Country fact sheet

Land cover 2012

ICELAND

September 2017

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European Environment Agency

Iceland

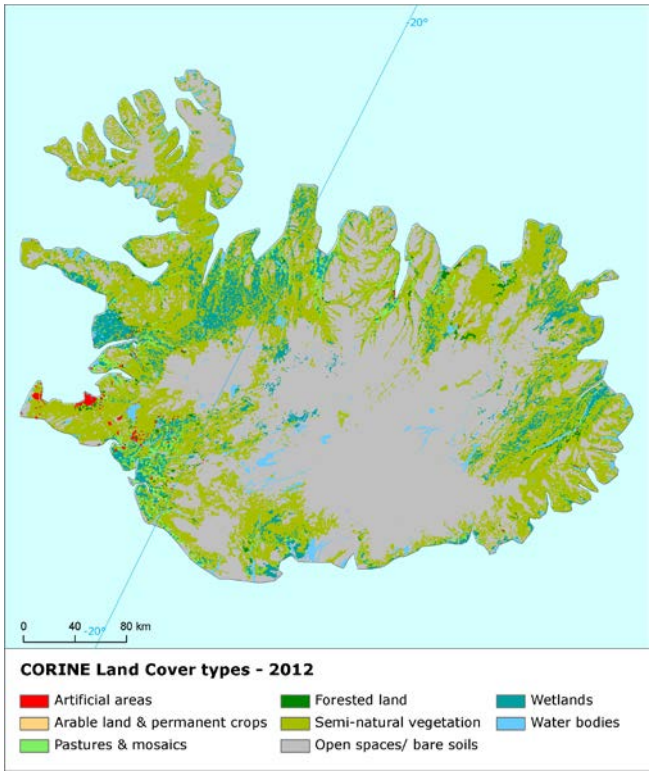
Land cover 2012

Overview of land cover & change 2006-2012

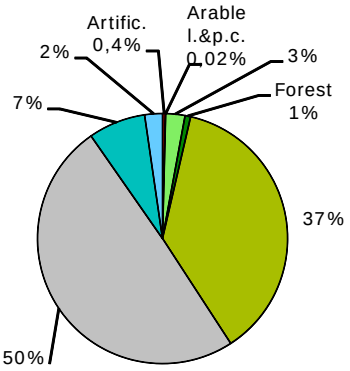
The pace of land cover development in Iceland shows slight acceleration, compared to the previous period. However, in the European context, it is relatively low, reaching about one half of the average value.
The landscape exchange is driven mostly by the changes due to natural and multiple causes. The intensity of the other land cover flows is significantly lower, compared to these conversions. Both sprawl of economic sites and infrastructures and forest creation and management occur with significantly decreased intensity than in the previous period 2000-2006. On the other hand, the intensity of water bodies creation and development is several times higher, compared to the period 2000-2006.
Although it covers a significantly smaller area, compared to the above mentioned conversions of natural land, the artificial development in Iceland is quite significant. With the annual artificial land take rate of 0.36%, its speed reaches the European average. However, compared to the previous period, its intensity is much lower. Also in the latest period, the land take is driven mostly by the sprawl of sport and leisure facilities and by construction. It has to be mentioned, that these two flows, which were very extensive in the previous period, lost most of their intensity and the sprawl of industrial or commercial sites and urban fabric almost disappeared from the Icelandic landscape in the 2006-2012.

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.

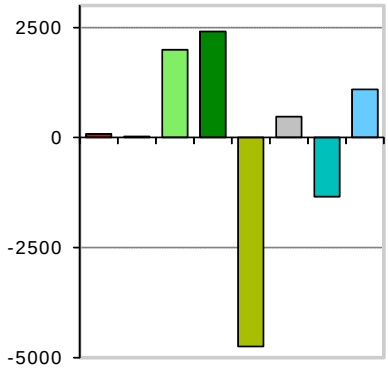
Number of years between CLC2006-CLC2012 data for Iceland: 6



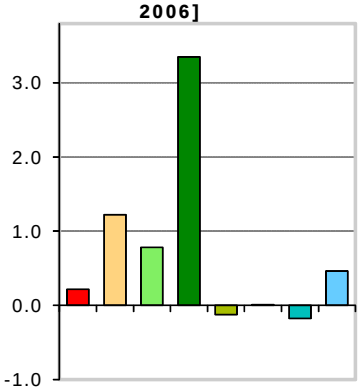
1.1. Land cover 2012 [% of total]



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

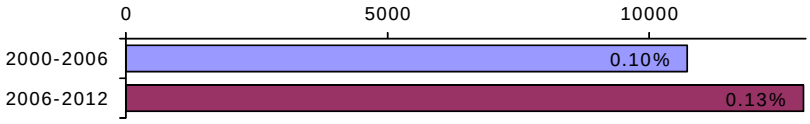
Summary balance table 2006-2012

	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	**396**	**22**	**2559**	**720**	**38558**	**51211**	**7666**	**2362**	**103494**
Consumption of initial LC	17.9	0.0	2.0	4.4	95.3	462.1	14.0	181.1	777
Formation of new LC	18.8	0.3	21.9	28.5	47.8	466.9	0.6	192.1	777
Net Formation of LC	**0.9**	**0.3**	**20.0**	**24.1**	**-47.5**	**4.8**	**-13.4**	**11.0**	**0**
Net formation as % of initial year	*0.2*	*1.2*	*0.8*	*3.3*	*-0.1*	*0.0*	*-0.2*	*0.5*	
Total turnover of LC	**36.7**	**0.3**	**23.9**	**32.9**	**143.0**	**929.0**	**14.6**	**373.2**	**1554**
Total turnover as % of initial year	*9.3*	*1.2*	*0.9*	*4.6*	*0.4*	*1.8*	*0.2*	*15.8*	*1.5*
Land cover 2012	**396**	**22**	**2579**	**744**	**38511**	**51215**	**7652**	**2373**	**103494**

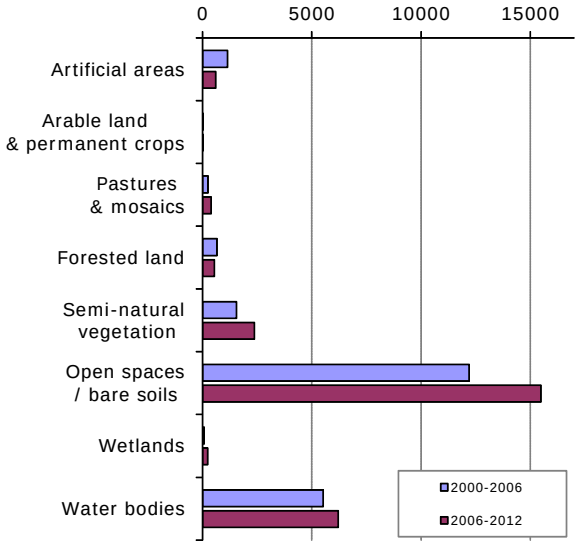
Iceland

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

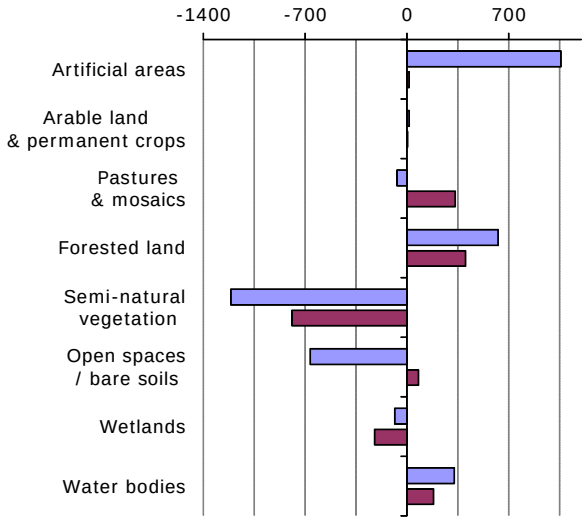
2.4. Annual land cover change [ha/year, % of total area]



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

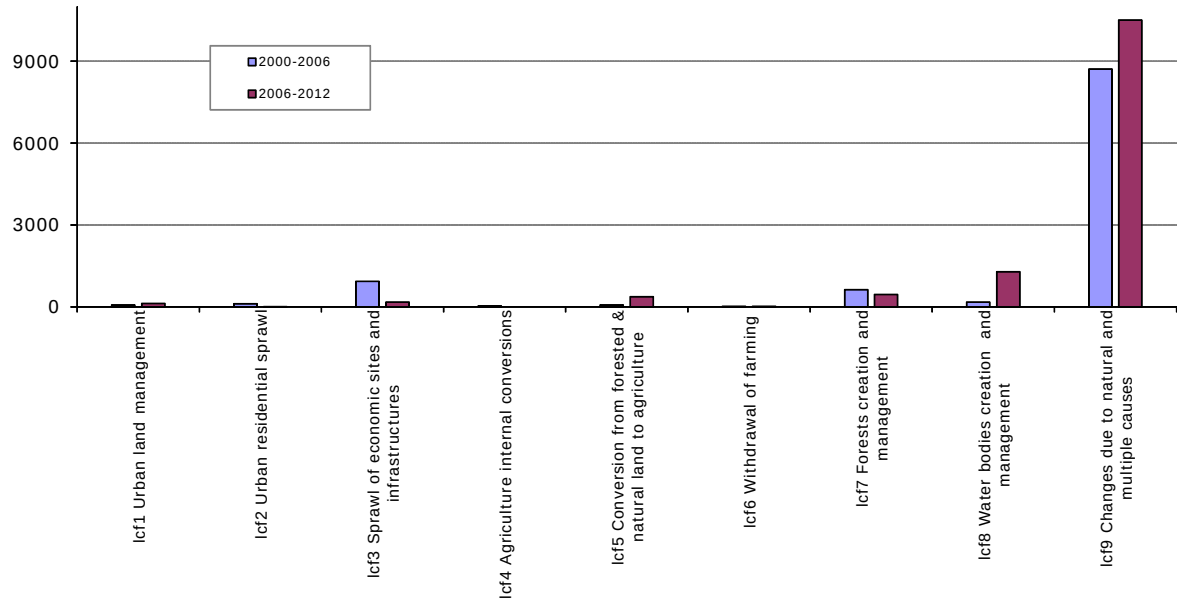


2.6. Net annual change of LC types [ha/year]



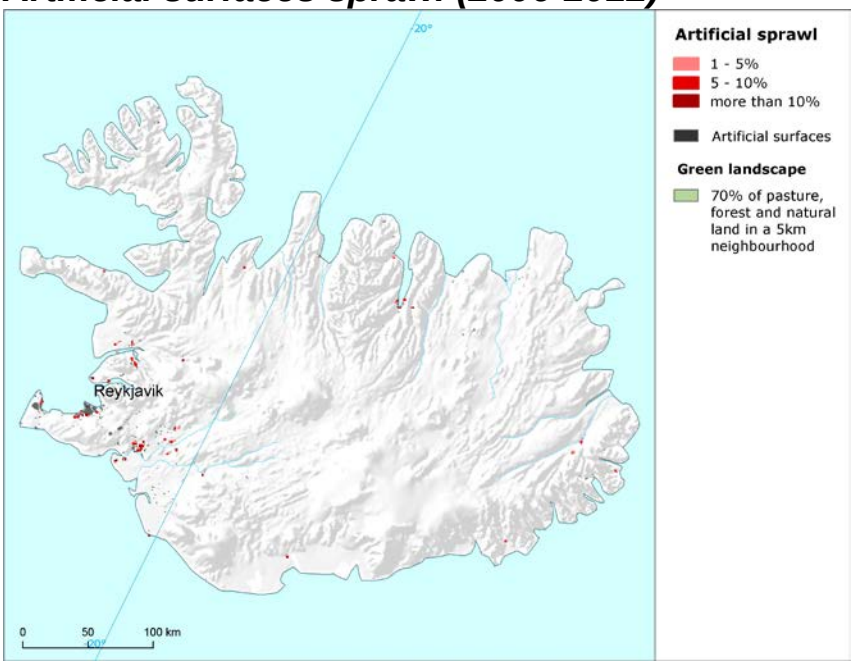
Summary trend figures	2000-2006	2006-2012
Annual land cover change [ha/year]	**10731**	**12947**
Annual land cover change as % of initial year	**0.10%**	**0.13%**
Land uptake by artificial development as mean annual change [ha/year]	1058	140
Agricultural land uptake by urban and infrastructures development as mean annual change [ha/year]	110	7
Net uptake of forests and semi-natural land by agriculture as mean annual change [ha/year]	57	344
Net conversion from pasture to arable land and permanent crops as mean annual change [ha/year]	33	0
Forest & other woodland net formation as mean annual change [ha/year]	628	402
Dry semi-natural land cover net formation as mean annual change [ha/year]	-1865	-711
Wetlands & water bodies net formation as mean annual change [ha/year]	243	-41

