

Land cover 2012



Turkey 
September 2017

Photo: © Toni García, My City/EEA

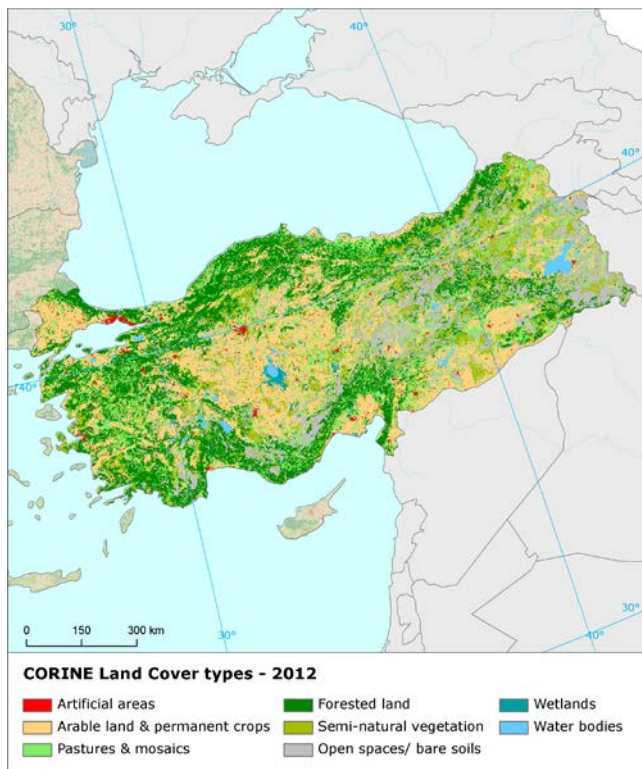
Turkey

Land cover 2012

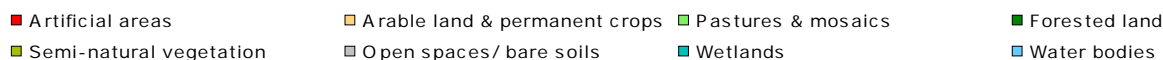
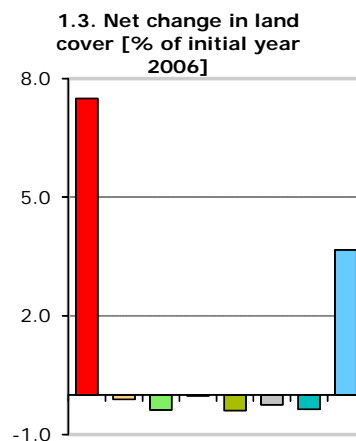
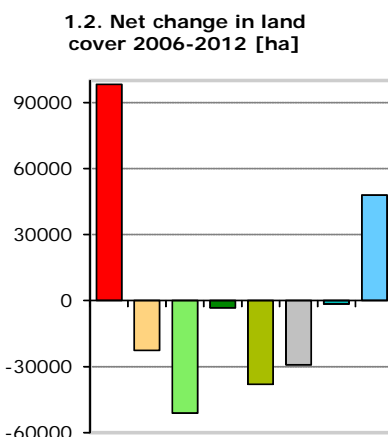
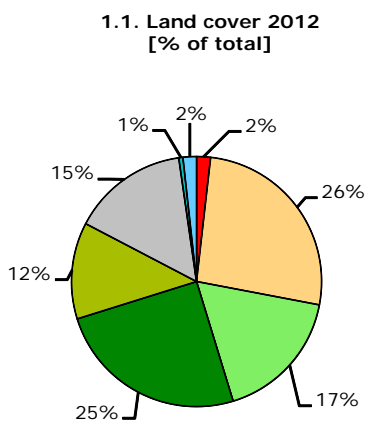
Overview of land cover & change 2006-2012

The overall pace of land cover development in Turkey has increased, comparing with the previous period. However, the overall annual change rate – 0,12% - is still quite low in comparison with other European countries – about one half of the European average. The landscape exchange in the country is driven by forest creation and management, followed by the sprawl of economic sites and infrastructures and internal agricultural conversions. Water bodies creation occurs much more frequently in Turkey, than in the period 2000-2006 and became one of the most significant drivers of change in the landscape of this country.

The artificial sprawl in Turkey has accelerated – with 1.34% annual artificial land take rate is more than twice higher, than in the period 2000-2006. The major concentration of the sprawl is situated around the Bosphorus strait. There is also the highest amount of forest conversions situated in that area. Unlike in previous period, the changes in land cover are densely scattered over the whole country.



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. The accounts for Azores and Madeira are not included into this analysis. Number of years between CLC2006-CLC2012 data for Turkey: 6



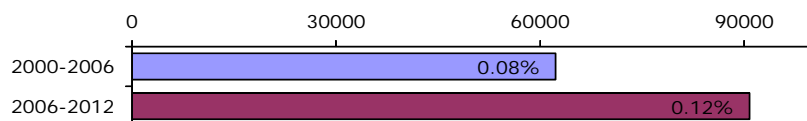
Summary balance table 2006-2012

	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	13095	204569	135313	194304	97798	117826	4195	13071	780172
Consumption of initial LC	393.2	822.5	820.9	2527.9	460.6	322.5	39.1	60.3	5447
Formation of new LC	1374.7	595.9	309.6	2494.3	79.3	29.9	23.8	539.5	5447
Net Formation of LC	981.5	-226.6	-511.3	-33.6	-381.3	-292.6	-15.3	479.2	0
Net formation as % of initial year	7.5	-0.1	-0.4	0.0	-0.4	-0.2	-0.4	3.7	
Total turnover of LC	1767.9	1418.4	1130.5	5022.2	539.9	352.4	62.9	599.8	10894
Total turnover as % of initial year	13.5	0.7	0.8	2.6	0.6	0.3	1.5	4.6	1.4
Land cover 2012	14077	204342	134802	194271	97417	117534	4180	13550	780172

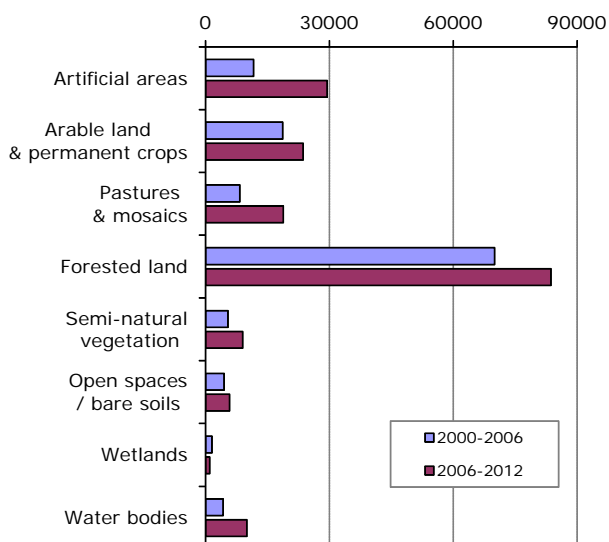
Turkey

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

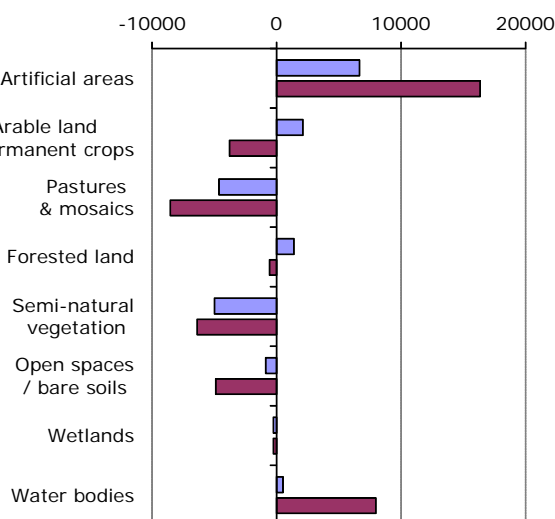
2.4. Annual land cover change
[ha/year, % of total area]



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

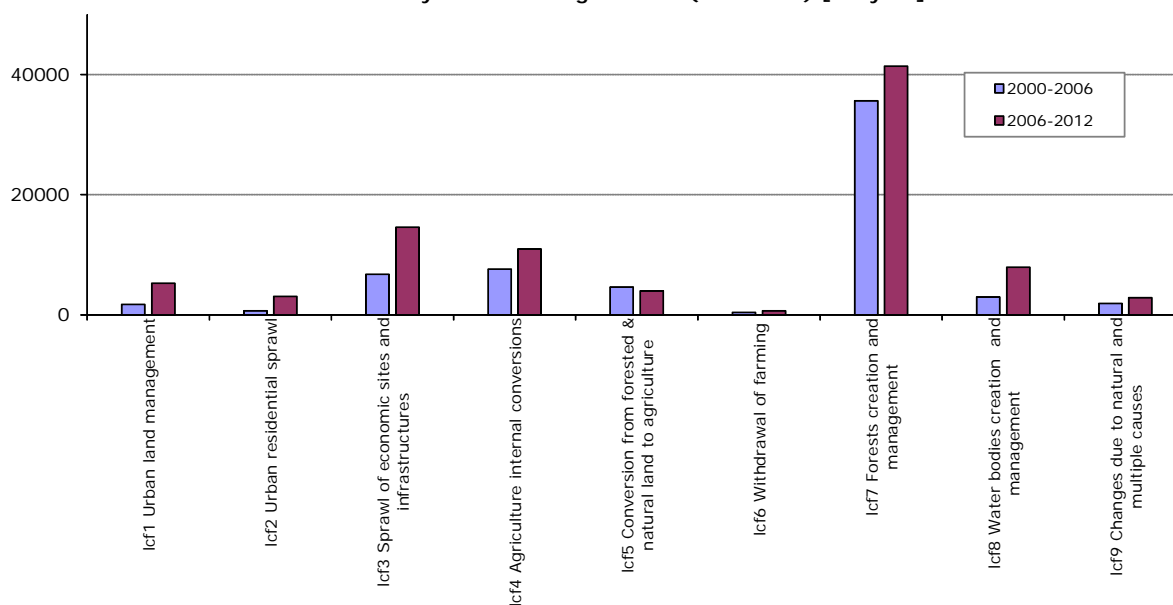


2.6. Net annual change of LC types [ha/year]

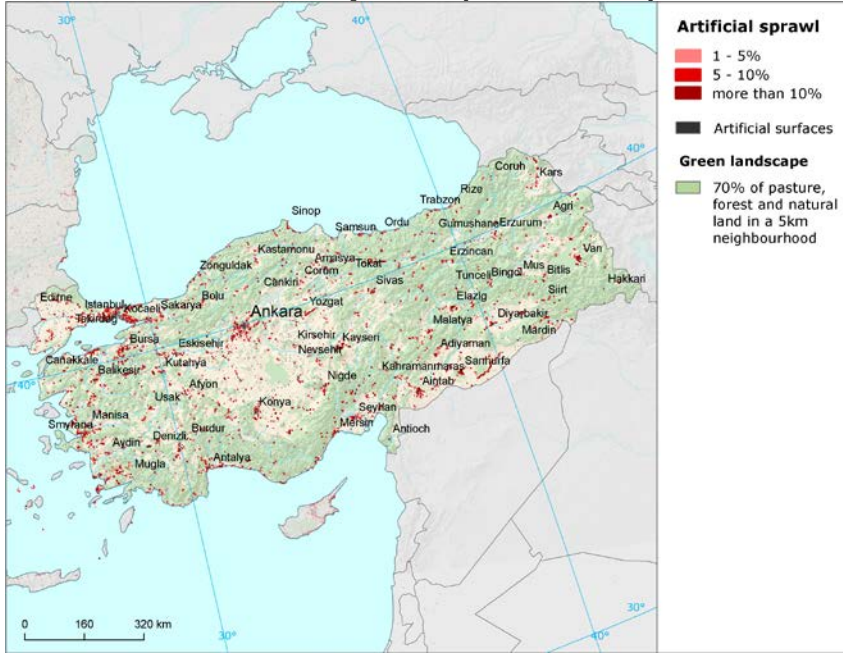


Summary trend figures		
	2000-2006	2006-2012
Annual land cover change [ha/year]	62291	90783
Annual land cover change as % of initial year	0.08%	0.12%
Land uptake by artificial development as mean annual change [ha/year]	7201	17563
Agricultural land uptake by urban and infrastructures development as mean annual change [ha/year]	5665	15126
Net uptake of forests and semi-natural land by agriculture as mean annual change [ha/year]	4093	3049
Net conversion from pasture to arable land and permanent crops as mean annual change [ha/year]	1316	1622
Forest & other woodland net formation as mean annual change [ha/year]	1407	-560
Dry semi-natural land cover net formation as mean annual change [ha/year]	-5367	-10607
Wetlands & water bodies net formation as mean annual change [ha/year]	269	7731

