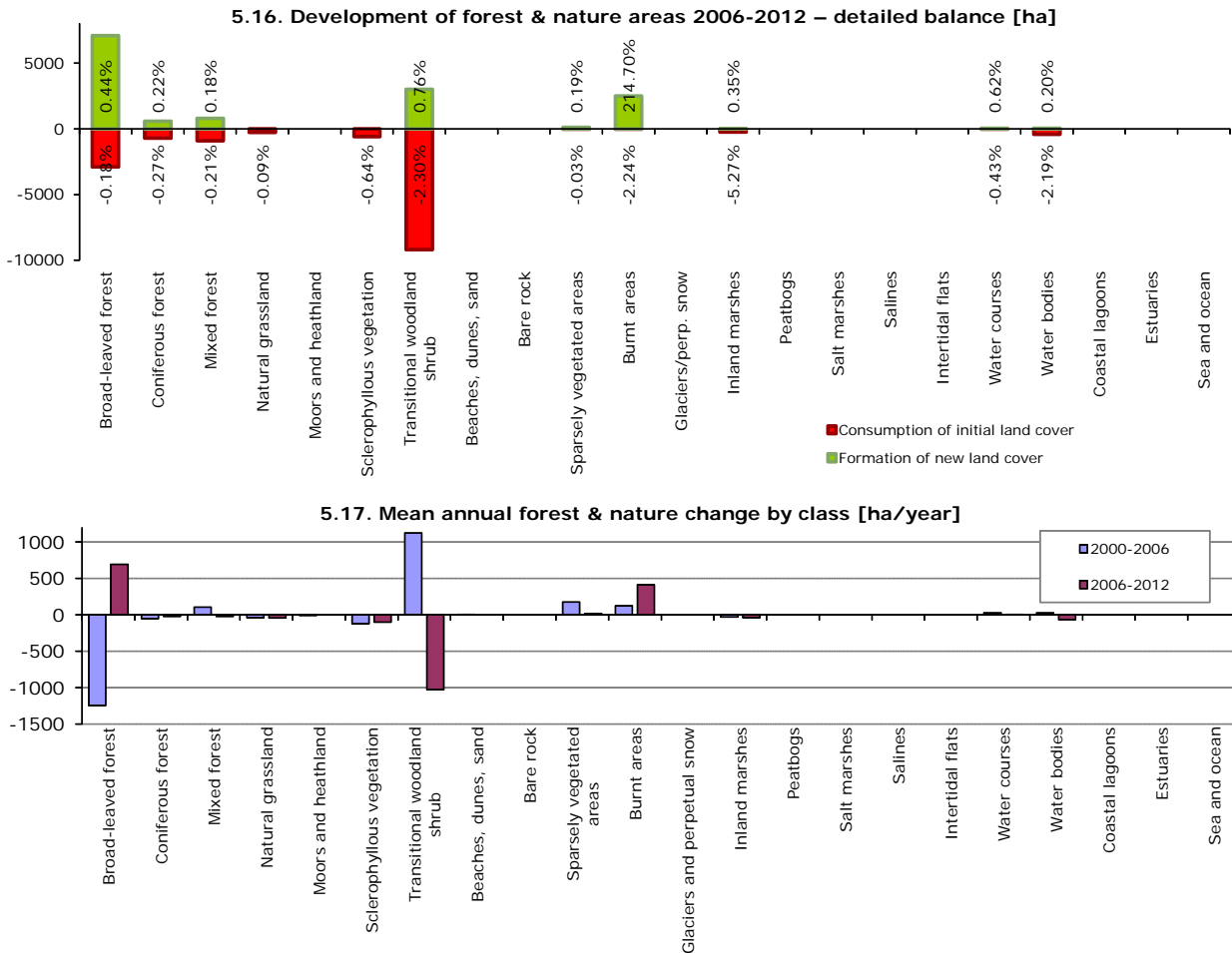


Forest & nature (2006-2012)



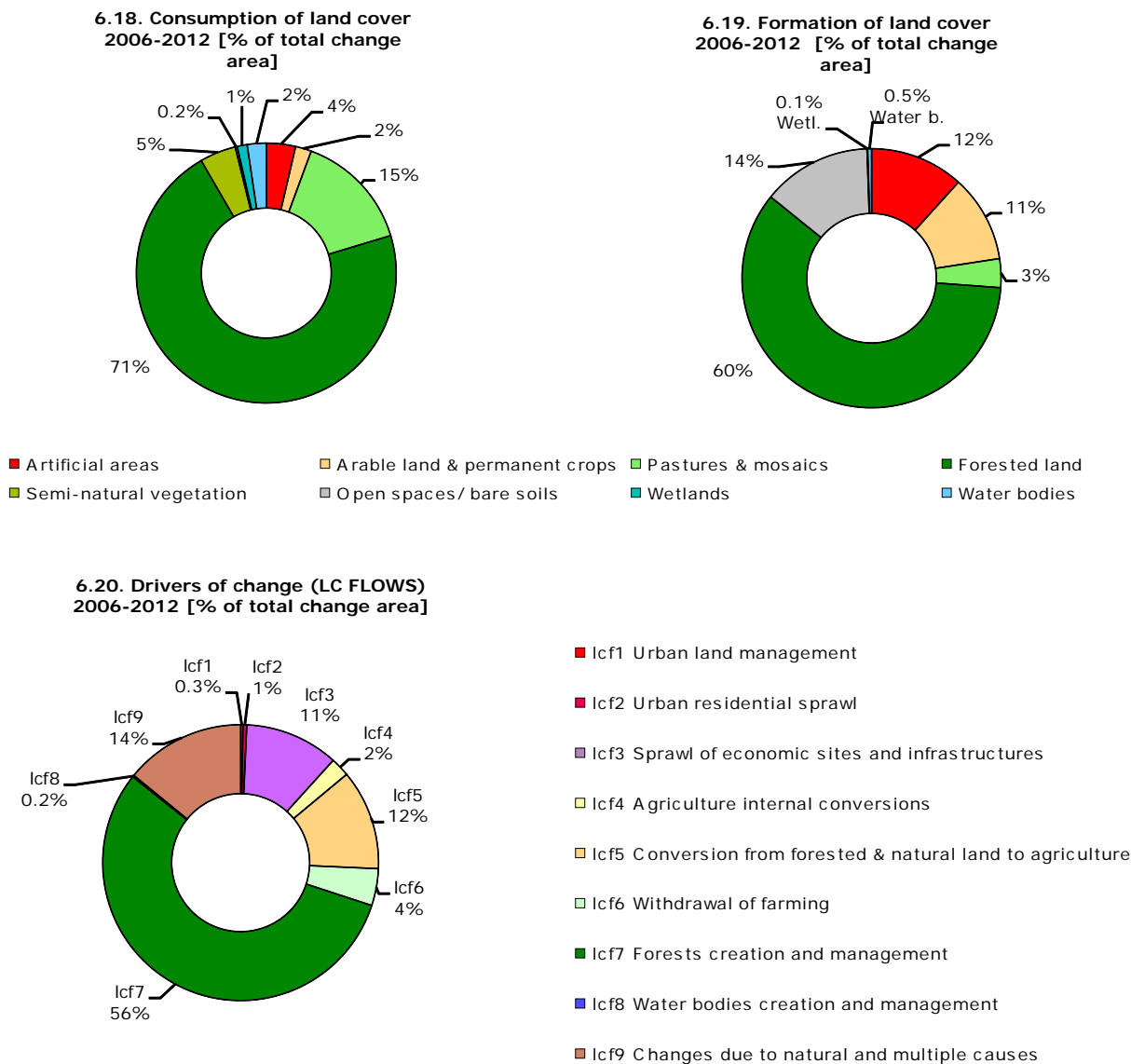
Slowdown of recent felling and transition

Despite significant decrease of its intensity, compared to previous period, forest creation and management remains the most powerful driver of land cover change in the country. As usual in Europe, this flow is represented mostly by forest internal conversions. Their prevailing direction is the conversion from transitional woodland to forest, in 2006-2012. On the other hand, the intensity of opposite recent felling and transition decreased significantly, compared to previous period. Except these forest internal flows, also forests and shrubs fires or conversion from wetlands to agriculture have been observed in the country, in the frame of natural land cover change.