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

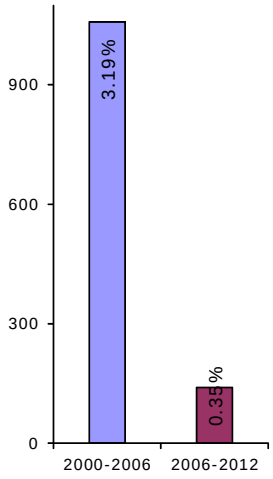


Iceland

Artificial surfaces sprawl (2006-2012)



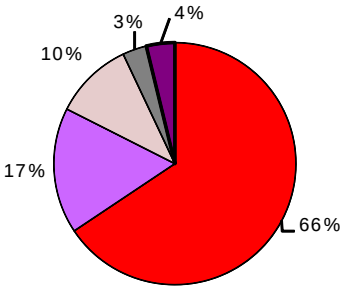
3.8. Artificial land take [ha/year, % of initial year]

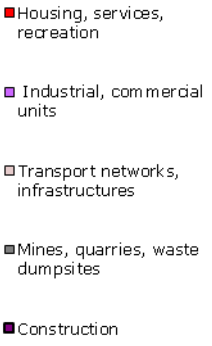


Artificial sprawl slows down, still driven by extension of sport and leisure facilities and construction

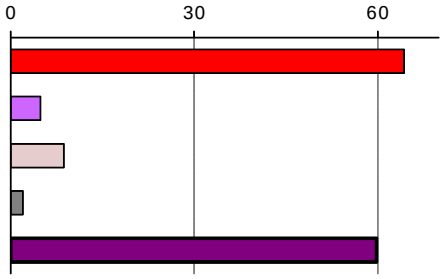
The intensity of the artificial sprawl is significantly lower, compared to previous period 2000-2006, however, it still reaches the European average. The artificial development is still driven by the sprawl of sport and leisure facilities and by construction, which is a similar situation as in the previous period, although the intensity of these two flows is significantly lower in 2006-2012. In contrast, the sprawl of industrial or commercial sites and also of residential fabric lost most of their intensity and almost disappeared from the Icelandic landscape in the last period. The spatial distribution of the land take shows a similar pattern with the previous period, with major concentration on the western coast of the island. It has to be mentioned, that the artificial sprawl is compensated by simultaneous conversion of artificial areas (mostly construction sites) into natural land, which leads to very low rate of net formation of artificial land.

3.9. Artificial surfaces 2012 [% of total area]

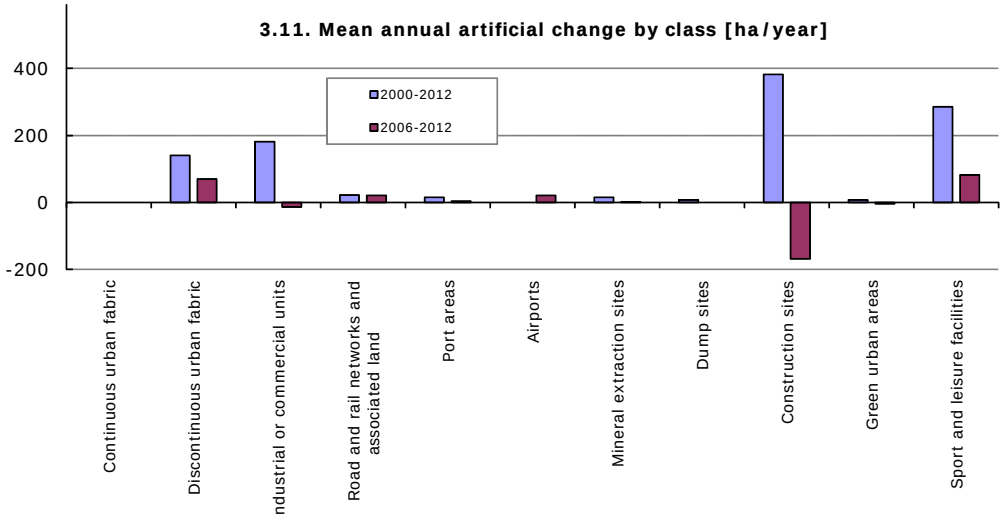




3.10. Artificial land take 2006-2012 [ha/year]

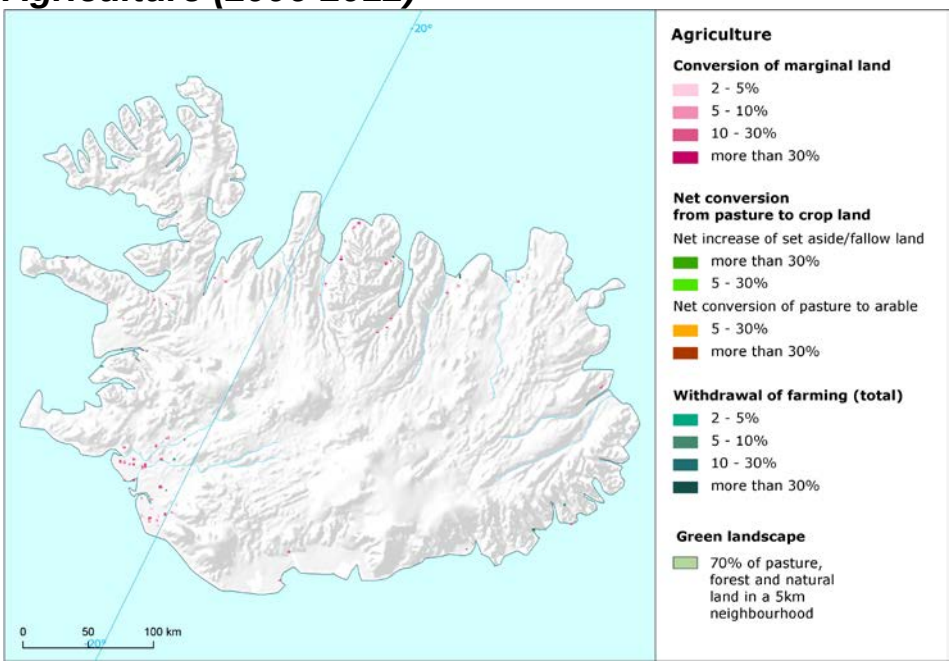


3.11. Mean annual artificial change by class [ha/year]



Iceland

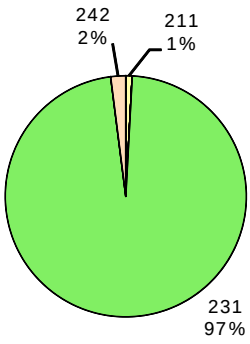
Agriculture (2006-2012)

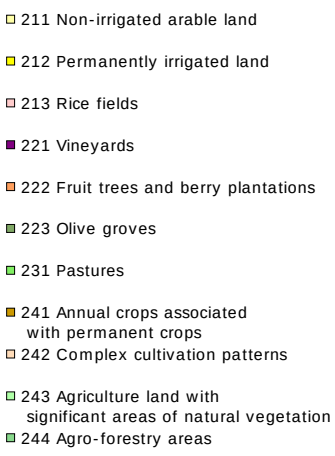


Conversion of natural grasslands, heathlands and peatbogs to pasture

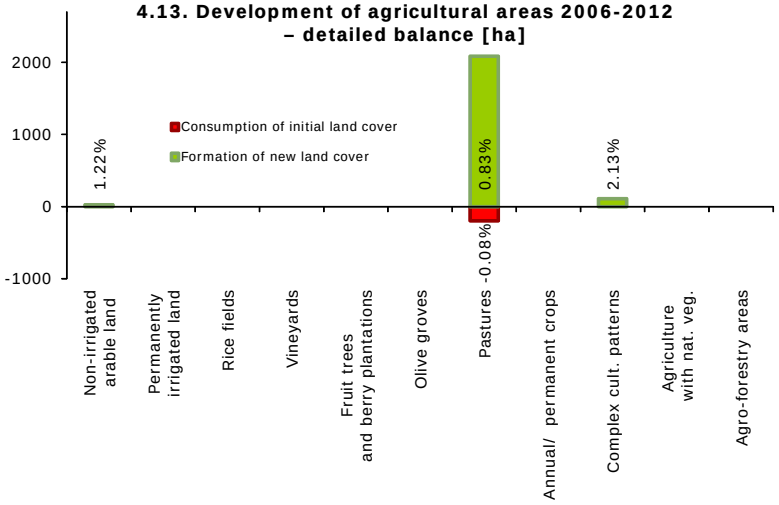
The extent of agricultural land in Iceland is very limited, covering only 3% of the total area, with strong predominance of pastures (97% of total agricultural land). In the period 2006-2012, there was an observed frequent formation of agricultural land (mostly pastures), mainly through conversion from natural land to agriculture. This flow was represented mostly by the diffuse conversion from semi-natural land (conversion of marginal land) and also from wetlands to agriculture. Moors and heathlands, natural grasslands as well as peatbogs are the main sources for this new agricultural land (mostly pastures) creation. Geographically, patches with these conversions are concentrated in the south-western part of the island and they also occur along the northern coast. These flows were observed already during the previous period, however, their intensity was rather insignificant.

4.12. Agricultural areas 2012 [% of total area]

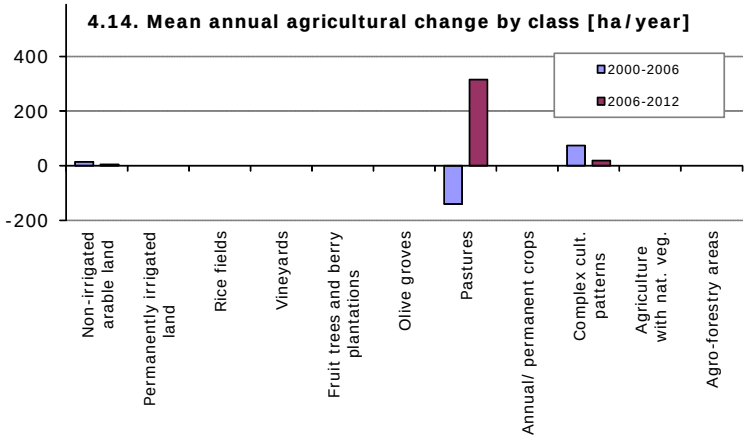




4.13. Development of agricultural areas 2006-2012 – detailed balance [ha]

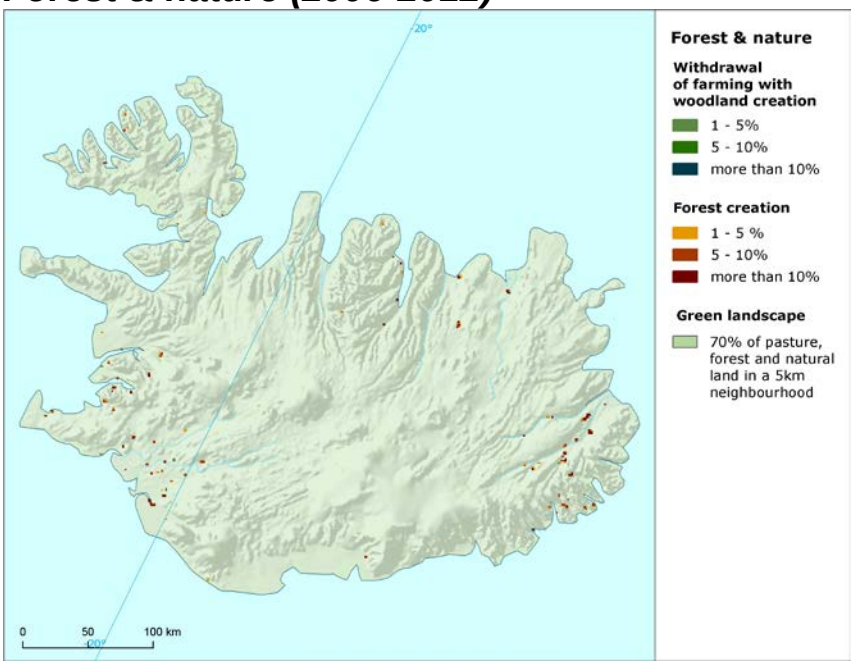


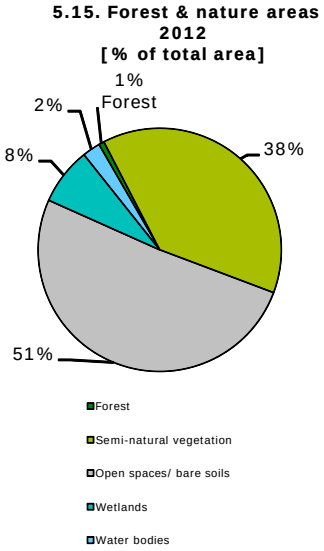
4.14. Mean annual agricultural change by class [ha/year]



