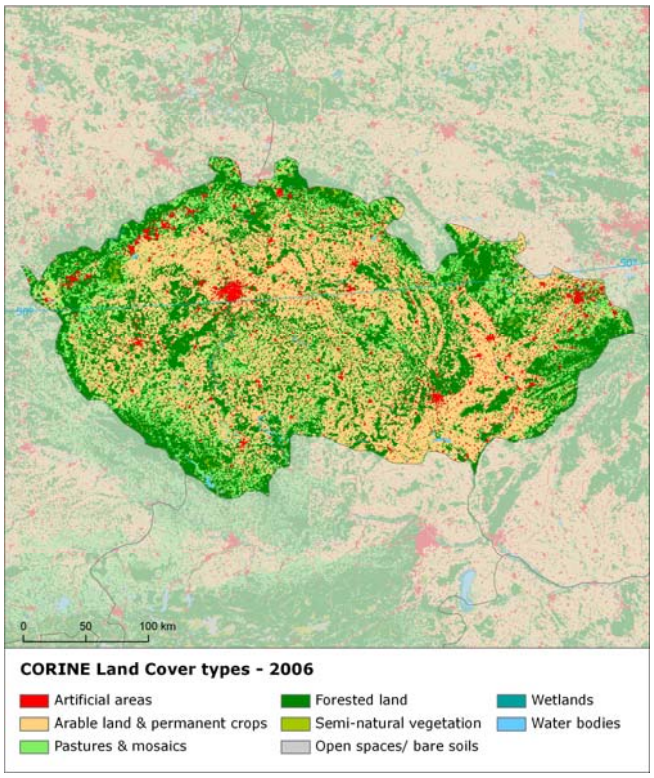
Czech Republic

Land cover 2006

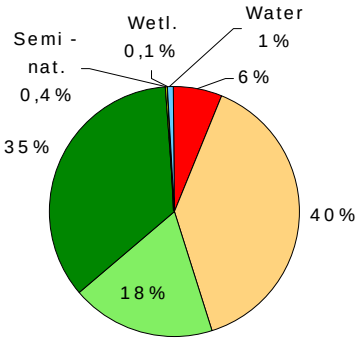
Overview of land cover & change 2000-2006

The landscape in the Czech Republic is dominated by agriculture land (58%) and forest (35%) with artificial areas coverage of 6%. The general landscape seems to be more stabilized as the overall intensity of land cover changes, characterized by total annual land cover change is more than twice lower than in the previous period. Agriculture and forest developments remain the main contributors of land cover changes. However, total turnover of both is also significantly lower.
The main driver of change within agricultural areas remains the internal conversion from arable land to pastures, although the intensity of these change decreased strongly.
On the contrary, intensity of changes due to artificial land development has been almost doubled compared with previous period and it occurs mostly at the expense of agriculture (91%), with largest urban sprawl in surroundings of the capital city Praha and other major cities.

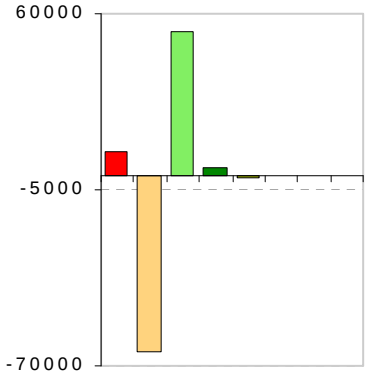


Note: The results presented here are based on a change analysis of 44 land cover types mapped consistently on a 1:100.000 scale across Europe over almost two decades 1990-2006 - see Corine land cover (CLC) programme for details.
Number of years between CLC2000-CLC2006 data for the Czech Republic: 6

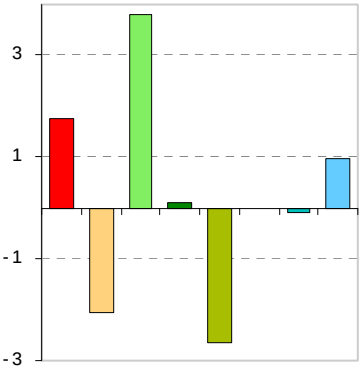
1.1. Land cover 2006 [% of total]



1.2. Net change in land cover 2000-2006 [ha]



1.3. Net change in land cover [% of initial year 2000]



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

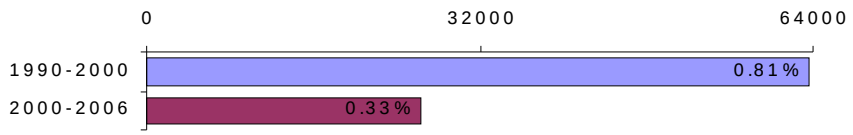
Summary balance table 2000-2006

	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 2000	**4932**	**31219**	**14018**	**27755**	**297**	**3**	**102**	**560**	**78886**
Consumption of initial LC	58	788	123	598	10	0	0	0	1577
Formation of new LC	144	141	654	630	2	0	0	6	1577
Net Formation of LC	**87**	**-647**	**531**	**32**	**-8**	**0**	**0**	**5**	**0**
Net formation as % of initial year	*1.8*	*-2.1*	*3.8*	*0.1*	*-2.6*	*0.0*	*-0.1*	*1.0*	
Total turnover of LC	**202**	**929**	**776**	**1227**	**12**	**0**	**0**	**6**	**3154**
Total turnover as % of initial year	*4.1*	*3.0*	*5.5*	*4.4*	*4.0*	*0.0*	*0.2*	*1.1*	*4.0*
Land cover 2006	**5019**	**30572**	**14549**	**27788**	**289**	**3**	**102**	**566**	**78886**

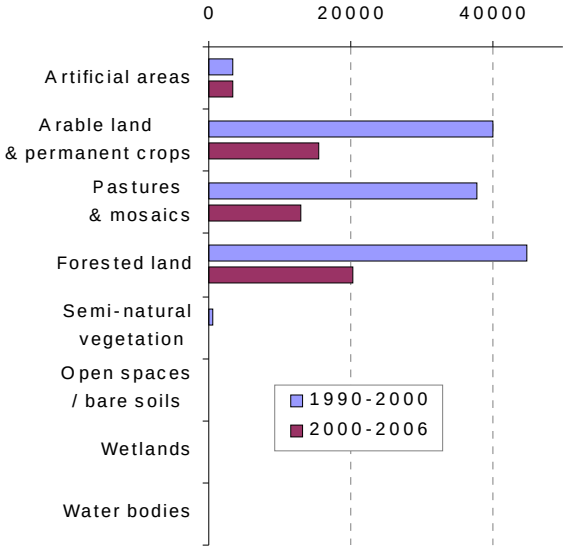
Czech Republic

Land cover trends comparison 1990-2000 vs. 2000-2006

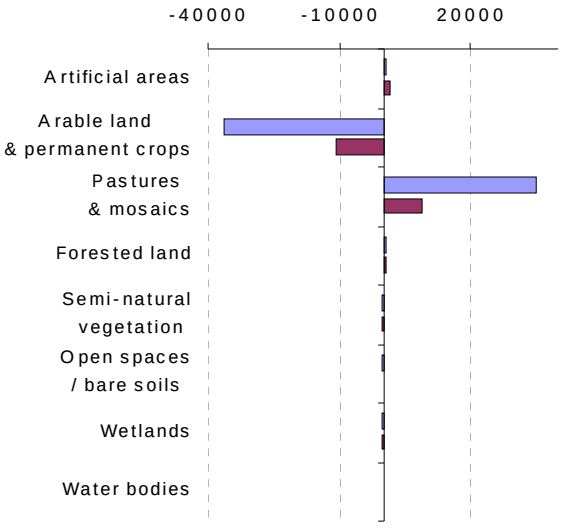
2.4. Annual land cover change [ha/year, % of total area]



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

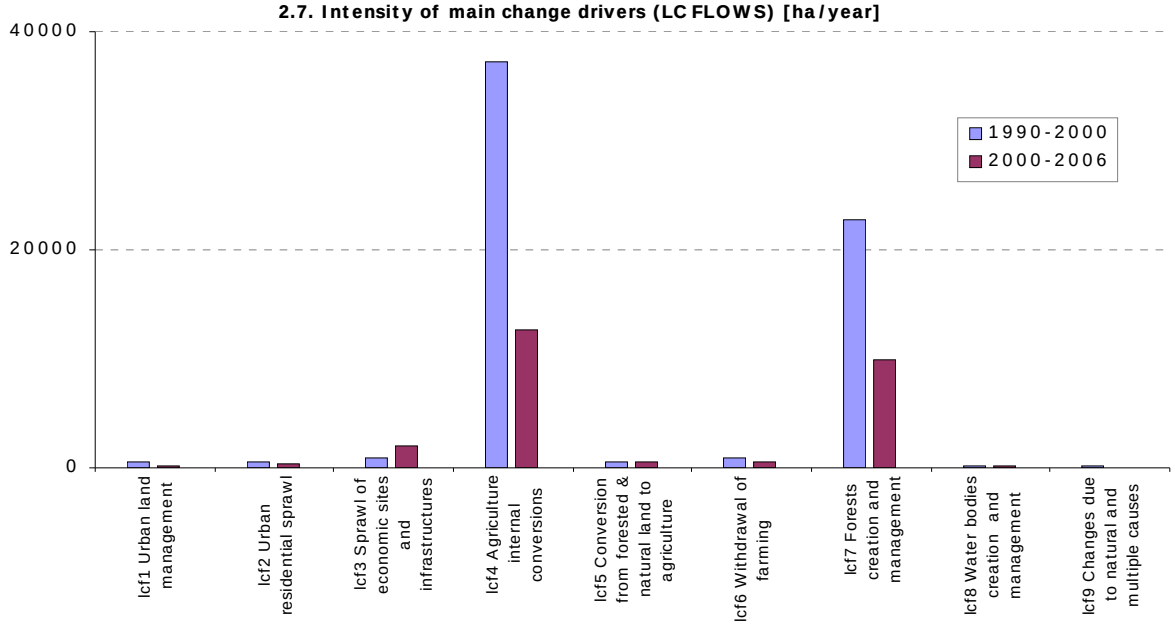


2.6. Net annual change of LC types [ha/year]



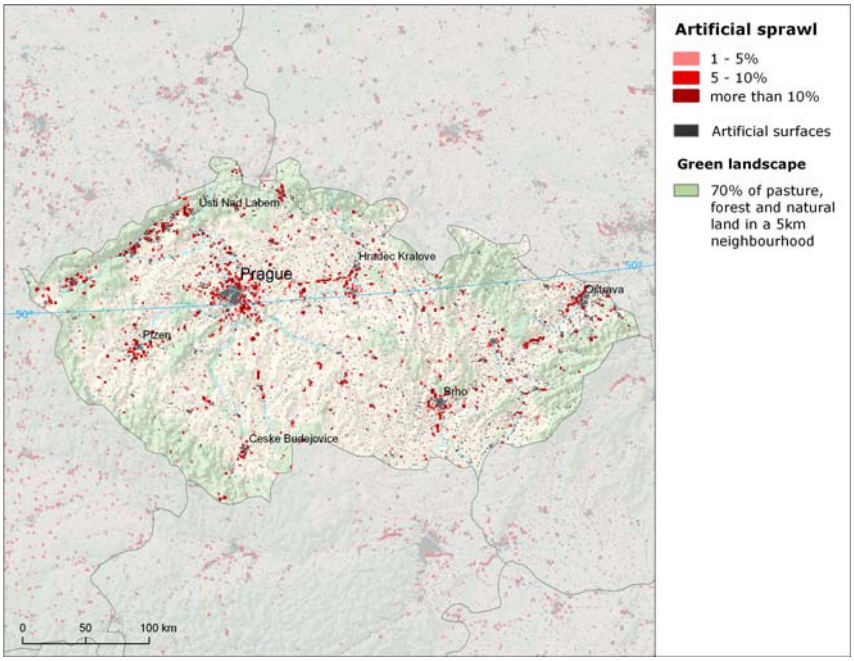
Summary trend figures	1990-2000	2000-2006
Annual land cover change [ha/year]	**63634**	**26280**
Annual land cover change as % of initial year	**0.81%**	**0.33%**
Land uptake by artificial development as mean annual change [ha/year]	1409	2209
Agricultural land uptake by urban and infrastructures development as mean annual change [ha/year]	1354	2052
Net uptake of forests and semi-natural land by agriculture as mean annual change [ha/year]	-591	-526
Net conversion from pasture to arable land and permanent crops as mean annual change [ha/year]	-34662	-9508
Forest & other woodland net formation as mean annual change [ha/year]	535	540
Dry semi-natural land cover net formation as mean annual change [ha/year]	-157	-131
Wetlands & water bodies net formation as mean annual change [ha/year]	203	88