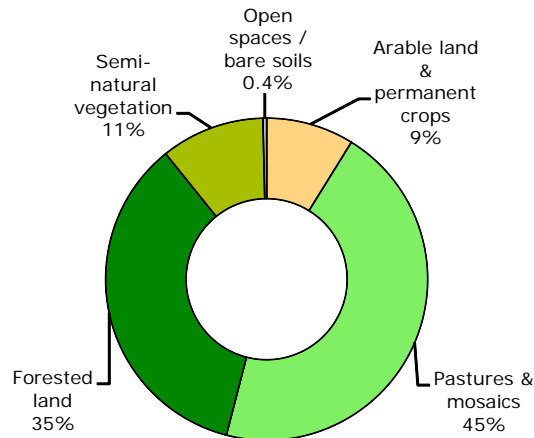
Annex: Land cover flows and trends

Land cover flows 2006-2012

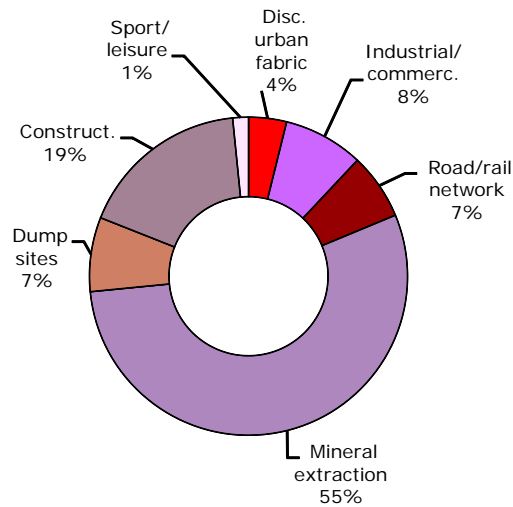


Artificial areas

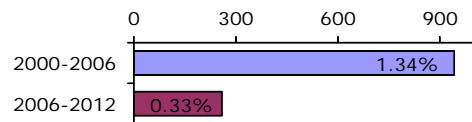
7.21. Consumption by artificial land take
2006-2012 [% of total]



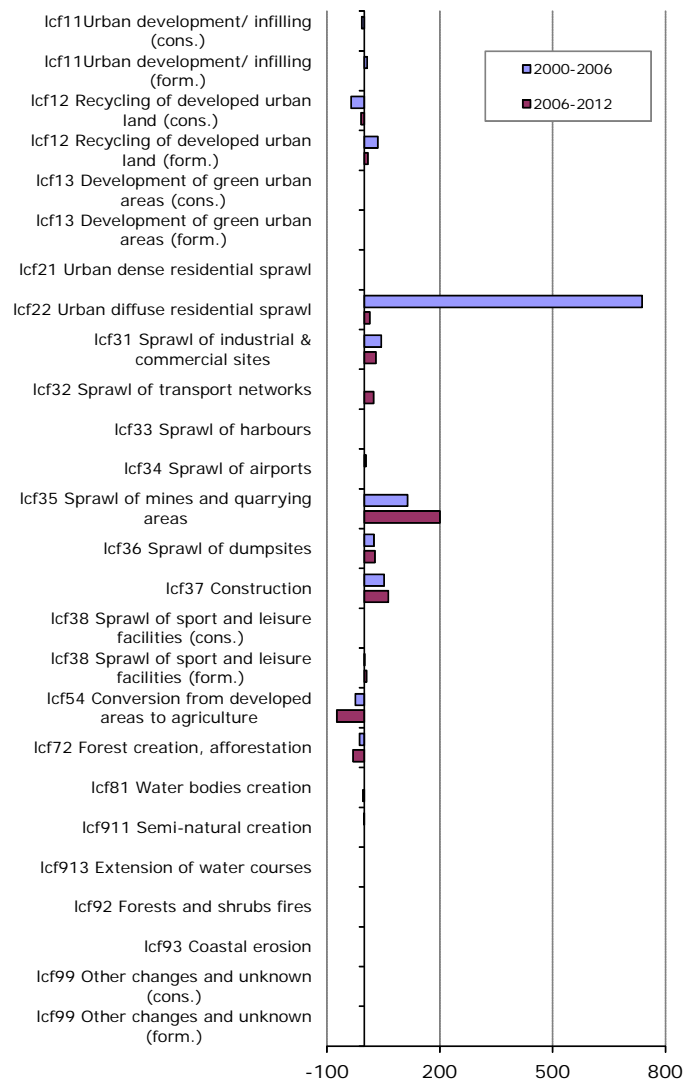
7.22. Formation by artificial land take
2006-2012 [% of total]



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

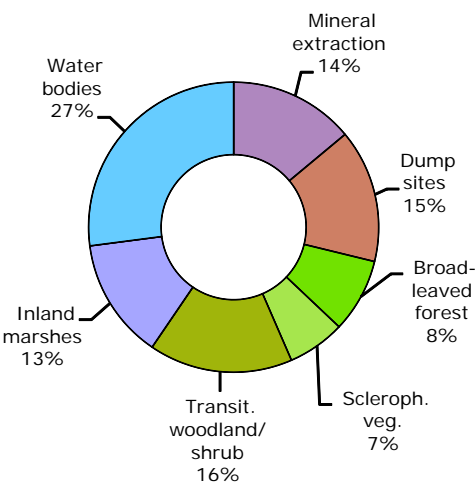


7.24. Artificial development by change drivers
(LC FLOWS) [ha/year]

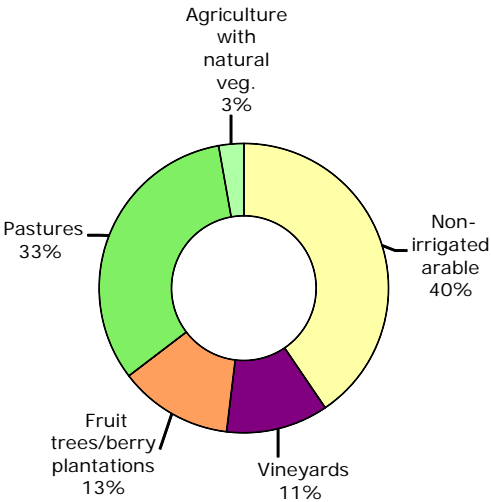


Agriculture

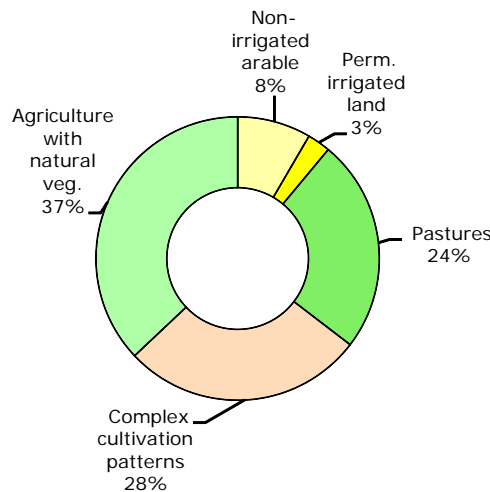
8.25. LC consumed by agriculture 2006-2012 [% of total]



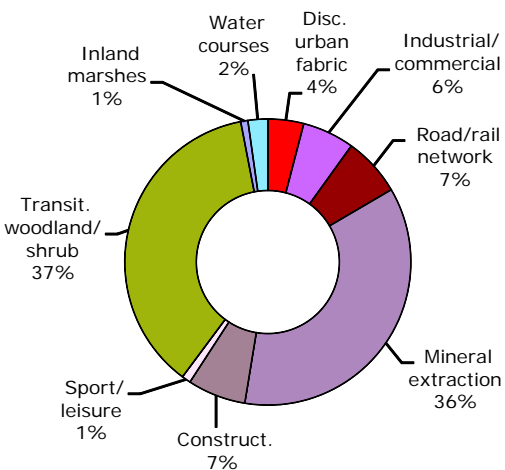
8.26. Formation of agricultural land from non-agriculture 2006-2012 [% of total]