Iceland

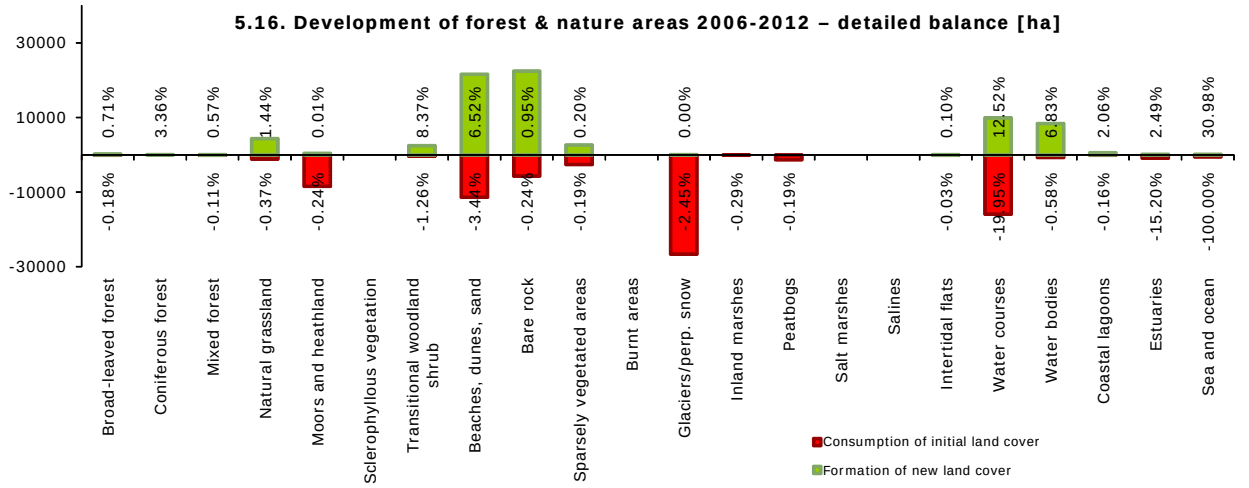
Forest & nature (2006-2012)

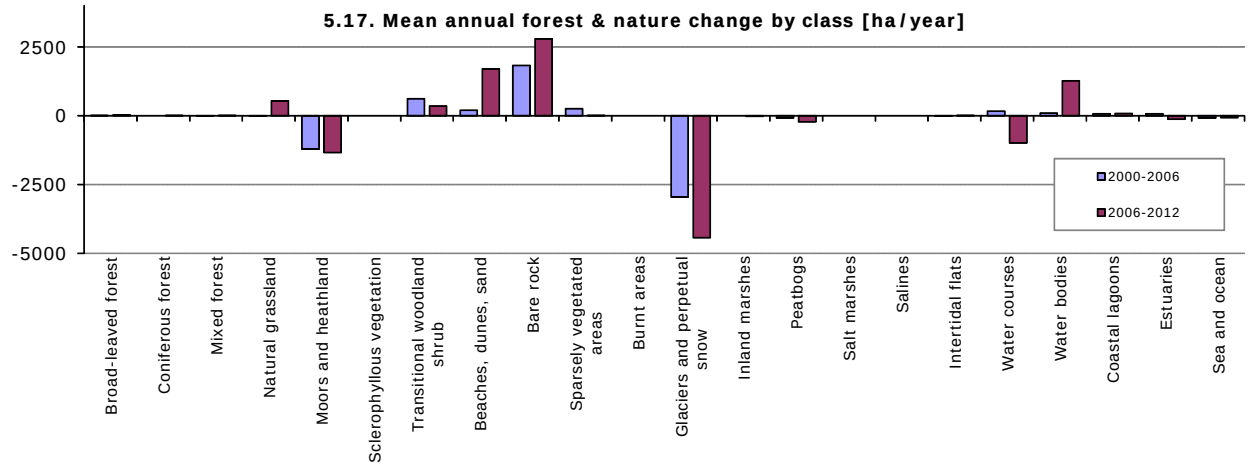




Dynamic development of natural land

Covering most of the Icelandic area, the natural landscape shows high dynamics of land cover development. The most significant flow in natural land cover, as well as in the country in general, is the decrease of glaciers cover, which has significantly higher intensity, compared to previous period. The most of former glaciers area is being converted into bare rock land, beaches, dunes or sand plains or to water bodies, courses or coastal lagoons. The other significant flows in the Icelandic natural land are semi-natural rotation (mainly creation of natural grasslands over moors and heathlands or open spaces and bare soils) and water bodies extension over former moors and heathlands or bare rock areas. There also occur frequent conversions of water courses into beaches, dunes and sand plains – which indicates the temporal character of water courses in Iceland. As already mentioned, natural areas, with prevailing share of moors and heathlands, natural grasslands and peatbogs are also consumed by the creation of new pastures.

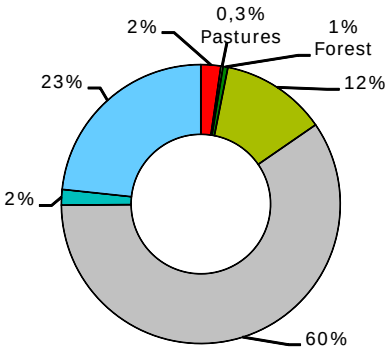




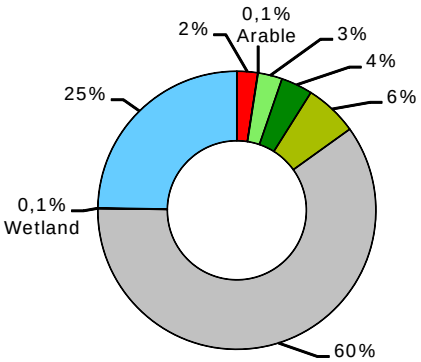
Annex: Land cover flows and trends

Land cover flows 2006-2012

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

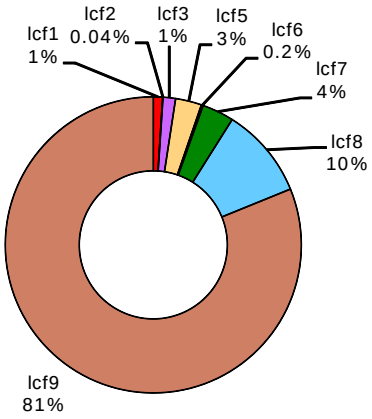


6.19. Formation of land cover 2006-2012 [% of total change area]



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) 2006-2012 [% of total change area]

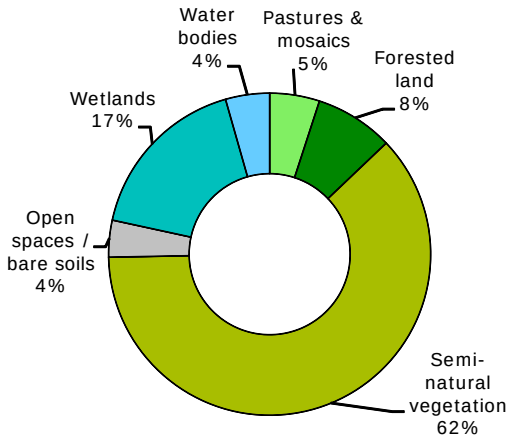


lcf1 Urban land management
lcf2 Urban residential sprawl
lcf3 Sprawl of economic sites and infrastructures
lcf4 Agriculture internal conversions
lcf5 Conversion from forested & natural land to agriculture
lcf6 Withdrawal of farming
lcf7 Forests creation and management
lcf8 Water bodies creation and management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

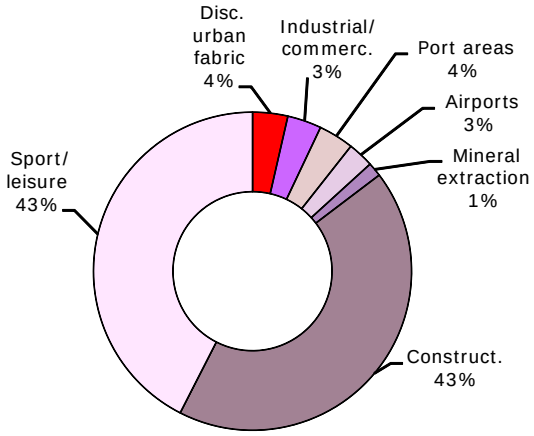
Iceland

Artificial areas

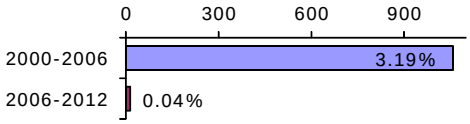
7.21. Consumption by artificial land take 2006-2012 [% of total]



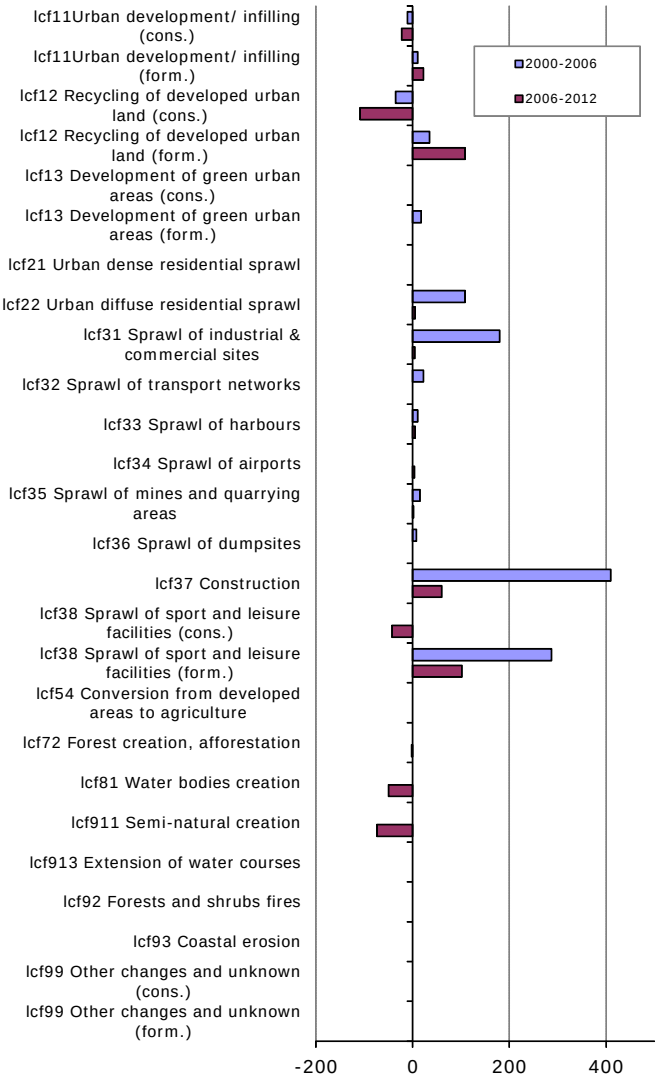
7.22. Formation by artificial land take 2006-2012 [% of total]