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

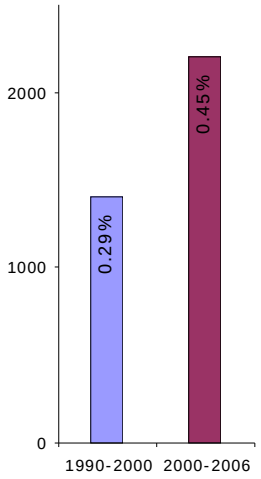


Czech Republic

Artificial areas



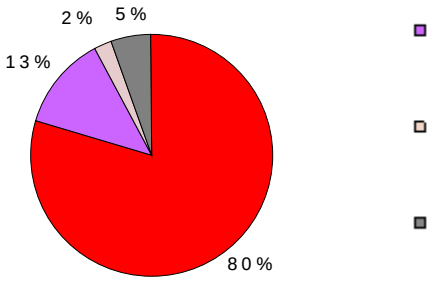
3.8. Artificial land take [ha/year, % of initial year]



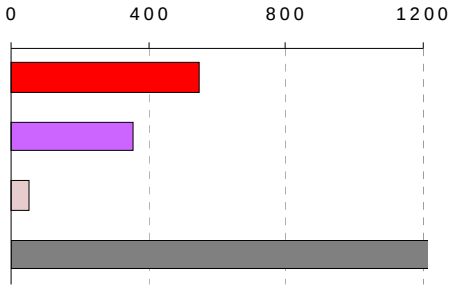
Urban sprawl accelerates, driven by construction

Development of artificial areas, with more than doubled overall intensity compared to the previous period 1990-2000, is driven by accelerated artificial land take represented mainly by development of construction sites (37%) (in contrast to previous period). The other main drivers of the sprawl are commercial/industrial sprawl (16%), urban residential (14%), sprawl of mineral extraction (14%), and sprawl of sport and leisure facilities (11%). The most increased intensity, compared to the previous period, occurs for constructions, together with development of sport and leisure facilities and commercial/industrial sprawl . On the contrary, intensity of residential sprawl has been significantly slowed down after year 2000. Also, although mineral extraction sites contribute to artificial land uptake, in absolute figures their formation is compensated through restoration by conversion to agriculture areas (with prevailing share of pastures). Land uptake occurs mainly at the expense of agricultural land (91%). Spatially, The majority of the urban sprawl in the Czech Republic occurred next to major cities with the capital city Prague at the first position, followed by Brno, Plzen, Ostrava or Hradec Kralove as well as the industrial and mining resorts of the northern Bohemia.

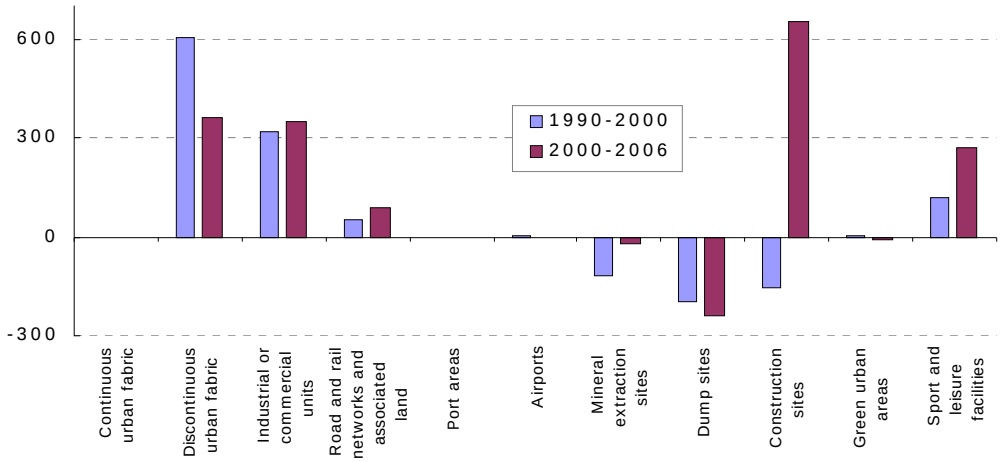
3.9. Artificial surfaces 2006 [% of total area]



3.10. Artificial land take 2000-2006 [ha/year]

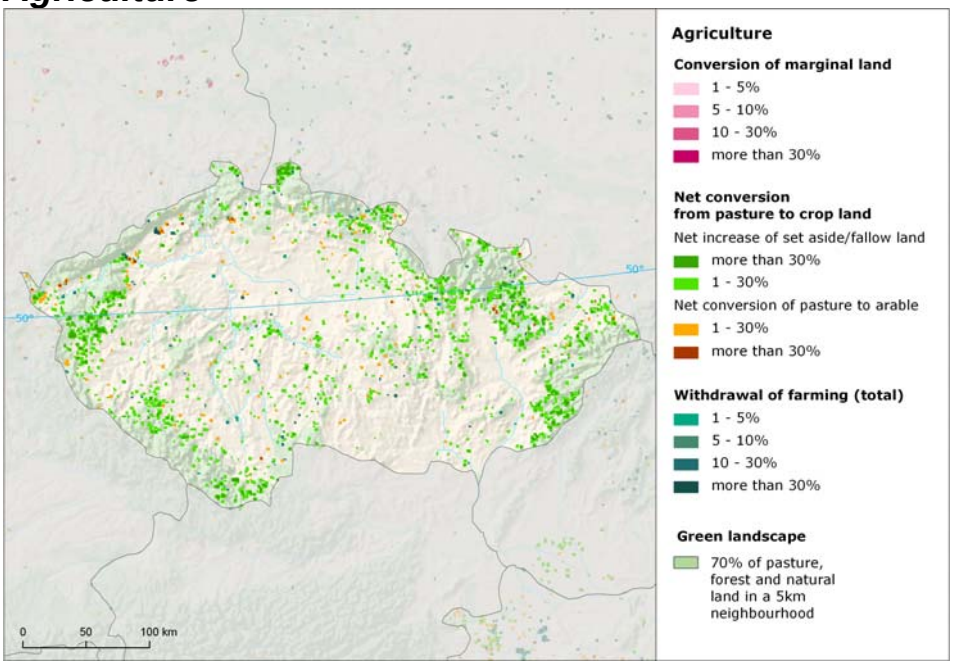


3.11. Mean annual artificial change by class [ha/year]



Czech Republic

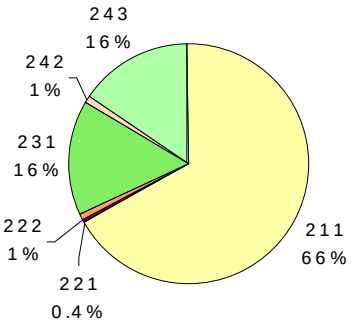
Agriculture



Agricultural management stabilisation, extension of pasture

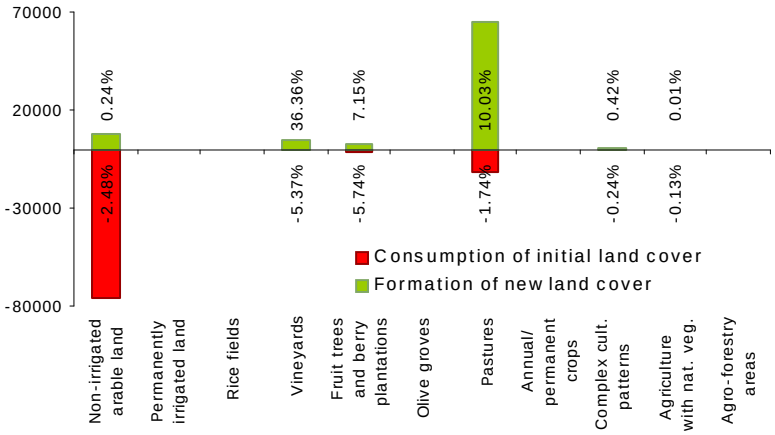
Ownership structure in agriculture land has stabilized, which is reflected by rapid decrease of internal agricultural conversions compared to the previous period 1990-2000, especially between arable land and pastures. Most characteristic agriculture internal conversion remains the one from arable land to pasture supported by governmental subsidies for grassing of arable land and for extensive grassland management. Grassing of arable land is characteristic especially for peripheral uplands regions of Czech Republic – such as foothills of the Bohemian Forest, Jeseniky, Beskydy and uplands in the western Bohemia. External exchange of agricultural surfaces with other land cover types has been represented mostly by consumption of agricultural land by artificial land take with prevailing share of sprawl of economic sites and infrastructures and also by withdrawal of farming with transitional woodland creation. On the contrary, formation of new agricultural areas has been driven by conversion from developed areas (mostly mineral extraction and dump sites) to agriculture (with prevailing share of pastures).

4.12. Agricultural areas 2006 [% of total area]

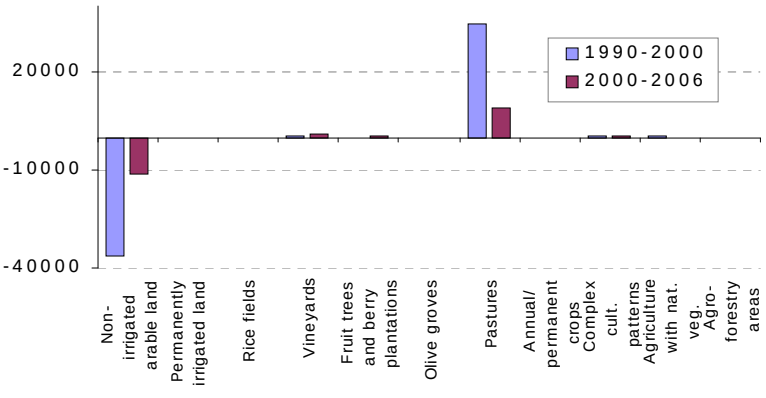


- 211 Non-irrigated arable land
- 212 Permanently irrigated land
- 213 Rice fields
- 221 Vineyards
- 222 Fruit trees and berry plantations
- 223 Olive groves
- 231 Pastures
- 241 Annual crops associated with permanent crops
- 242 Complex cultivation patterns
- 243 Agriculture land with significant areas of natural vegetation
- 244 Agro-forestry areas