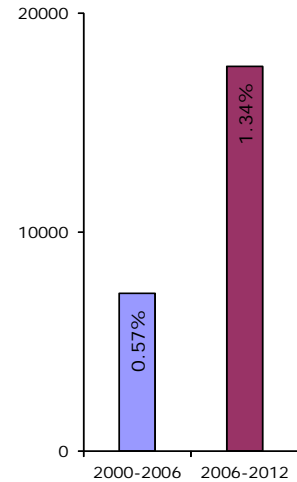
2.7. Intensity of main change drivers (LC FLOWS) [ha/year]



Artificial surfaces sprawl (2006-2012)



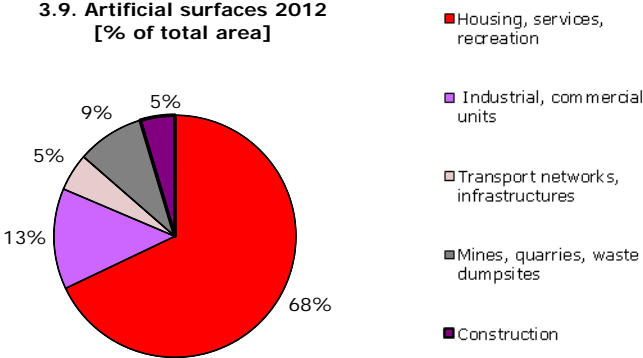
3.8. Artificial land take [ha/year, % of initial year]



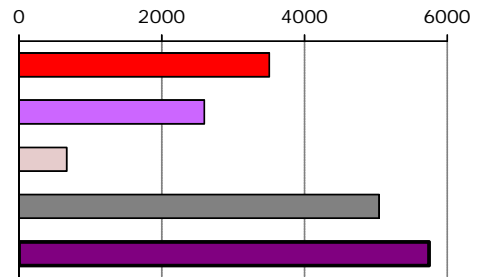
Artificial sprawl accelerates rapidly

The artificial development in Turkey in 2006-2012 is very intensive and it is the second most powerful driver of change in the country. Also, comparing with the European average, the artificial land take rate of Turkey is very high – 1.34% - which is the second highest in Europe, behind Spain. There has been observed a rapid acceleration of the sprawl – the land take rate is more than twice higher than in the period 2000-2006. The major concentration of artificial development is located around the Bosphorus strait – the rest of the country is covered by scattered sprawl, with highest density along the western coast and also in the surroundings of the capital city of Ankara. Construction and sprawl of mines and quarrying areas are the two strongest drivers of land take, followed by diffuse residential sprawl and industrial and commercial one. All of these flows show significantly higher intensity, compared with previous the period. Also the pace of internal recycling of developed urban land – represented by conversion from construction sites - has increased very rapidly.

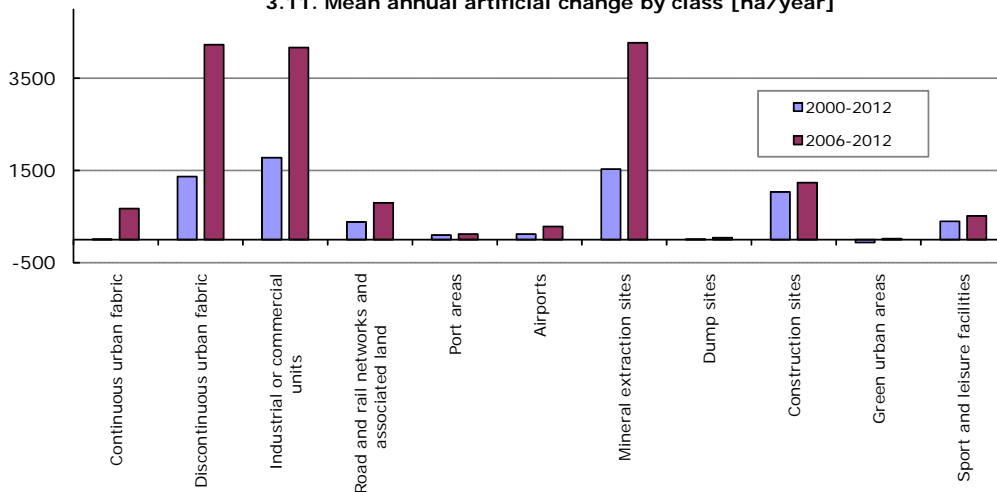
3.9. Artificial surfaces 2012 [% of total area]



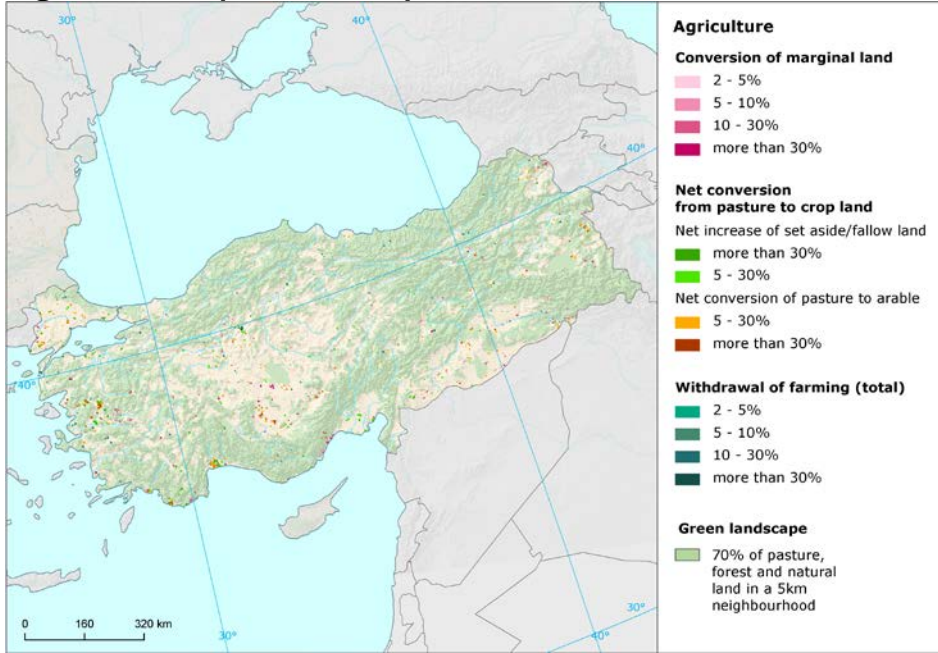
3.10. Artificial land take 2006-2012 [ha/year]



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



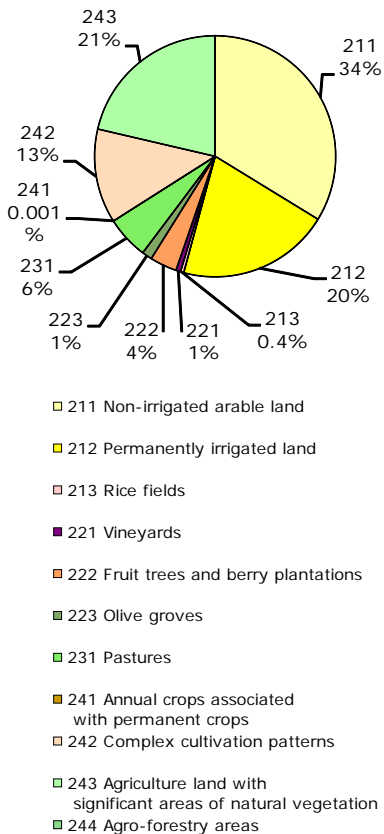
Agriculture (2006-2012)



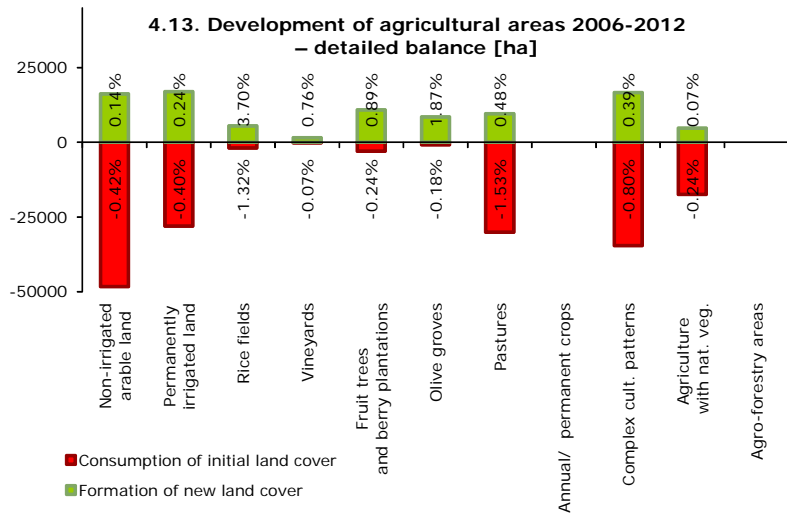
Prevailing conversion from pasture to arable

Behind the consumption of agricultural land by artificial land take and also by water bodies creation, the development of agricultural land in the country is driven by internal agricultural conversions, which occur with significantly higher intensity, compared to the previous period. Prevailing direction is the conversion from pasture to arable land and permanent crops – in particular the diffuse one. However, both diffuse and uniform extension of set aside fallow land and pasture are also very frequent processes in the Turkish landscape. As mentioned above, the agricultural land is frequently consumed by water bodies creation and also by intensive conversion from semi-natural land to agriculture to a lesser extent.

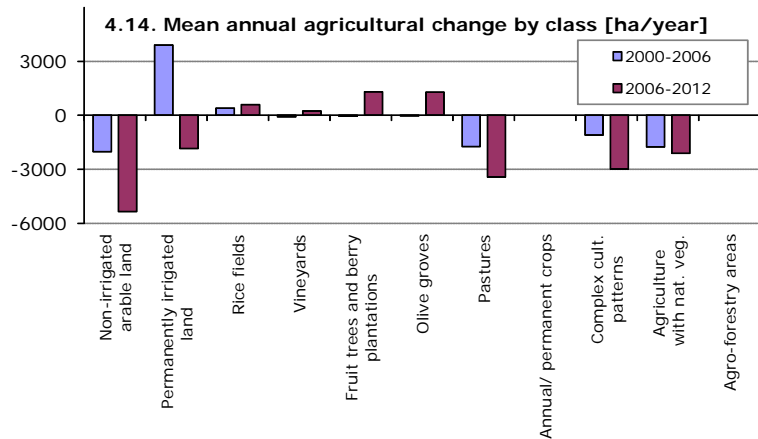
4.12. Agricultural areas 2012 [% of total area]



