

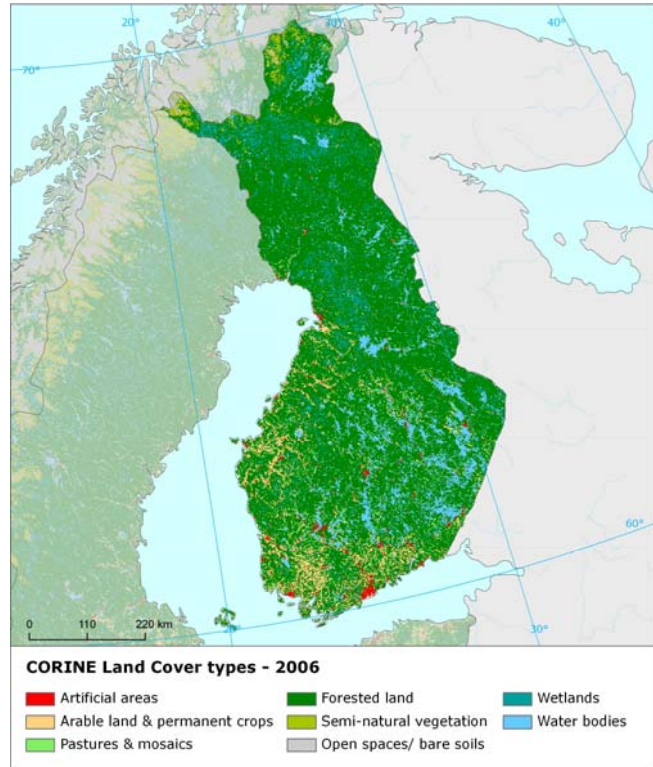
Finland

Land cover 2006

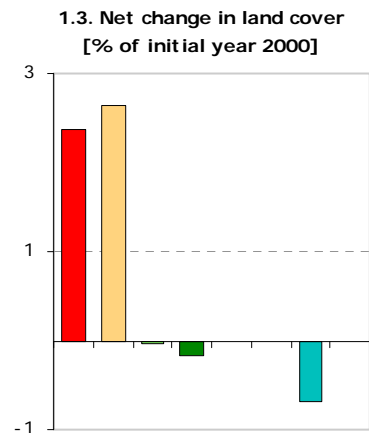
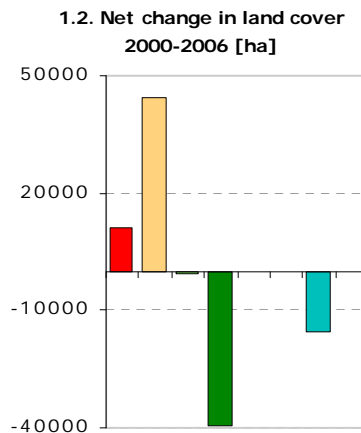
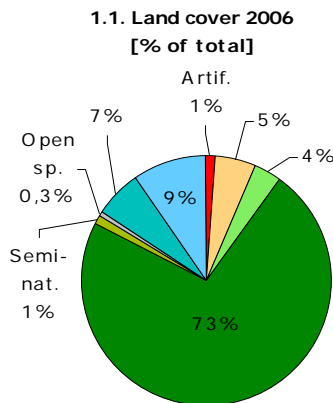
Overview of land cover & change 2000-2006

Finish landscape is characterized by high amount of forested areas and water bodies (almost ¼ of area are composed of coniferous and mixed forest, together with transitional woodland), with only small percentage (about 1%) of artificial surfaces. This fact is reflected in absolute amounts of change areas, with predominant share of forest transitions on total annual turnover of land cover. However, this turnover is driven mostly by internal forest conversions between standing forests and transitional woodland. Besides forest internal conversions, the most significant drivers of land cover exchange in Finnish landscape is the formation of arable land and artificial surfaces over natural areas (mainly forests and wetlands).

Changes in forested land cover are equally distributed over the whole Finland, with the exception of northernmost part of the country. Conversions from forested and natural land to agriculture occur mainly in western Finland. Artificial sprawl is concentrated in proximity to the capital city Helsinki and to the other major cities like Turku or Oulu – the areas with the highest population density.



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 Finland: 6



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

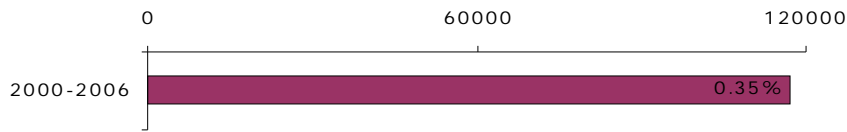
Summary balance table 2000-2006

	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	4722	16864	12301	244117	4186	1162	22437	31500	337289
Consumption of initial LC	14	26	5	6781	0	0	201	1	7028
Formation of new LC	125	470	0	6387	0	0	45	0	7028
Net Formation of LC	112	444	-5	-394	0	0	-156	-1	0
<i>Net formation as % of initial year</i>	2.4	2.6	0.0	-0.2	0.0	0.0	-0.7	0.0	
Total turnover of LC	139	497	5	13168	0	0	246	1	14055
<i>Total turnover as % of initial year</i>	2.9	2.9	0.0	5.4	0.0	0.0	1.1	0.0	4.2
Land cover 2006	4834	17307	12296	243723	4186	1162	22281	31499	337289

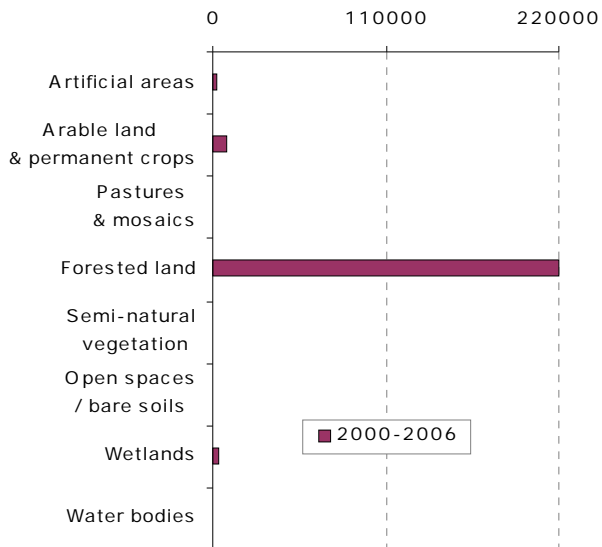
Finland

Land cover trends 2000-2006

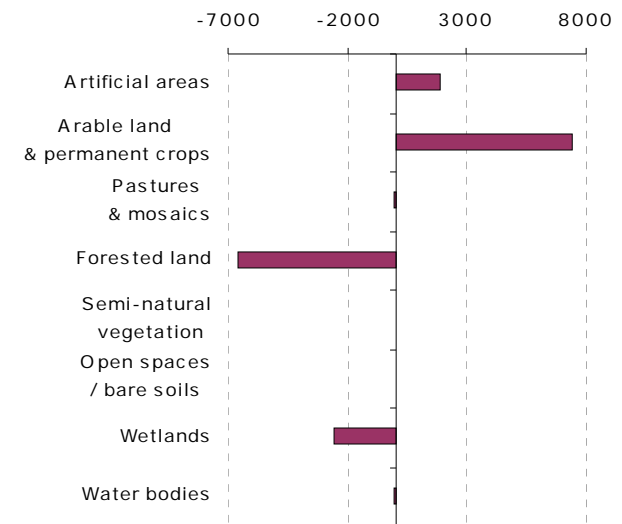
2.4. Annual land cover change
[ha/year, % of total area]