4.13. Development of agricultural areas 2000-2006 – detailed balance [ha]

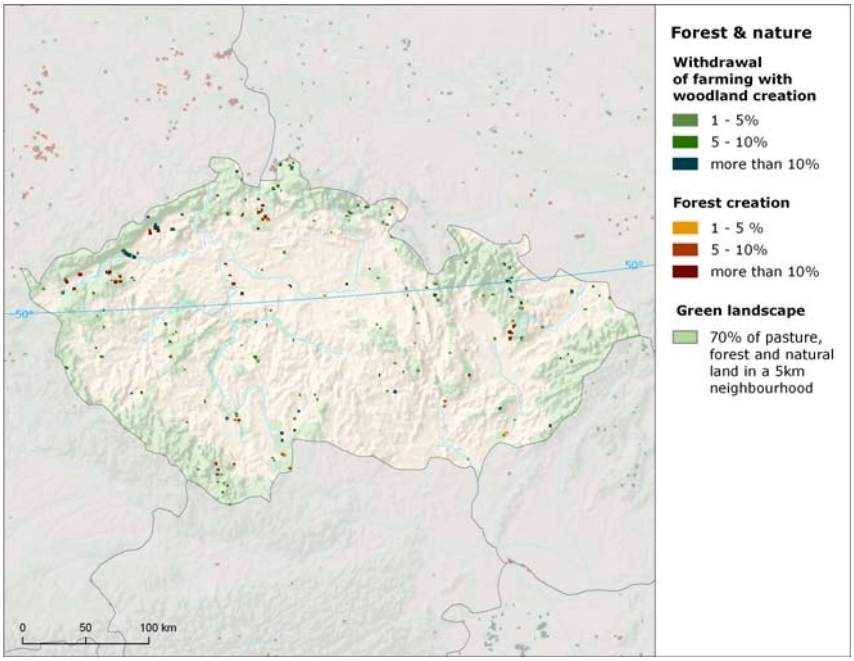


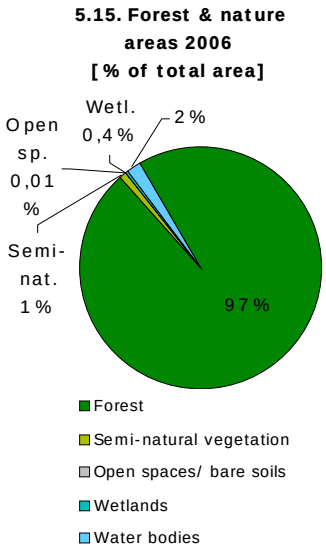
4.14. Mean annual agricultural change by class [ha/year]



Czech Republic

Forest & nature

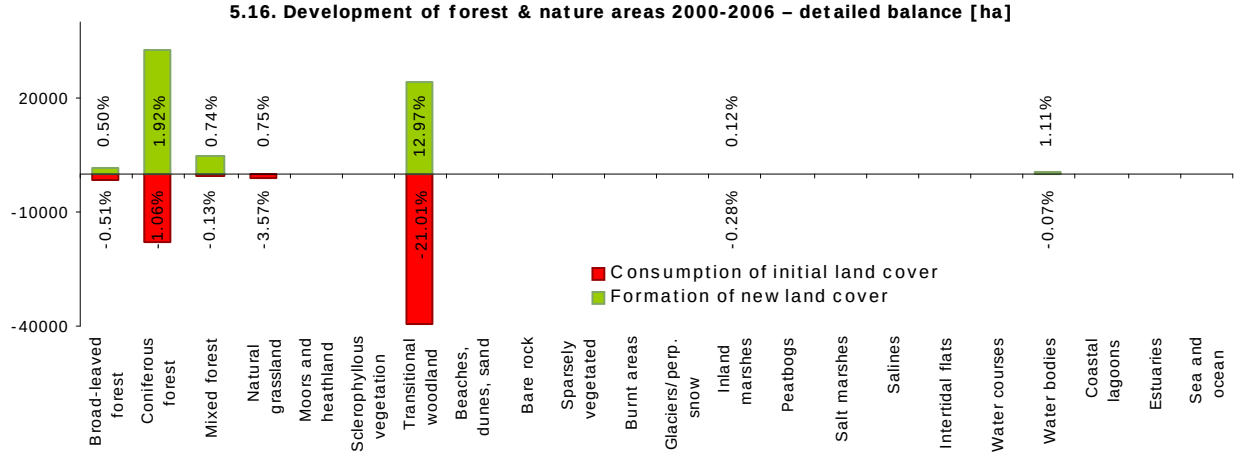




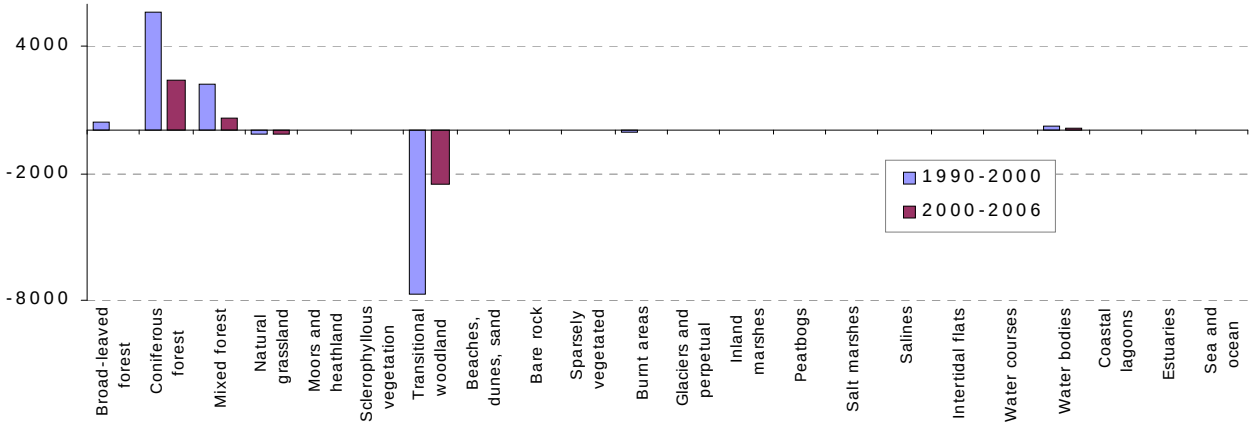
Slow down of internal natural landscape development

During the period the forest territory remains stable, with only slight increase in the amount of forest area through accelerated withdrawal of farming with woodland creation, driven by the policy to support changes of agricultural land to forest. On the contrary, forested land has been consumed by sprawl of mineral extraction, construction and dump sites.
Internal development of natural land cover has been characterized by significant slowdown of overall change dynamics. Despite of significant decrease of intensity compared to the previous period, recent felling and transition together with opposite conversion from transitional woodland to forest remain the dominant drivers in forest conversions. The intensity of internal exchange between forested and dry semi-natural land, represented by forest creation over natural grasslands, decreased to a half compared to the previous period.
Also formation of water bodies, supported by the policy of subsidising the creation or re-creation of ponds, has continued with decreasing intensity compared to the period 1990/2000.

5.16. Development of forest & nature areas 2000-2006 – detailed balance [ha]



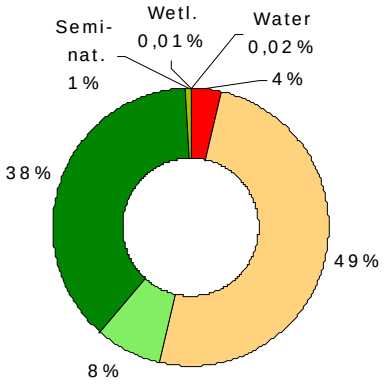
5.17. Mean annual forest & nature change by class [ha/year]



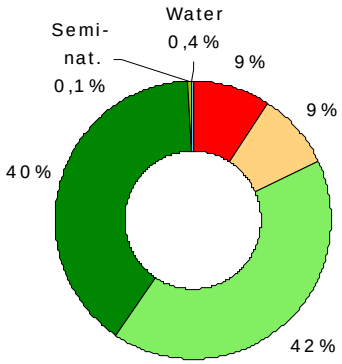
Annex: Land cover flows and trends

Land cover flows 2000-2006

6.18. Consumption of land cover 2000-2006 [% of total change area]

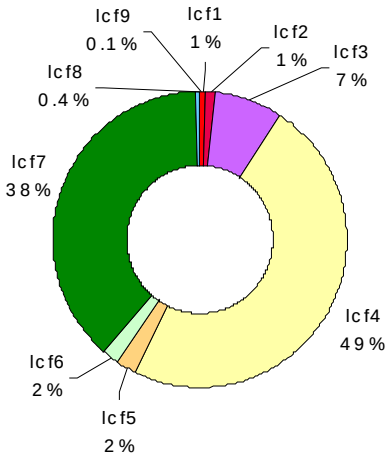


6.19. Formation of land cover 2000-2006 [% of total change area]



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

6.20. Drivers of change (LC FLOWS) 2000-2006 [% of total change area]

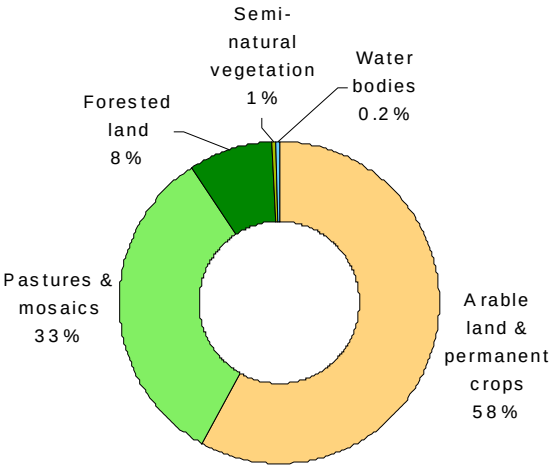


- lcf1 Urban land management
- lcf2 Urban residential sprawl
- lcf3 Sprawl of economic sites and infrastructures
- lcf4 Agriculture internal conversions
- lcf5 Conversion from forested & natural land to agriculture
- lcf6 Withdrawal of farming
- lcf7 Forests creation and management
- lcf8 Water bodies creation and management
- lcf9 Changes due to natural and multiple causes

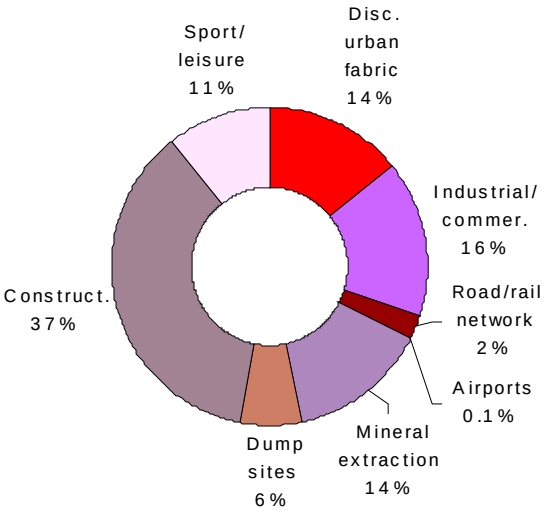
Czech Republic

Artificial areas

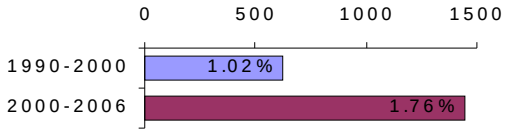
7.21. Consumption by artificial land take 2000-2006 [% of total]