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



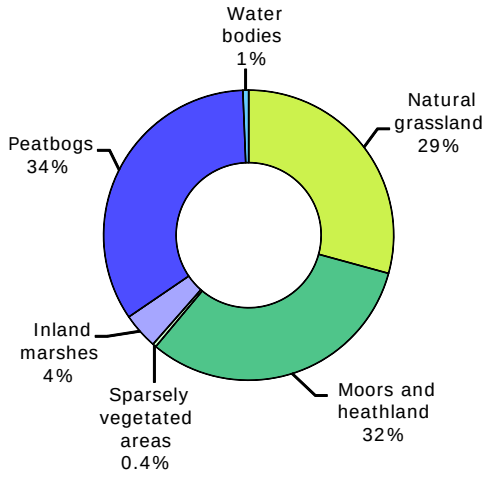
7.24. Artificial development by change drivers (LC FLOWS) [ha/year]



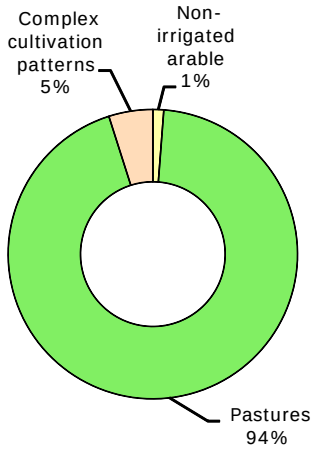
Iceland

Agriculture

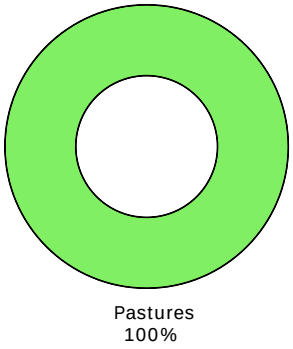
8.25. LC consumed by agriculture 2006-2012 [% of total]



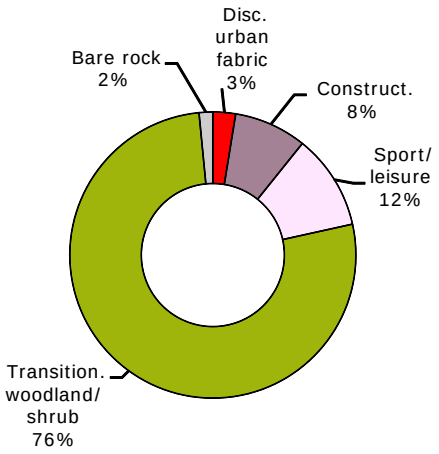
8.26. Formation of agricultural land from non-agriculture 2006-2012 [% of total]



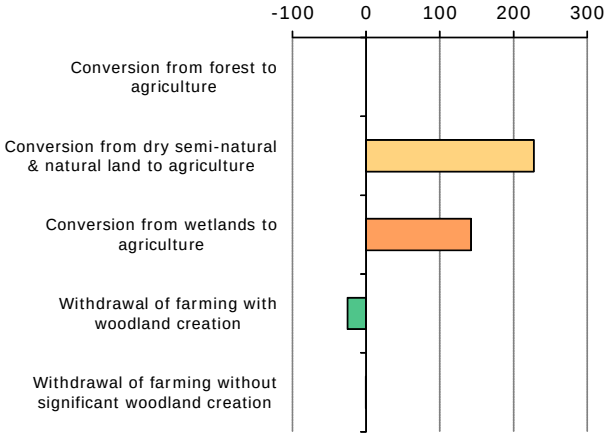
8.27. Consumption of agricultural land by non-agriculture 2006-2012 [% of total]



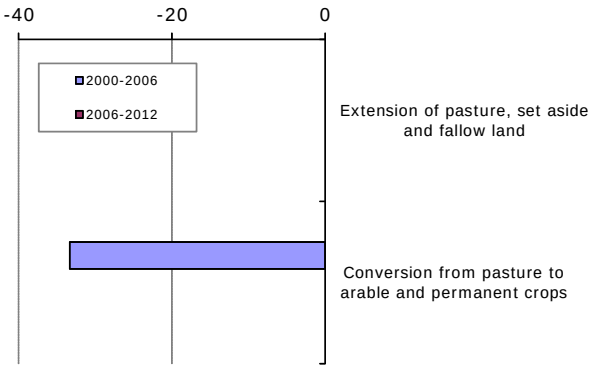
8.28. Formation of non-agricultural land from agriculture 2006-2012 [% of total]



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

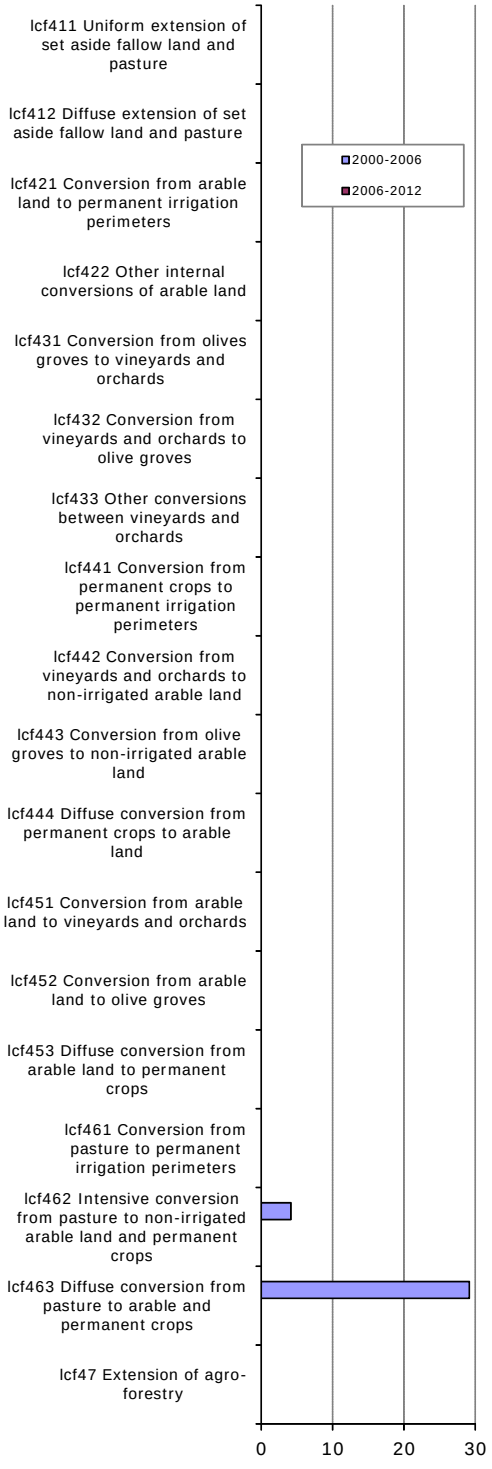


8.30. Mean annual conversion between arable land and pasture [ha/year]

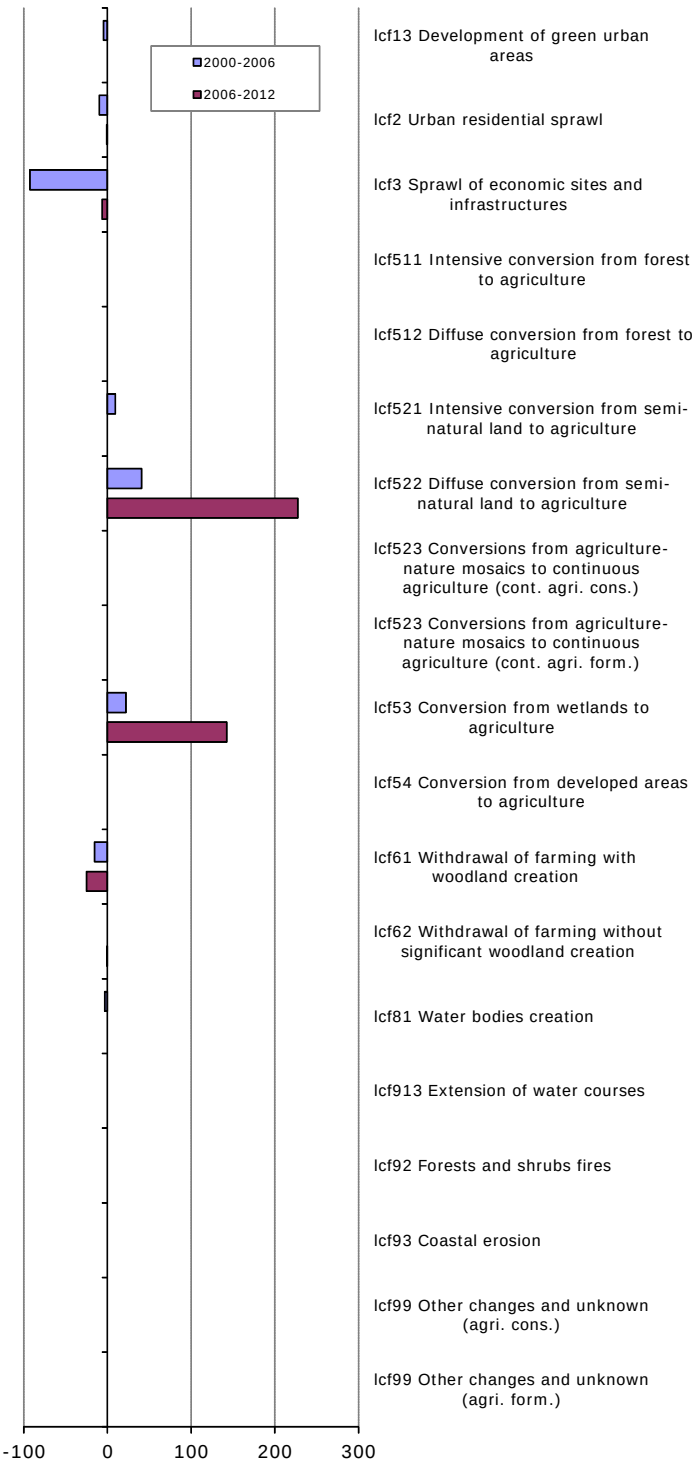


Iceland

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



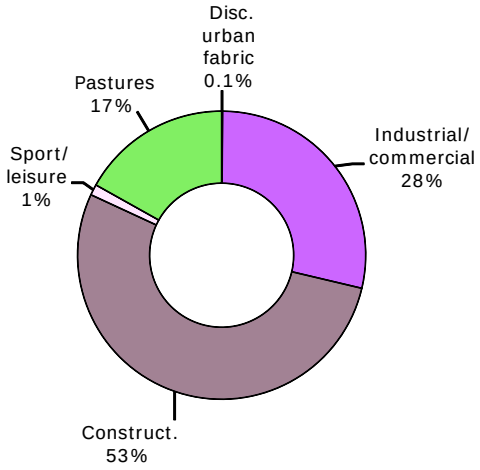
9.32. Mean annual conversions between agriculture and other LC types [ha / year]



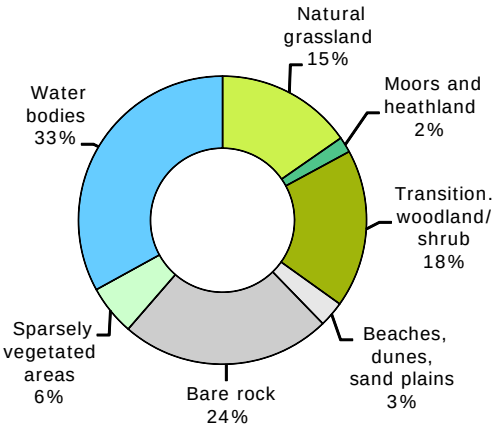
Iceland

Forest & nature

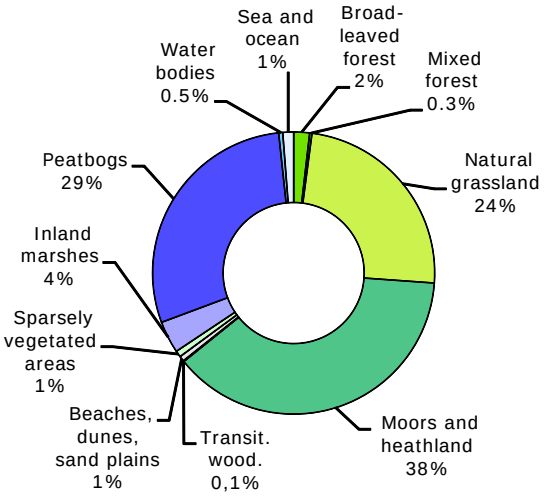
10.33. LC consumed by forest & nature 2006-2012 [% of total]