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

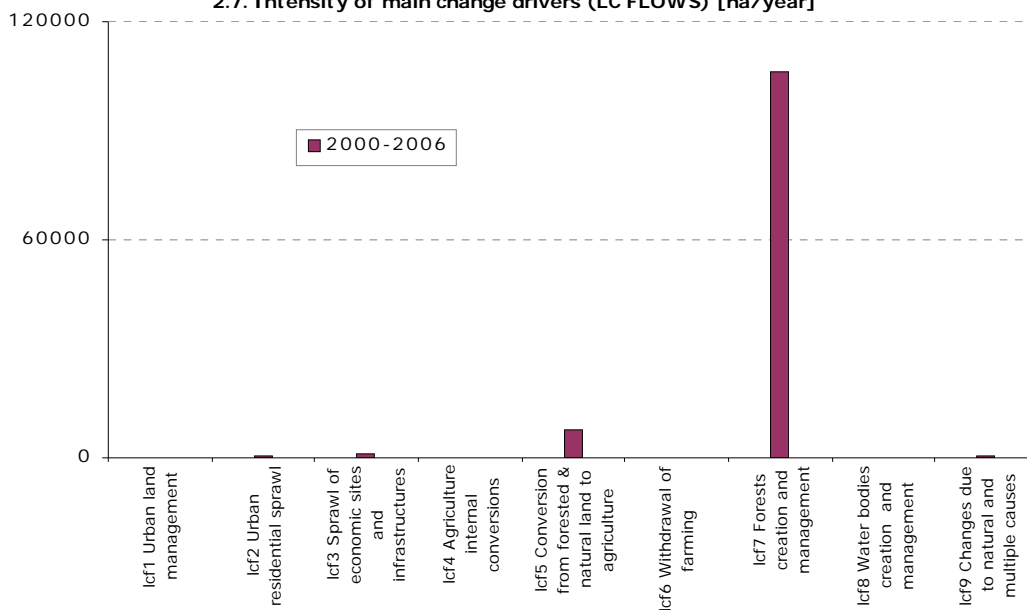


2.6. Net annual change of LC types [ha/year]

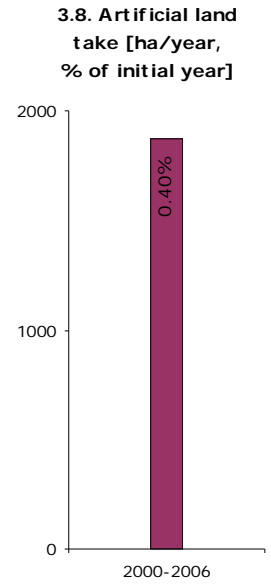


Summary trend figures		2000-2006
Annual land cover change [ha/year]		117127
Annual land cover change as % of initial year		0.35%
Land uptake by artificial development as mean annual change [ha/year]		1869
Agricultural land uptake by urban and infrastructures development as mean annual change [ha/year]		360
Net uptake of forests and semi-natural land by agriculture as mean annual change [ha/year]		7669
Net conversion from pasture to arable land and permanent crops as mean annual change [ha/year]		1
Forest & other woodland net formation as mean annual change [ha/year]		-6564
Dry semi-natural land cover net formation as mean annual change [ha/year]		-1
Wetlands & water bodies net formation as mean annual change [ha/year]		-2612

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



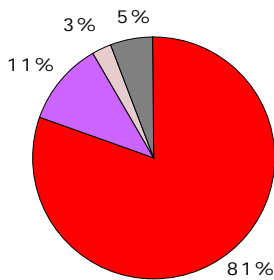
Artificial areas



Sprawl of housing and recreation

Artificial land uptake in Finland is driven mainly by sprawl of discontinuous urban fabric as well as sports leisure facilities development, followed by extension of mineral extraction sites, construction and commercial/industrial sprawl. Mostly forested land has been consumed by sprawl of artificial areas during the period. Besides artificial areas uptake, recycling of developed urban land has significant share on total artificial change area. It is represented by consumption of construction and mineral extraction sites for formation of airports, transportation networks and industrial/commercial sites. Artificial sprawl is concentrated in the areas with the highest population density - mainly in proximity to the capital city Helsinki and in surroundings of the other major cities like Turku or Oulu .

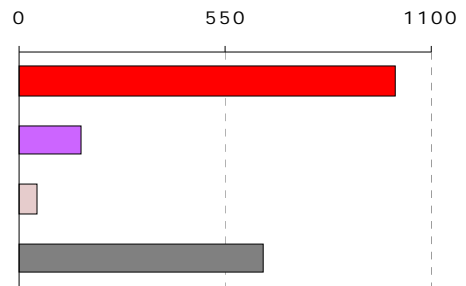
3.9. Artificial surfaces 2006 [% of total area]



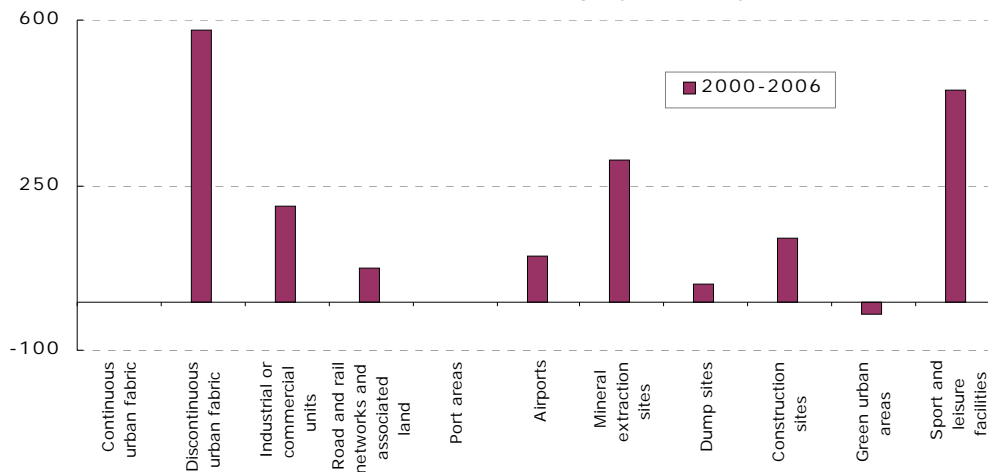
Housing, services, recreation

- Industrial & commercial units
- Transport networks, infrastructures
- Mines, quarries, waste dumpsites incl. construction