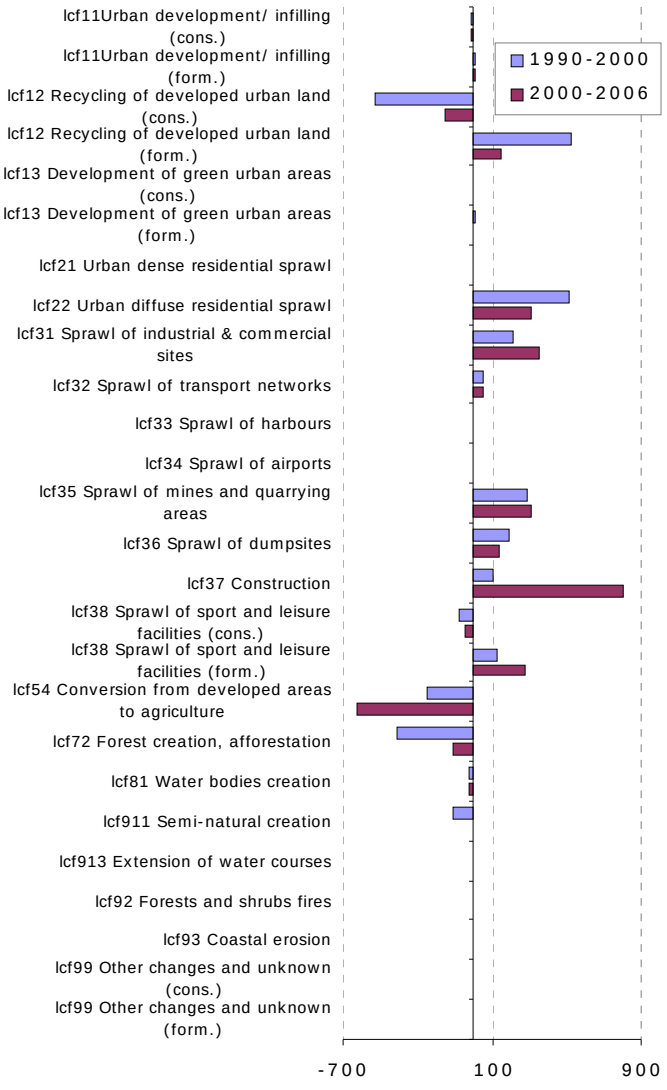
7.22. Formation by artificial land take 2000-2006 [% of total]



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



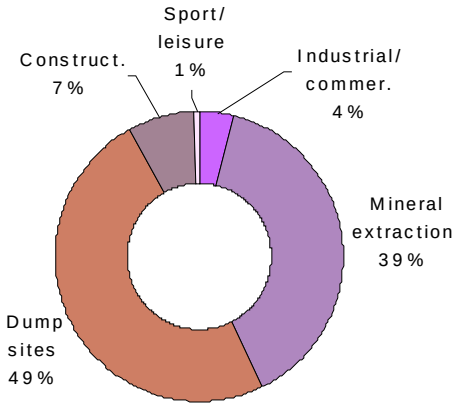
7.24. Artificial development by change drivers (LC FLOWS) [ha/year]



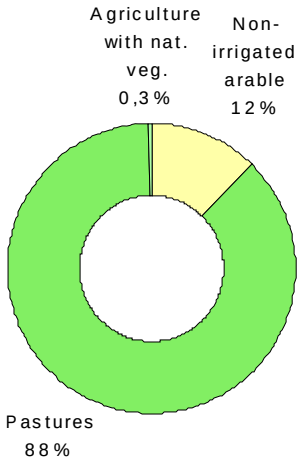
Czech Republic

Agriculture

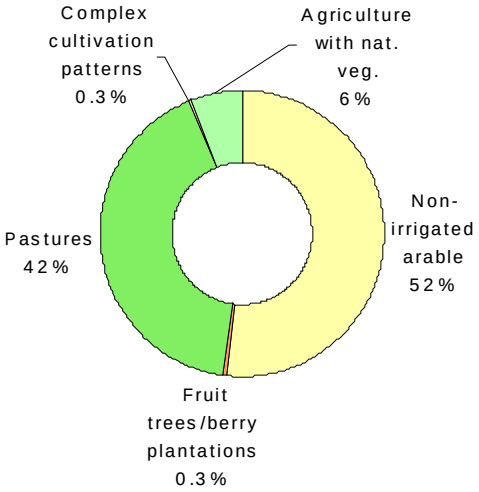
8.25. LC consumed by agriculture 2000-2006 [% of total]



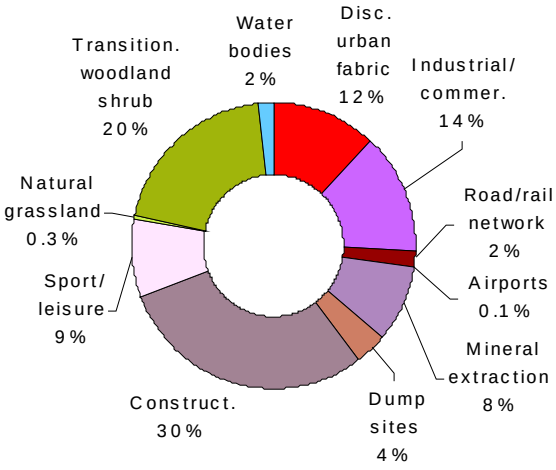
8.26. Formation of agricultural land from non-agriculture 2000-2006 [% of total]



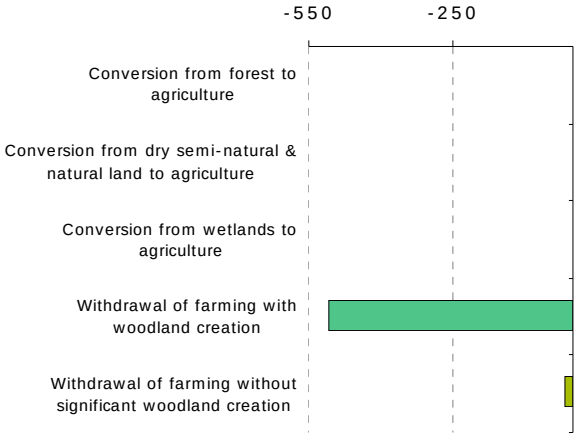
8.27. Consumption of agricultural land by non-agriculture 2000-2006 [% of total]



8.28. Formation of non-agricultural land from agriculture 2000-2006 [% of total]



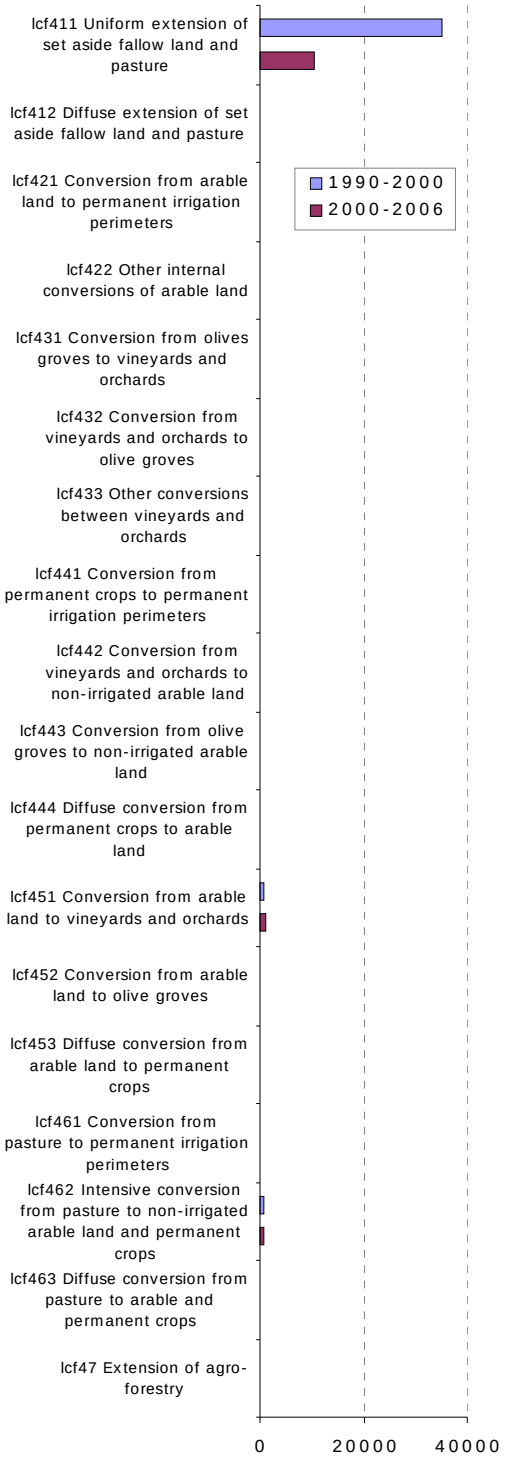
8.29. Main annual conversions between agriculture and forests & semi-natural land 2000-2006 [ha/year]



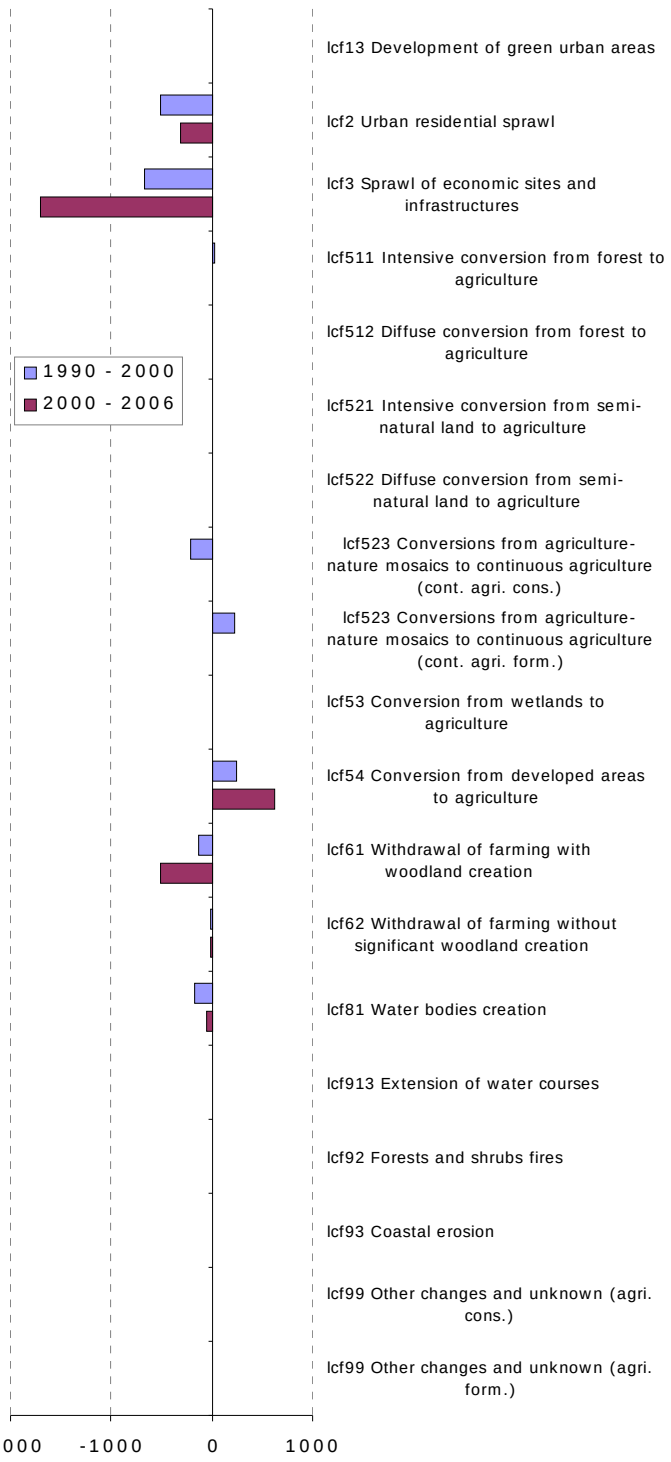
8.30. Mean annual conversion between arable land and pasture [ha/year]

Czech Republic

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



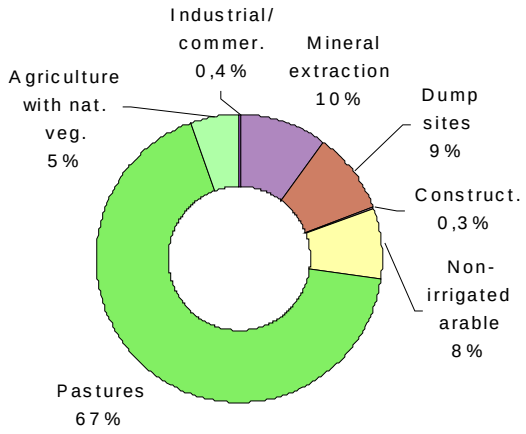
9.32. Mean annual conversions between agriculture and other LC types [ha/year]