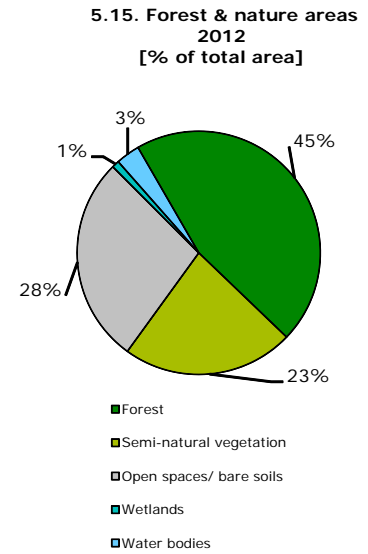
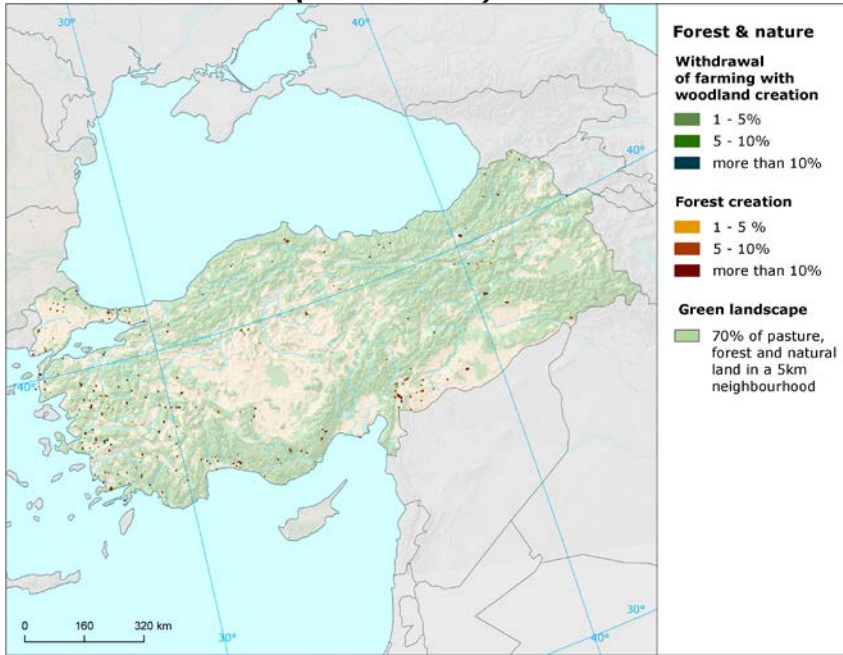
4.13. Development of agricultural areas 2006-2012 – detailed balance [ha]



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

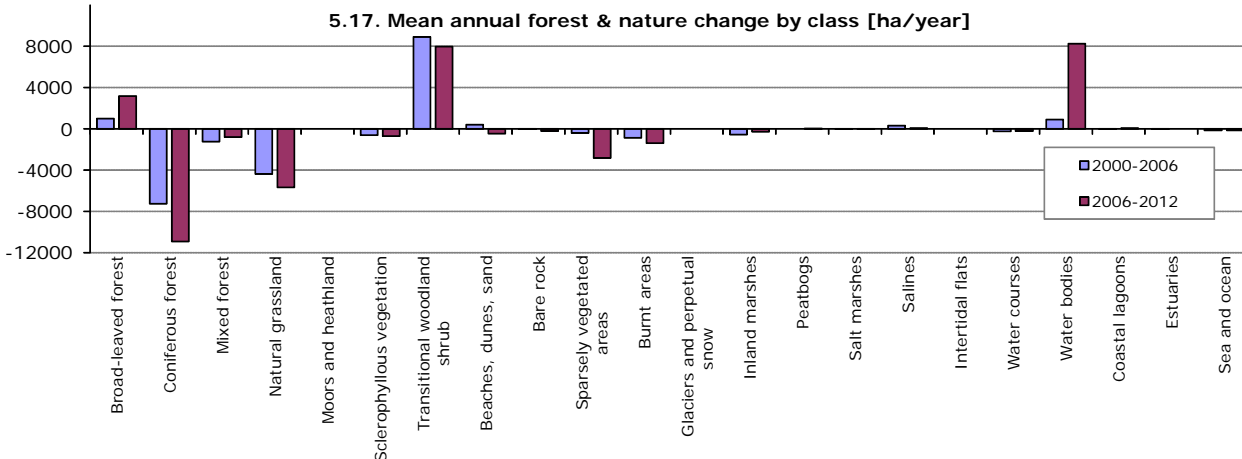
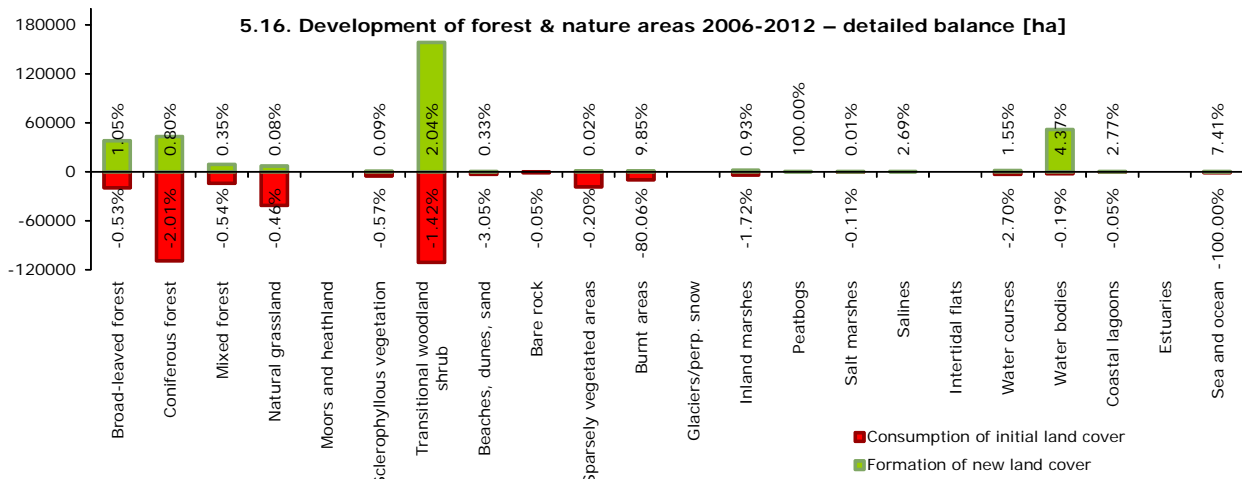


Forest & nature (2006-2012)



Increase of water bodies creation

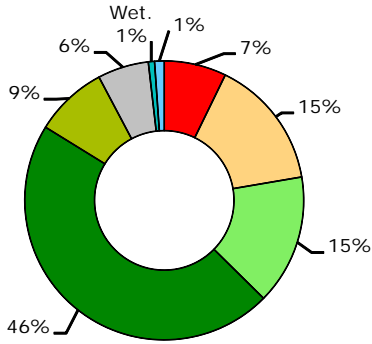
Forest creation and management with even slightly increasing tendency is the most frequent driver of land cover exchange in Turkey. Recent felling and transition is the prevailing direction of these internal flows, which depicts the same situation as in the previous period. Comparing with these conversions, forest creation over dry semi-natural land is much less frequent, however, it is also a quite usual process in this country. The situation in forest development is comparable to previous period – concerning both quantity of flows and structure. There is a very significant incidence of water bodies creation in Turkey – it is consuming mainly agricultural land. These processes are much more extensive, than in the period 2000-2006.



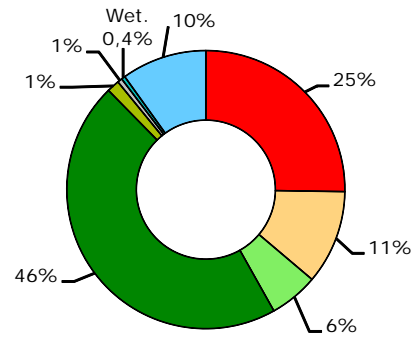
Annex: Land cover flows and trends

Land cover flows 2006-2012

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

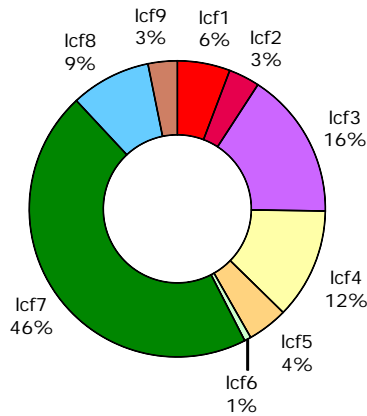


6.19. Formation of land cover 2006-2012 [% of total change area]



- 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]

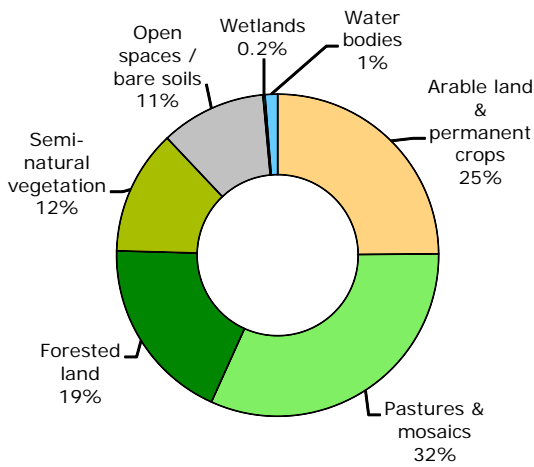


- Icf1 Urban land management
- Icf2 Urban residential sprawl
- Icf3 Sprawl of economic sites and infrastructures
- Icf4 Agriculture internal conversions
- Icf5 Conversion from forested & natural land to agriculture
- Icf6 Withdrawal of farming
- Icf7 Forests creation and management
- Icf8 Water bodies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

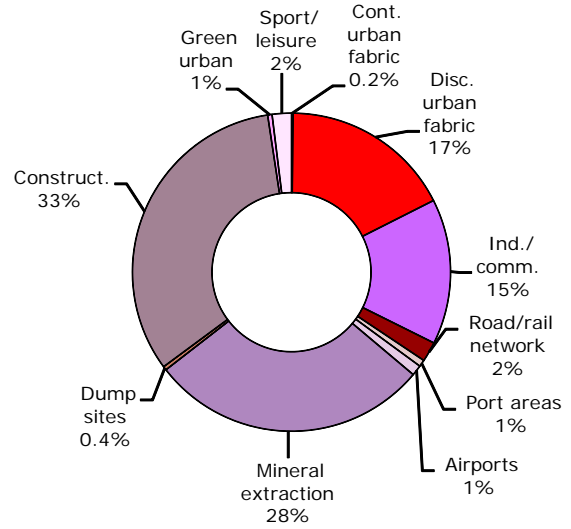
Turkey

Artificial areas

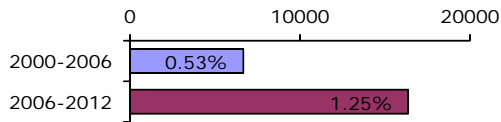
7.21. Consumption by artificial land take 2006-2012 [% of total]



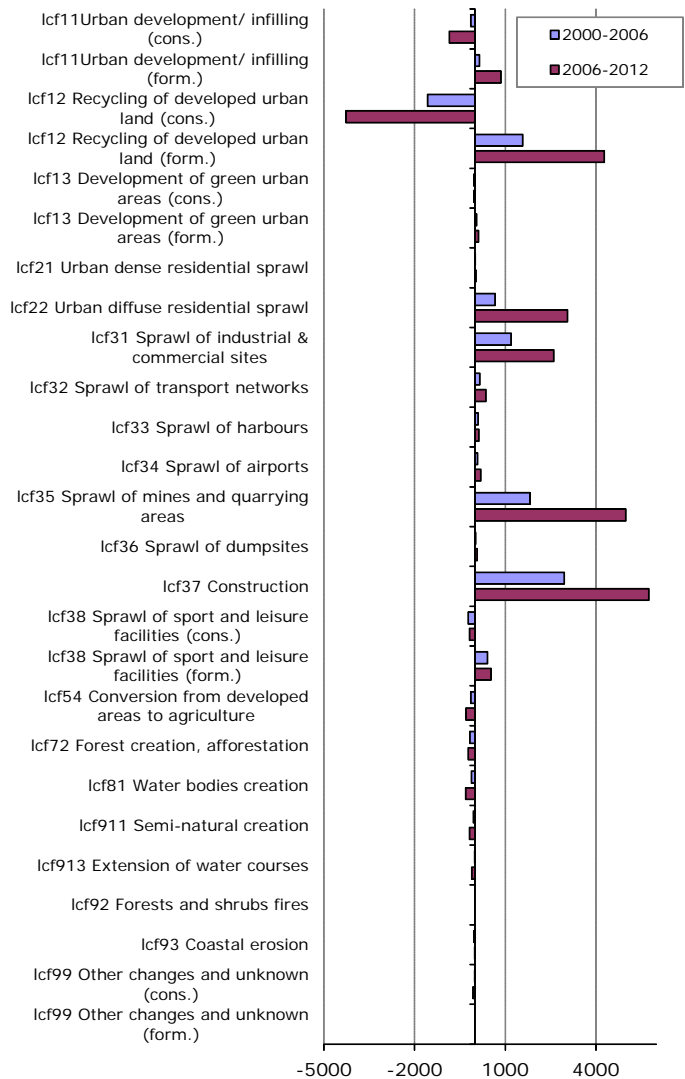
7.22. Formation by artificial land take 2006-2012 [% of total]