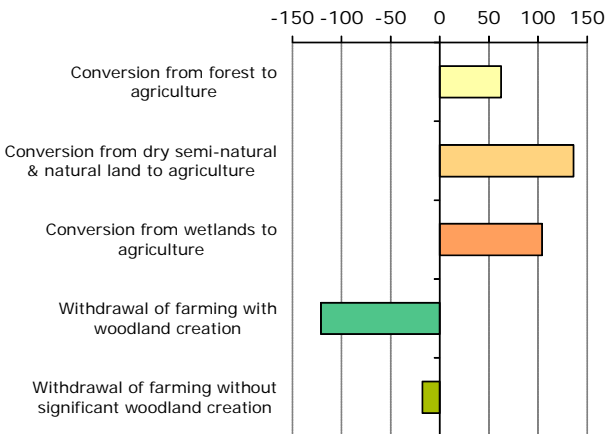
8.27. Consumption of agricultural land by non-agriculture 2006-2012 [% of total]



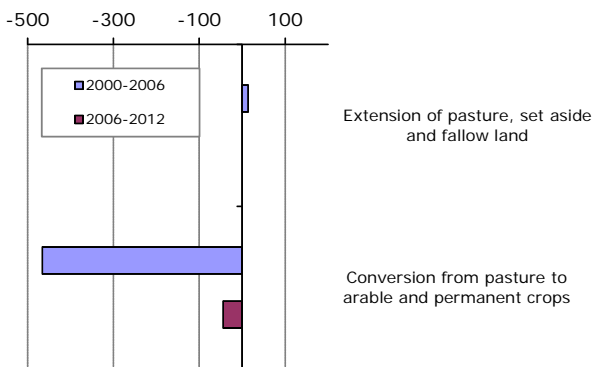
8.28. Formation of non-agricultural land from agriculture 2006-2012 [% of total]



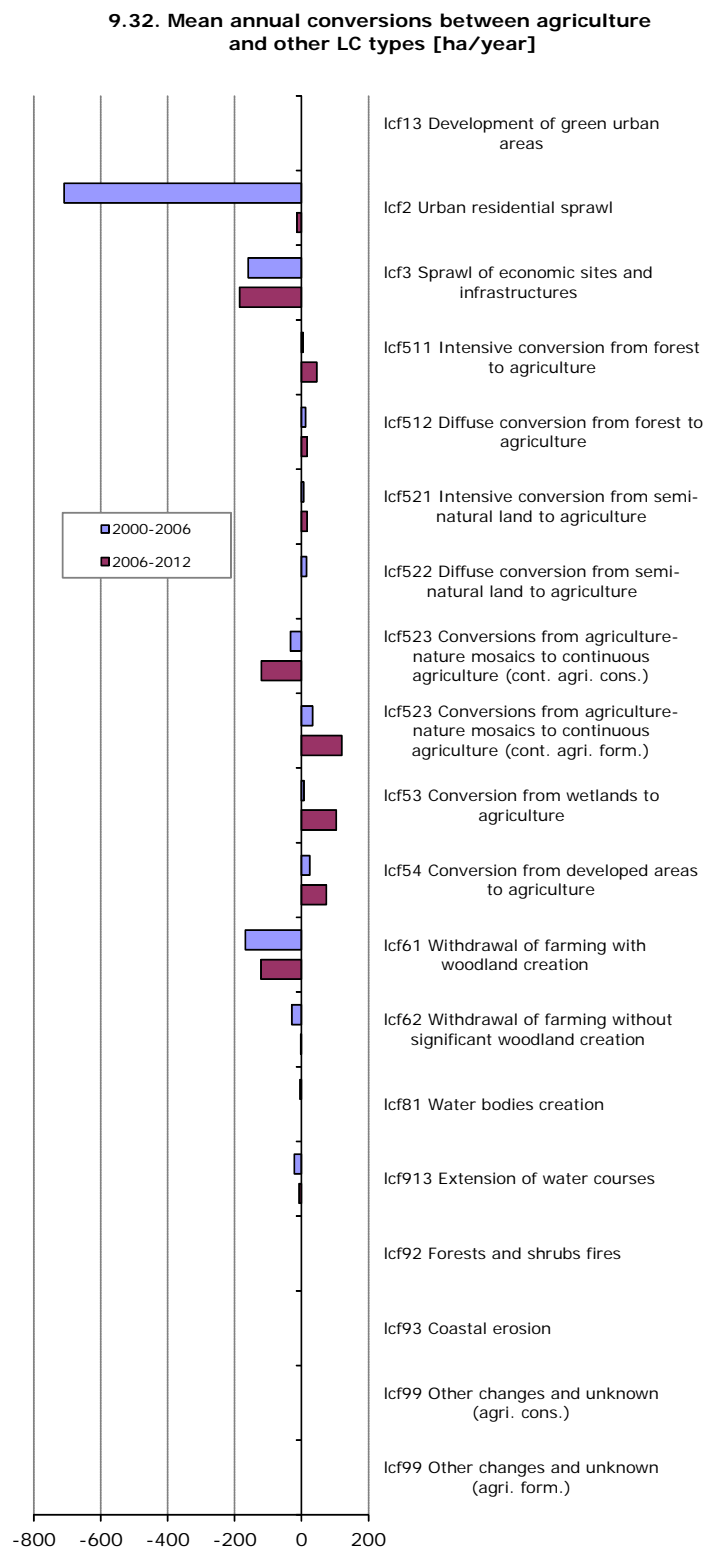
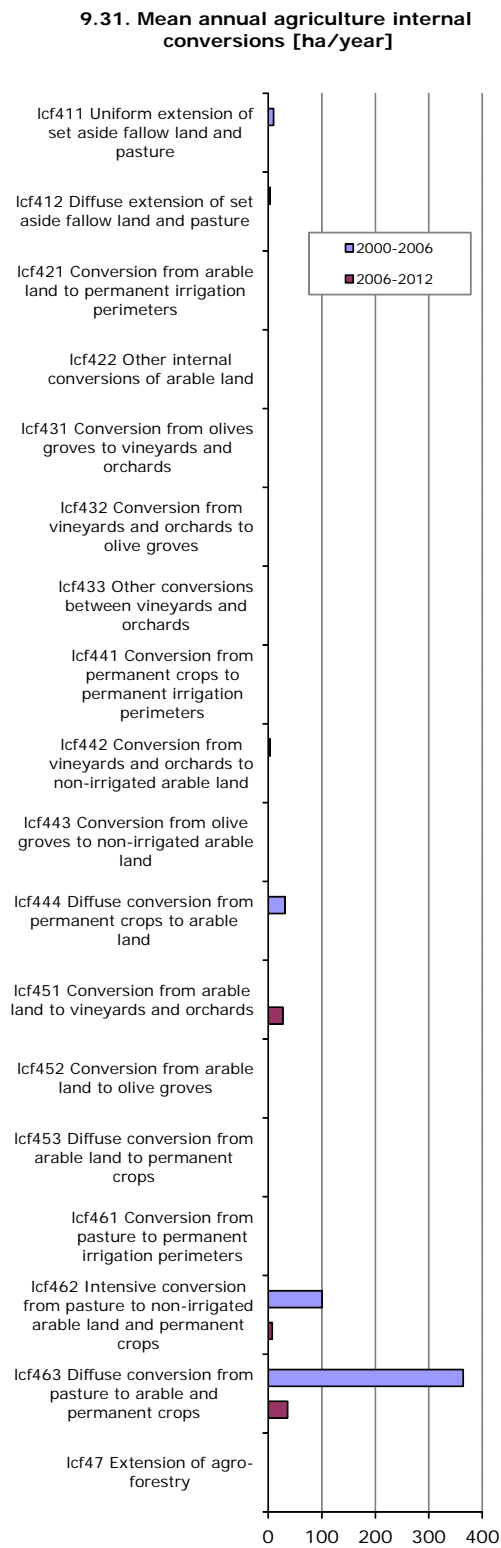
8.29. Main annual conversions between agriculture and forests & semi-natural land 2006-2012 [ha/year]