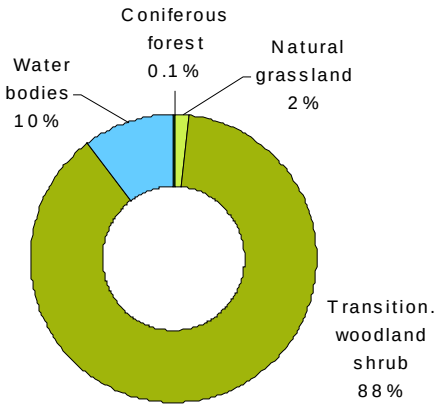
Czech Republic

Forest & nature

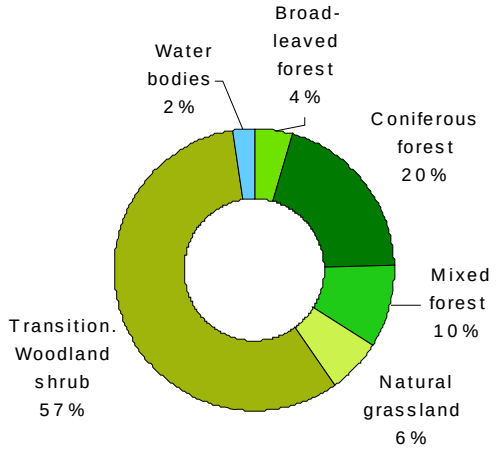
10.33. LC consumed by forest & nature 2000-2006 [% of total]



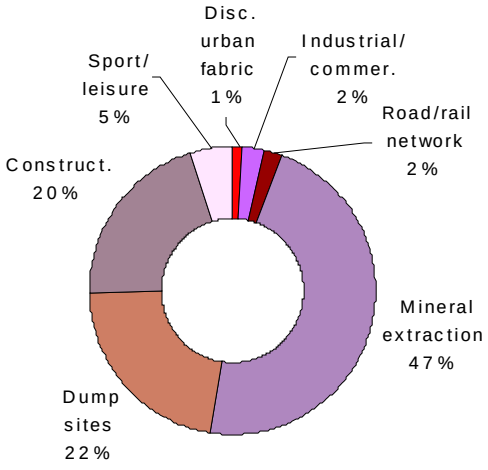
10.34. Formation of forest & nature land from non-forest /nature 2000-2006 [% of total]



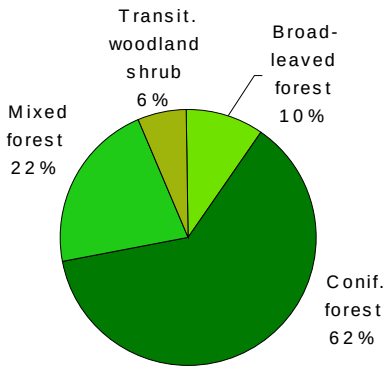
10.35. Consumption of forest & nature land by non-forest /nature 2000-2006 [% of total]



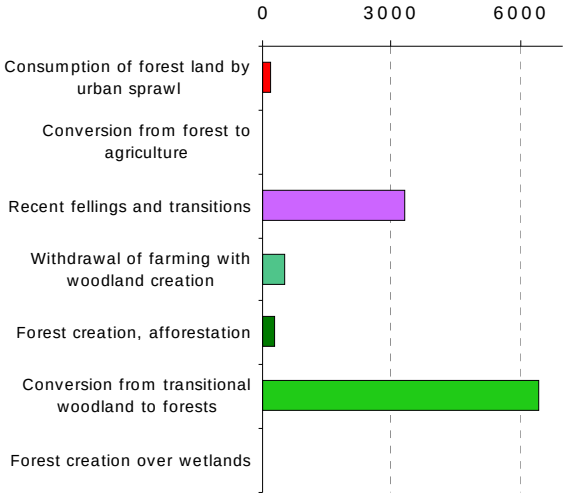
10.36. Formation of non-forest /nature land from forest & nature 2000-2006 [% of total]



10.37. Forested land 2006 [% of total area]

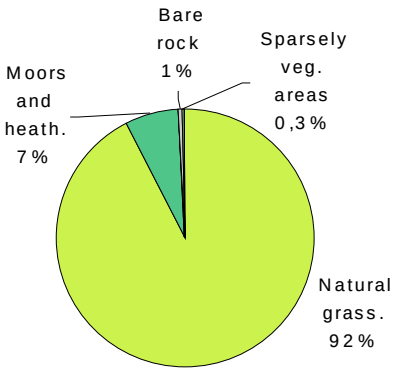


10.38. Main trends in woodland & forests consumption/formation 2000-2006 [ha/year]

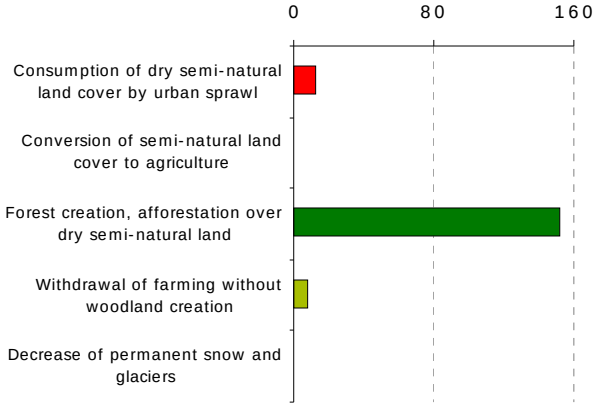


Czech Republic

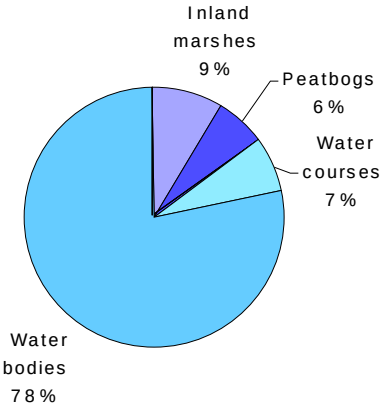
11.39. Dry semi-natural areas 2006 [% of total area]



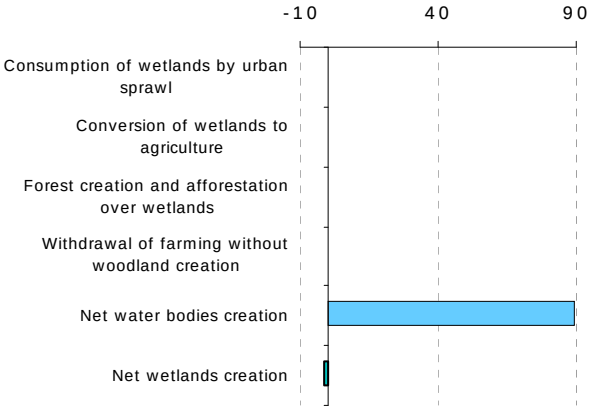
11.40. Main trends in dry semi-natural land consumption/formation 2000-2006 [ha/year]



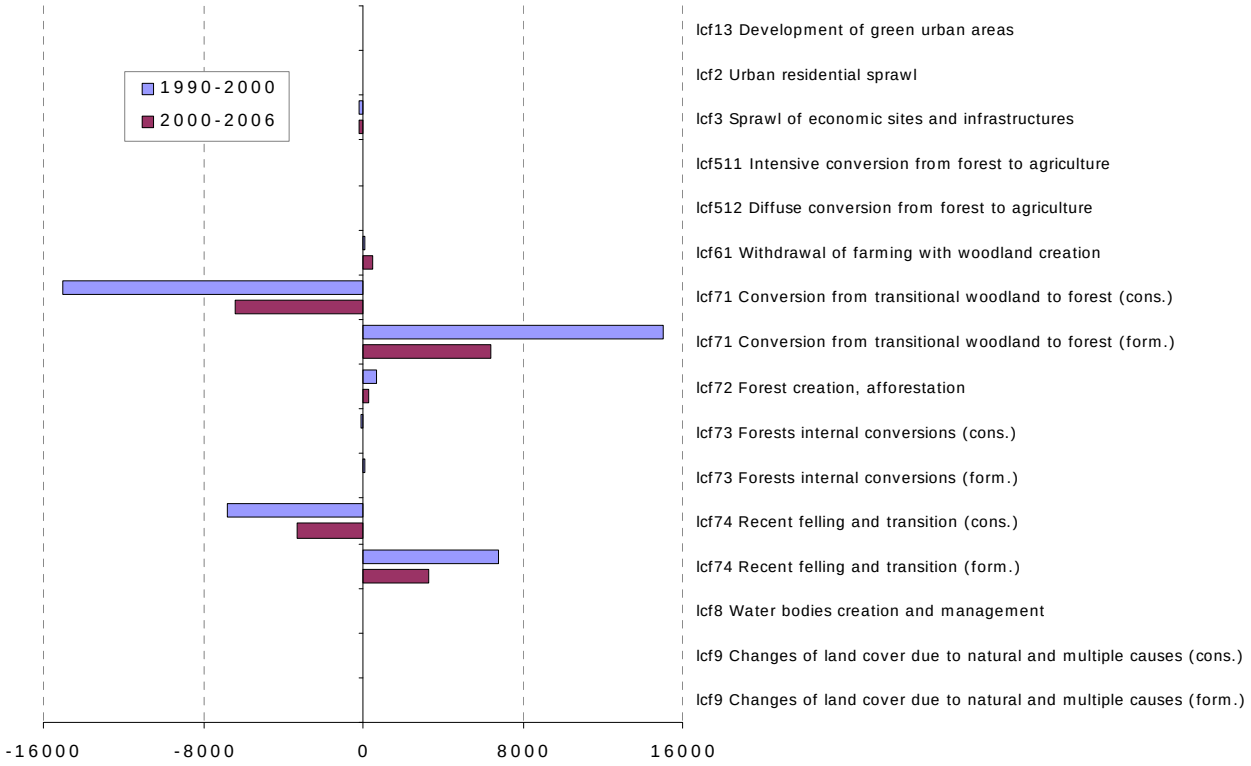
11.41. Wetlands & water 2006 [% of total area]



11.42. Main trends in wetlands & water consumption/formation 2000-2006 [ha/year]



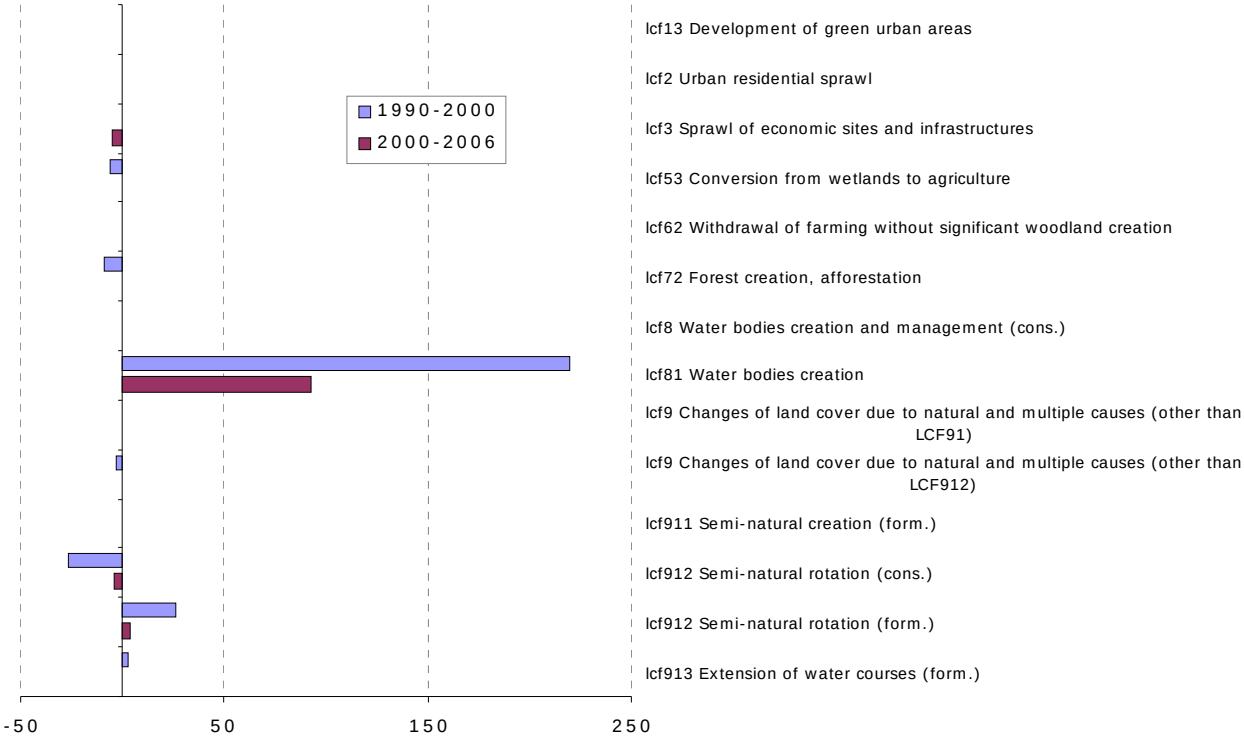
11.43. Mean annual conversions of forest & other woodland [ha/year]