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

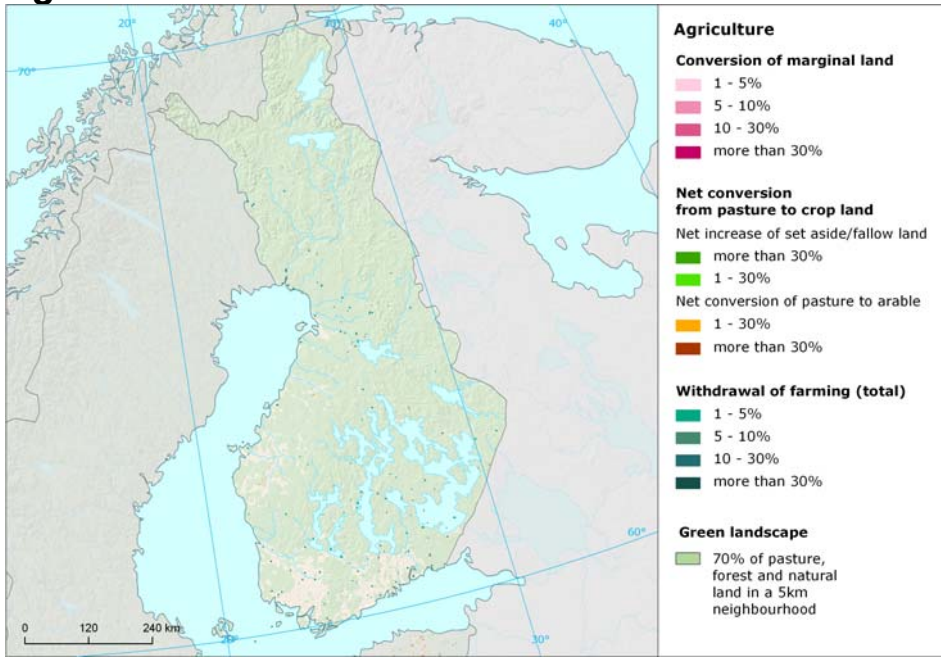


3.11. Mean annual artificial change by class [ha/year]



Finland

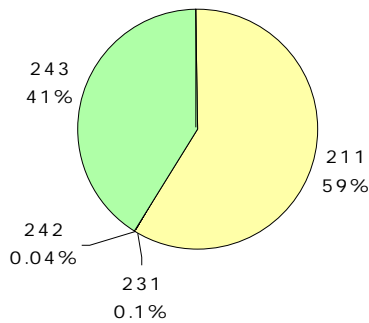
Agriculture



Conversion from forest and wetlands to arable land

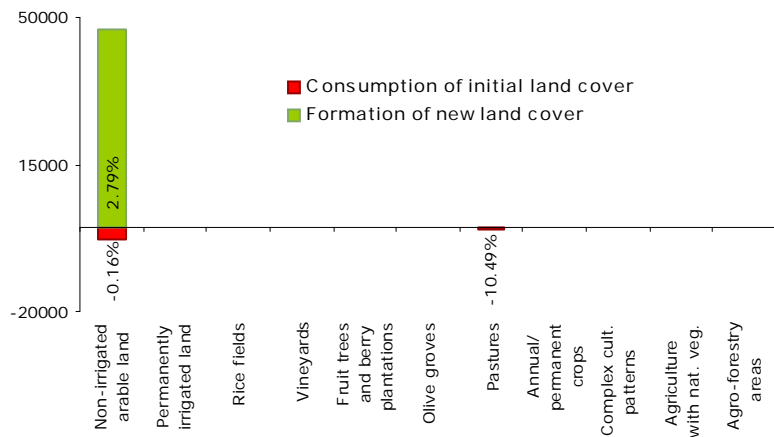
Agricultural areas (with only less than 10% share on total land cover) in Finland are composed almost entirely of arable land and agriculture with natural vegetation. Agricultural land has not only the highest percentual formation rate, but also the largest total formation area of all land cover types within the period. Arable land increase occurs at the expense of natural areas with prevailing share of peatbogs and transitional woodlands. Pastures area decrease is caused predominantly by artificial land expansion.

4.12. Agricultural areas 2006 [% of total area]

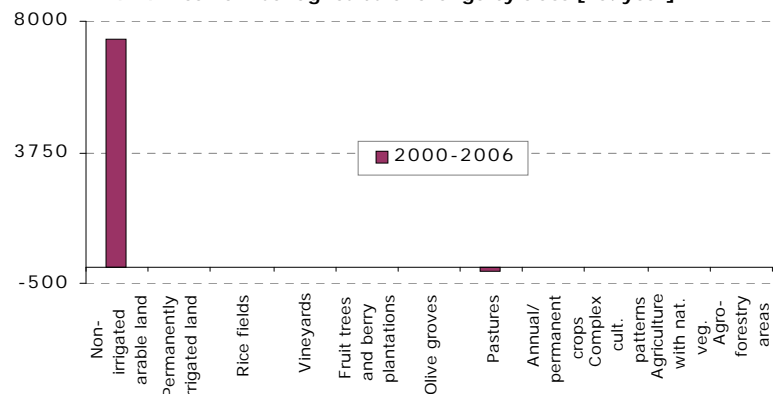


- 211 Non-irrigated arable land
- 212 Permanently irrigated land
- 213 Rice fields
- 221 Vineyards
- 222 Fruit trees and berry plantations
- 223 Olive groves
- 231 Pastures
- 241 Annual crops associated with permanent crops
- 242 Complex cultivation patterns
- 243 Agriculture land with significant areas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

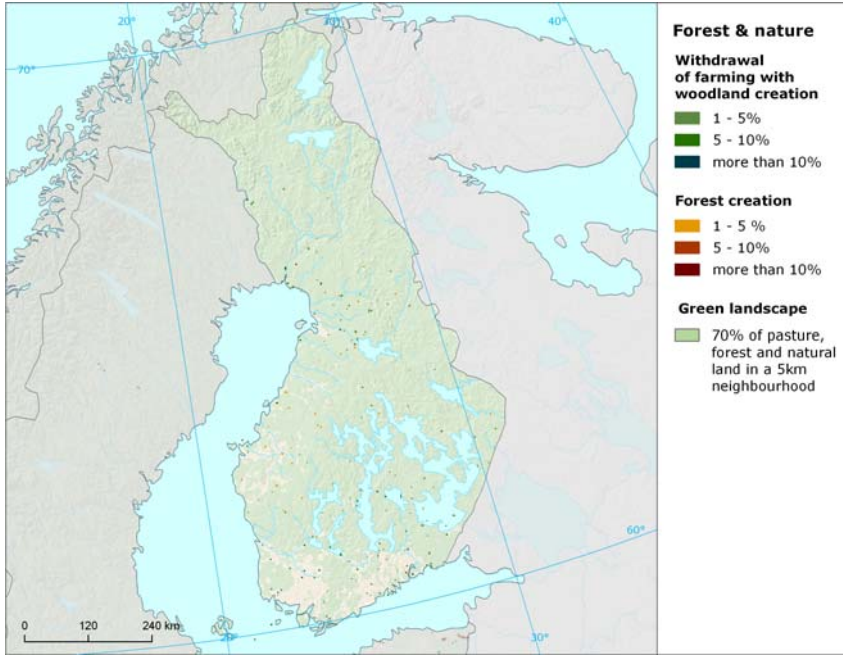
4.13. Development of agricultural areas 2000-2006 – detailed balance [ha]



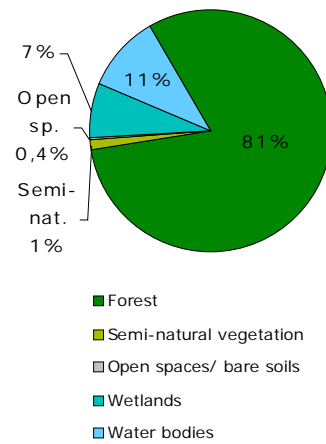
4.14. Mean annual agricultural change by class [ha/year]



Forest & nature



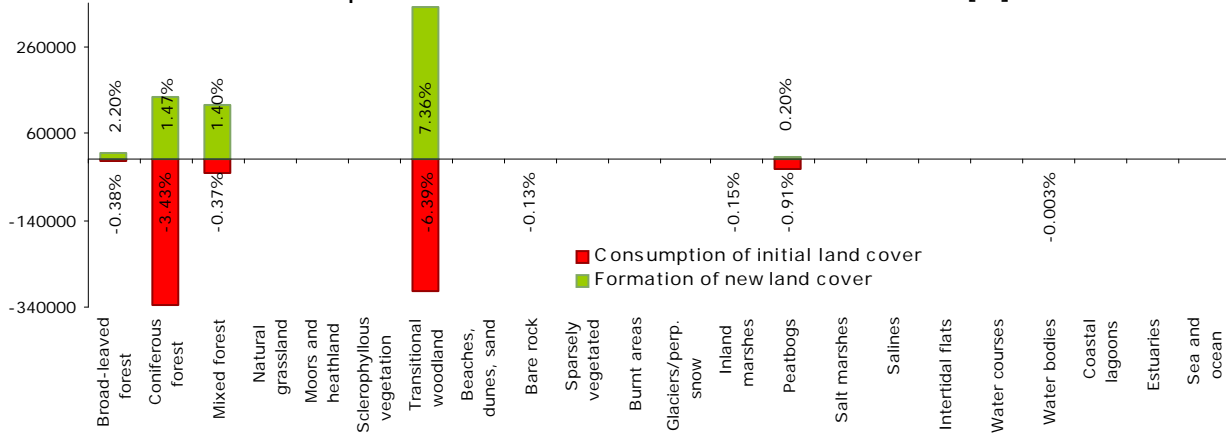
5.15. Forest & nature areas 2006 [% of total area]