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

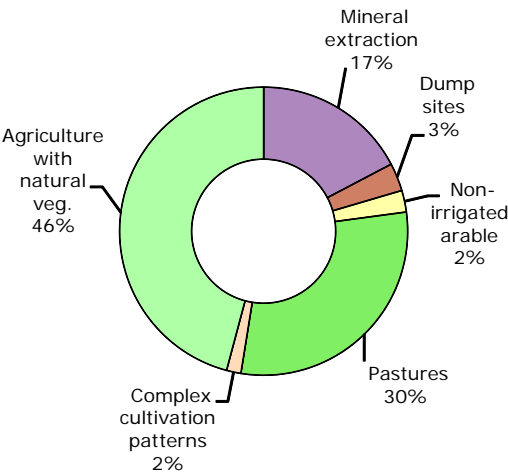


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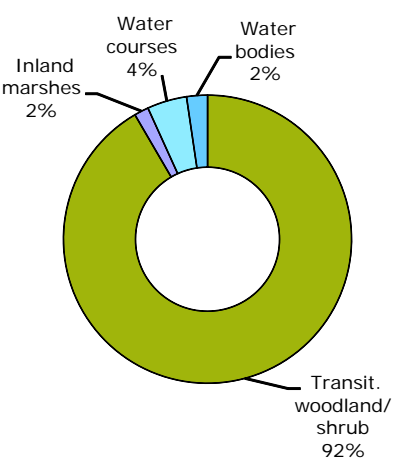


Forest & nature

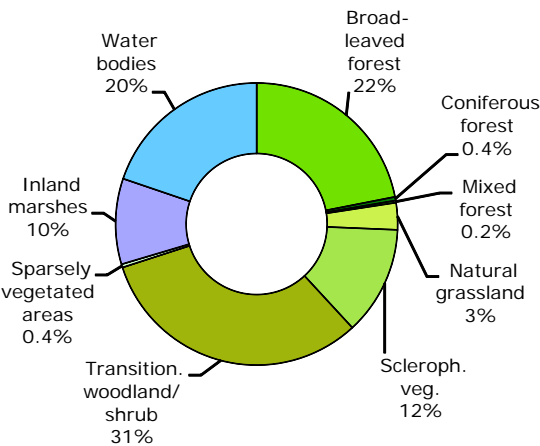
10.33. LC consumed by forest & nature
2006-2012 [% of total]



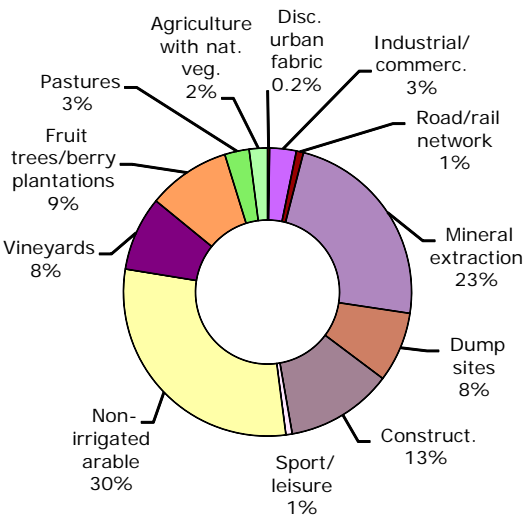
10.34. Formation of forest & nature land
from non-forest /nature 2006-2012
[% of total]



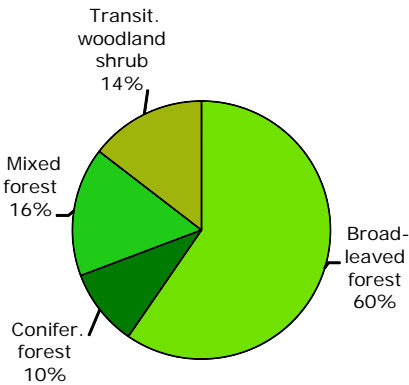
10.35. Consumption of forest & nature land
by non-forest/nature 2006-2012 [% of total]



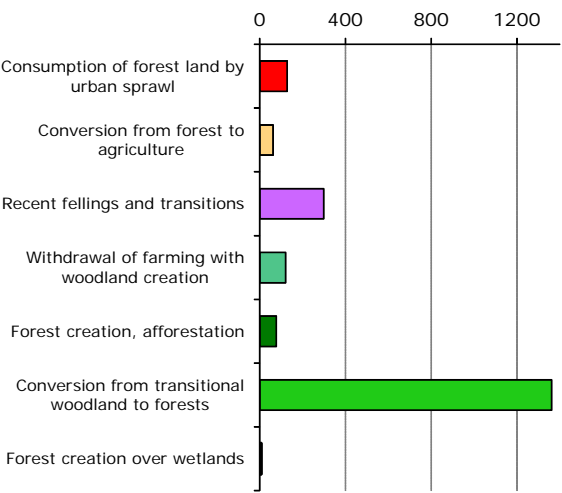
10.36. Formation of non-forest/nature land
from forest & nature 2006-2012 [% of total]



10.37. Forested land 2012
[% of total area]

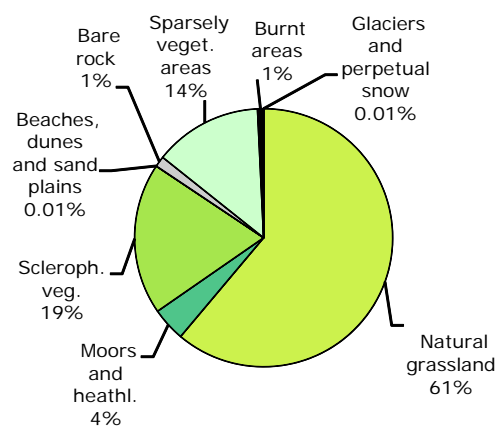


10.38. Main trends in woodland & forests
consumption/formation 2006-2012
[ha/year]

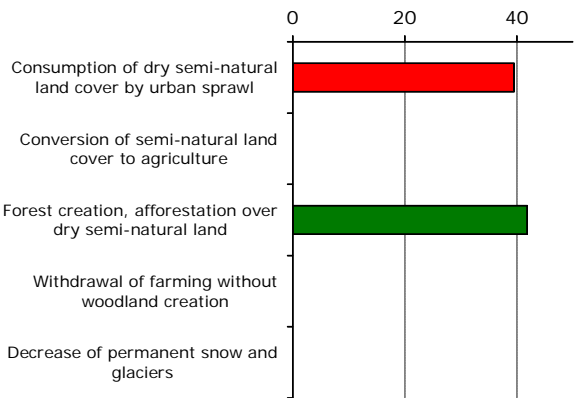


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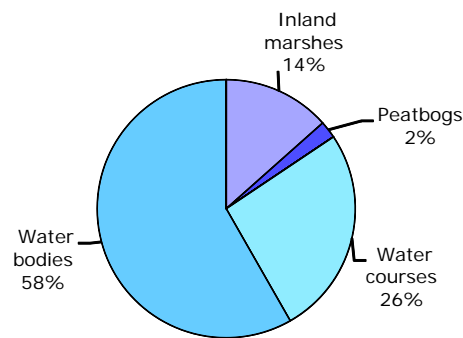
11.39. Dry semi-natural areas 2012
[% of total area]



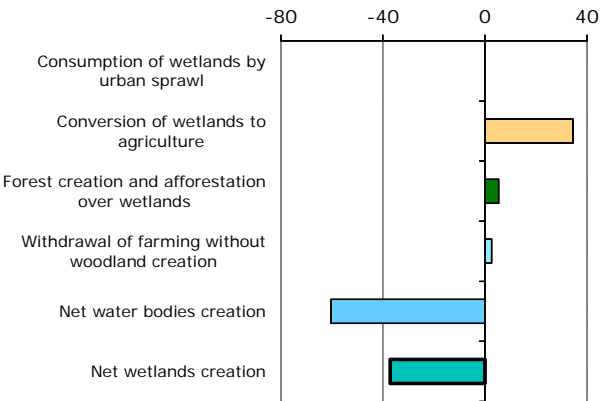
11.40. Main trends in dry semi-natural land consumption/formation 2006-2012
[ha/year]