Czech Republic

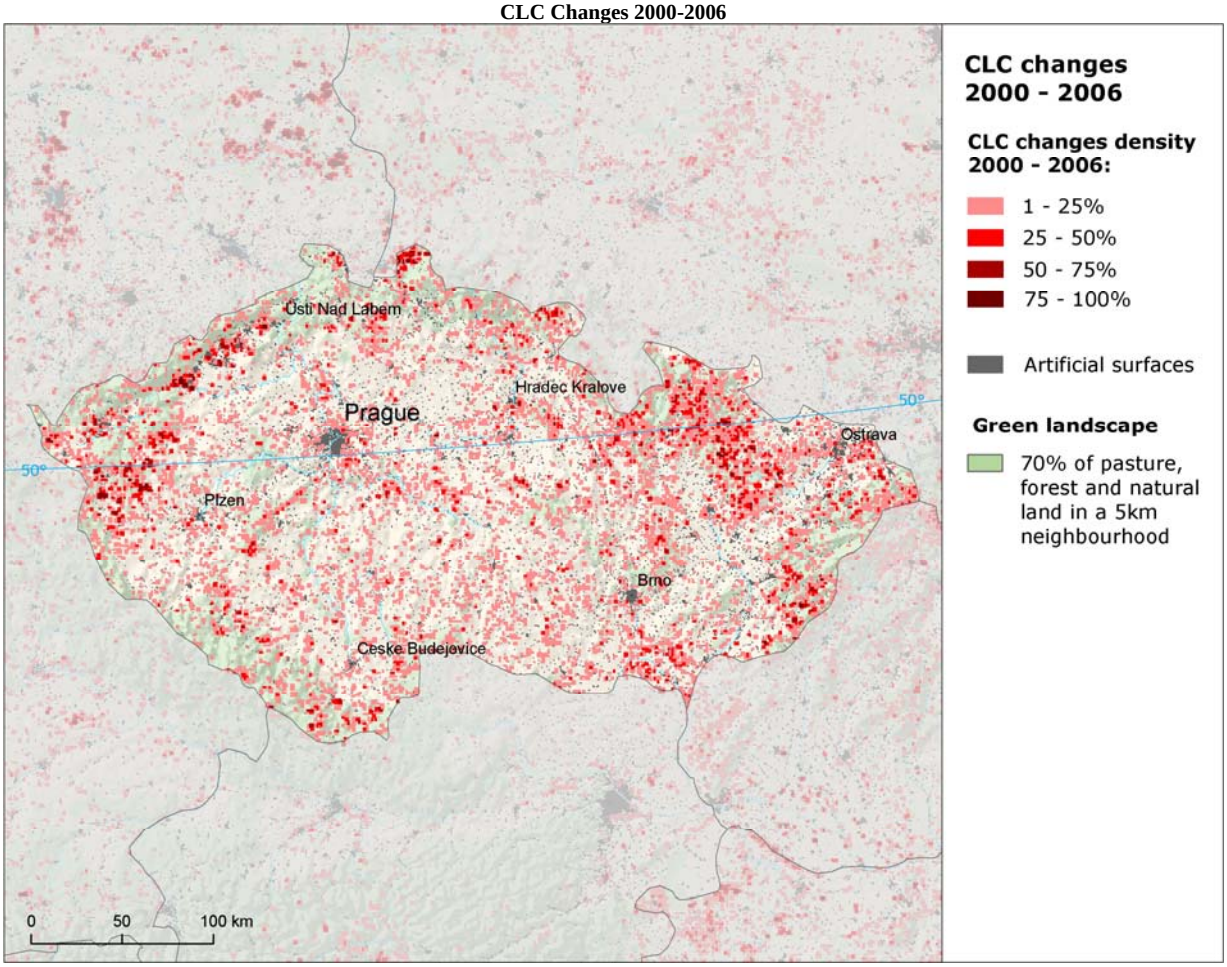
12.44. Mean annual conversions of dry semi-natural LC [ha/year]