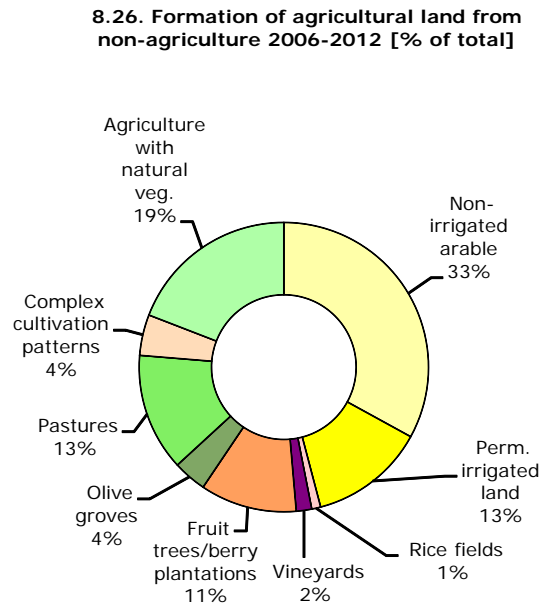
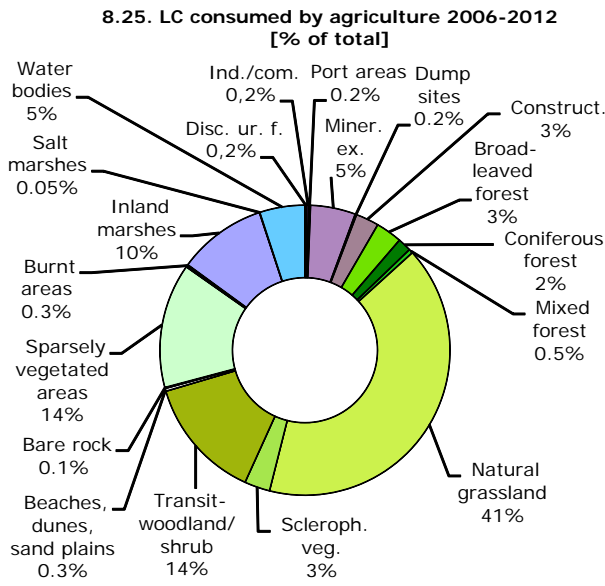
7.23. Net formation of artificial area [ha/year, % of initial year]



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

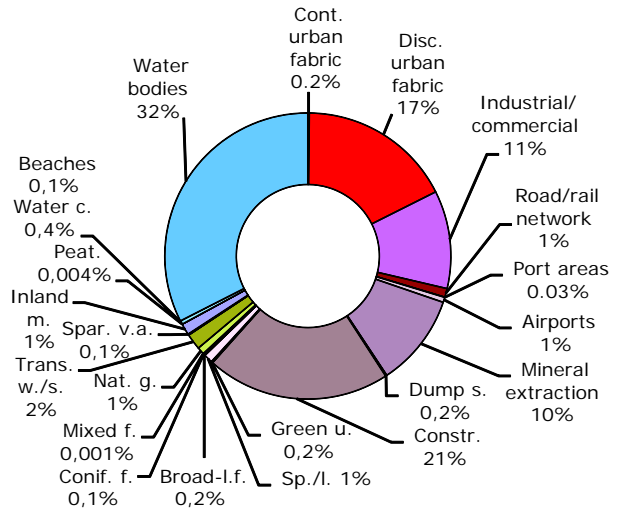
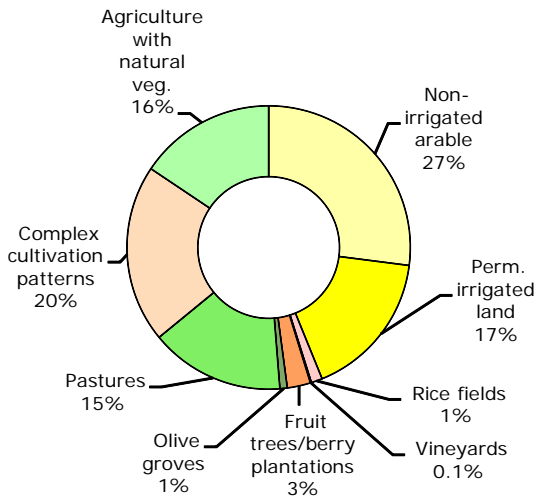


Agriculture



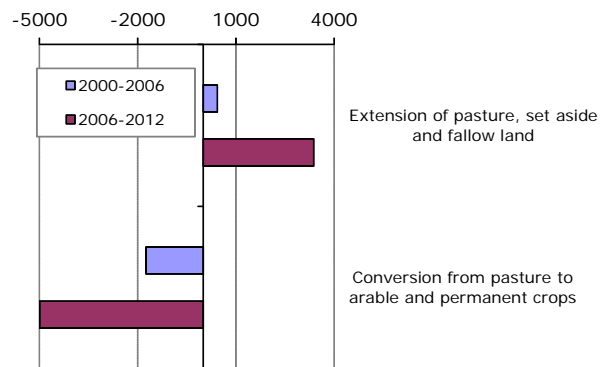
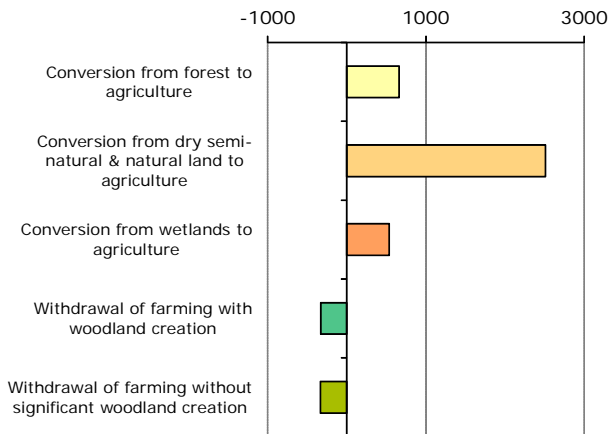
8.27. Consumption of agricultural land by non-agriculture 2006-2012 [% of total]

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



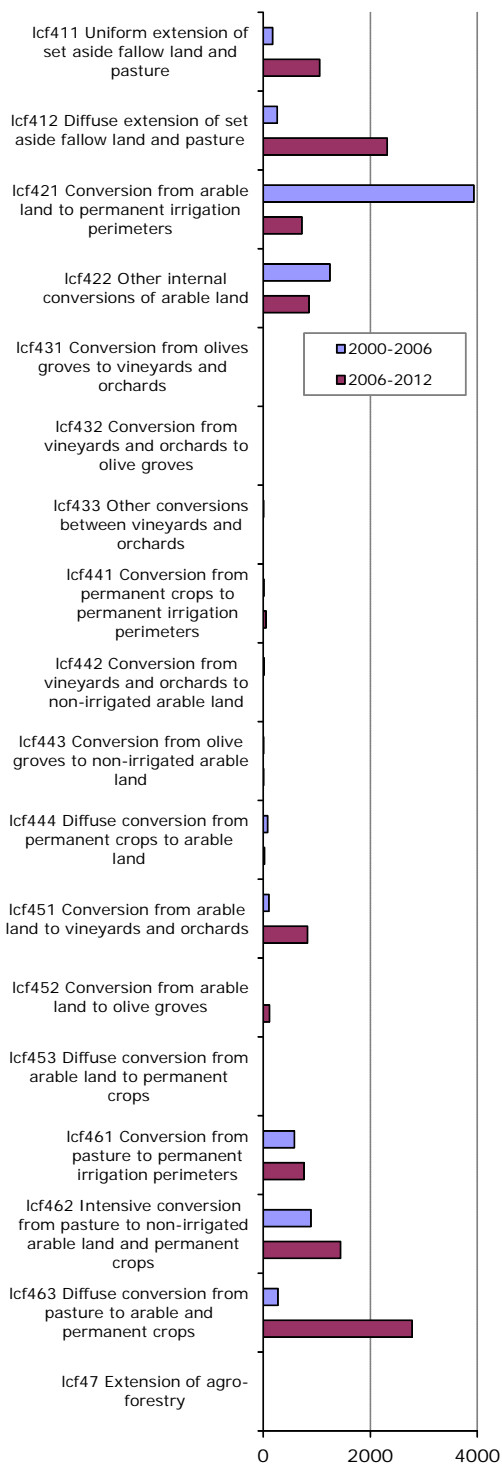
8.29. Main annual conversions between agriculture and forests & semi-natural land 2006-2012 [ha/year]

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

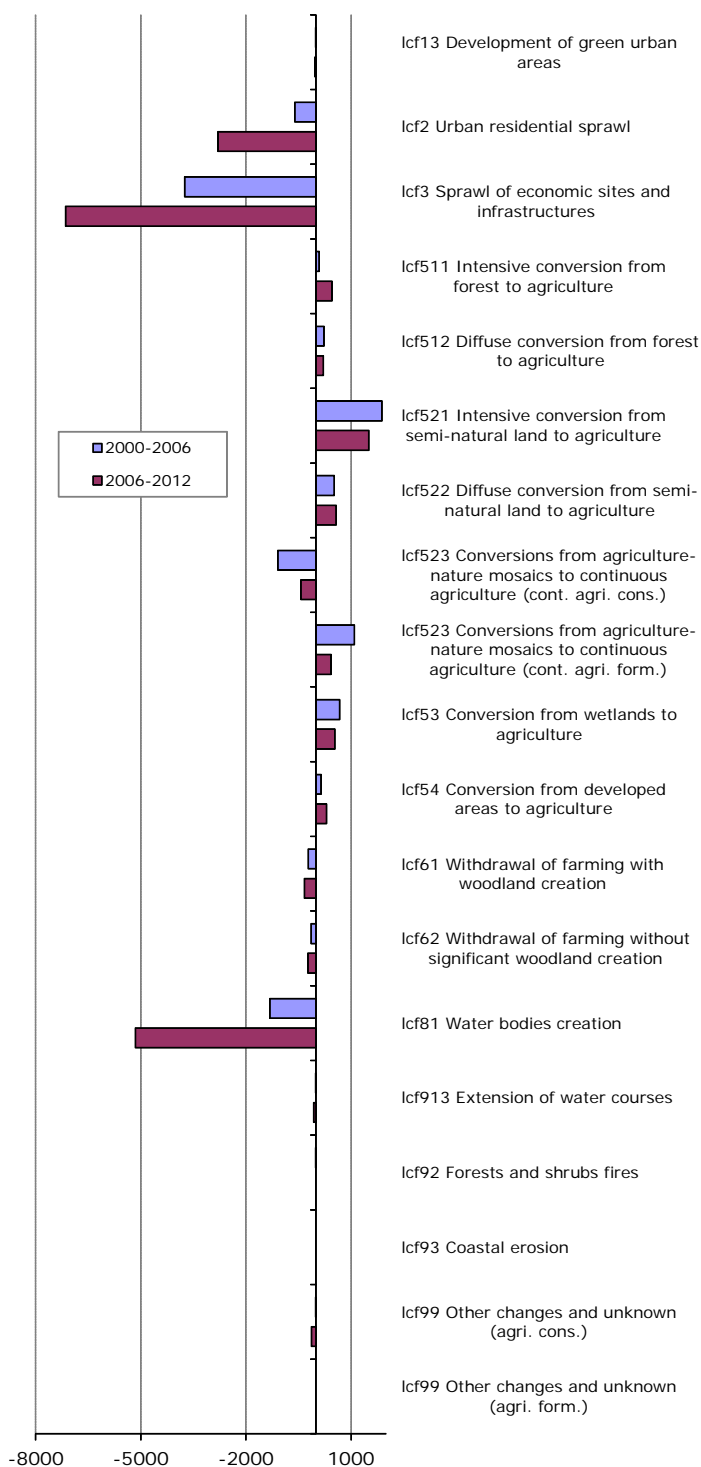


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9.31. Mean annual agriculture internal conversions [ha/year]

