

Land cover 2012



Italy 

September 2017

Photo: © Toni García, My City/EEA





## Land cover 2012

### Overview of land cover & change 2006-2012

Italy is a country with a relatively stable landscape, compared to the European average. The overall change rate is comparable with the previous period 2000-2006 and also with the period 1990-2000. Concerning the main land cover flows, the land cover development is driven mostly by forest creation and management and by the sprawl of economic sites and infrastructures (both of them occur with similar intensity as in the previous period) and also by agricultural conversions, which intensity is getting higher again, after a major decline in the previous period 2000-2006. Internal conversions are the main drivers of the agricultural development in Italy – they are represented mainly by conversion from vineyards and orchards to non-irrigated arable land and also by diffuse conversion from pasture to arable and permanent crops. On the other hand, withdrawal of farming, which was very frequent in the period 1990-2000, is currently the least significant agricultural flow.

Forest creation and management is represented mostly by internal forest conversion, with both recent felling and opposite forest creation having comparable intensity.

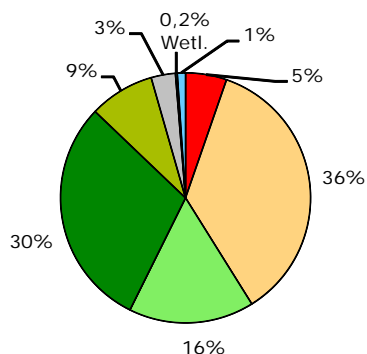
With the mean annual land take rate of 0.38%, the speed of urban development in Italy is just slightly above the European average. This means significant slowdown, compared to both previous periods. As already mentioned, the urban development in Italy is driven mainly by the sprawl of economic sites and infrastructures, namely by the sprawl of commercial or industrial units and by construction. The residential sprawl, which was the main land take driver in the period 1990-2000, seems to be in decline in 2000-2012.

*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.*

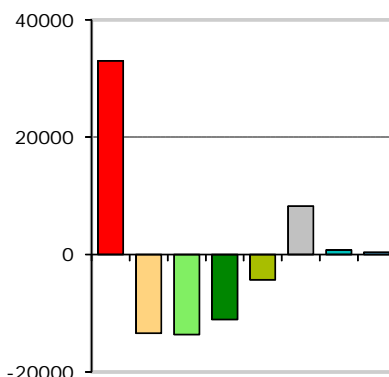
*Number of years between CLC2006-CLC2012 data for Italy: 6*



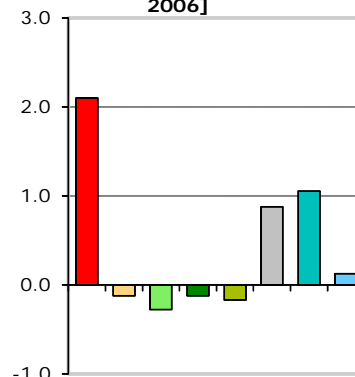
1.1. Land cover 2012 [% of total]



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



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



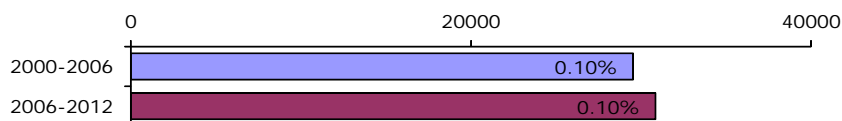
■ Artificial areas     
 ■ Arable land & permanent crops     
 ■ Pastures & mosaics     
 ■ Forested land  
■ Semi-natural vegetation     
 ■ Open spaces/ bare soils     
 ■ Wetlands     
 ■ Water bodies