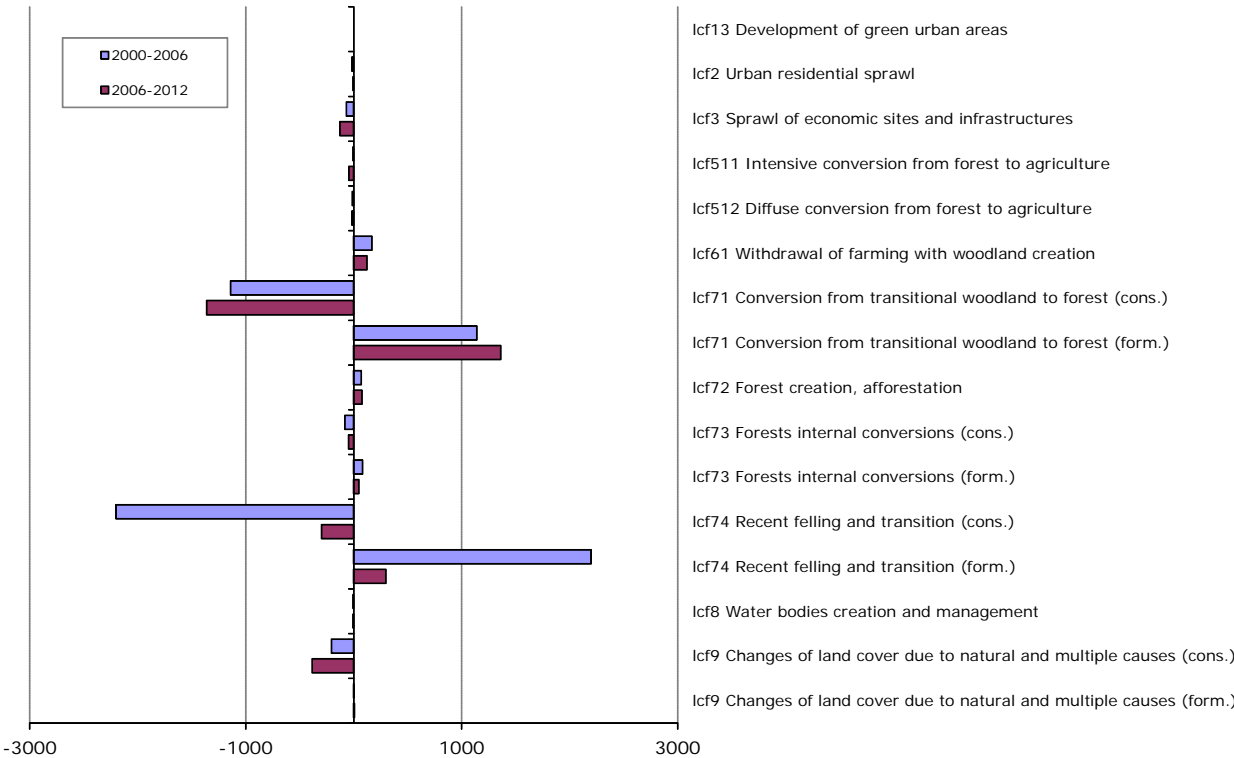
11.41. Wetlands & water 2012
[% of total area]

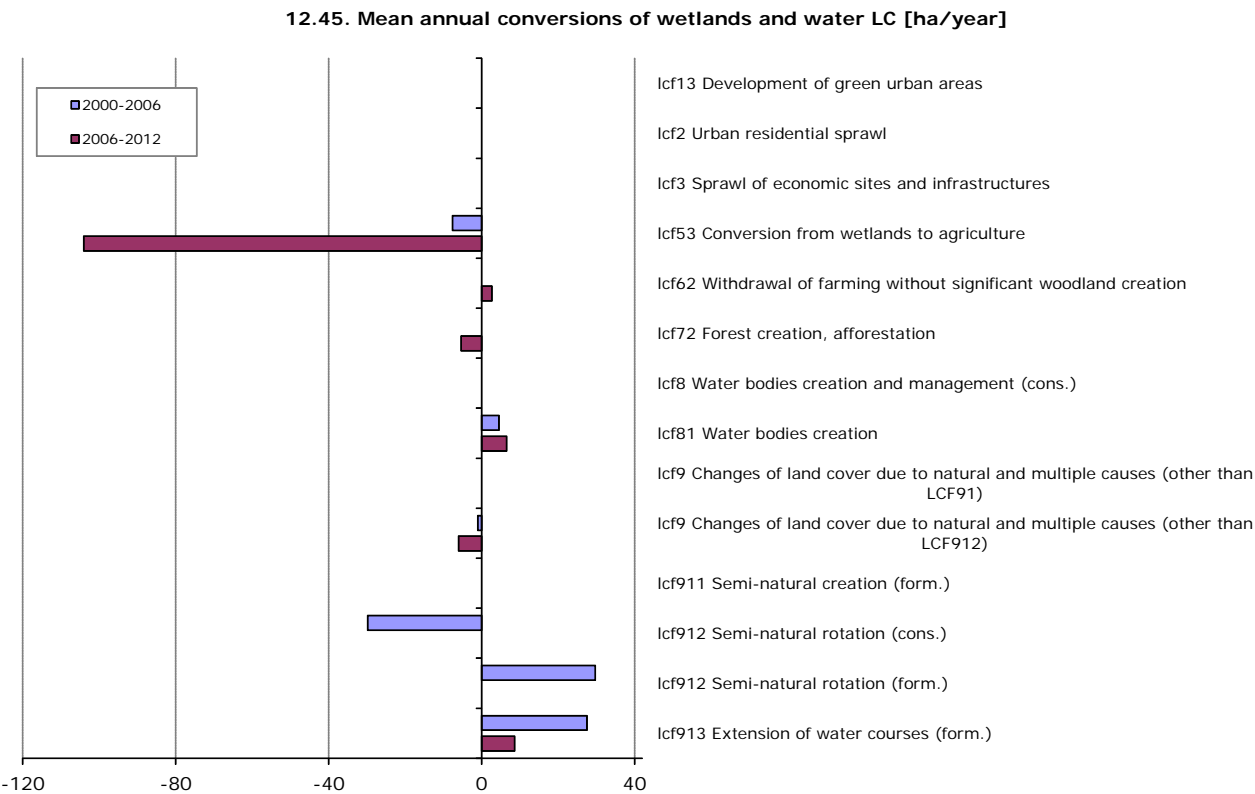
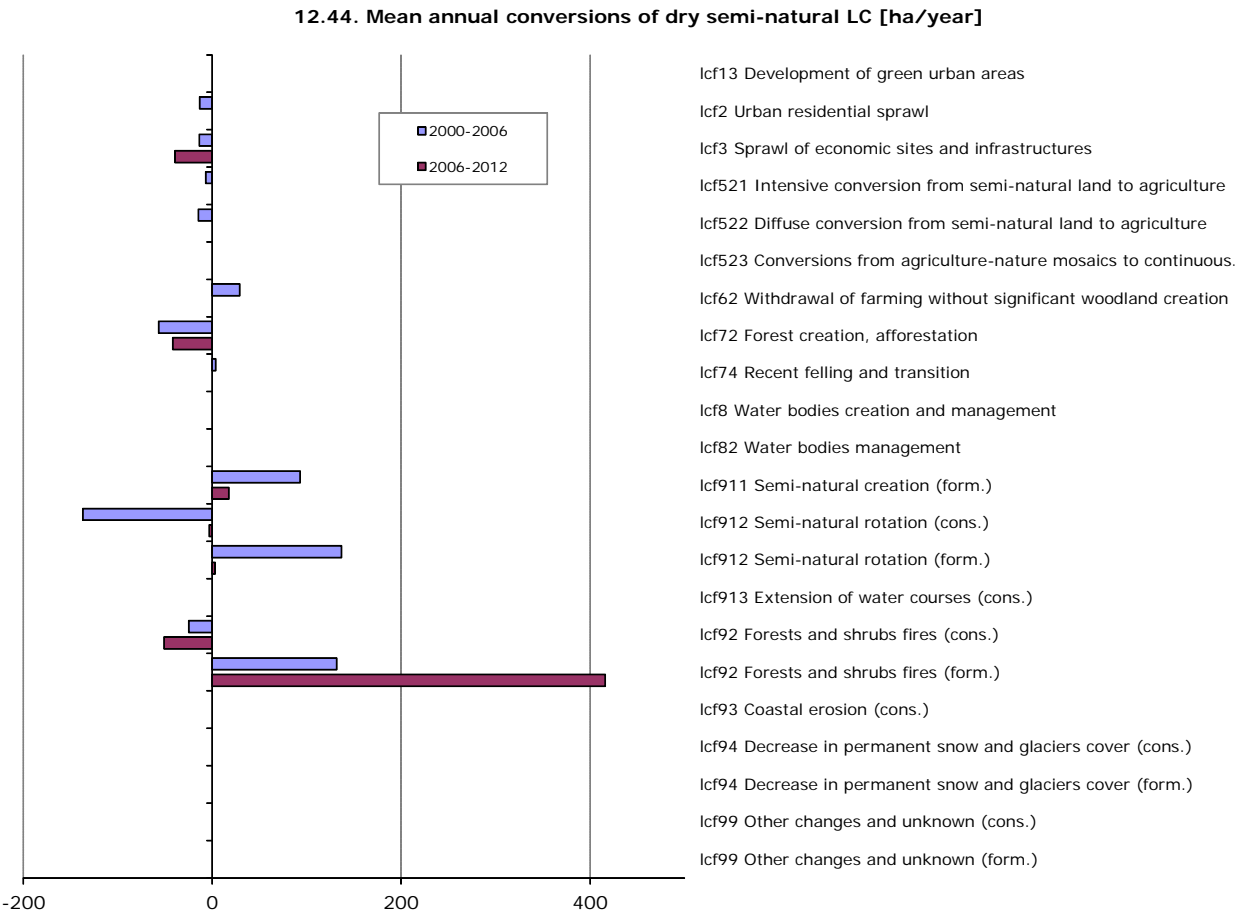