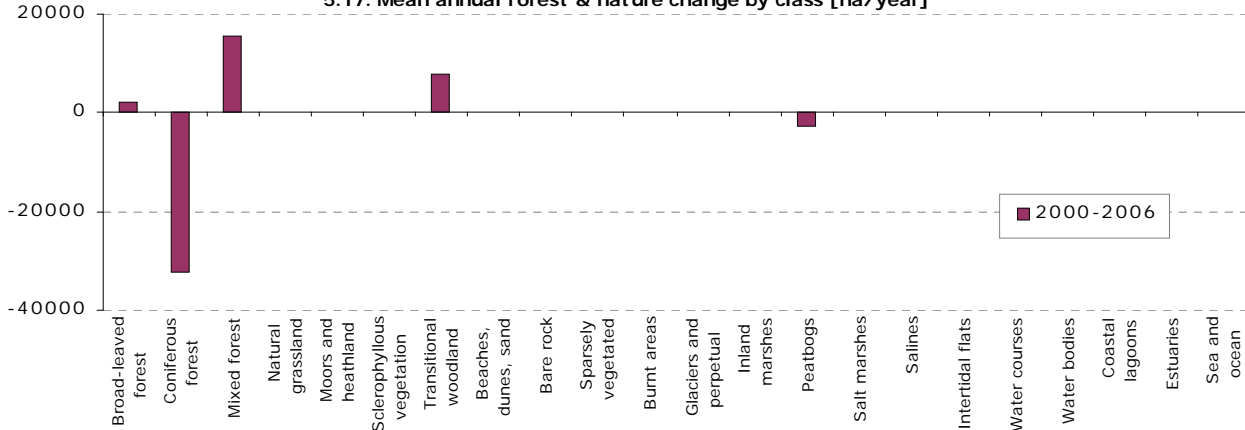
Internal forest transitions dominate

Specific character of Finnish landscape with almost ¼ share of forested areas indicates that forest management is the main and dominant factor in land cover development. However, total turnover of forested areas is driven predominantly by regular internal forestry driven conversions between standing forests and transitional woodlands. Within the internal changes in natural areas, there is also significant amount of transitions between forests and peatbogs. Concerning the external transitions, mainly forested areas and wetlands (represented by peatbogs) have been consumed by arable land and to a lesser extent also by artificial sprawl.

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



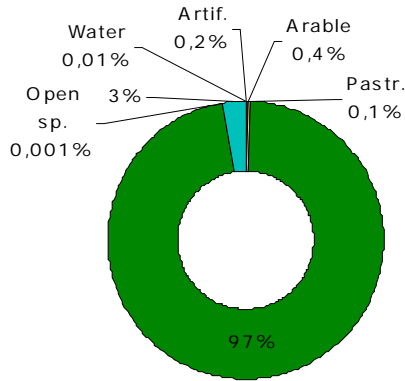
5.17. Mean annual forest & nature change by class [ha/year]



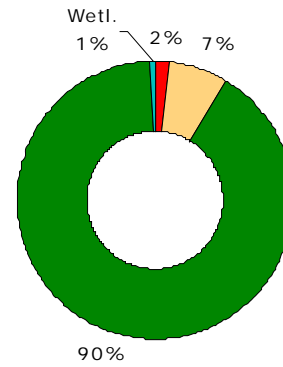
Annex: Land cover flows and trends

Land cover flows 2000-2006

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

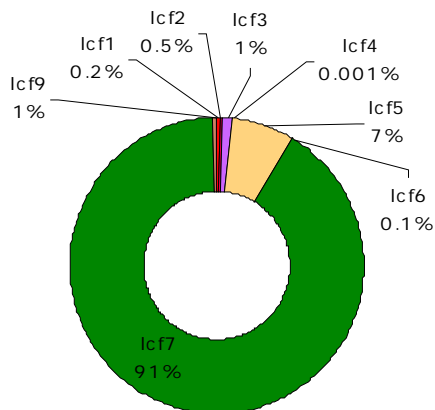


6.19. Formation of land cover 2000-2006 [% of total change area]



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

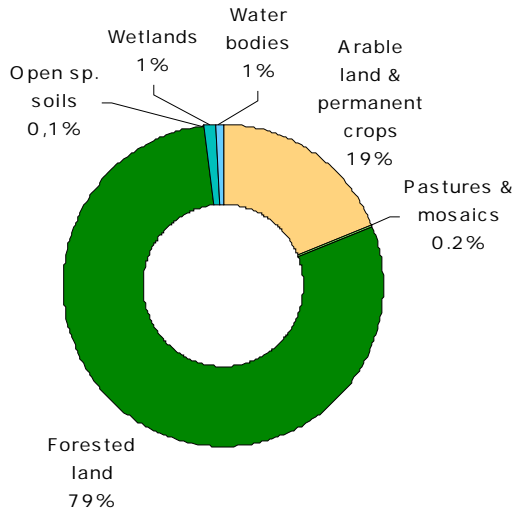
6.20. Drivers of change (LC FLOWS) 2000-2006 [% of total change area]



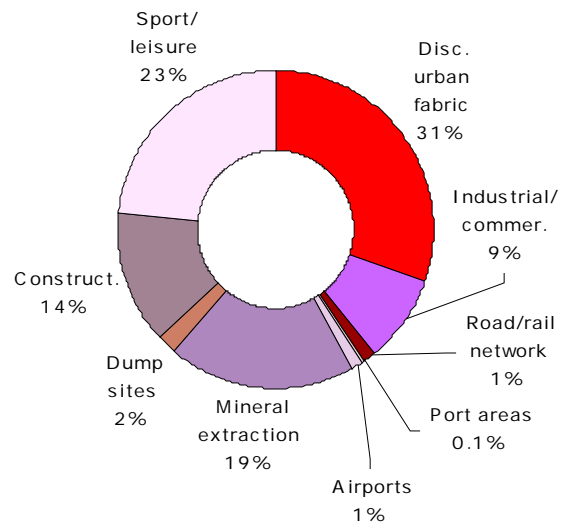
- Icf1 Urban land management
- Icf2 Urban residential sprawl
- Icf3 Sprawl of economic sites and infrastructures
- Icf4 Agriculture internal conversions
- Icf5 Conversion from forested & natural land to agriculture
- Icf6 Withdrawal of farming
- Icf7 Forests creation and management
- Icf8 Water bodies creation and management
- Icf9 Changes due to natural and multiple causes

Artificial areas

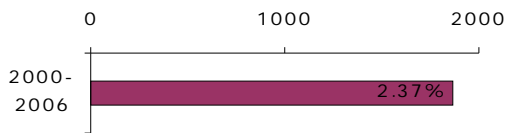
7.21. Consumption by artificial land take 2000-2006 [% of total]