### Summary balance table 2006-2012

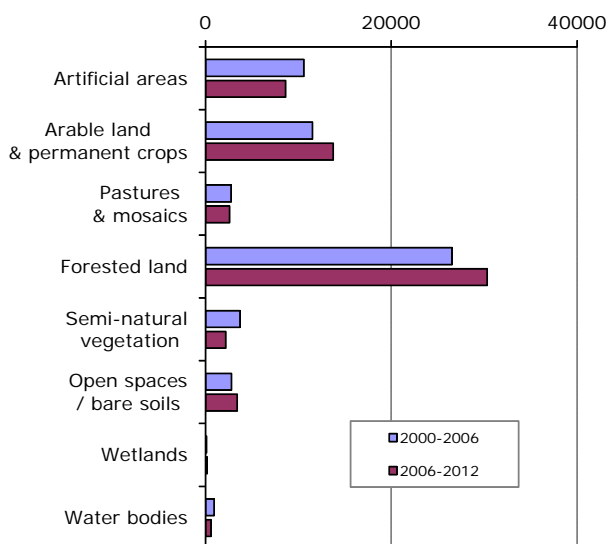
	Artificial areas	Arable land & permanent crops	Pastures & mosaics	Forested land	Semi-natural vegetation	Open spaces/ bare soils	Wetlands	Water bodies	TOTAL [hundreds ha]
<b>Land cover 2006</b>	15726	108128	49064	90034	25497	9388	716	3166	301720
Consumption of initial LC	93.7	480.2	145.9	964.8	87.1	61.5	1.7	15.7	1850
Formation of new LC	423.5	345.9	9.7	854.3	44.0	144.0	9.3	19.7	1850
<b>Net Formation of LC</b>	<b>329.9</b>	<b>-134.2</b>	<b>-136.1</b>	<b>-110.4</b>	<b>-43.1</b>	<b>82.5</b>	<b>7.5</b>	<b>4.0</b>	<b>0</b>
<i>Net formation as % of initial year</i>	2.1	-0.1	-0.3	-0.1	-0.2	0.9	1.1	0.1	
<b>Total turnover of LC</b>	<b>517.2</b>	<b>826.1</b>	<b>155.6</b>	<b>1819.1</b>	<b>131.1</b>	<b>205.6</b>	<b>11.0</b>	<b>35.3</b>	<b>3701</b>
<i>Total turnover as % of initial year</i>	3.3	0.8	0.3	2.0	0.5	2.2	1.5	1.1	1.2
<b>Land cover 2012</b>	<b>16056</b>	<b>107994</b>	<b>48928</b>	<b>89924</b>	<b>25454</b>	<b>9471</b>	<b>724</b>	<b>3170</b>	<b>301720</b>

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

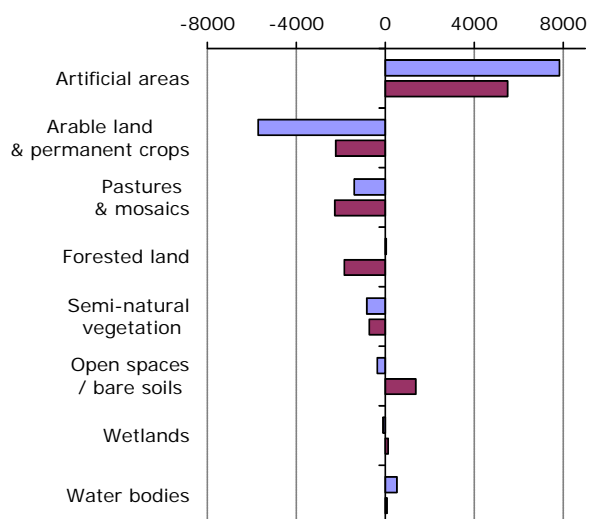
2.4. Annual land cover change  
[ha/year, % of total area]