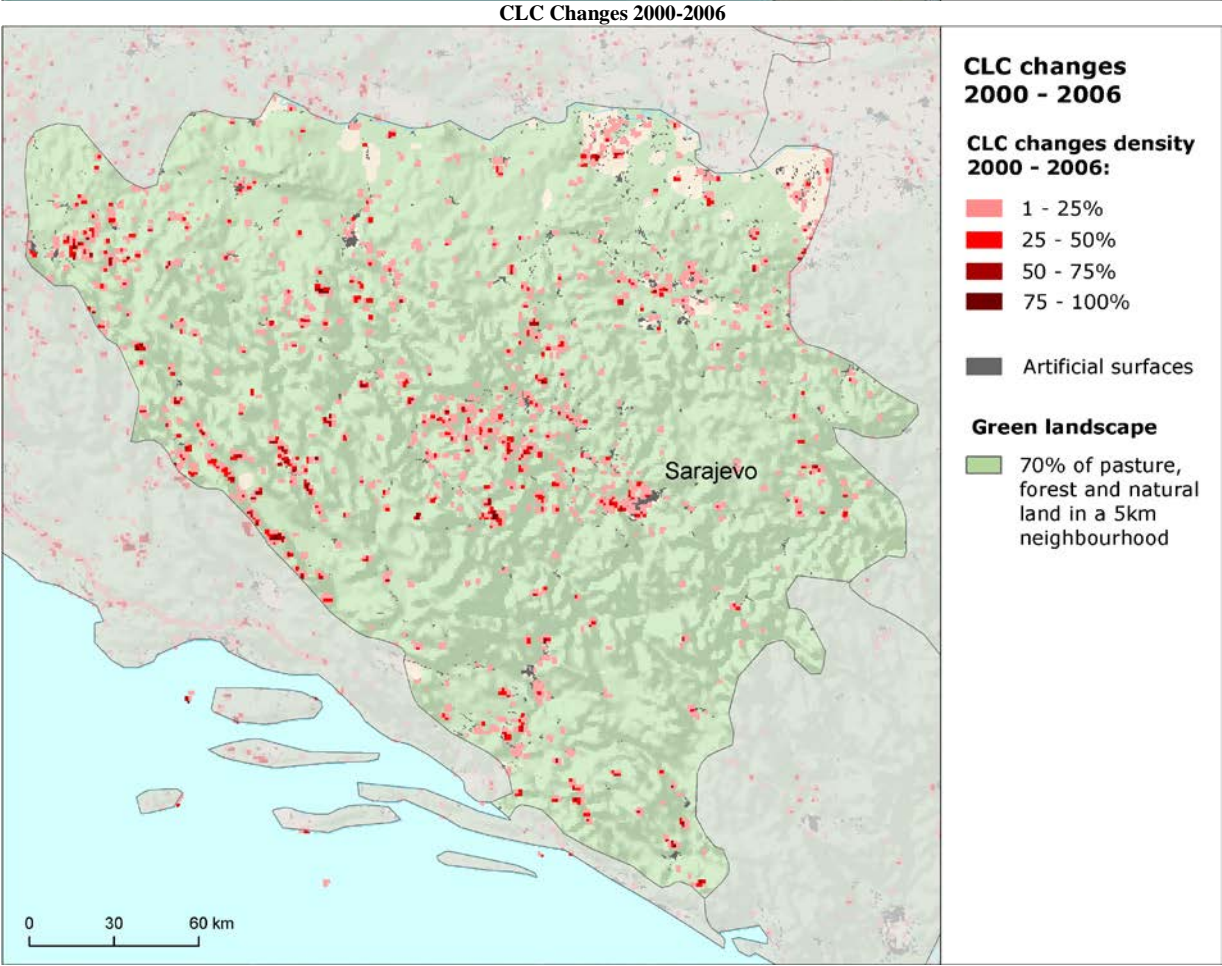
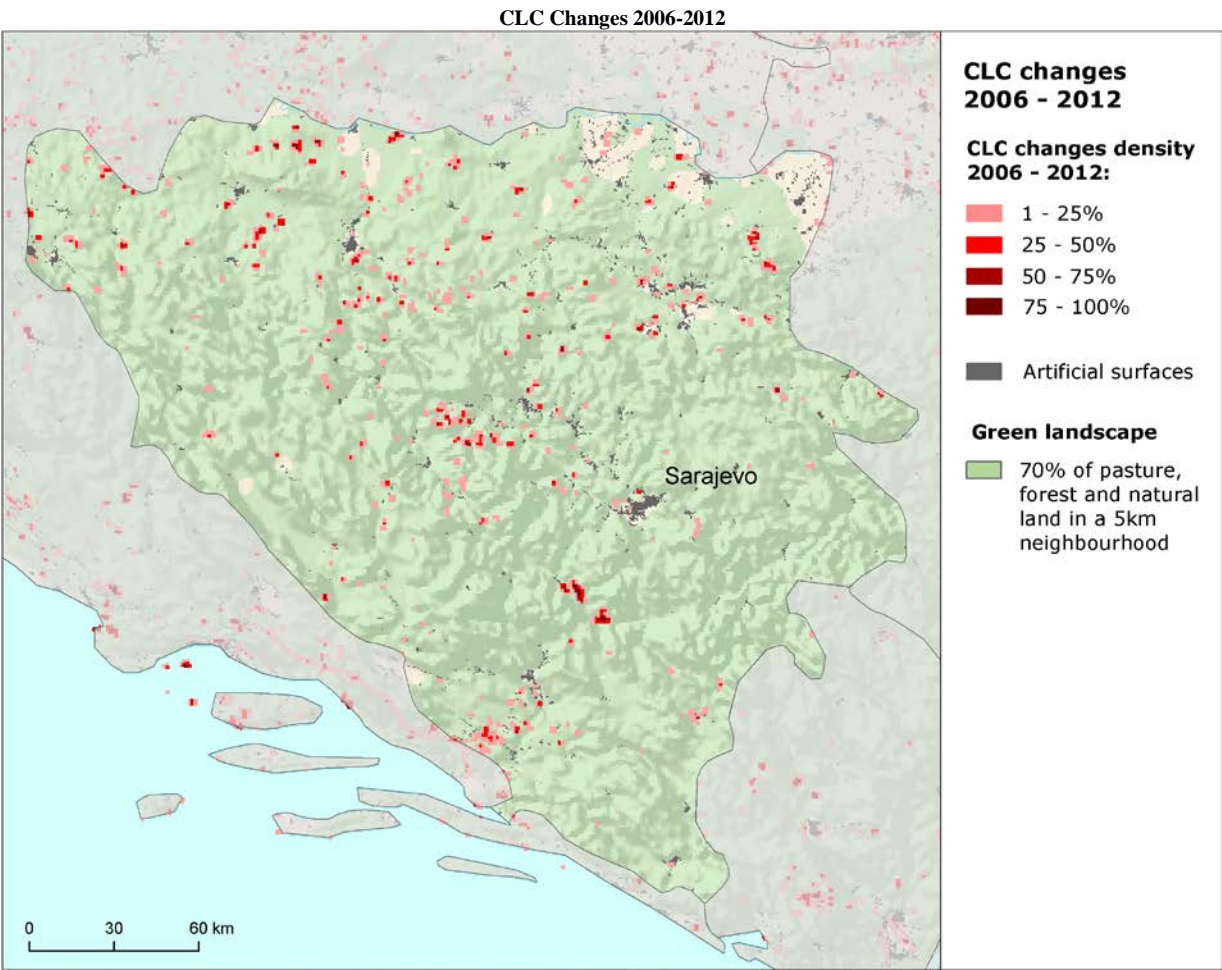
11.42. Main trends in wetlands & water consumption/formation 2006-2012
[ha/year]