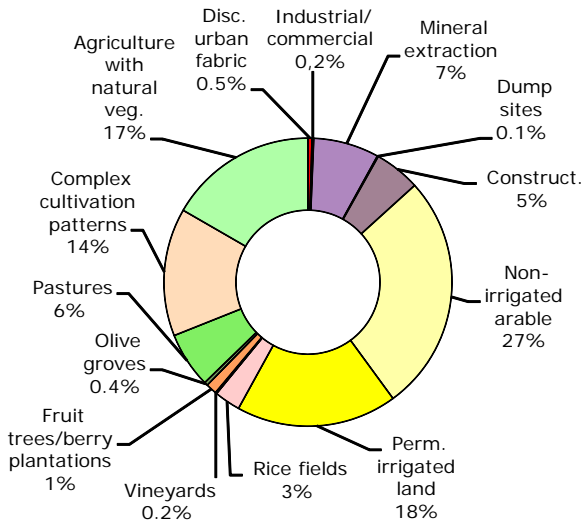


9.32. Mean annual conversions between agriculture and other LC types [ha/year]

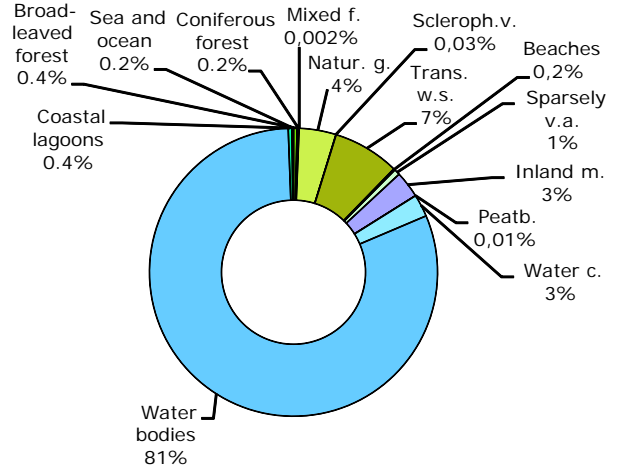


Forest & nature

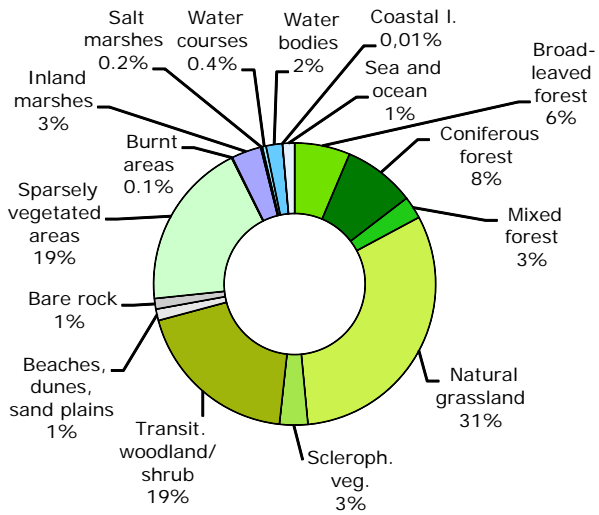
10.33. LC consumed by forest & nature 2006-2012 [% of total]



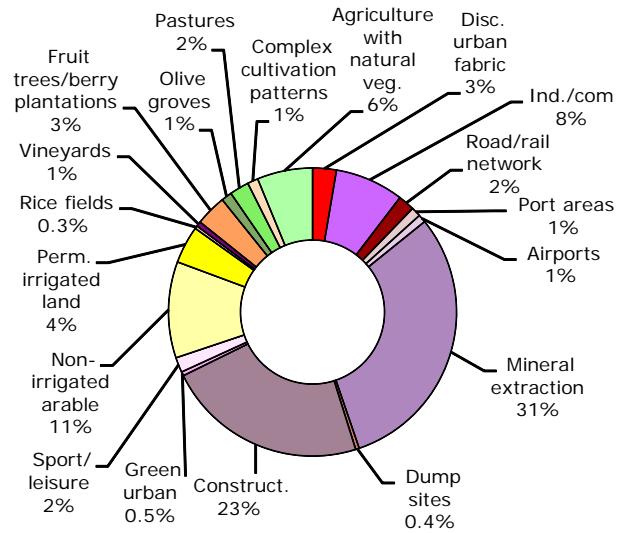
10.34. Formation of forest & nature land from non-forest /nature 2006-2012 [% of total]



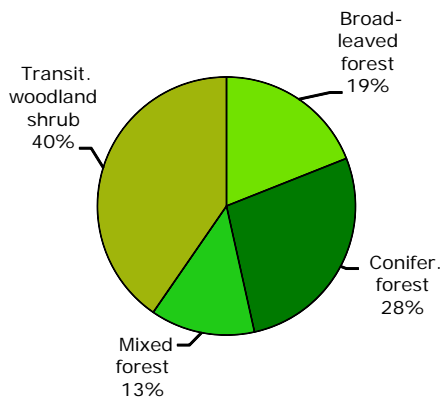
10.35. Consumption of forest & nature land by non-forest/nature 2006-2012 [% of total]



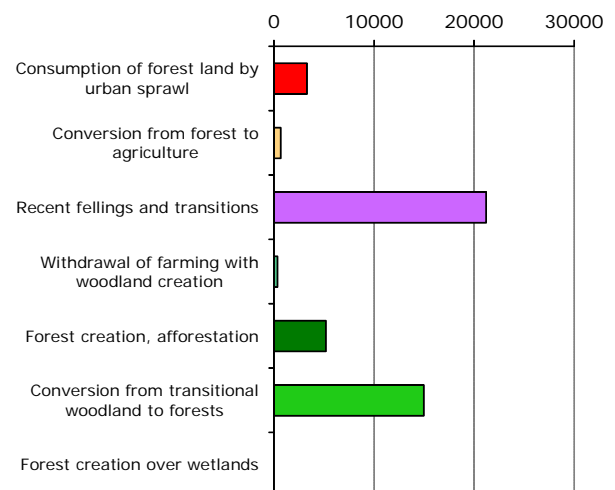
10.36. Formation of non-forest/nature land from forest & nature 2006-2012 [% of total]



10.37. Forested land 2012 [% of total area]

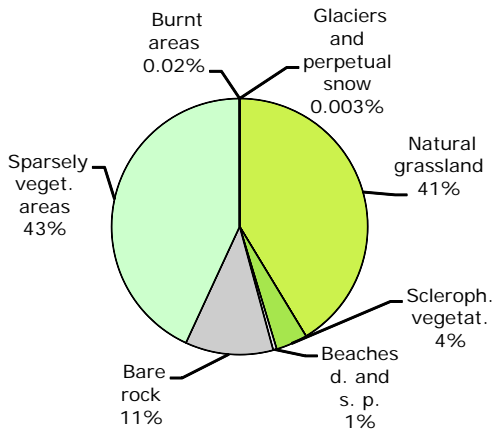


10.38. Main trends in woodland & forests consumption/formation 2006-2012 [ha/year]

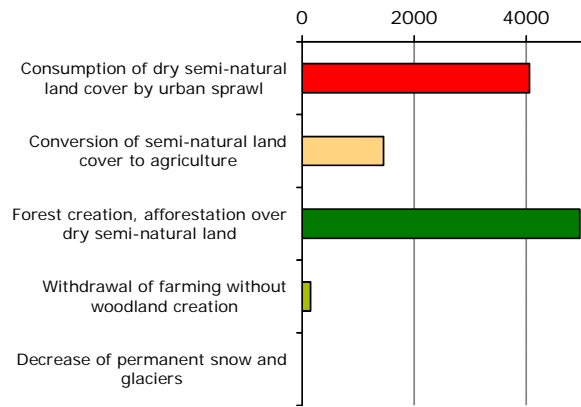


Turkey

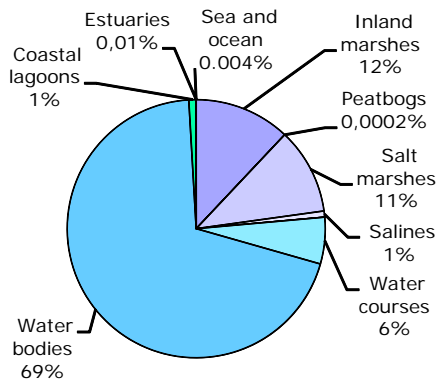
11.39. Dry semi-natural areas 2012
[% of total area]



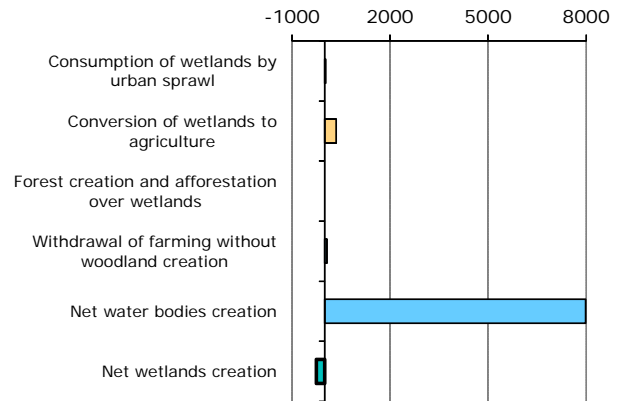
11.40. Main trends in dry semi-natural land consumption/formation 2006-2012
[ha/year]



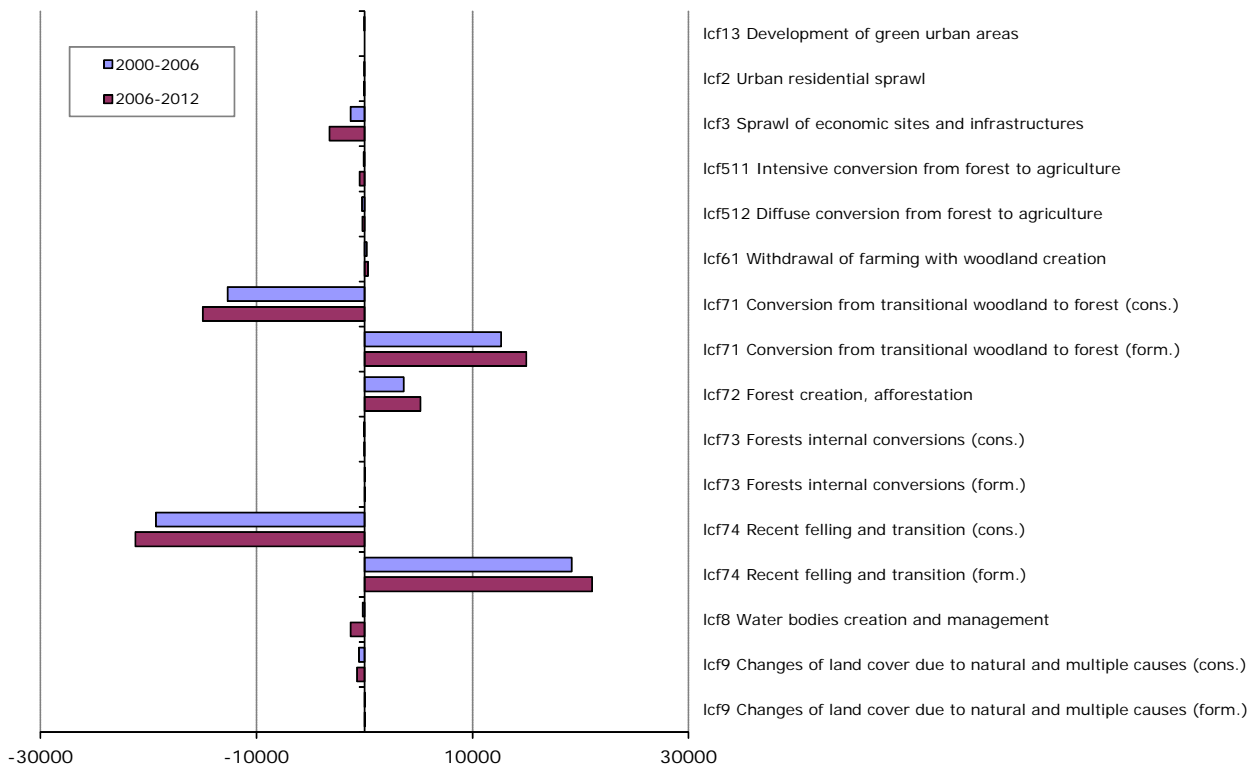
11.41. Wetlands & water 2012
[% of total area]