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

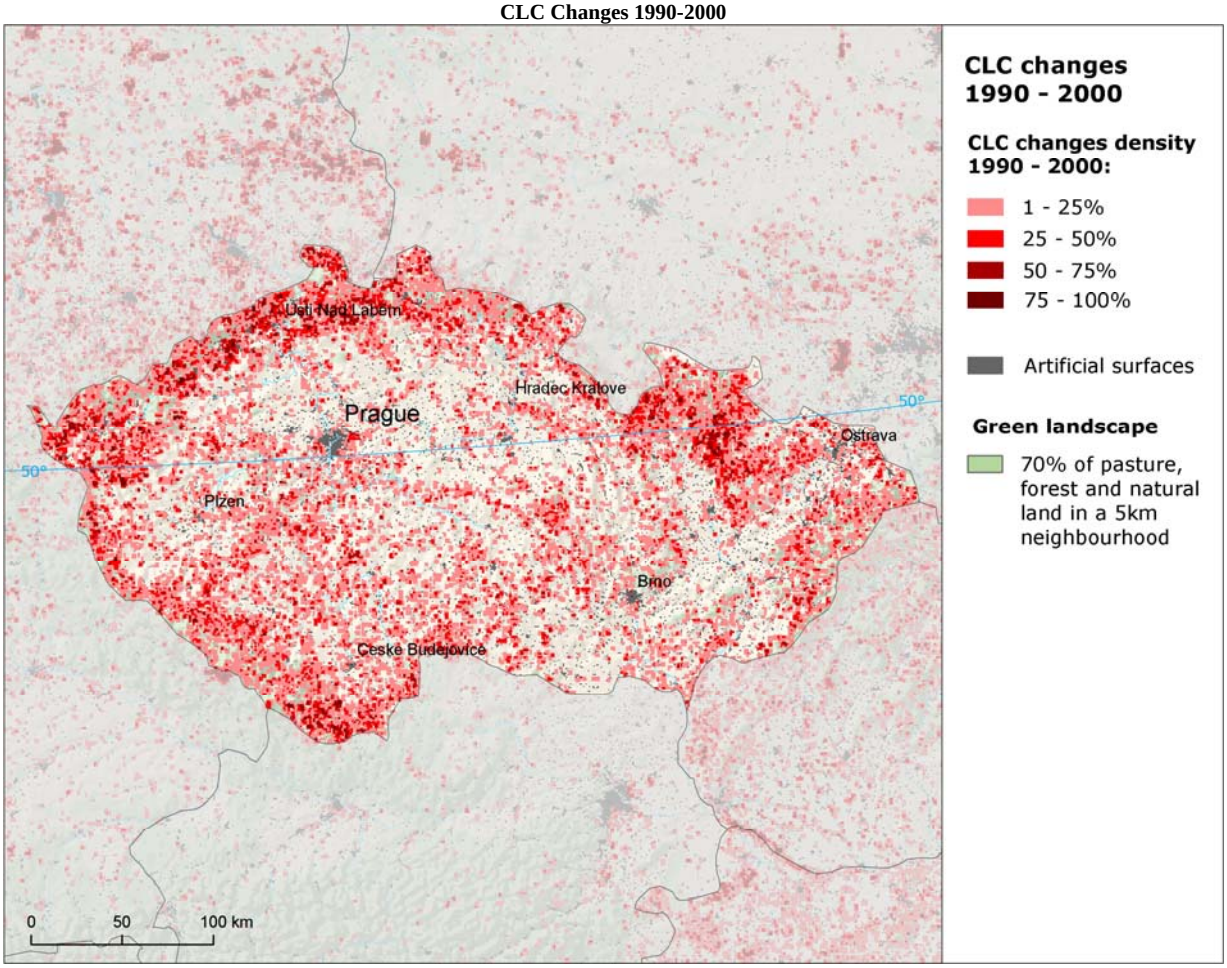


Czech Republic

CLC Changes 2000-2006

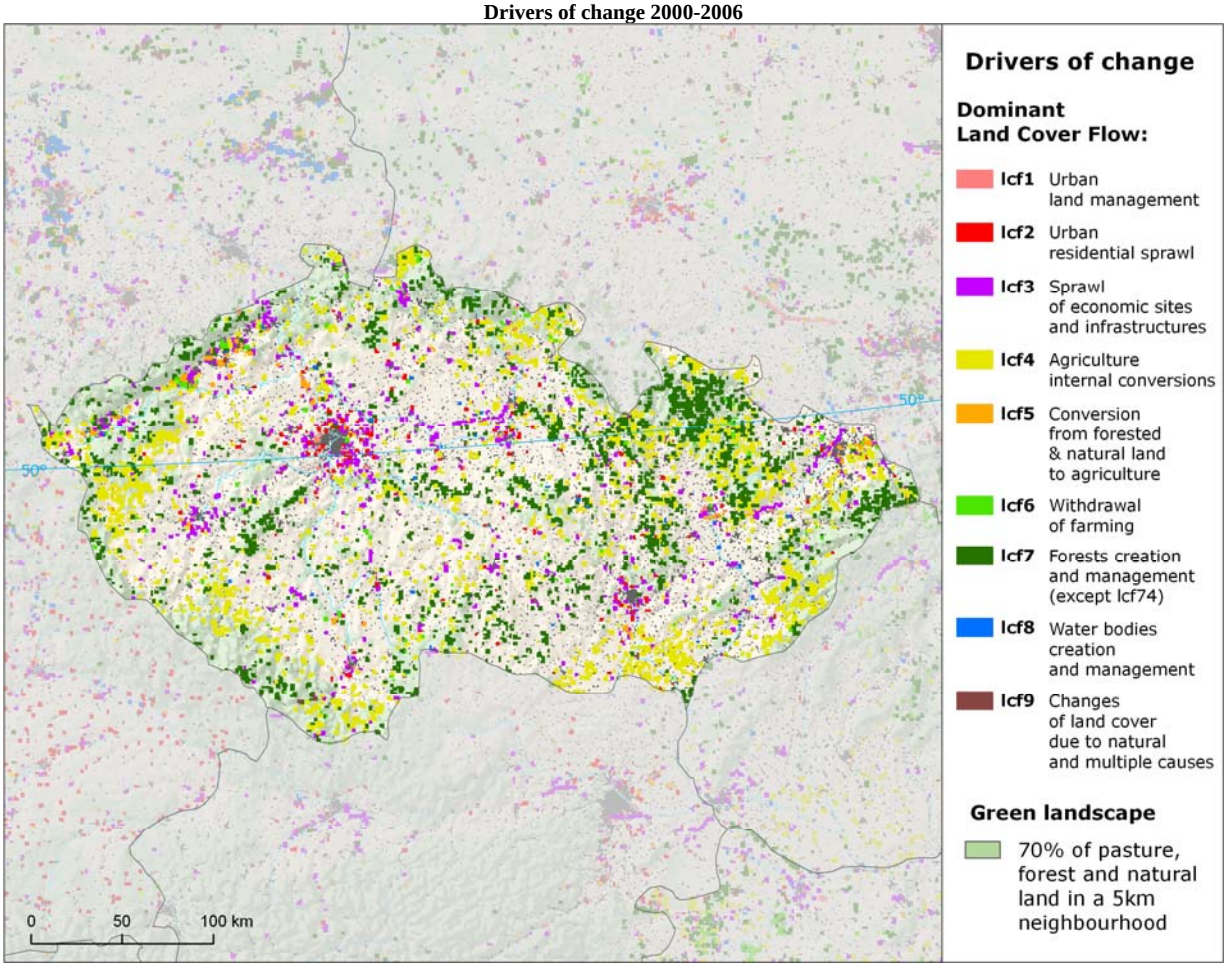


CLC Changes 1990-2000

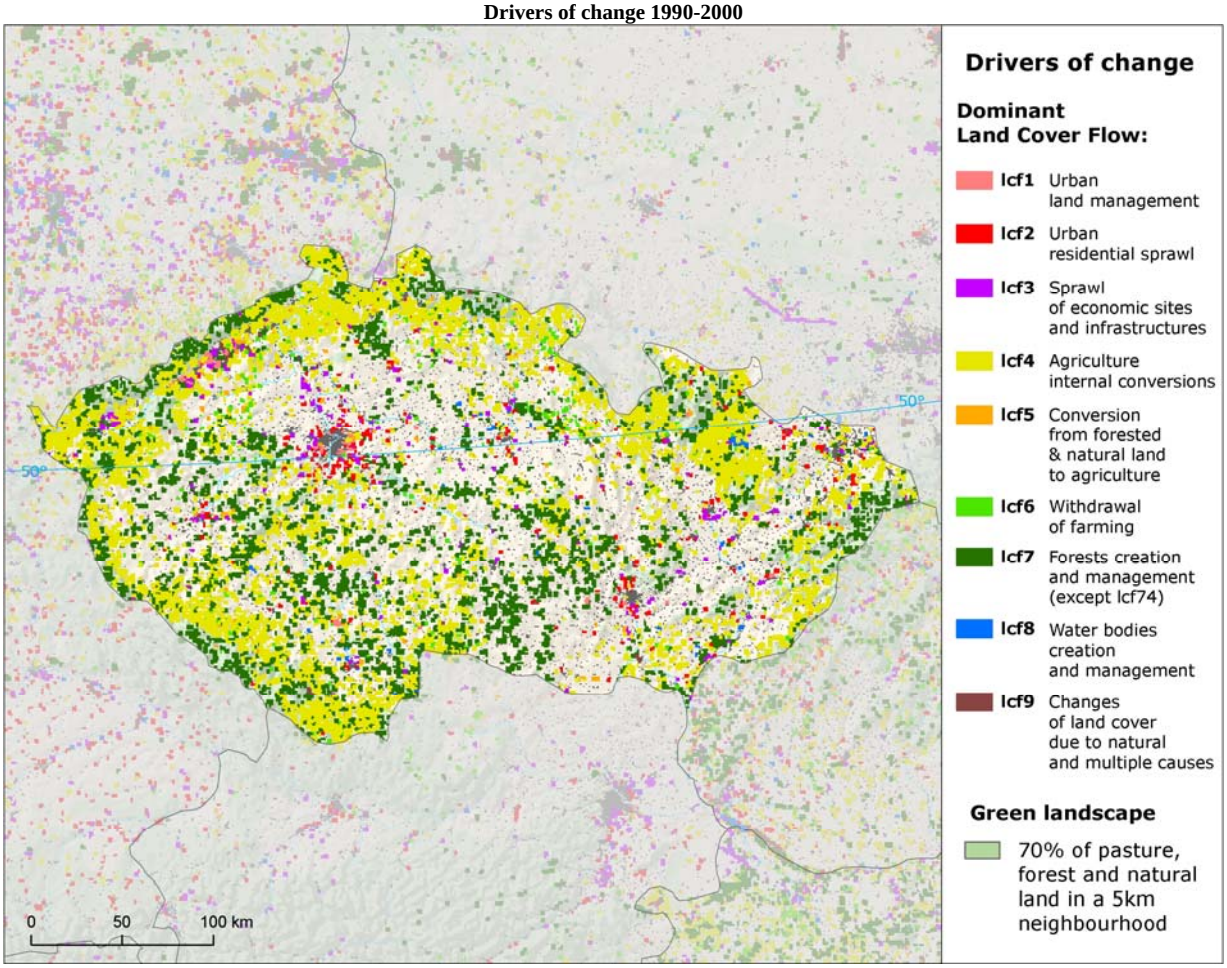


Czech Republic

Drivers of change 2000-2006

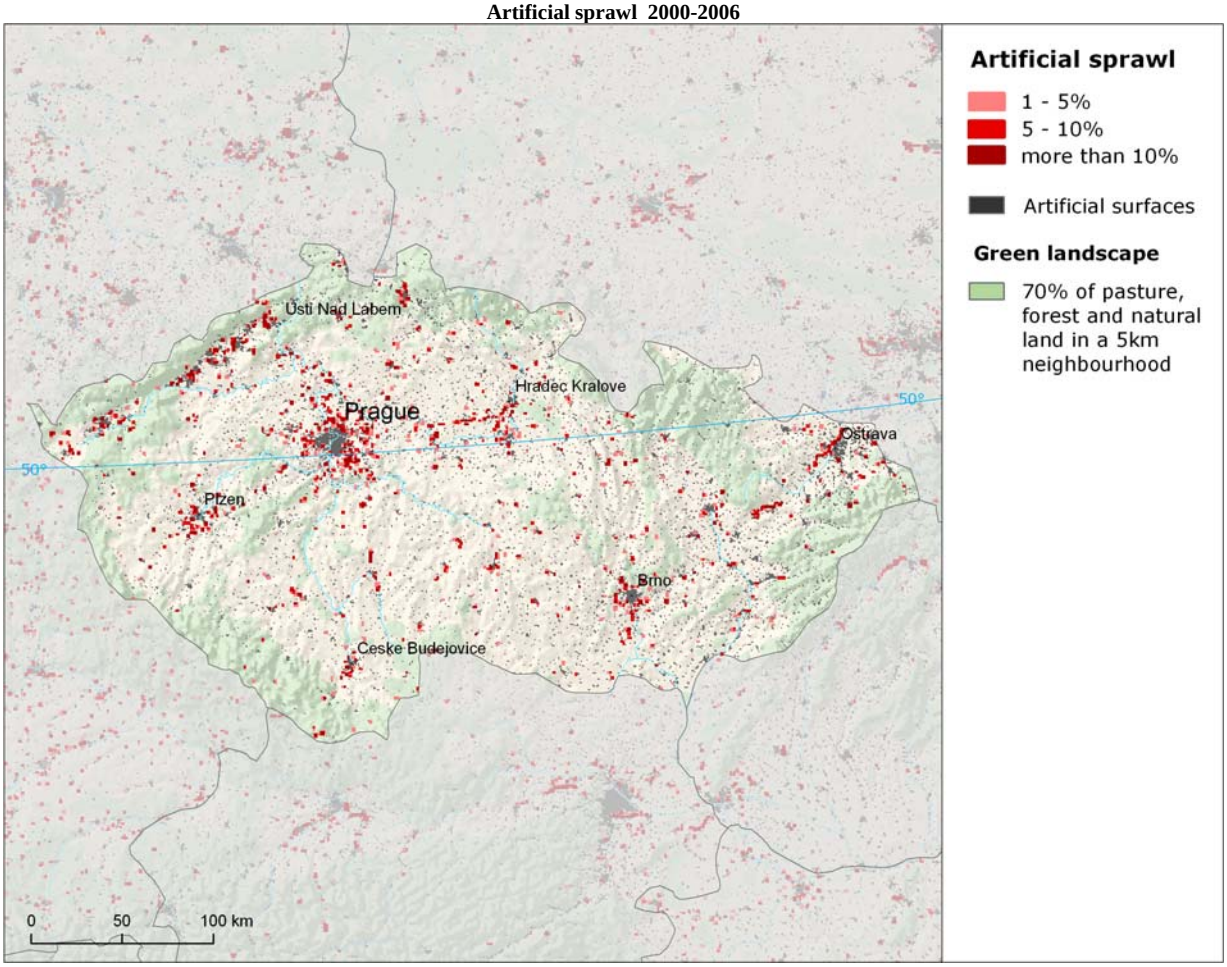


Drivers of change 1990-2000