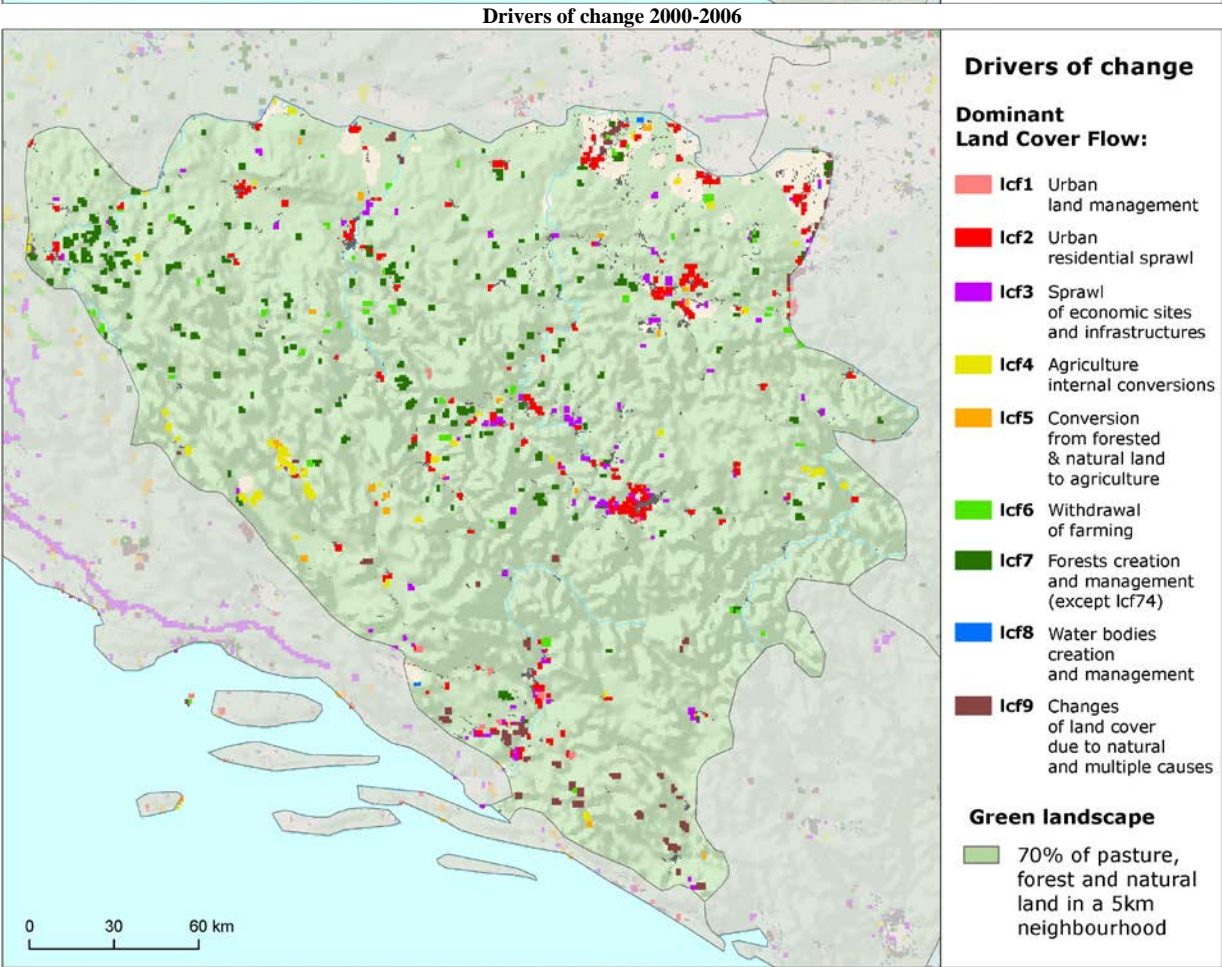
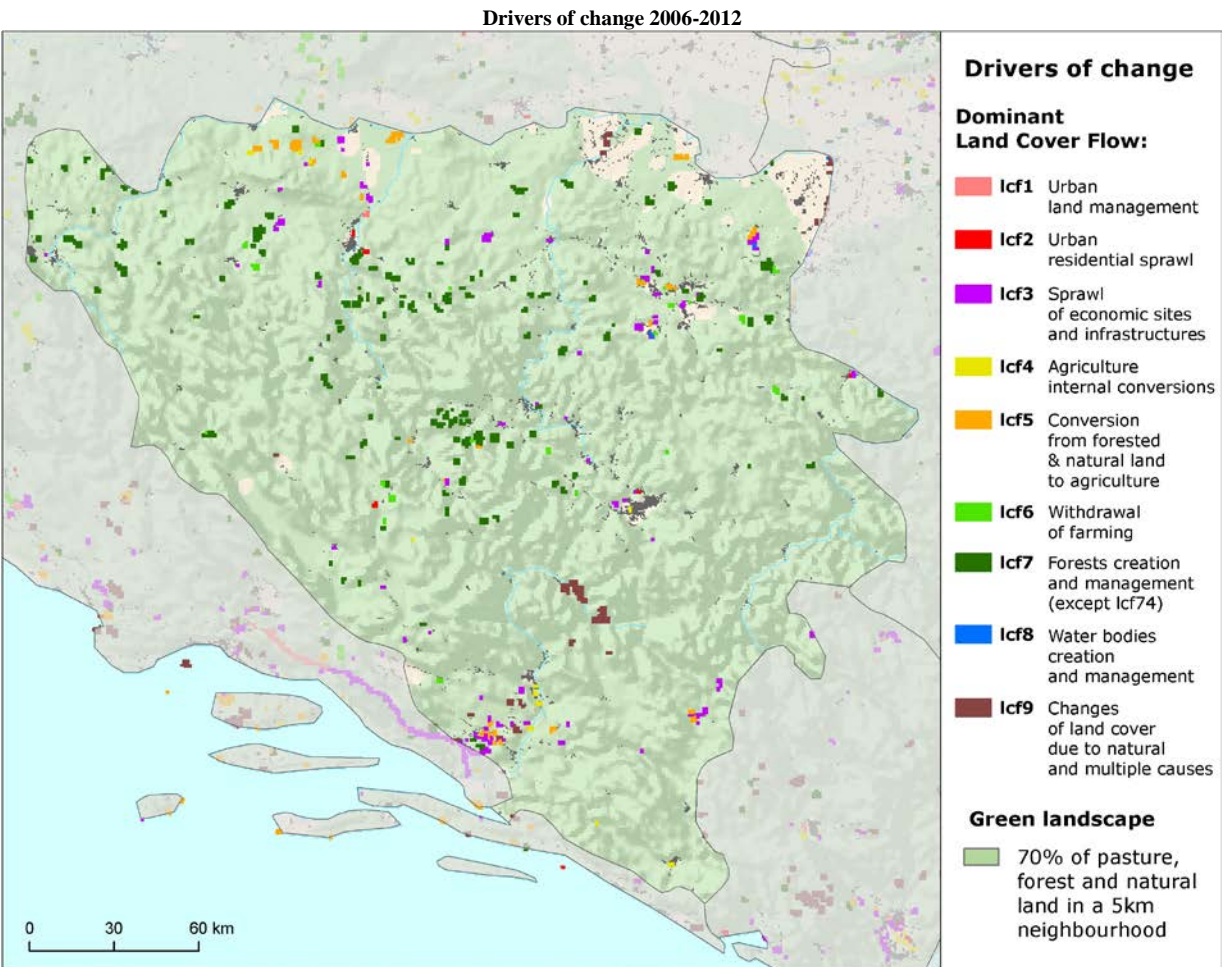