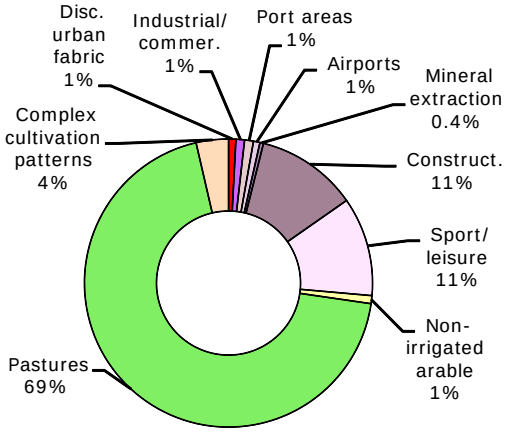
10.34. Formation of forest & nature land from non-forest /nature 2006-2012 [% of total]



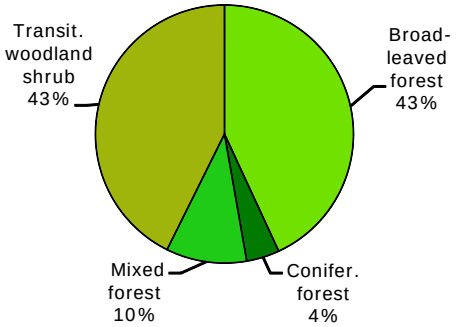
10.35. Consumption of forest & nature land by non-forest/nature 2006-2012 [% of total]



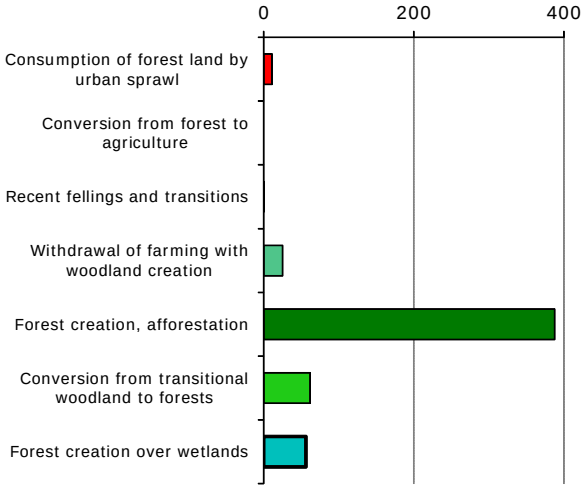
10.36. Formation of non-forest/nature land from forest & nature 2006-2012 [% of total]



10.37. Forested land 2012 [% of total area]

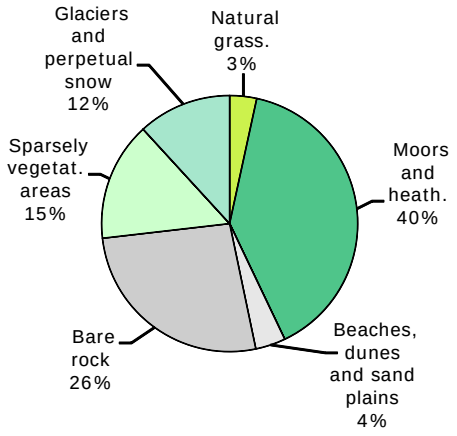


10.38. Main trends in woodland & forests consumption/formation 2006-2012 [ha/year]

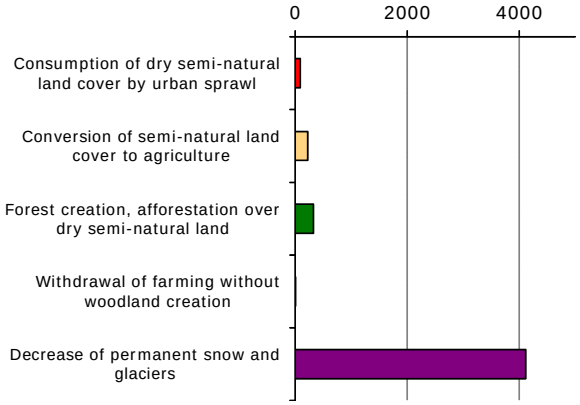


Iceland

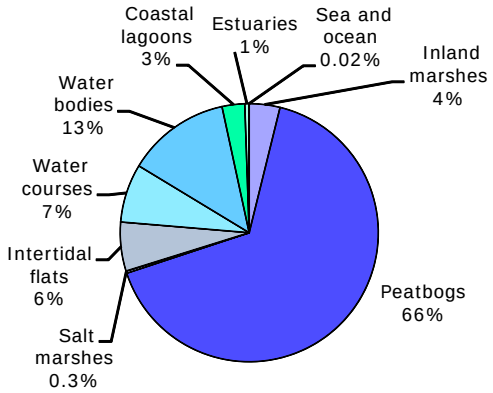
11.39. Dry semi-natural areas 2012 [% of total area]



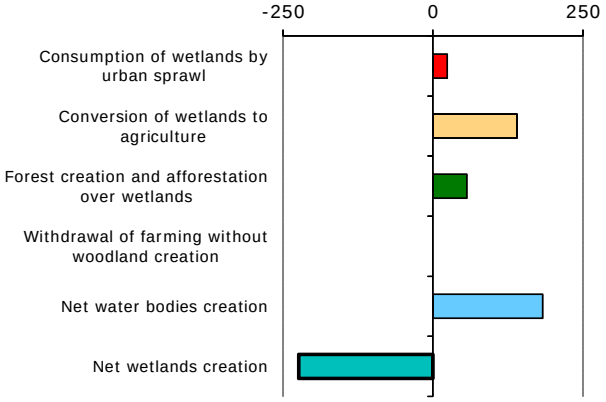
11.40. Main trends in dry semi-natural land consumption/formation 2006-2012 [ha/year]



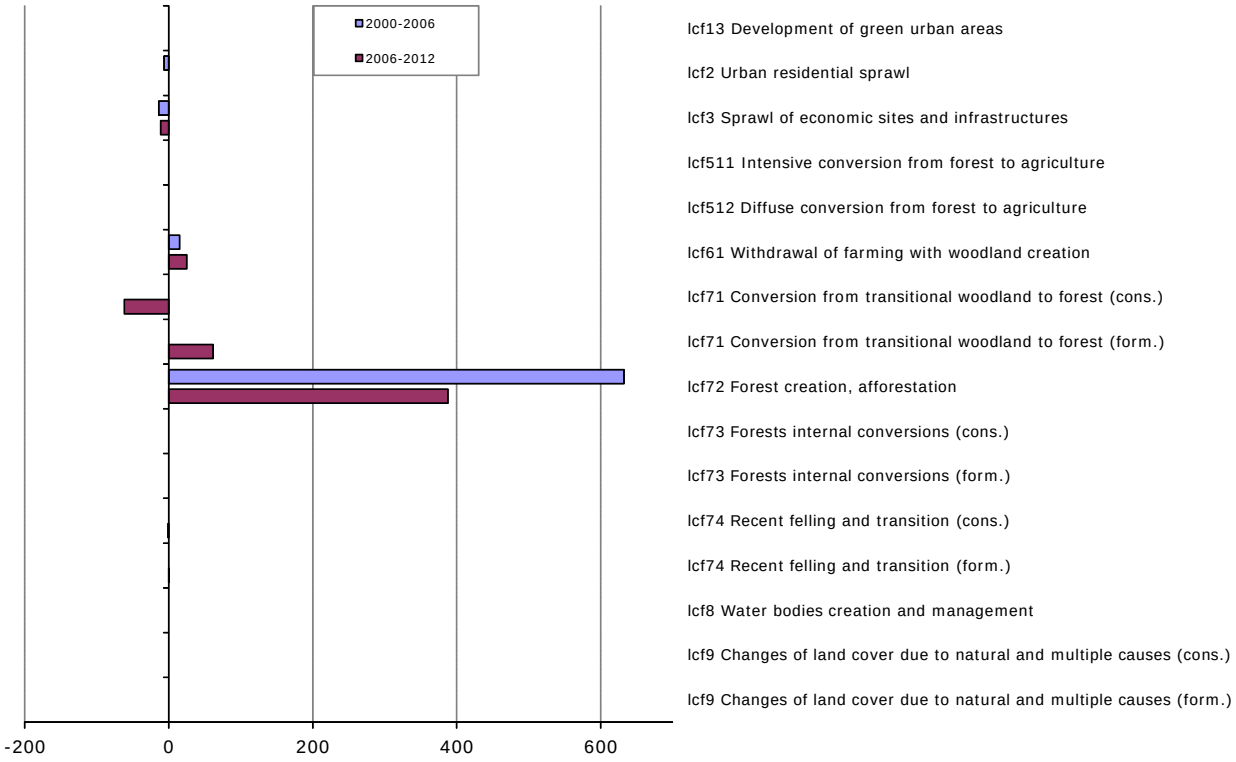
11.41. Wetlands & water 2012 [% of total area]



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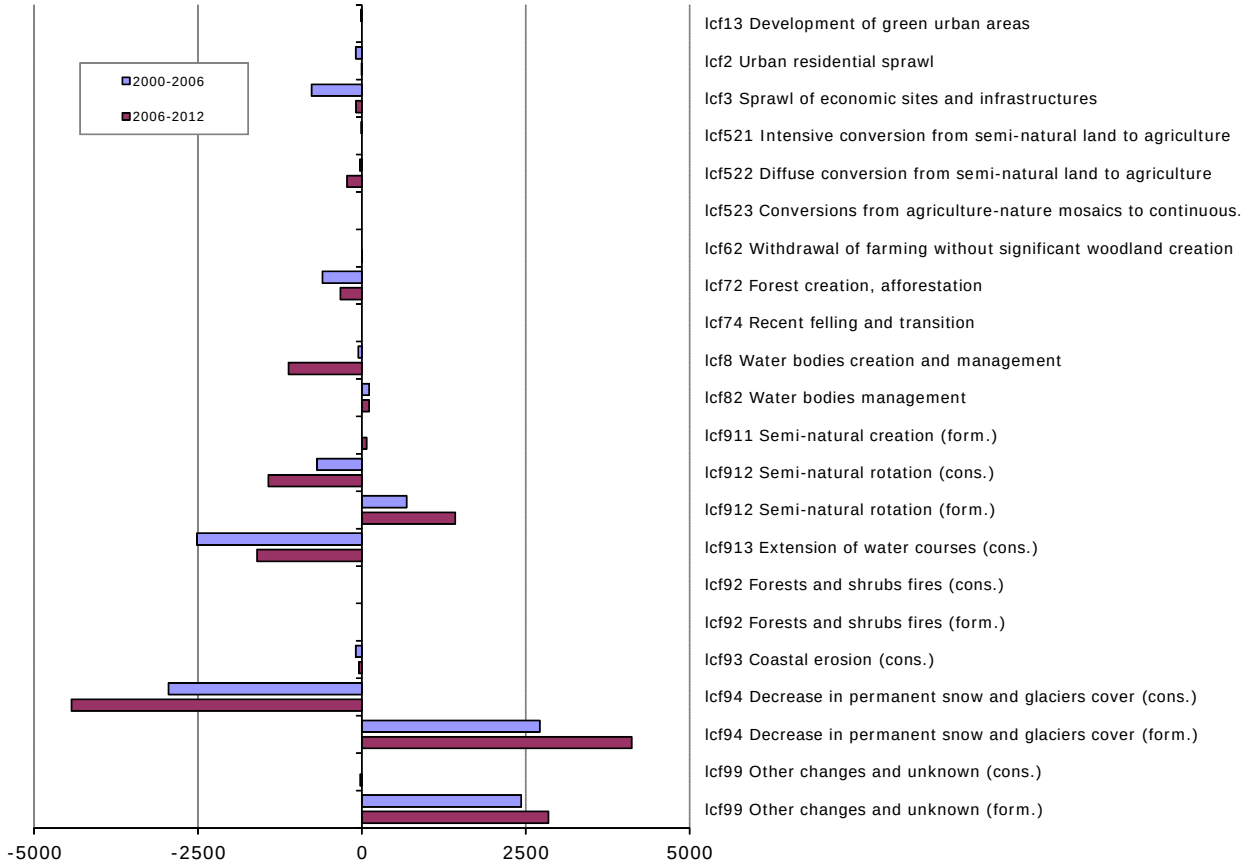
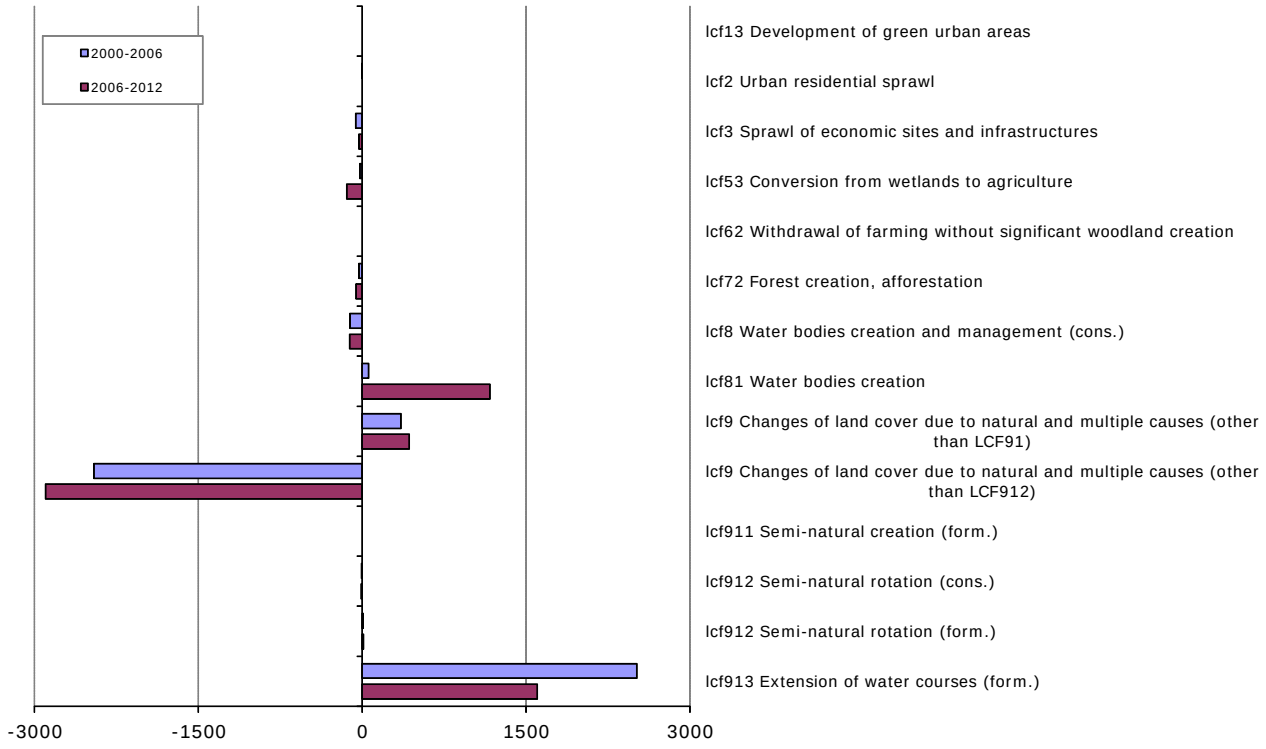
12.44. Mean annual conversions of dry semi-natural LC [ha/year]