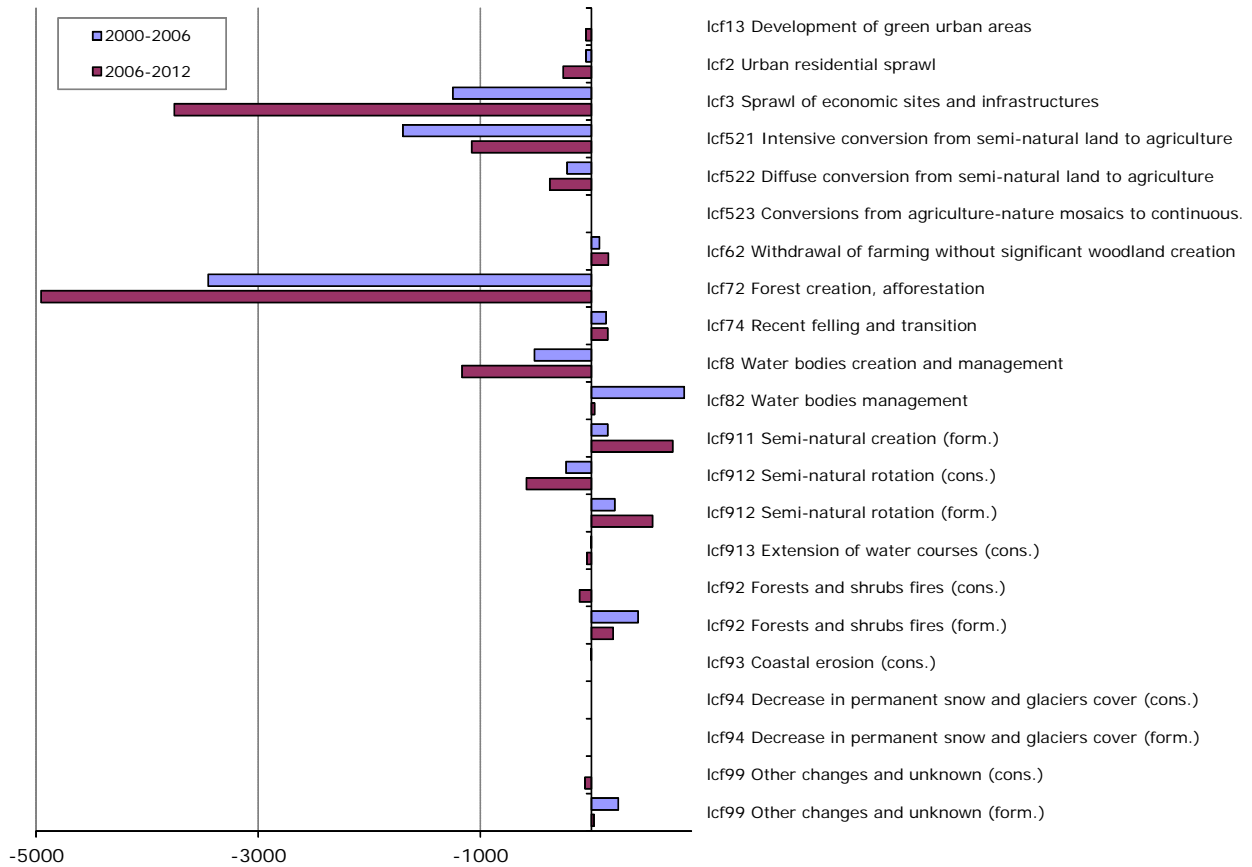
11.42. Main trends in wetlands & water consumption/formation 2006-2012
[ha/year]