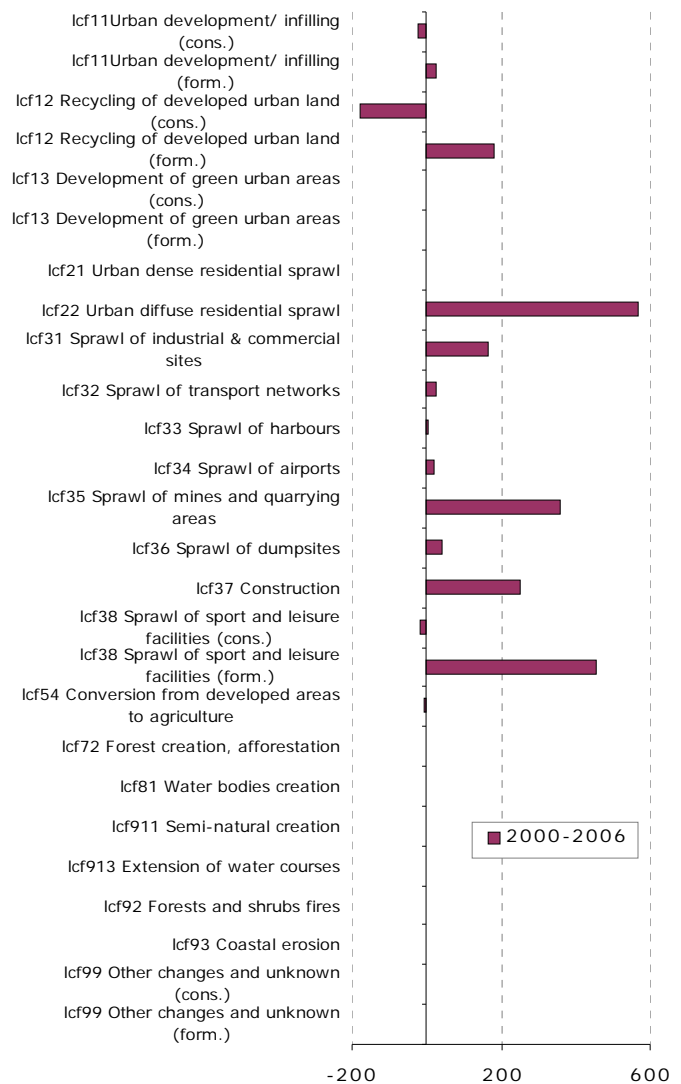
7.22. Formation by artificial land take 2000-2006 [% of total]



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



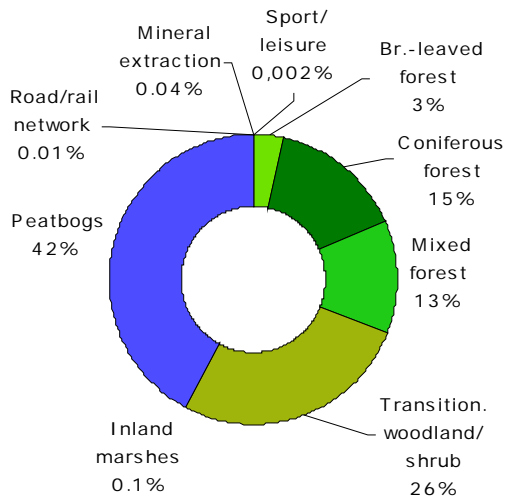
7.24. Artificial development by change drivers (LC FLOWS) [ha/year]



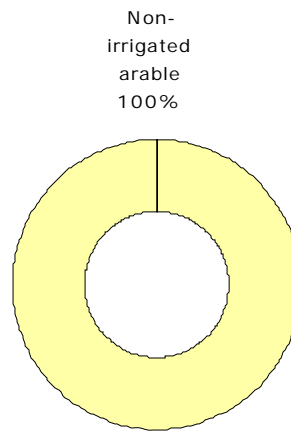
Finland

Agriculture

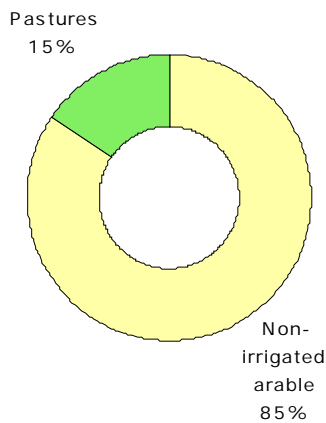
8.25. LC consumed by agriculture 2000-2006 [% of total]



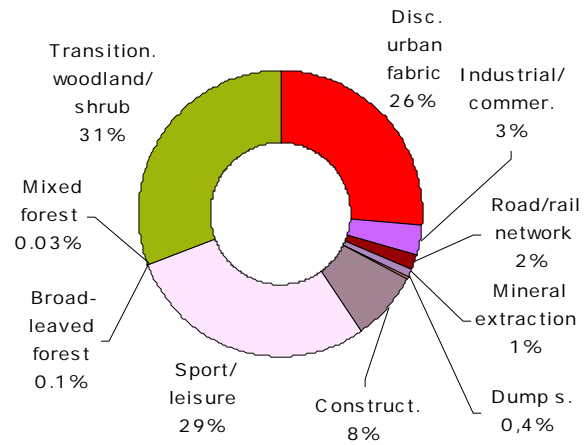
8.26. Formation of agricultural land from non-agriculture 2000-2006 [% of total]



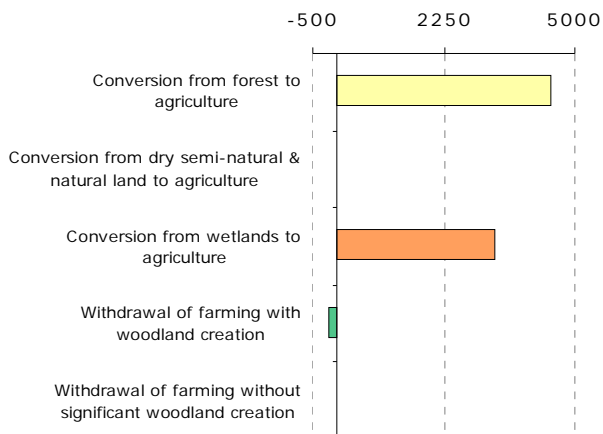
8.27. Consumption of agricultural land by non-agriculture 2000-2006 [% of total]



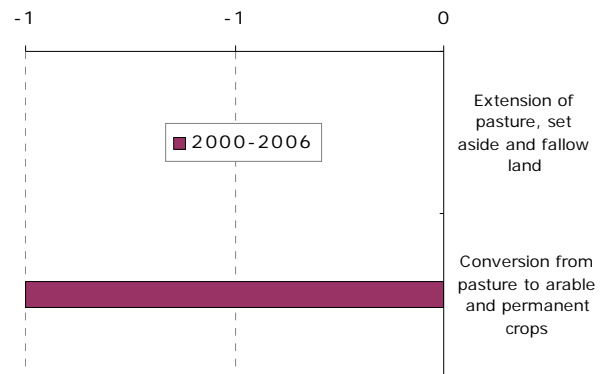
8.28. Formation of non-agricultural land from agriculture 2000-2006 [% of total]