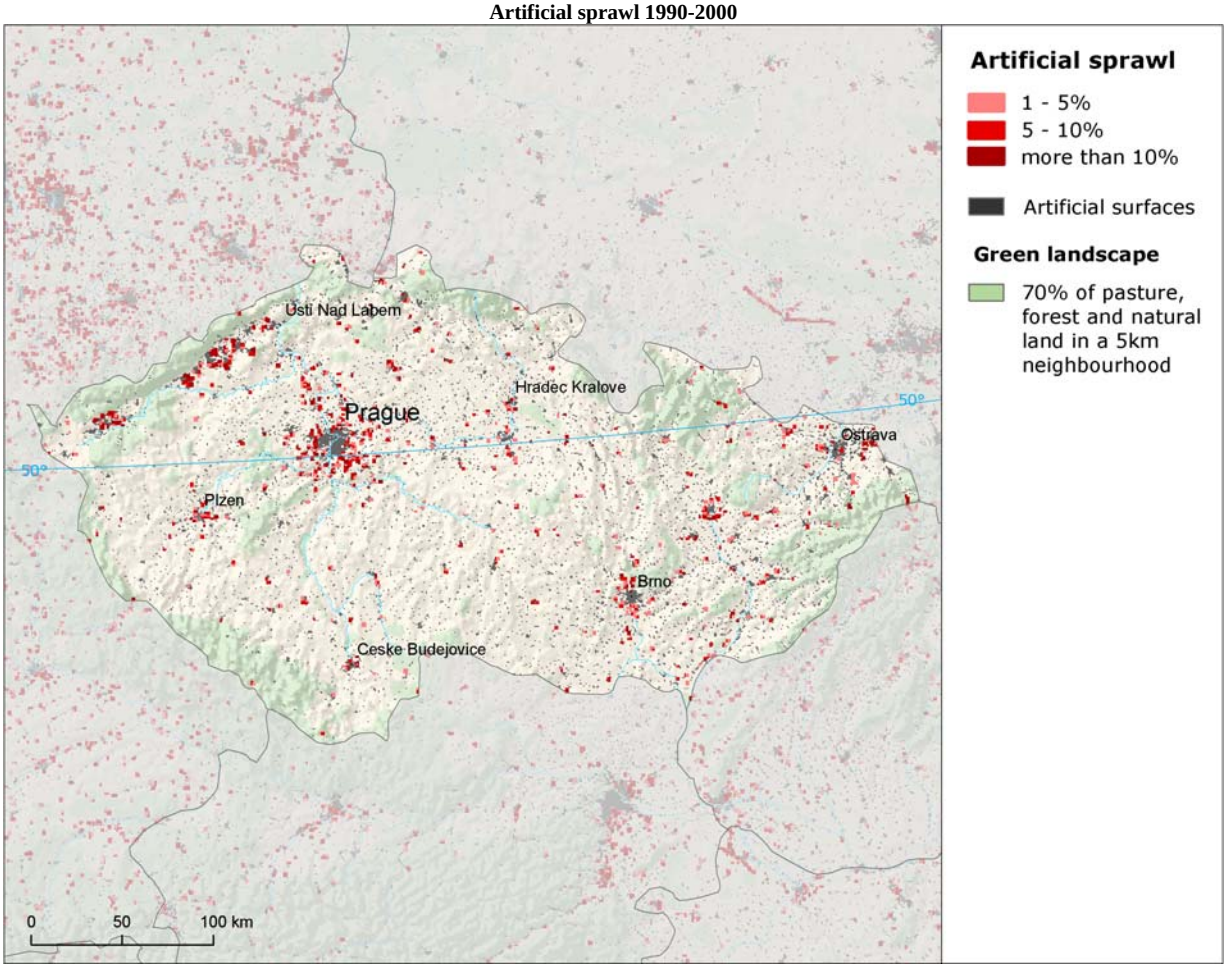


Czech Republic

Artificial sprawl 2000-2006

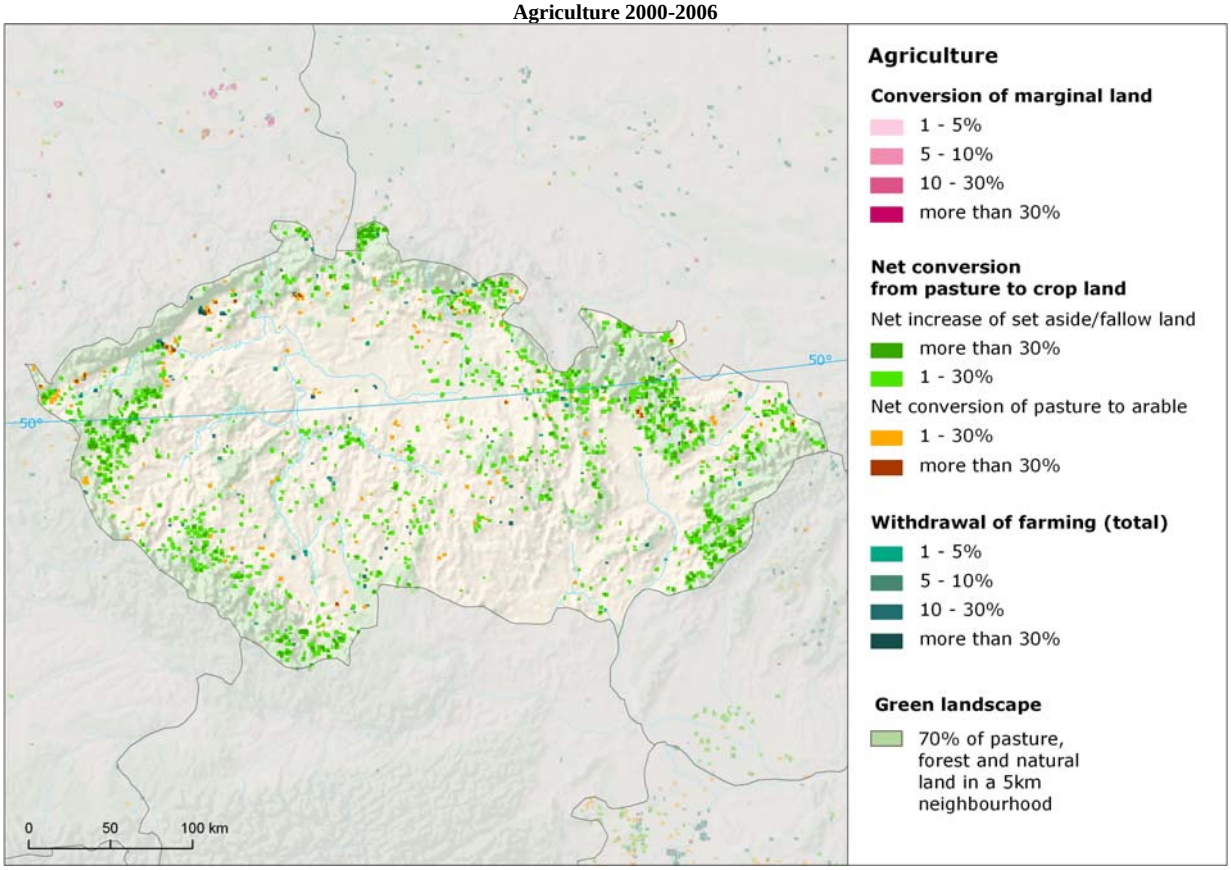


Artificial sprawl 1990-2000

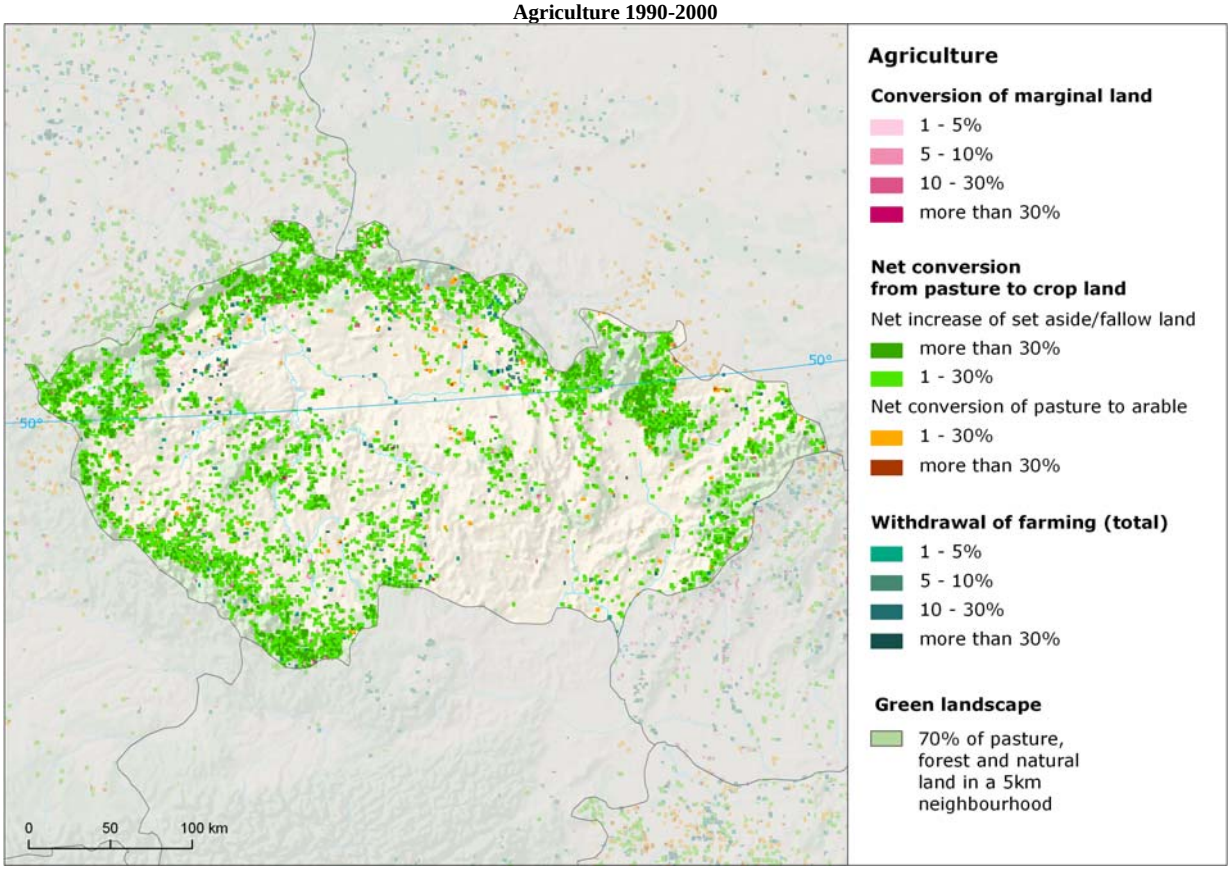


Czech Republic

Agriculture 2000-2006

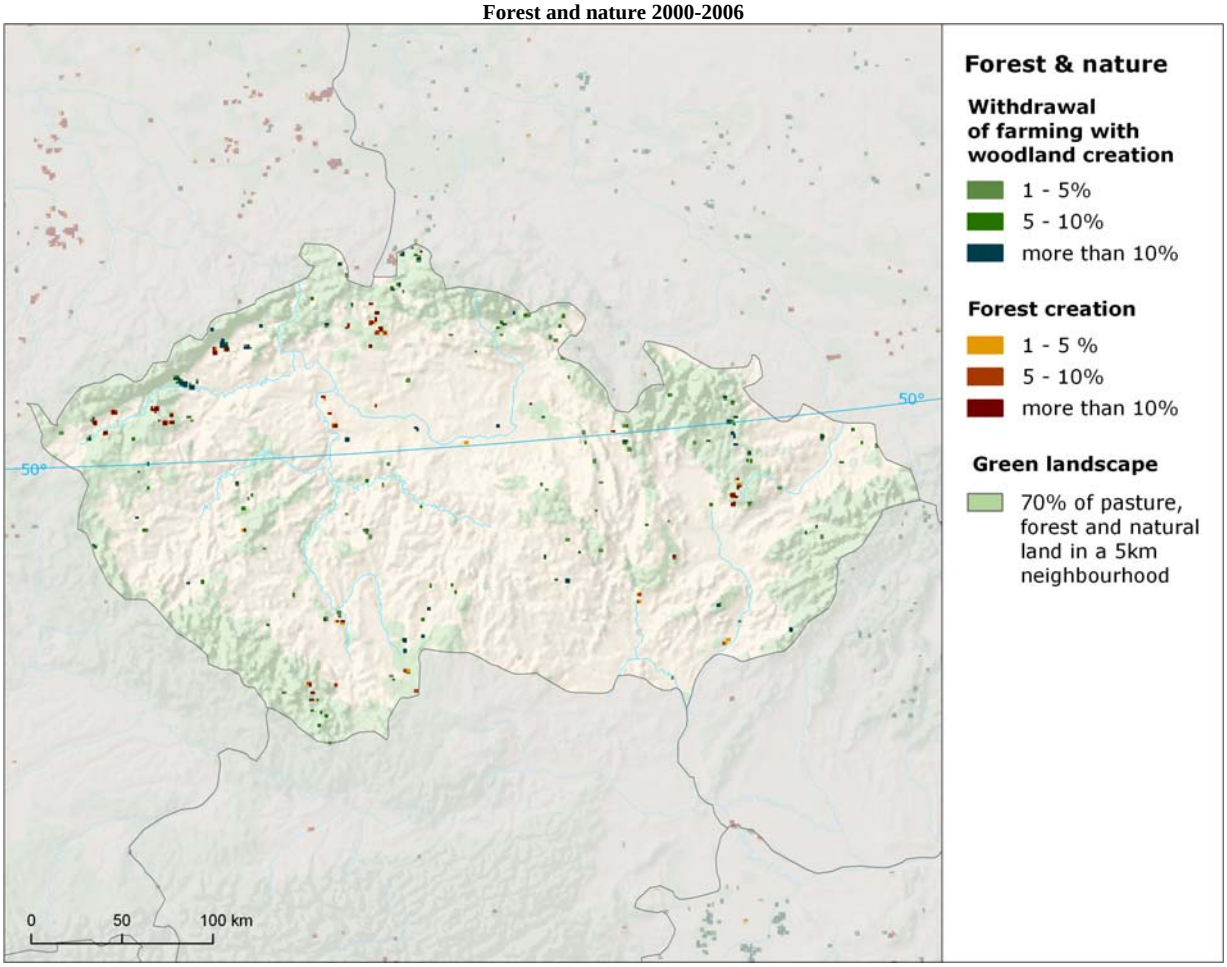


Agriculture 1990-2000



Czech Republic

Forest and nature 2000-2006



Forest and nature 1990-2000