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



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

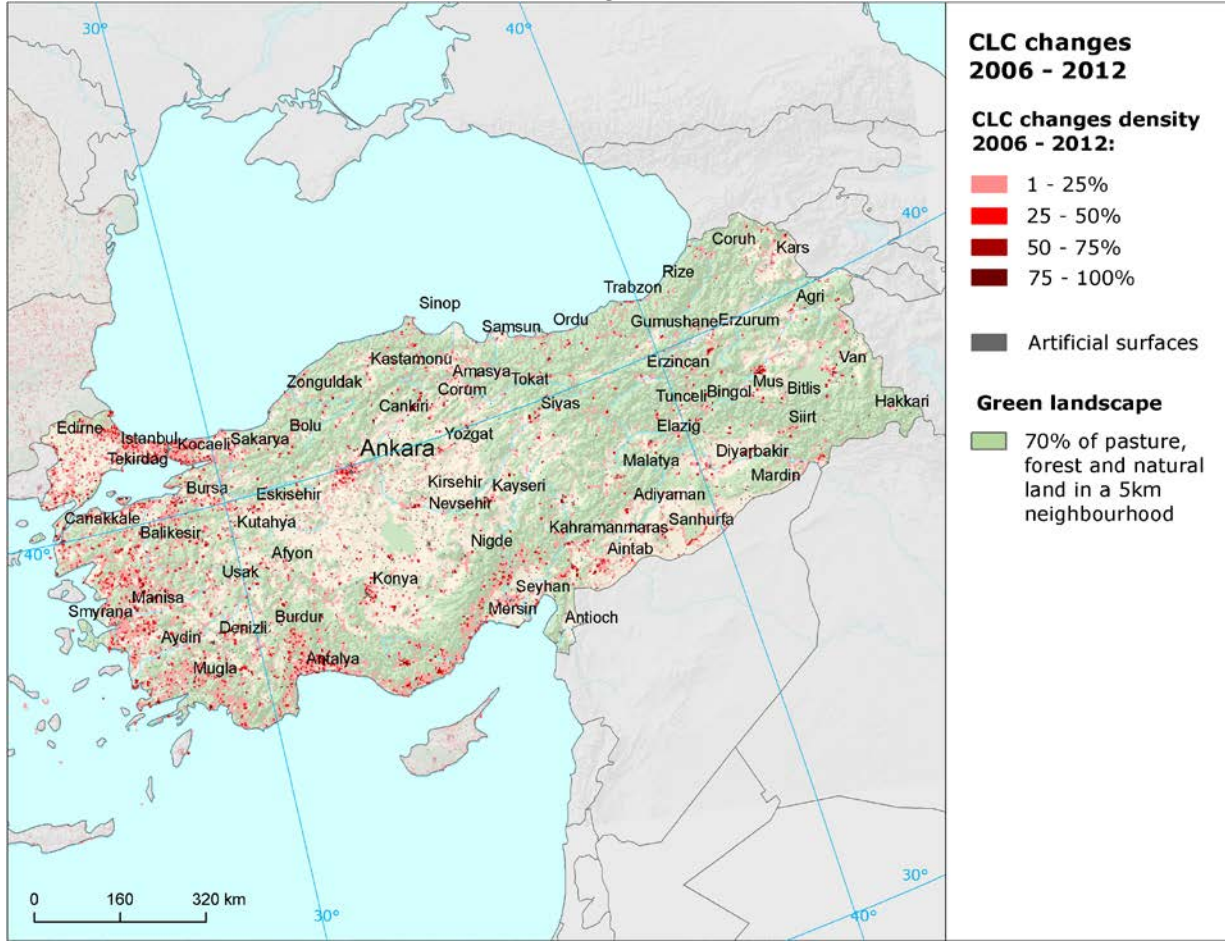


12.45. Mean annual conversions of wetlands and water LC [ha/year]

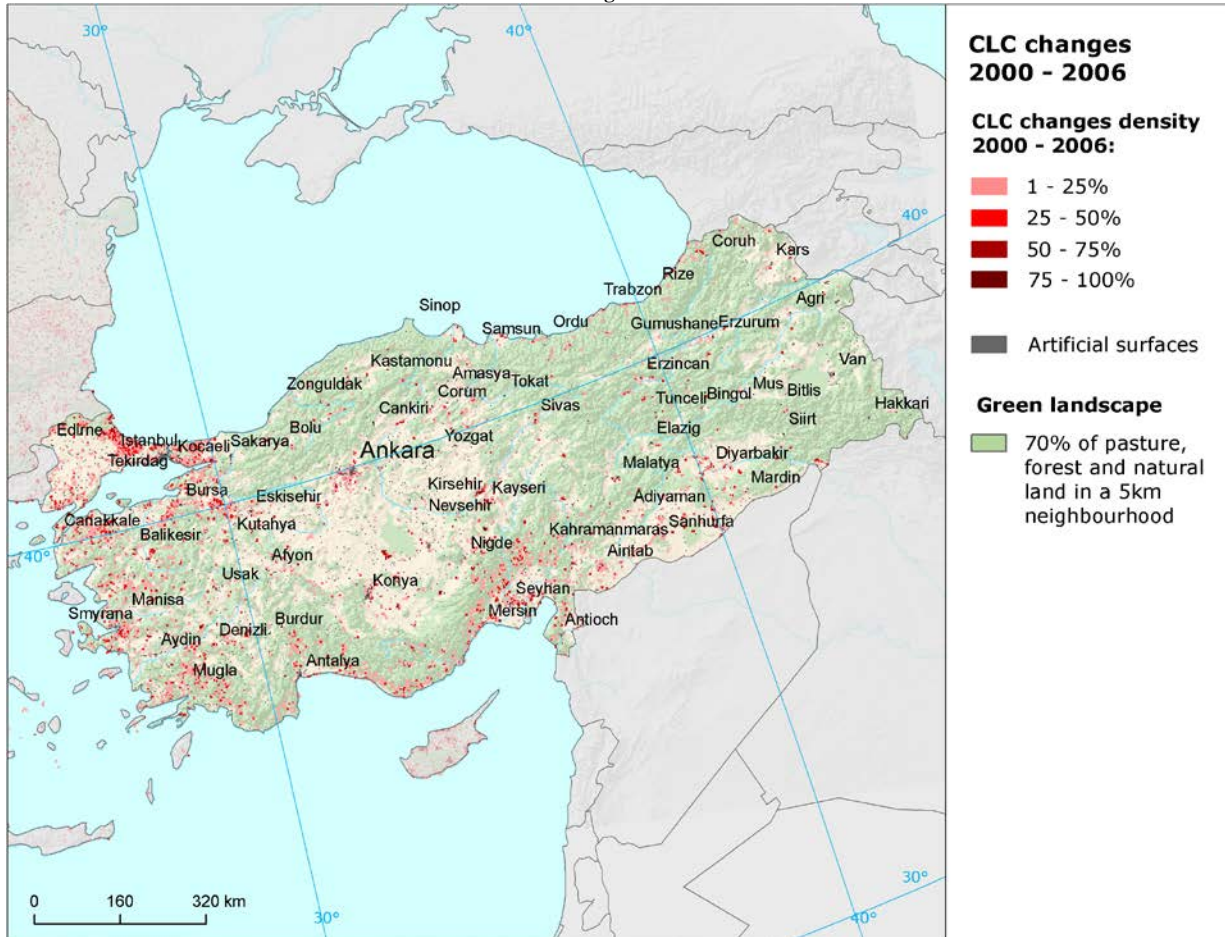


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CLC Changes 2006-2012

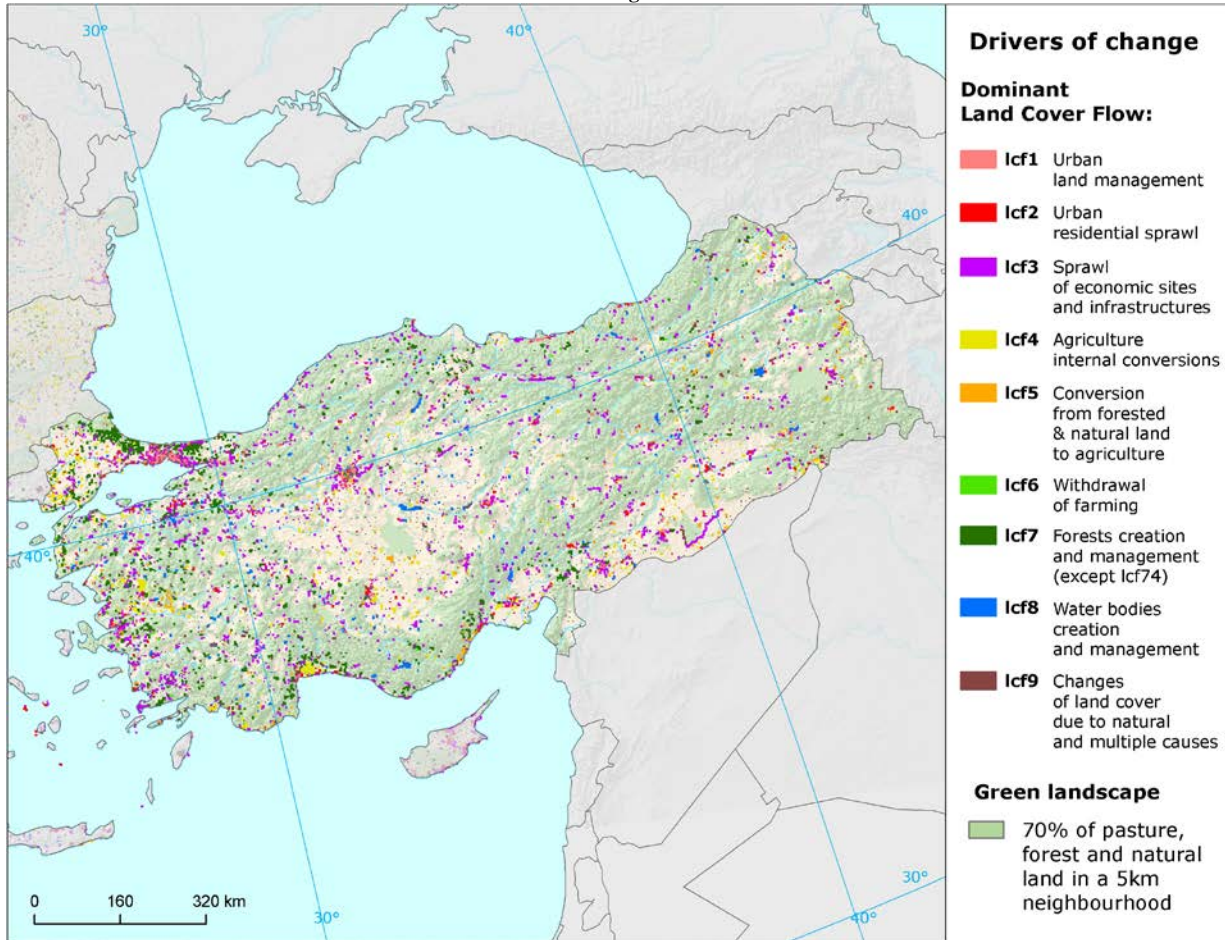


CLC Changes 2000-2006

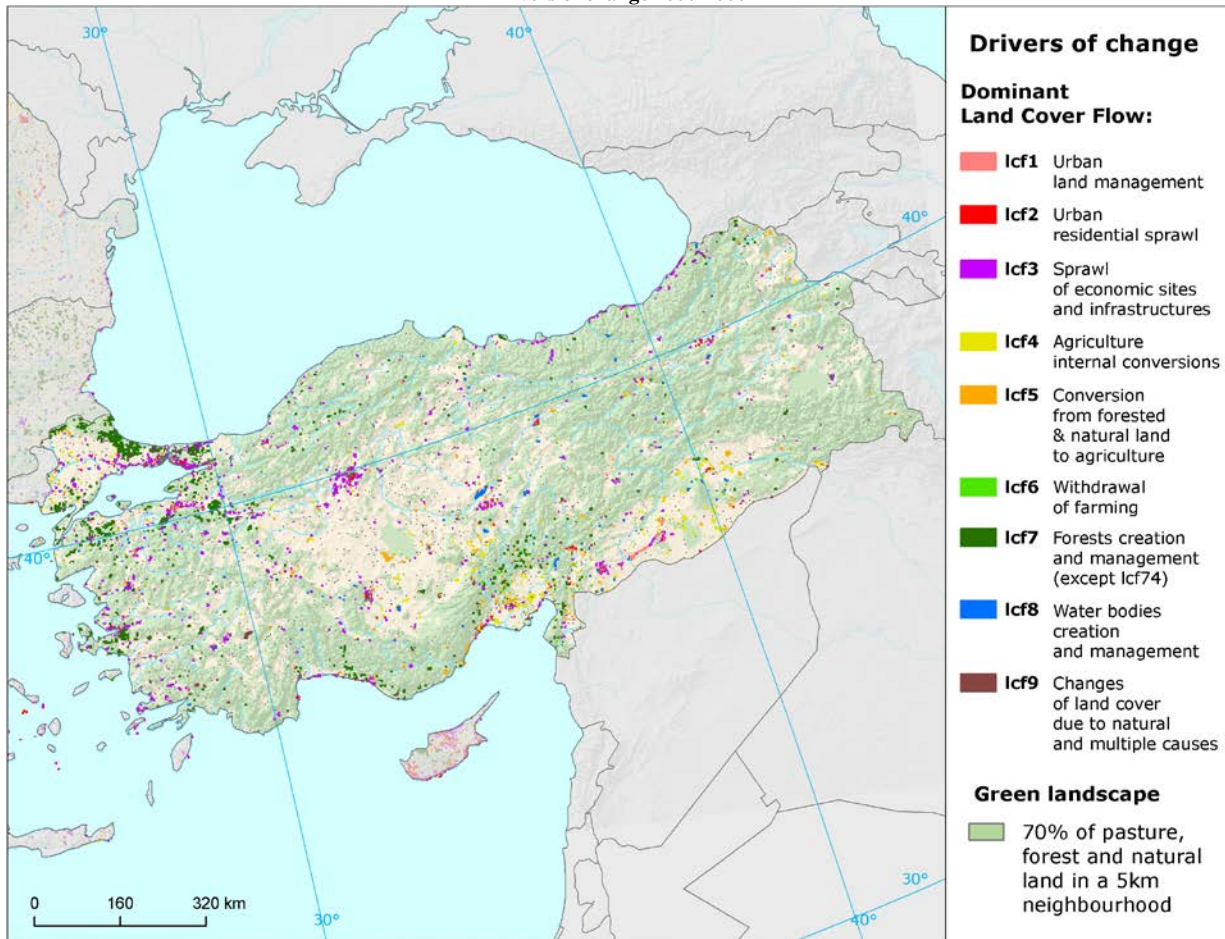


Turkey

Drivers of change 2006-2012