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

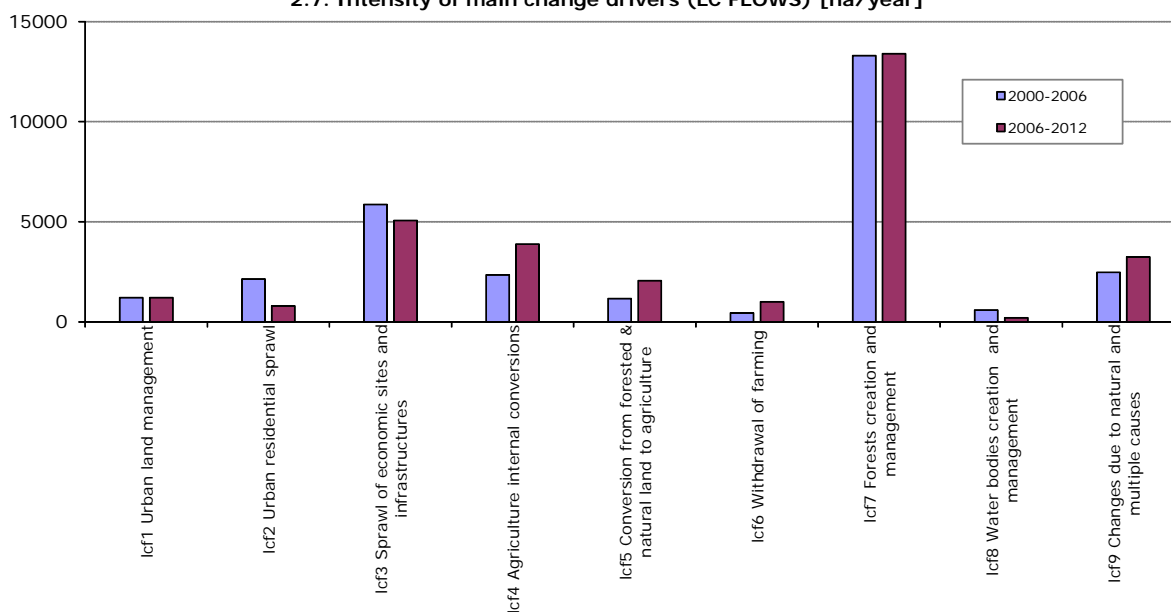


2.6. Net annual change of LC types [ha/year]

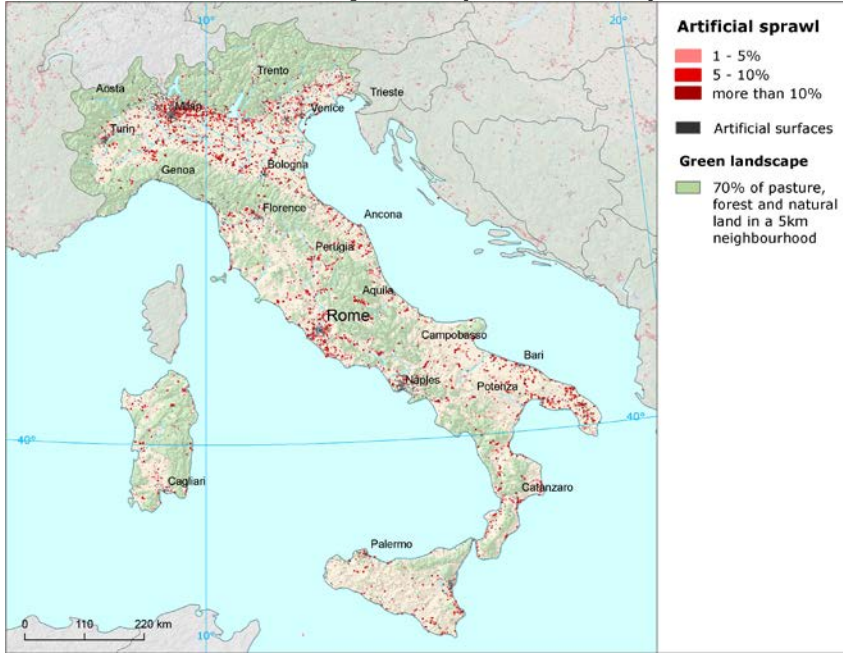


Summary trend figures		
	2000-2006	2006-2012
<b>Annual land cover change [ha/year]</b>	<b>29528</b>	<b>30841</b>
<b>Annual land cover change as % of initial year</b>	<b>0.10%</b>	<b>0.10%</b>
Land uptake by artificial development as mean annual change [ha/year]	8016	5786
Agricultural land uptake by urban and infrastructures development as mean annual change [ha/year]	7799	5451
Net uptake of forests and semi-natural land by agriculture as mean annual change [ha/year]	616	884
Net conversion from pasture to arable land and permanent crops as mean annual change [ha/year]	-82	1243
Forest & other woodland net formation as mean annual change [ha/year]	49	-1841
Dry semi-natural land cover net formation as mean annual change [ha/year]	-1061	711
Wetlands & water bodies net formation as mean annual change [ha/year]	419	192

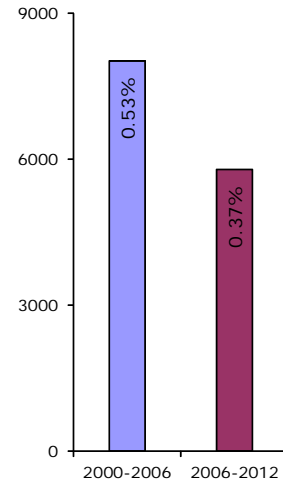
2.7. Intensity of main change drivers (LC FLOWS) [ha/year]



### Artificial surfaces sprawl (2006-2012)



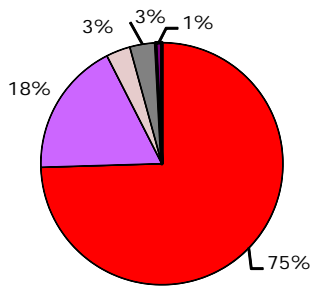