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



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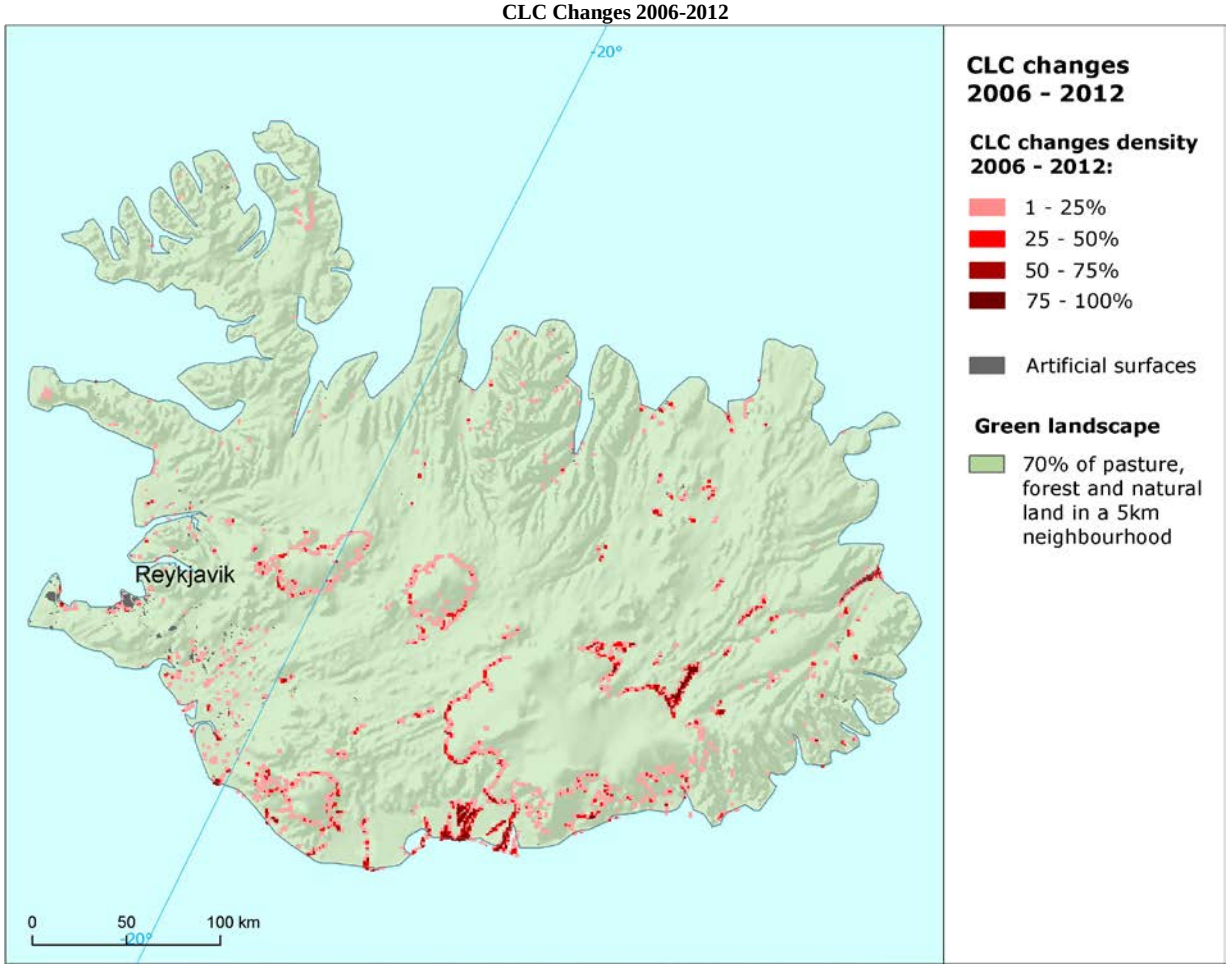
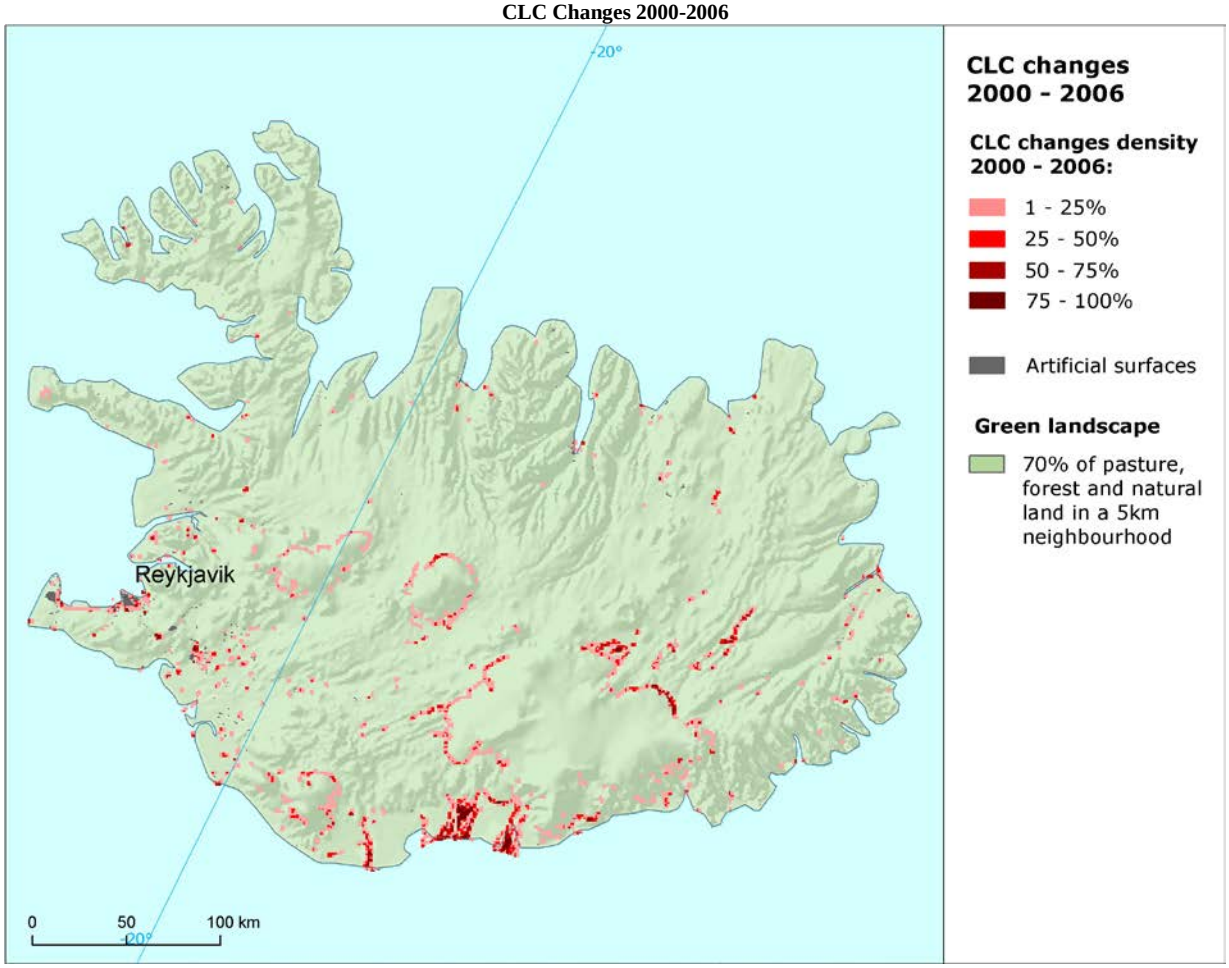
CLC Changes 2006-2012