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

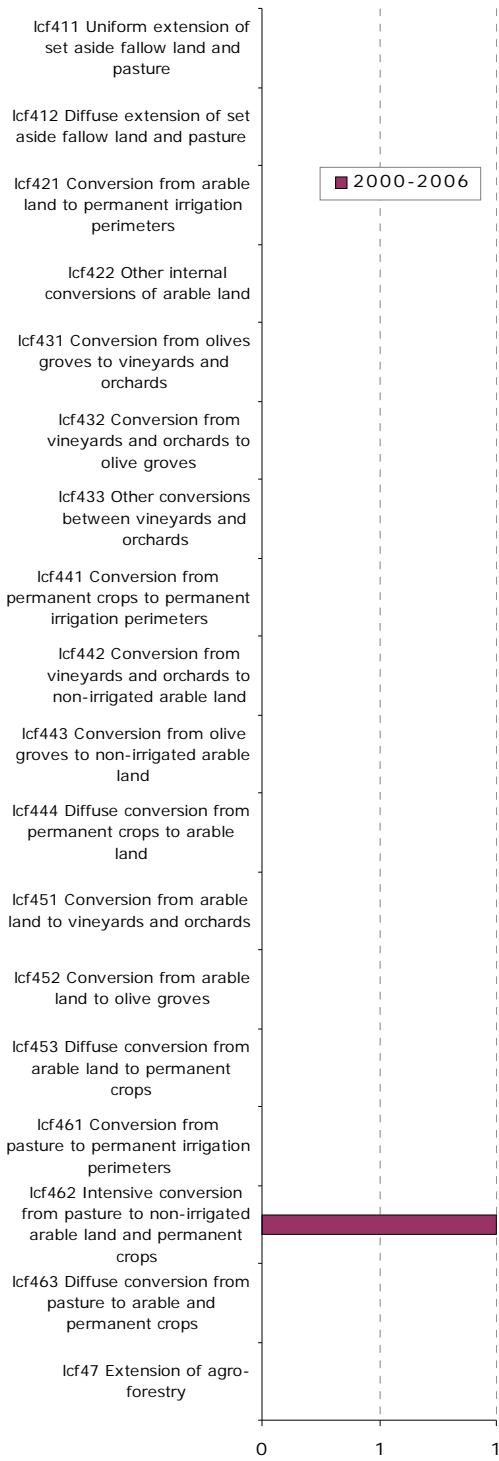


8.30. Mean annual conversion between arable land and pasture [ha/year]

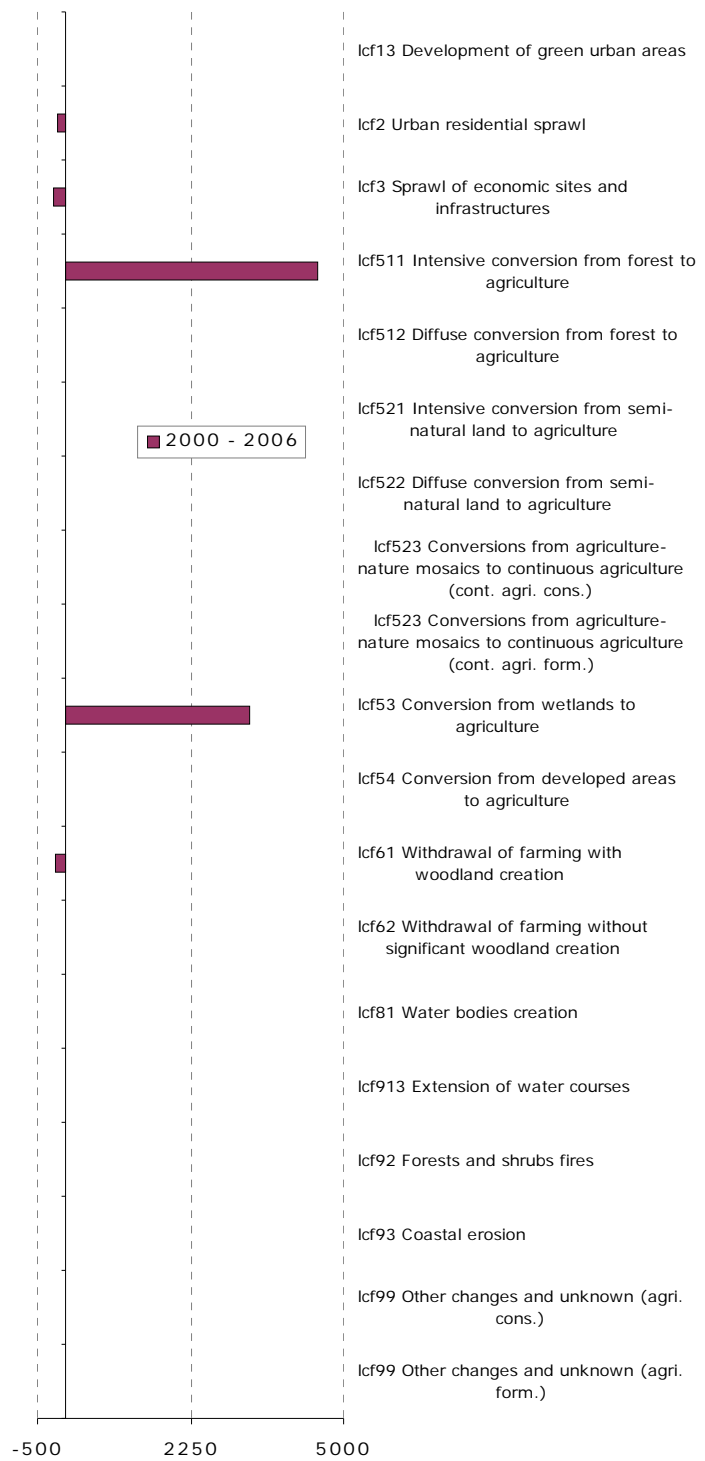


Finland

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



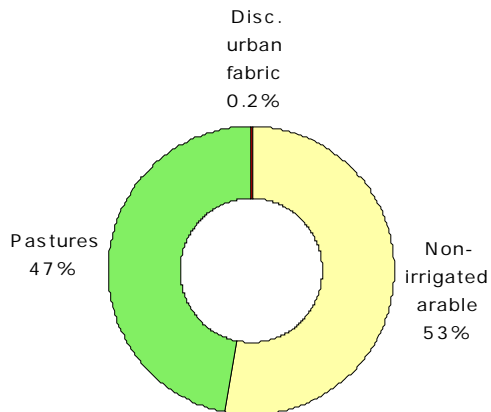
9.32. Mean annual conversions between agriculture and other LC types [ha/year]



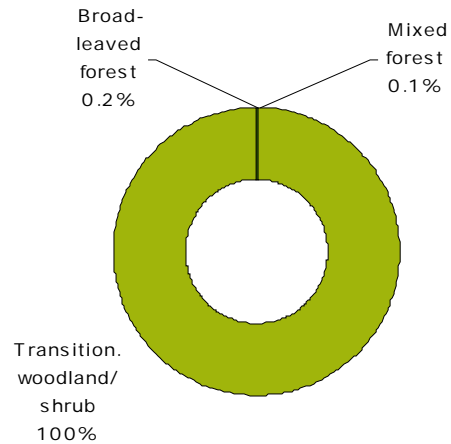
Finland

Forest & nature

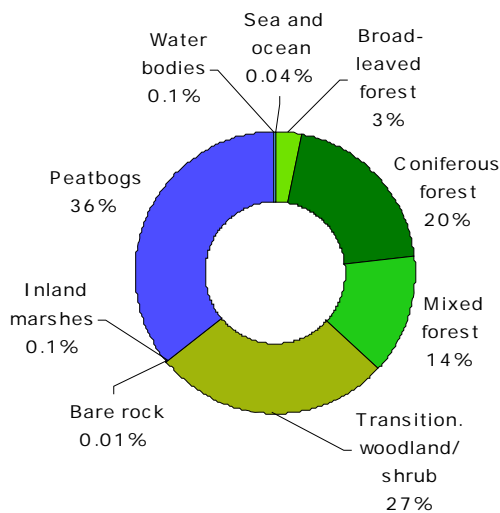
10.33. LC consumed by forest & nature 2000-2006 [% of total]