3.8. Artificial land take [ha/year, % of initial year]



### Slowdown of artificial development, especially residential one

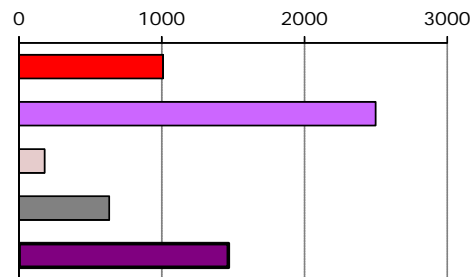
The pace of artificial development in Italy is just slightly above the European average. Compared with previous periods 1990-2000 and 2000-2006, it shows a significant slowdown. This overall slowdown is caused by decrease of intensity of commercial/industrial development and especially of residential sprawl, which was very strong before and represented the main driver of the artificial development in Italy in the period 1990-2000. Nowadays, the land take in the country is driven mostly by the sprawl of industrial, commercial sites and by construction, with the residential development on the third place. On the other hand, construction sites are continuously consumed by the developed urban land recycling, as they are transformed into industrial/commercial sites, urban fabric or transportation network. Geographically, the artificial development shows similar pattern as in the previous period, with major concentrations of sprawl in the northern Italy (in particular in the surroundings of Milan) and around the capital city Rome.