CLC Changes 2000-2006



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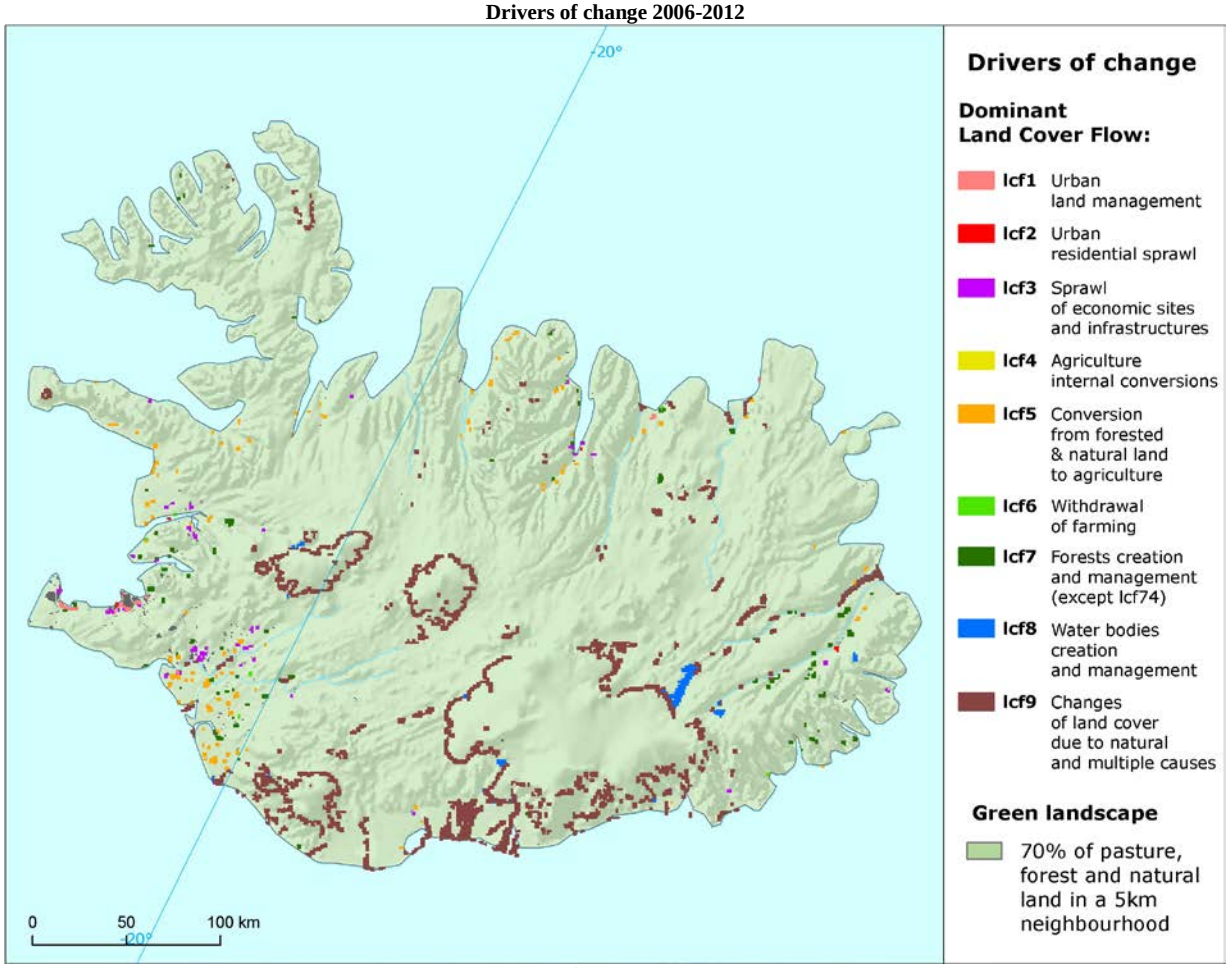
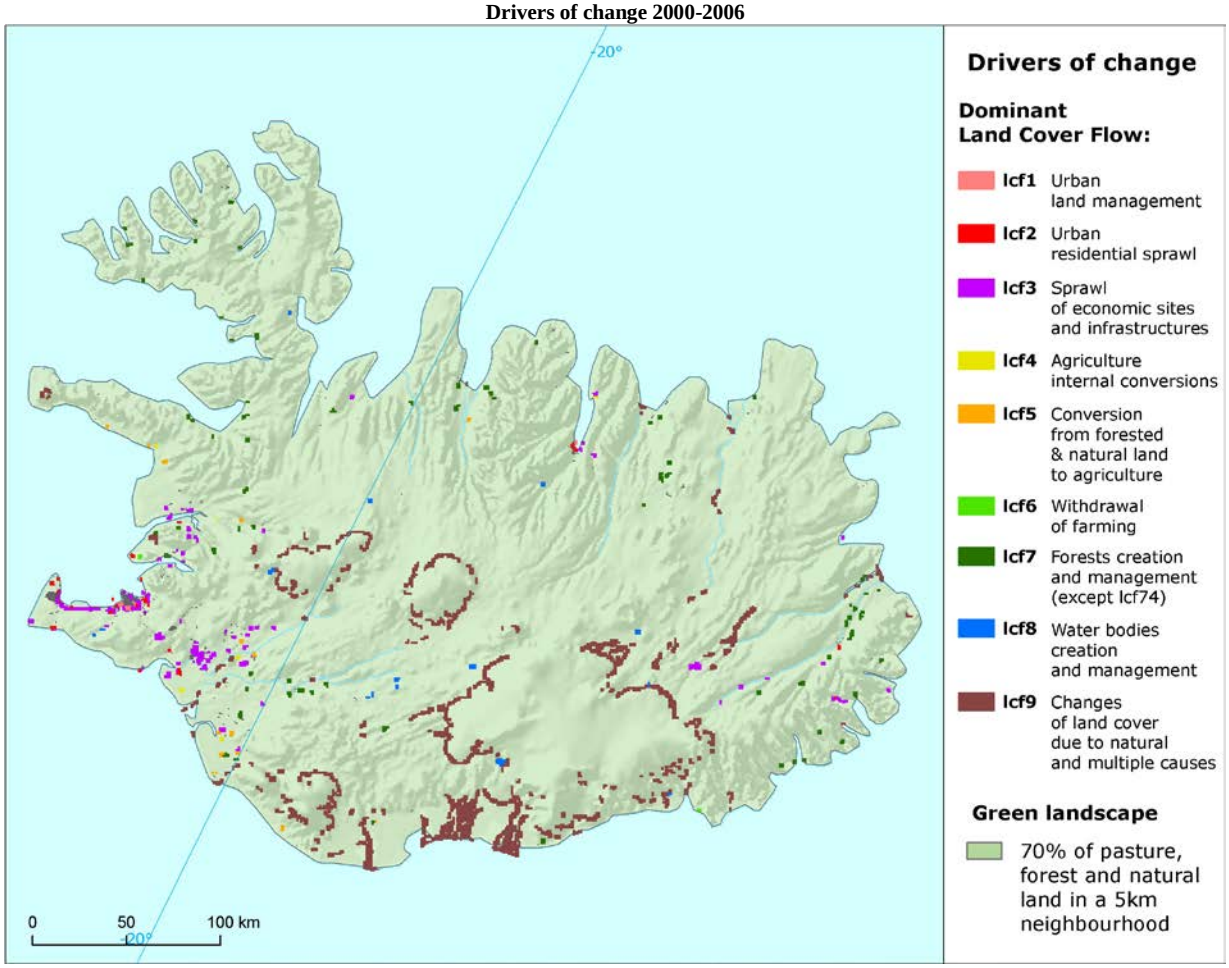
Drivers of change 2006-2012



Drivers of change 2000-2006



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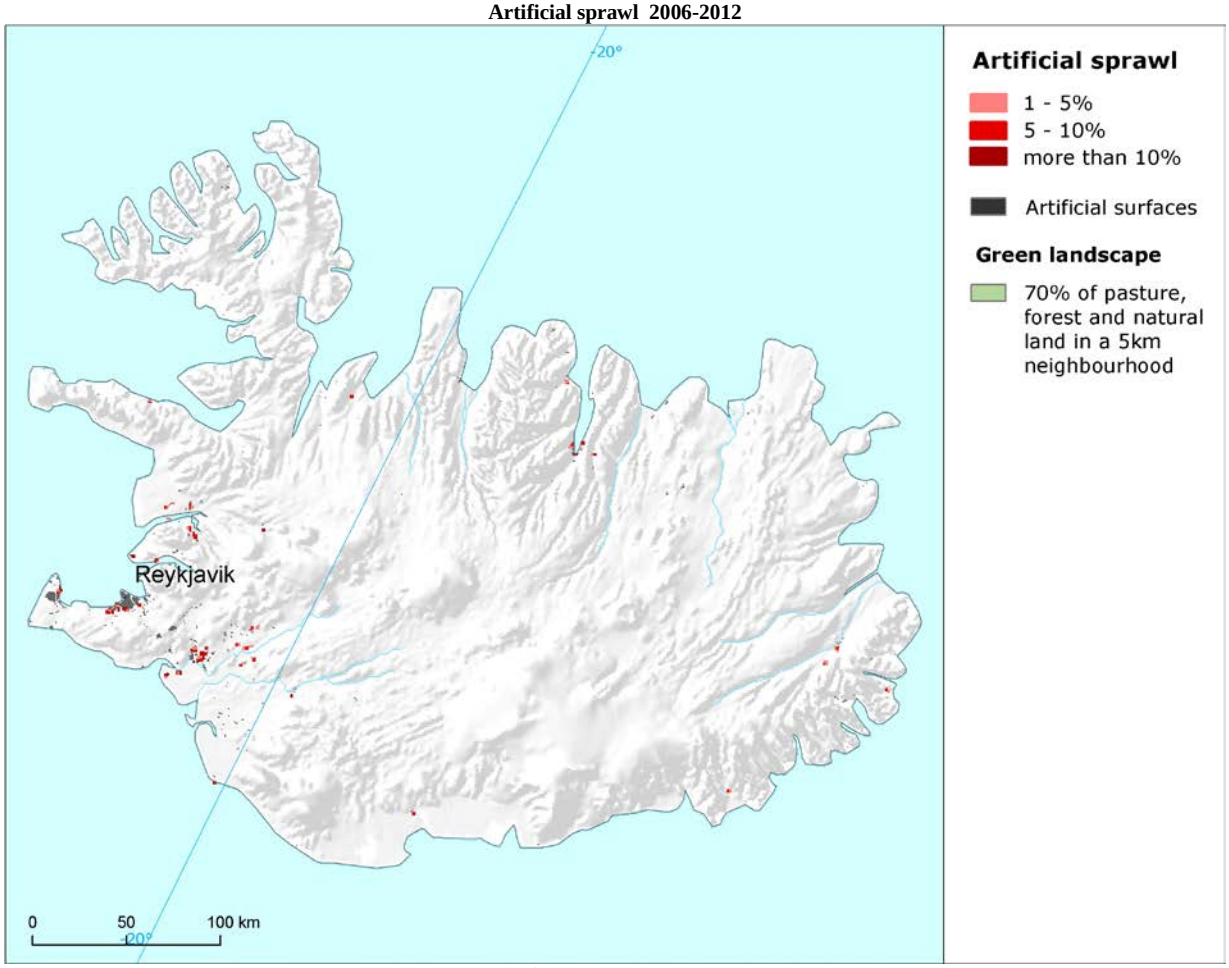
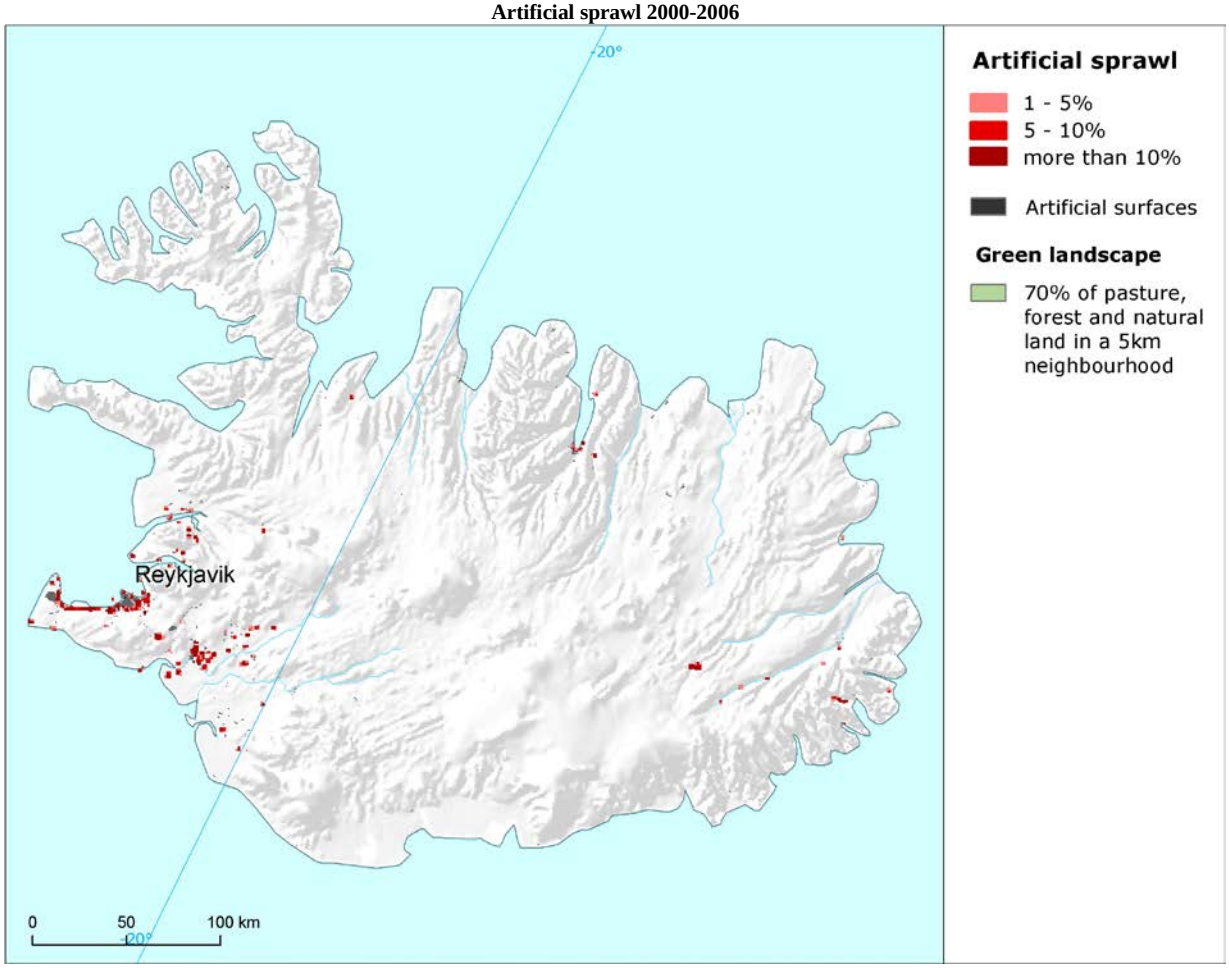
Artificial sprawl 2006-2012