11.43. Mean annual conversions of forest & other woodland
[ha/year]

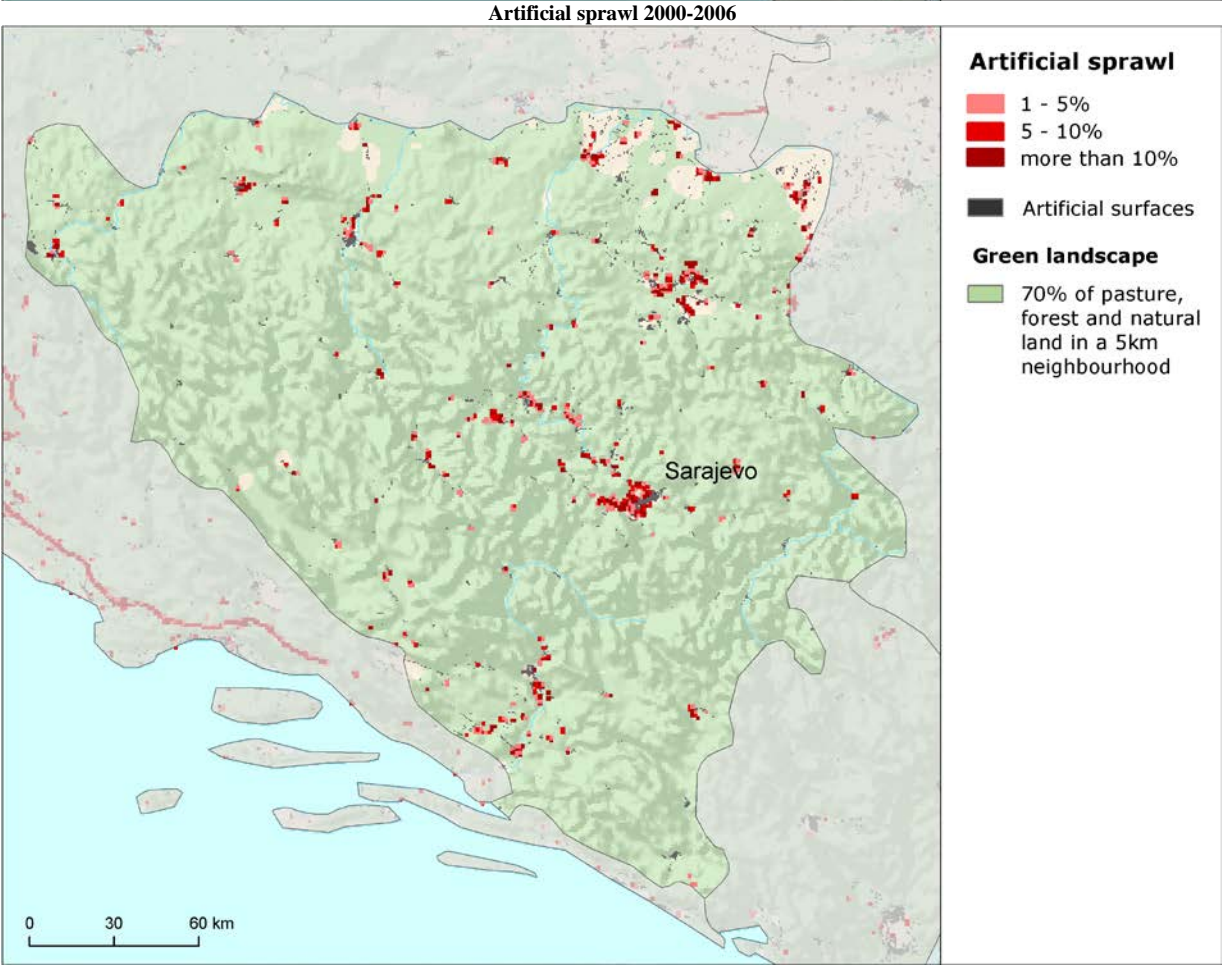
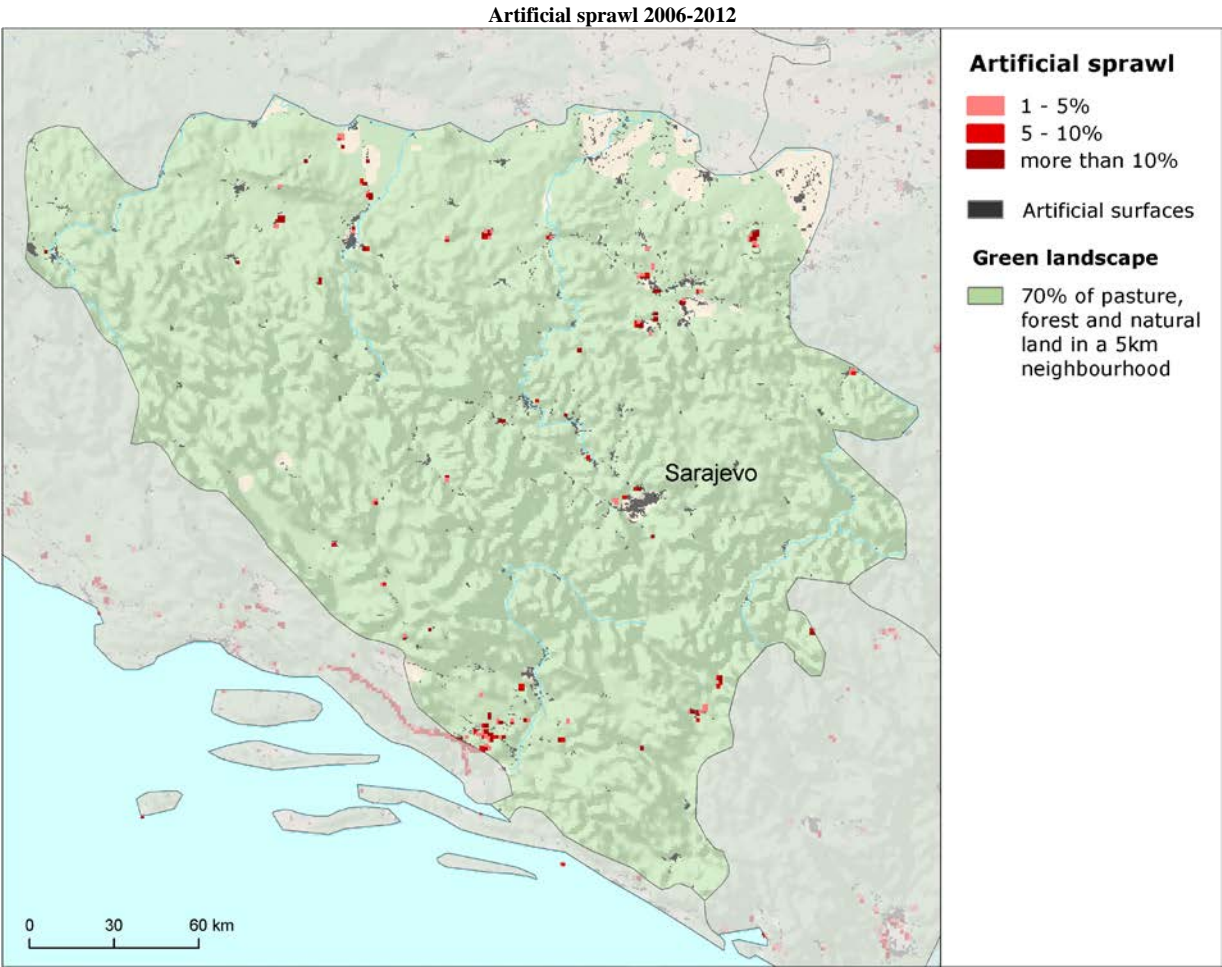








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