3.9. Artificial surfaces 2012 [% of total area]

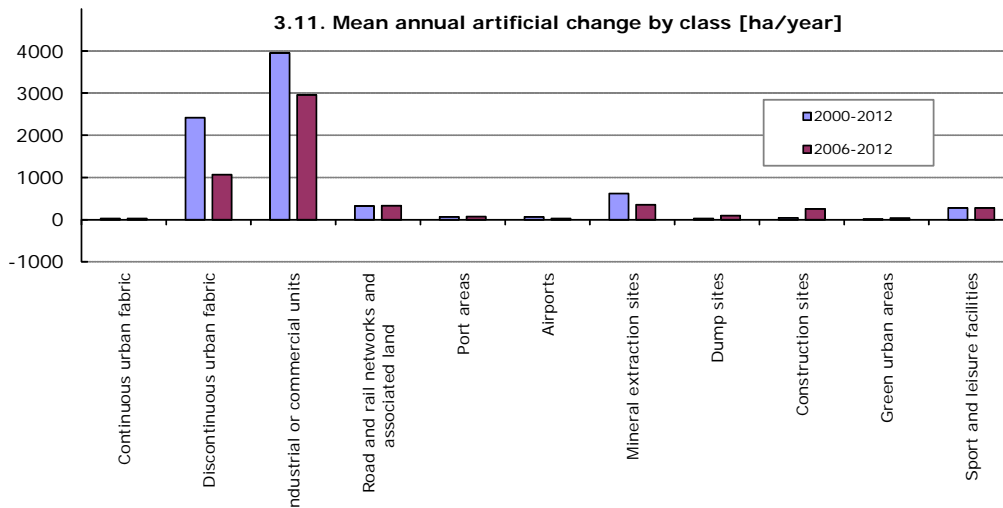


- Housing, services, recreation
- Industrial, commercial units
- Transport networks, infrastructures
- Mines, quarries, waste dumpsites
- Construction

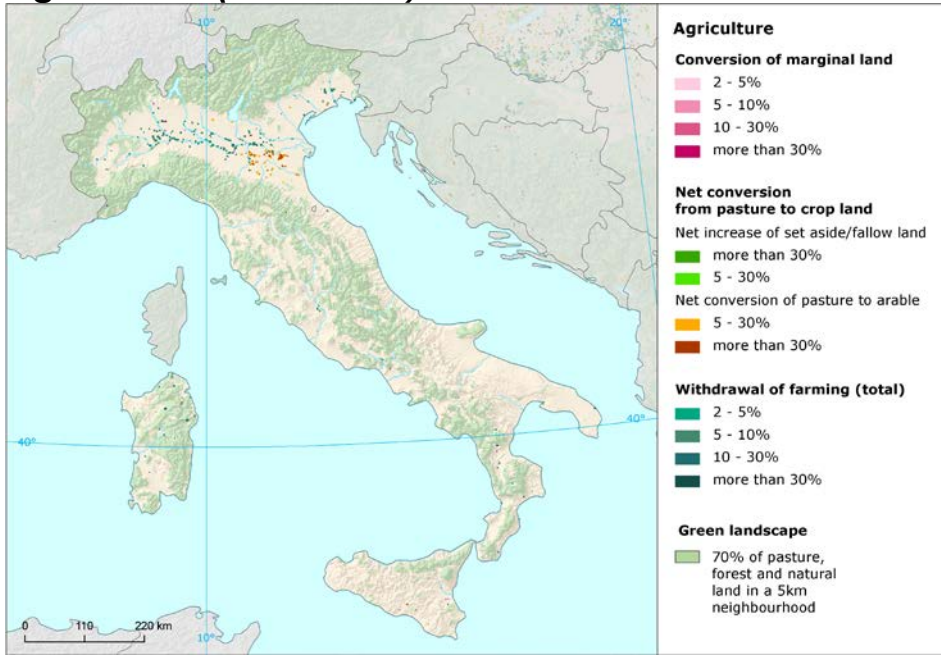
3.10. Artificial land take 2006-2012 [ha/year]



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



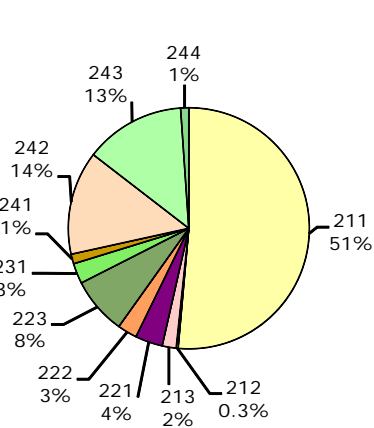
## Agriculture (2006-2012)