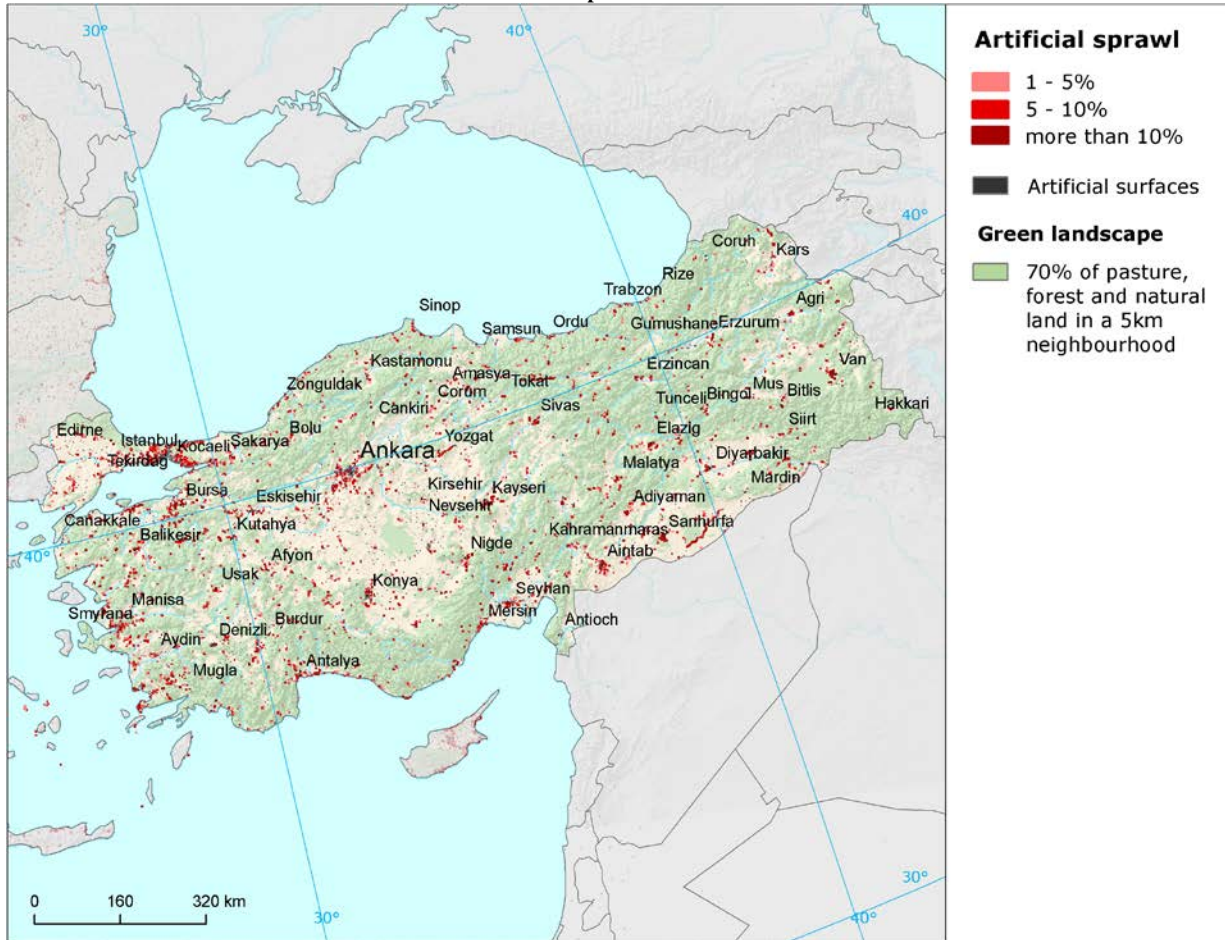


Drivers of change 2000-2006

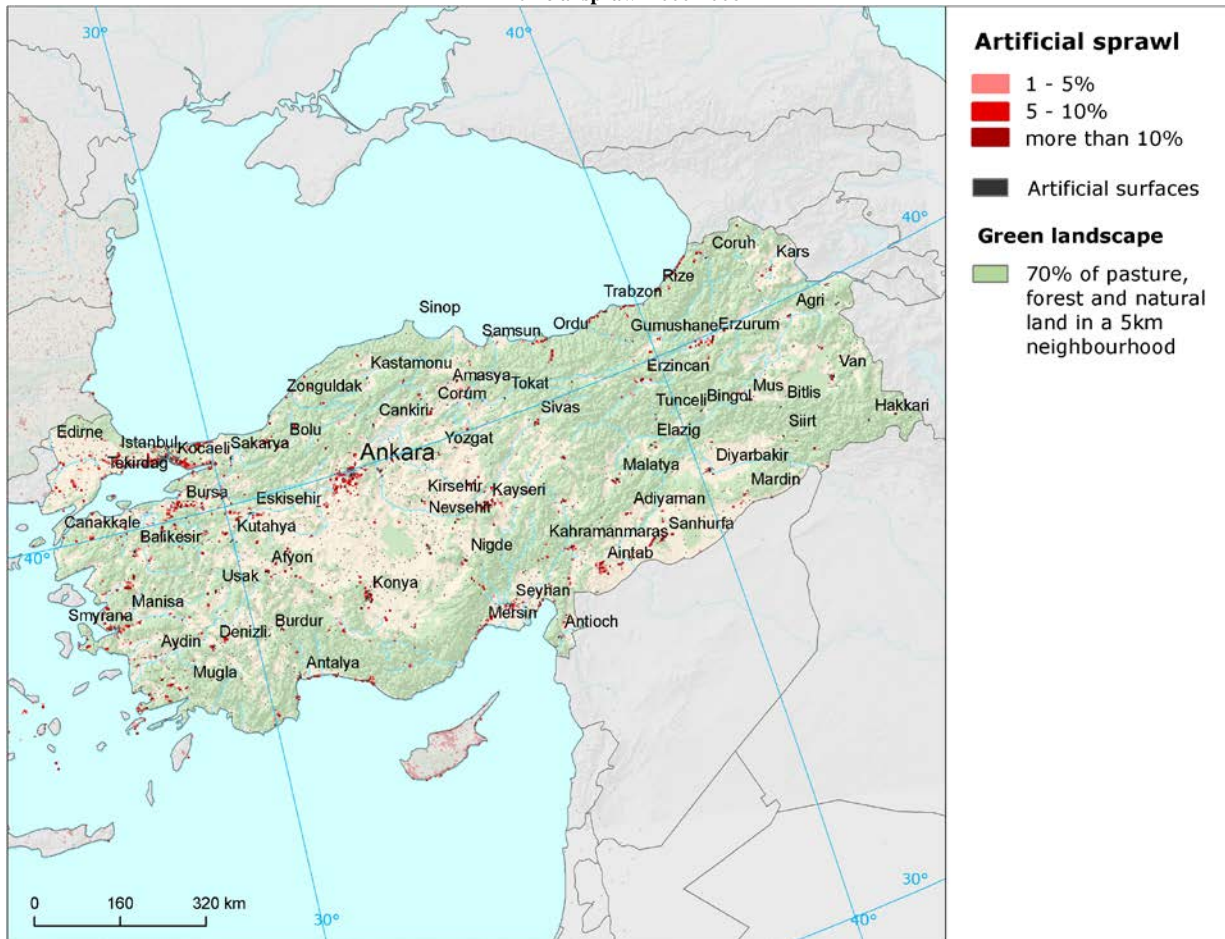


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Artificial sprawl 2006-2012

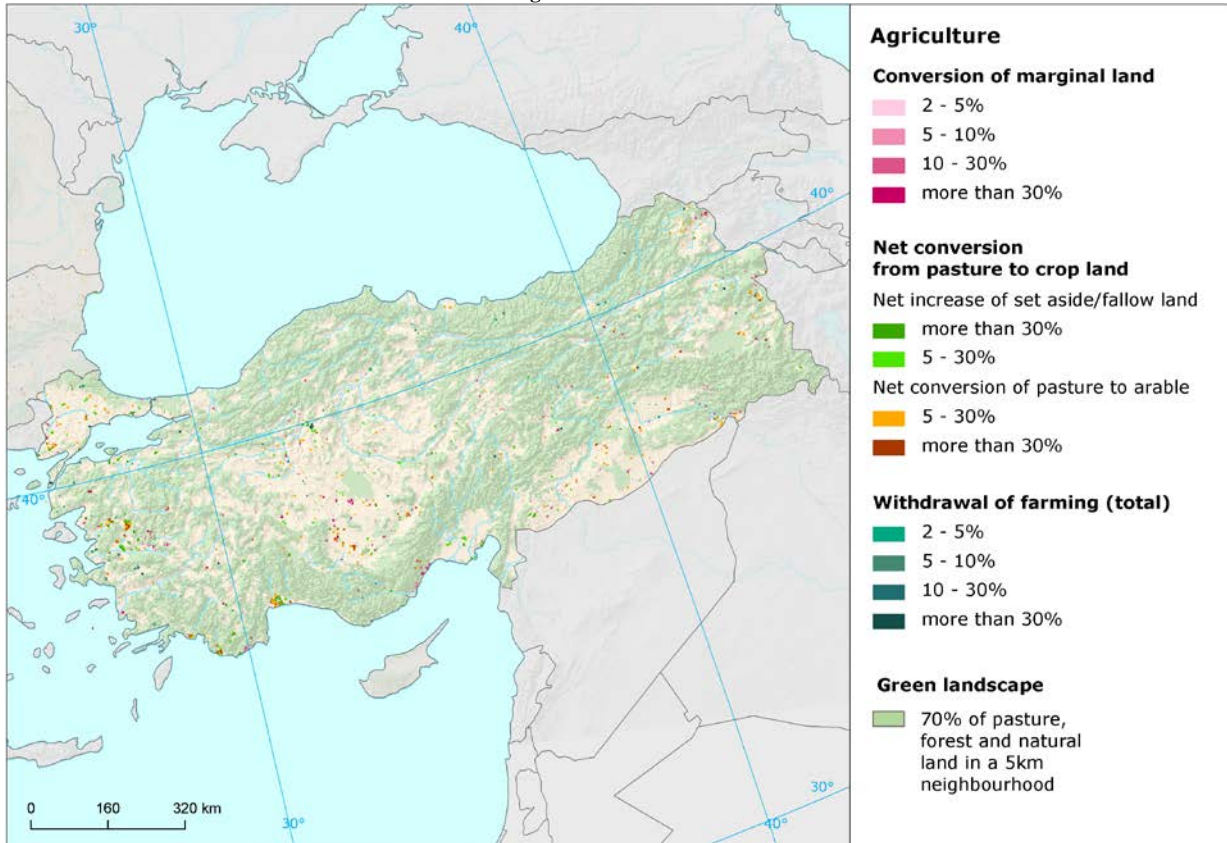


Artificial sprawl 2000-2006

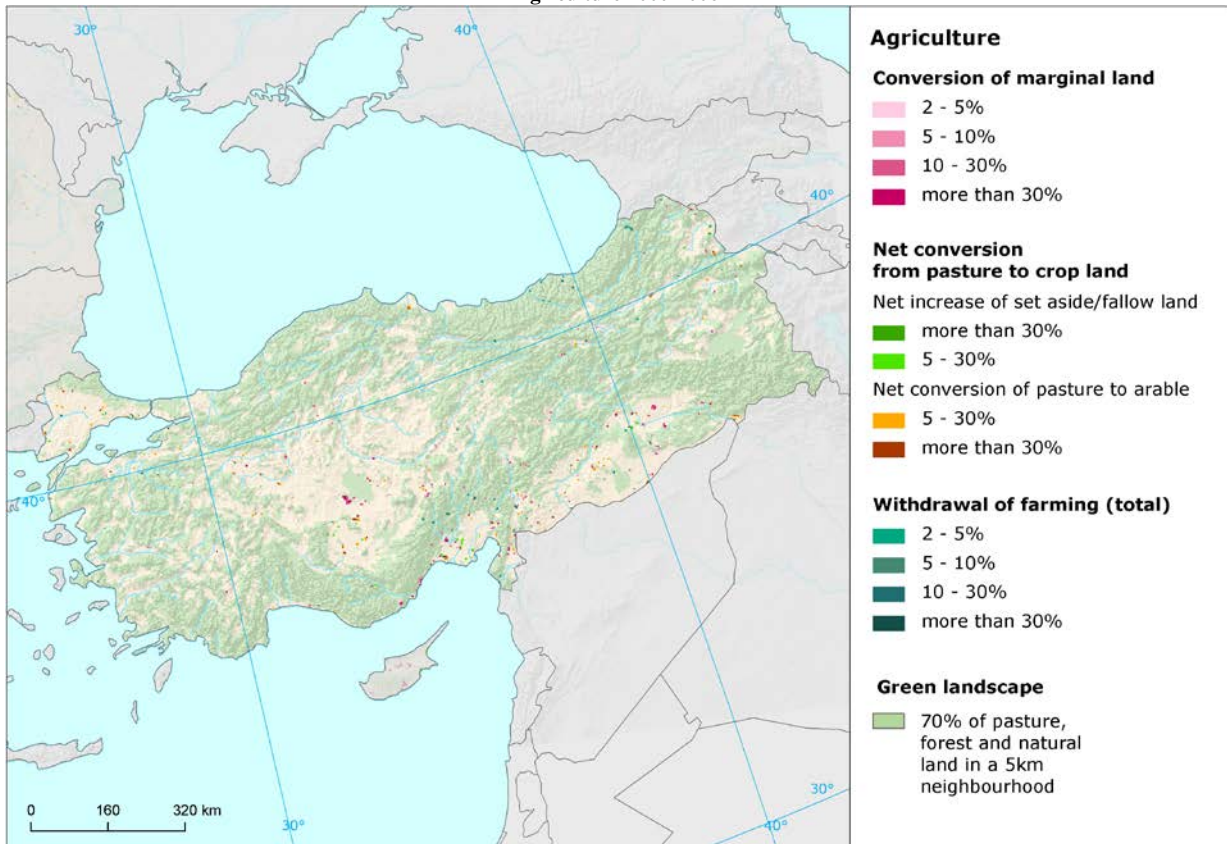


Turkey

Agriculture 2006-2012

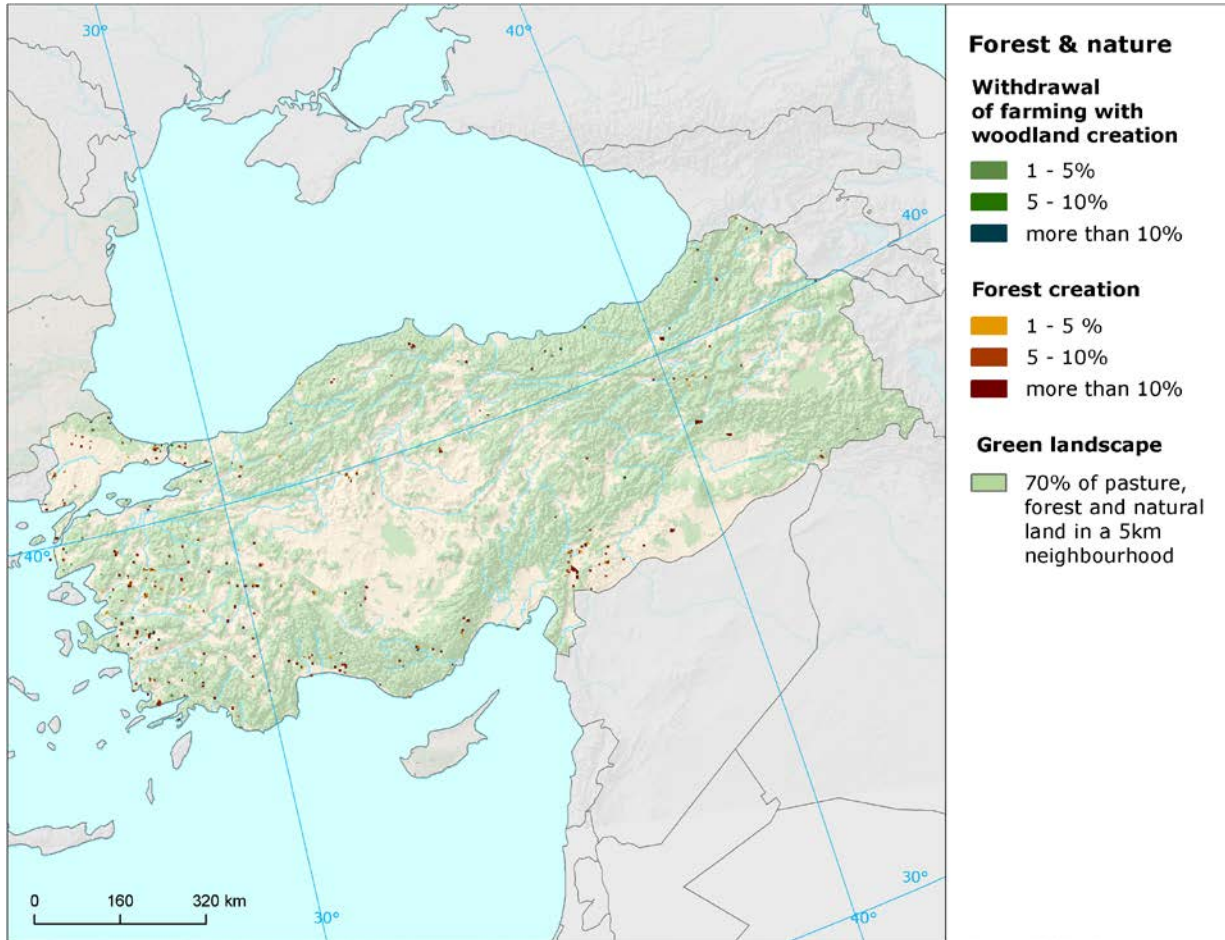


Agriculture 2000-2006



Turkey

Forest and nature 2006-2012



Forest and nature 2000-2006