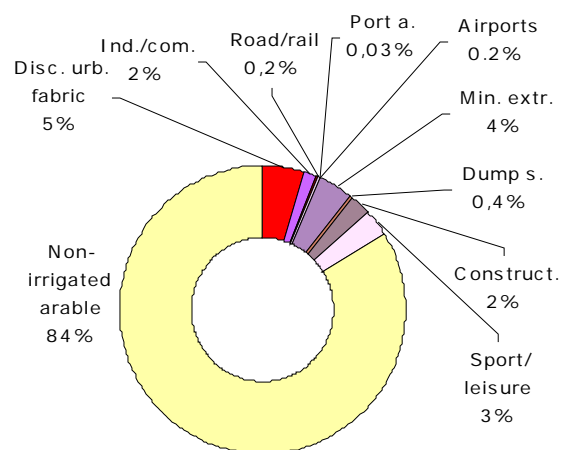
10.34. Formation of forest & nature land from non-forest /nature 2000-2006 [% of total]



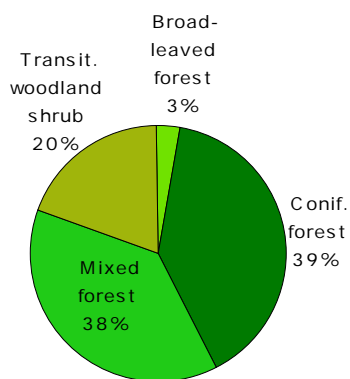
10.35. Consumption of forest & nature land by non-forest/nature 2000-2006 [% of total]



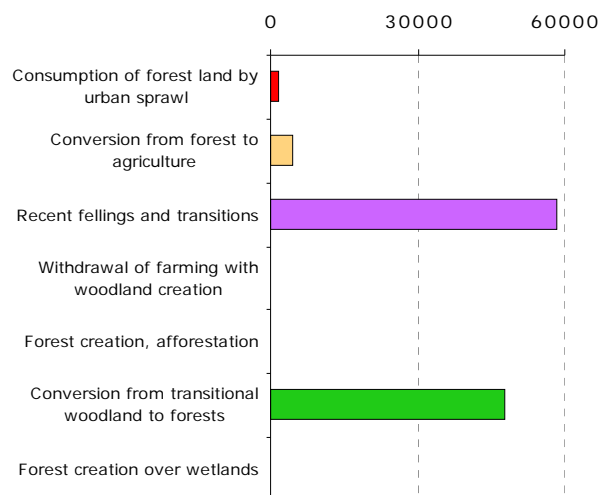
10.36. Formation of non-forest/nature land from forest & nature 2000-2006 [% of total]



10.37. Forested land 2006 [% of total area]

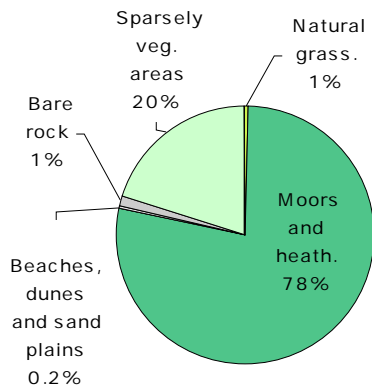


10.38. Main trends in woodland & forests consumption/formation 2000-2006 [ha/year]

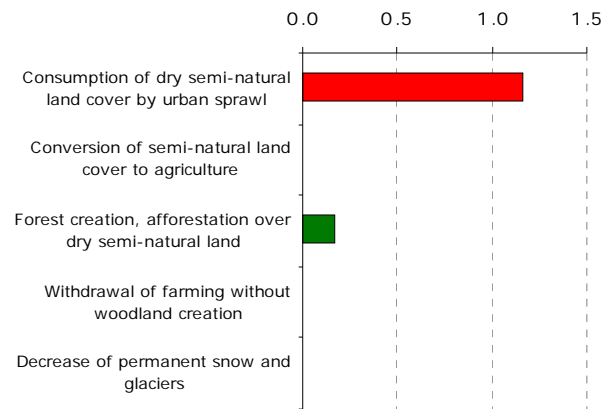


Finland

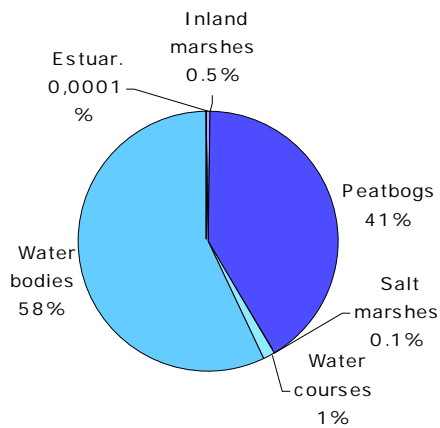
11.39. Dry semi-natural areas 2006
[% of total area]



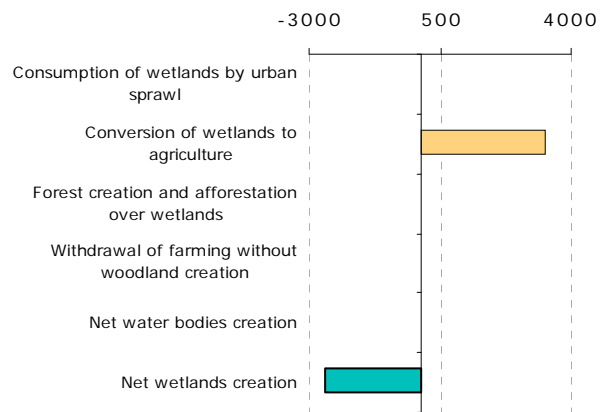
11.40. Main trends in dry semi-natural land consumption/formation 2000-2006 [ha/year]



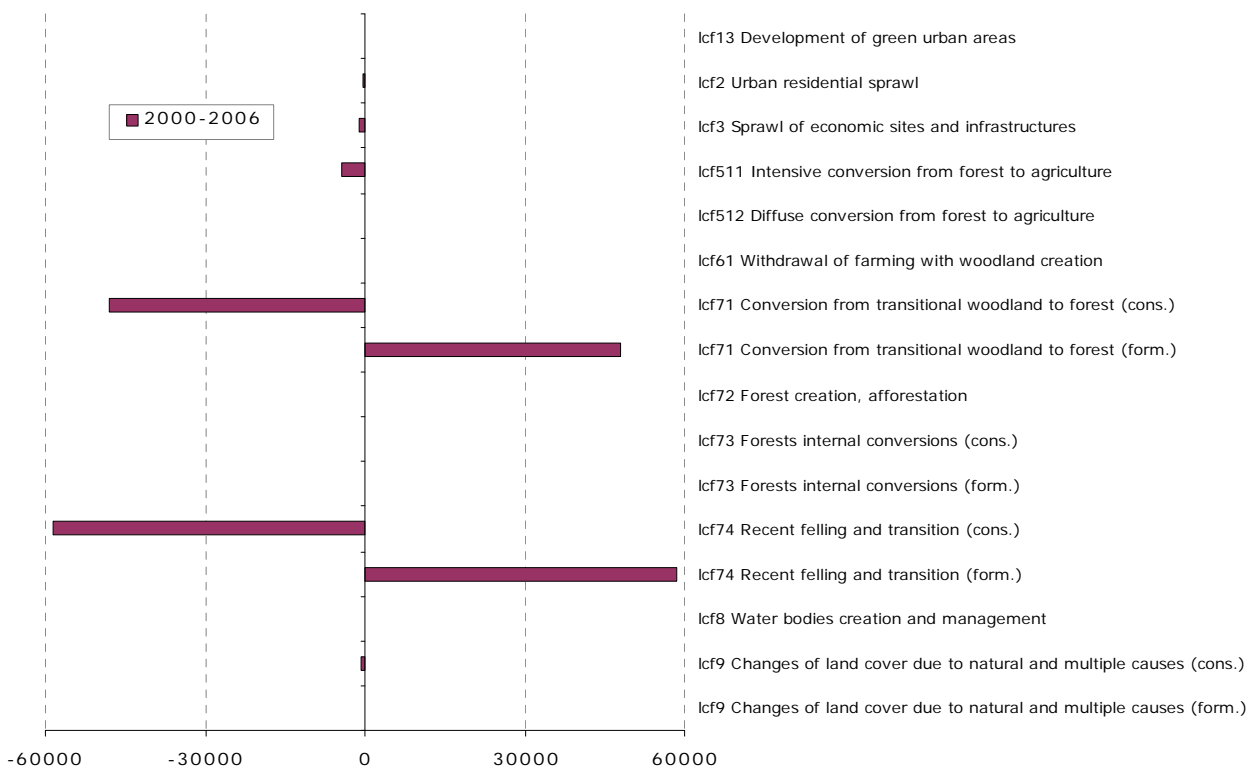
11.41. Wetlands & water 2006
[% of total area]