Artificial sprawl 2000-2006



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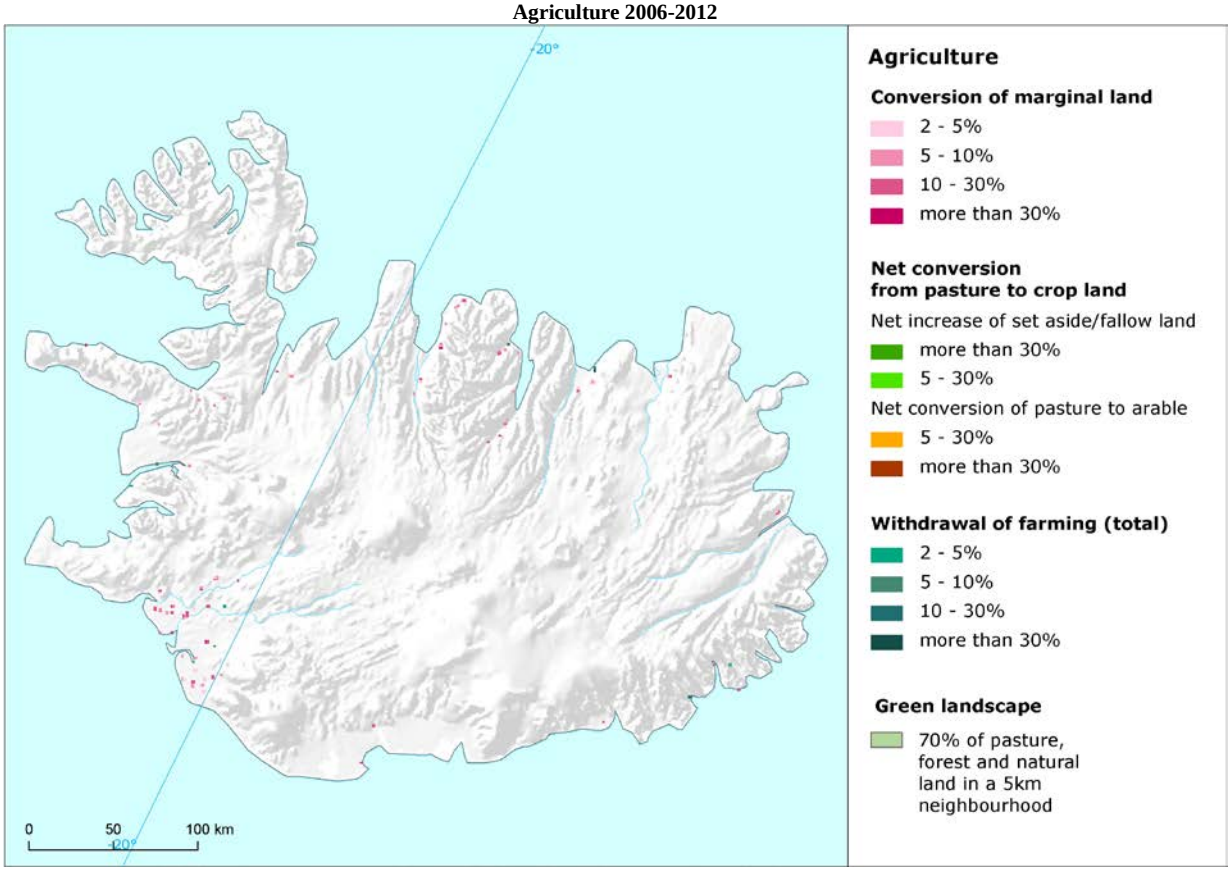
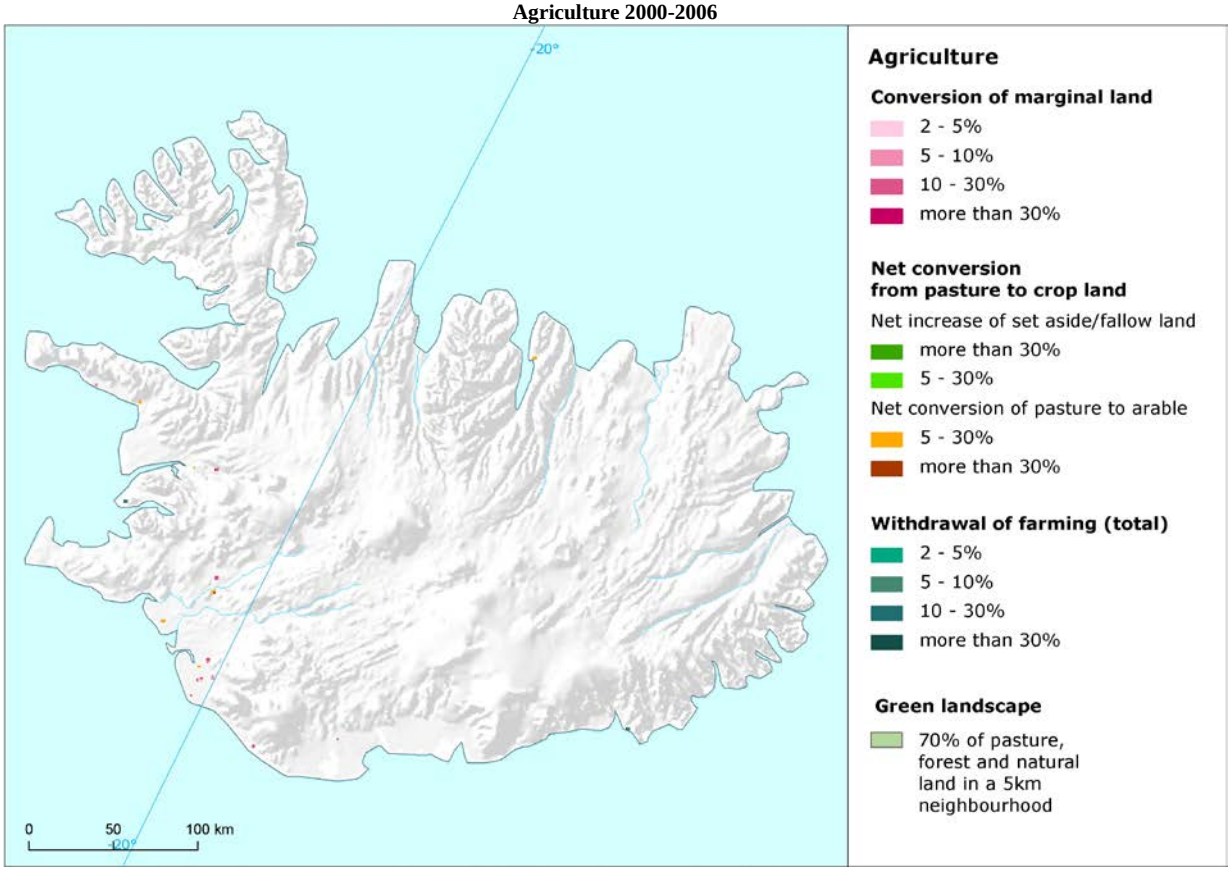
Agriculture 2006-2012

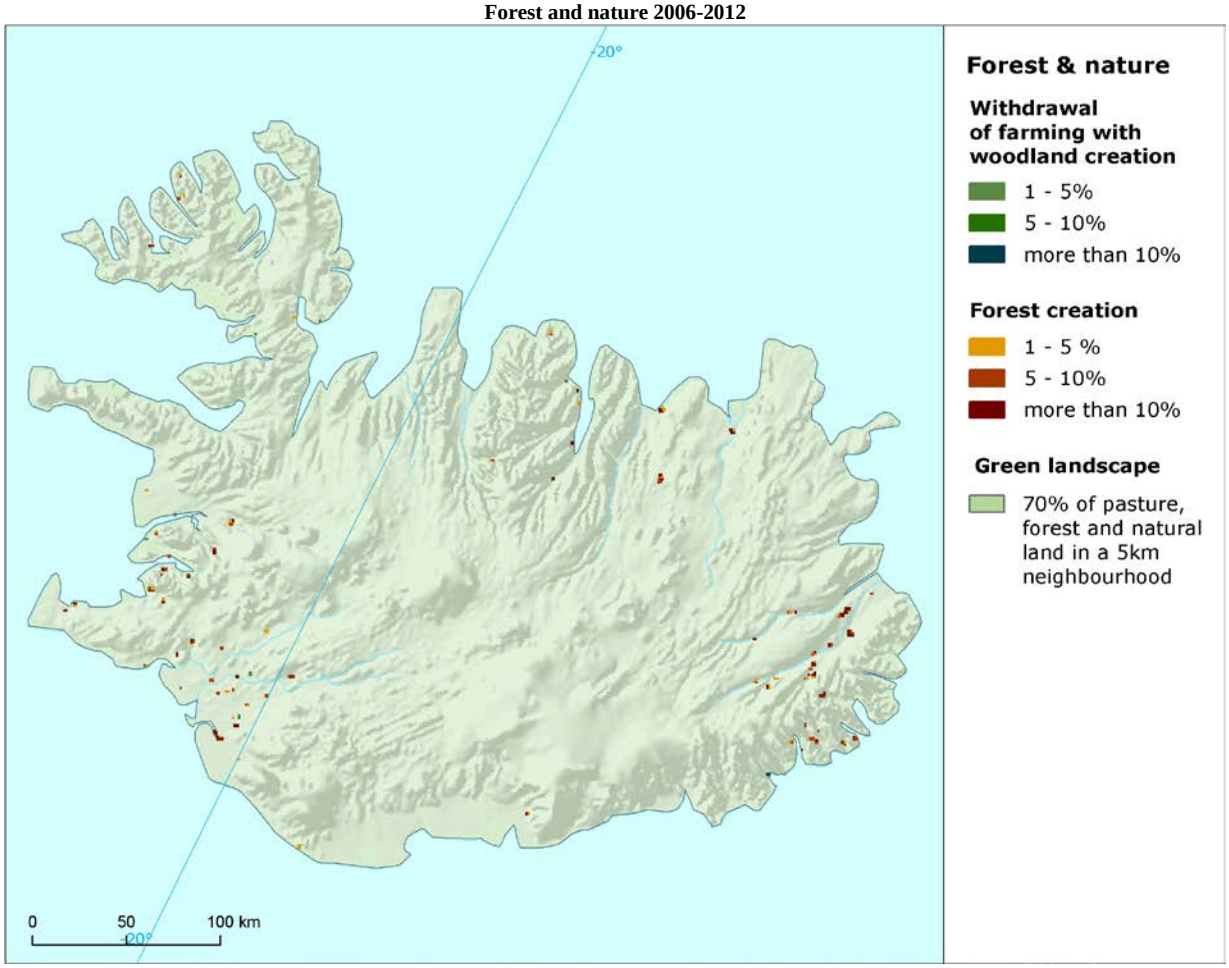


Agriculture 2000-2006



Iceland

Forest and nature 2006-2012



Forest and nature 2000-2006