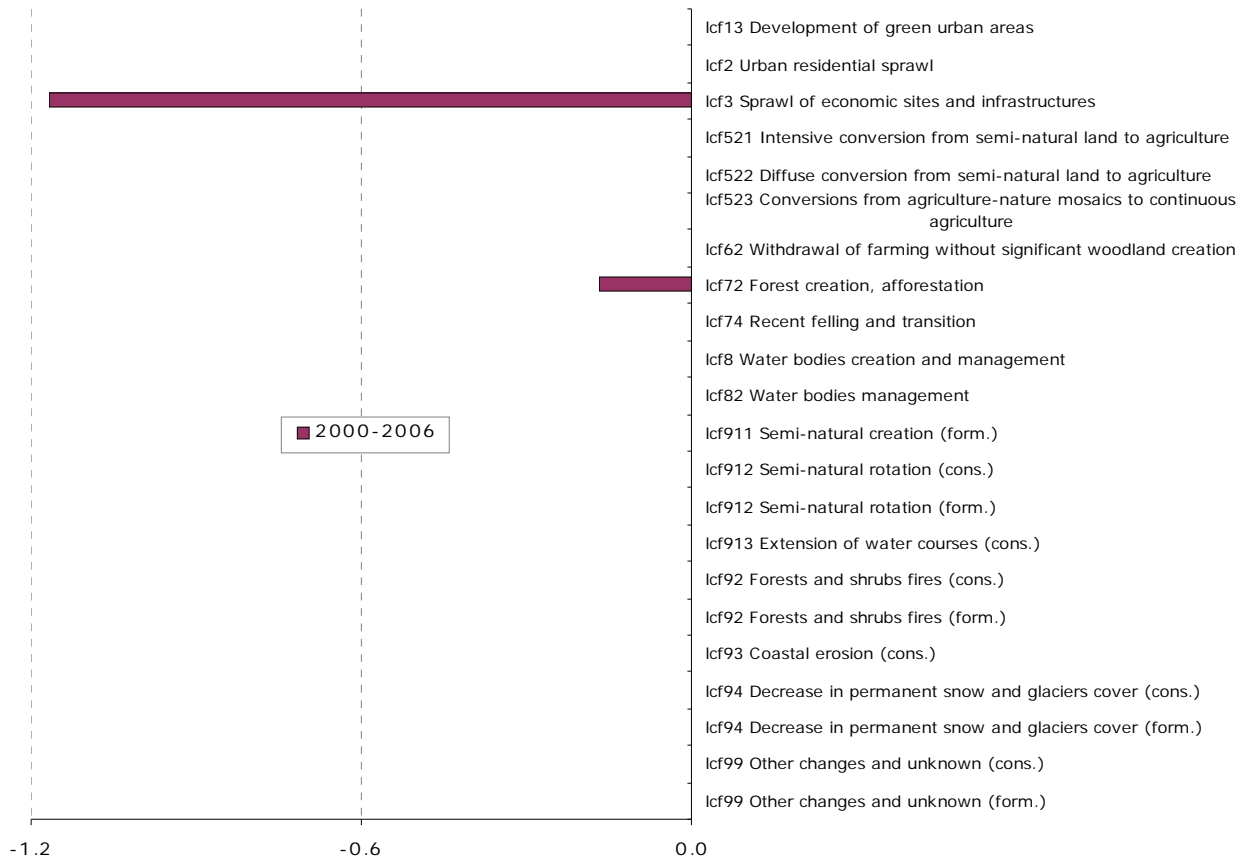
11.42. Main trends in wetlands & water consumption/formation 2000-2006 [ha/year]



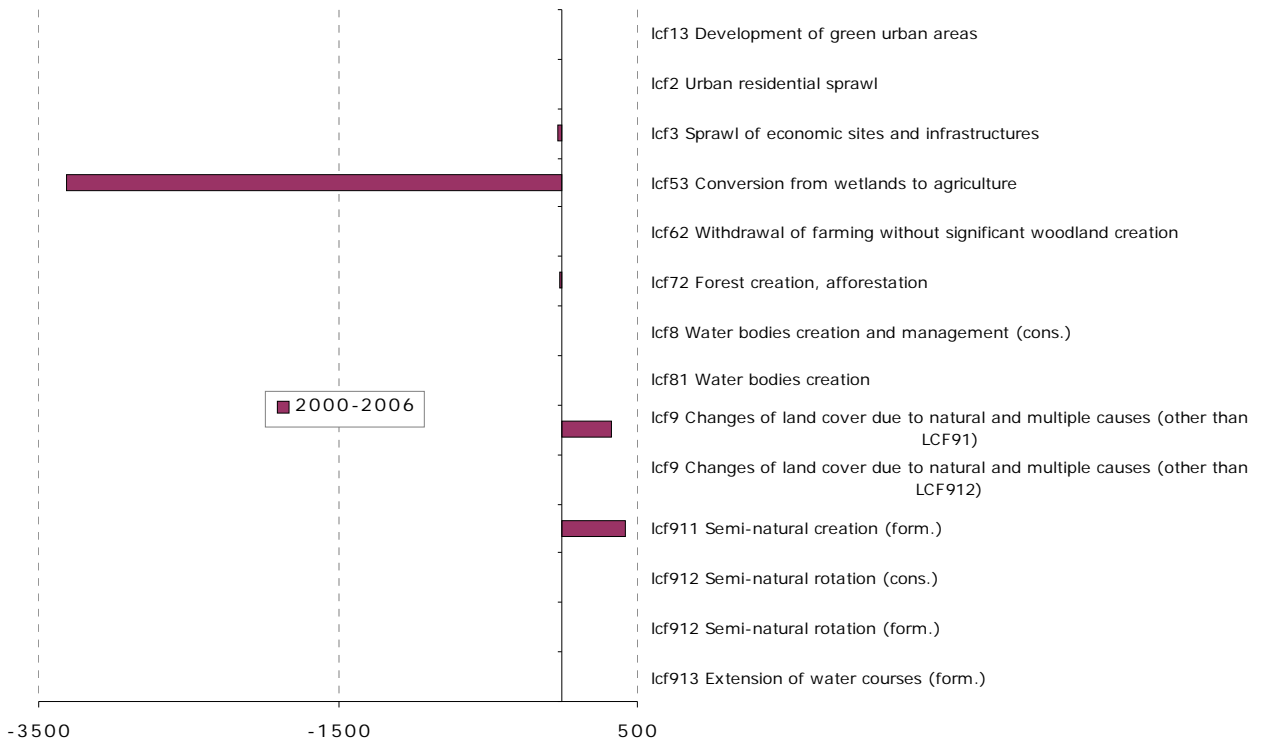
11.43. Mean annual conversions of forest & other woodland [ha/year]



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



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



Finland