### Internal agriculture development accelerates again

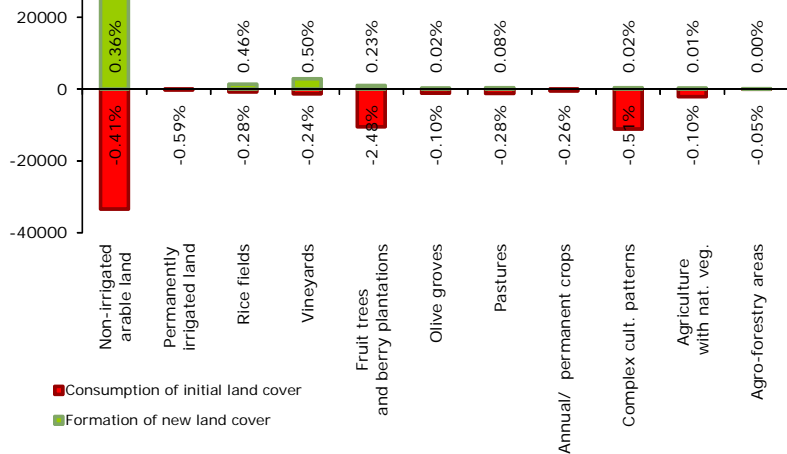
After a major slowdown, which was observed in the previous period 2000-2006, the intensity of agricultural development in Italy shows slightly increasing tendency. Agricultural exchange in the country is driven mostly by internal flows, with prevailing share of conversion from vineyards and orchards to non-irrigated arable land and diffuse conversion from pasture to arable and permanent crops. Also the conversions from arable land to vineyards and orchards are quite frequent in Italy. Compared to both previous periods, the intensity of agricultural land consumption is significantly lower – currently, this consumption is realized mainly through artificial sprawl, as the withdrawal of farming, which was very frequent in the period 1990-2000 and became much less significant between 2000 and 2012. Currently, this flow is getting a bit stronger again, with prevailing woodland creation, and it is situated mostly in the Po river valley in the northern part of the country. On the other hand, the opposite flow of conversion from forest to agriculture is more frequent currently, compared to previous periods and it is represented mostly by intensive conversion from broad-leaved forest to non-irrigated arable land.

4.12. Agricultural areas 2012 [% of total area]

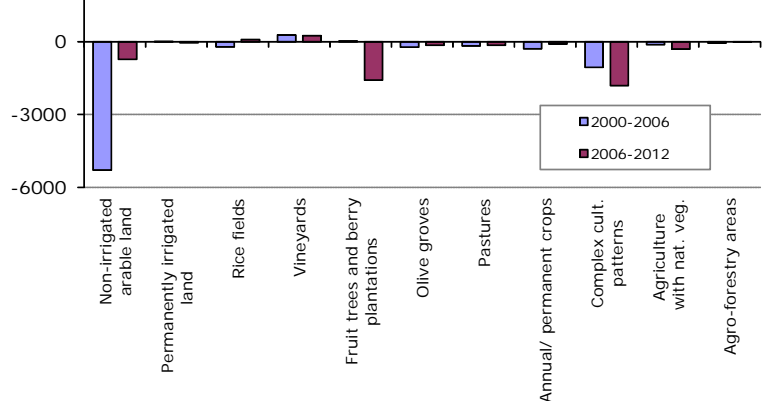


- 211 Non-irrigated arable land
- 212 Permanently irrigated land
- 213 Rice fields
- 221 Vineyards
- 222 Fruit trees and berry plantations
- 223 Olive groves
- 231 Pastures
- 241 Annual crops associated with permanent crops
- 242 Complex cultivation patterns
- 243 Agriculture land with significant areas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

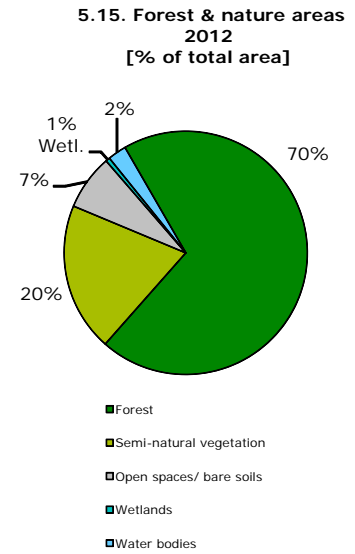
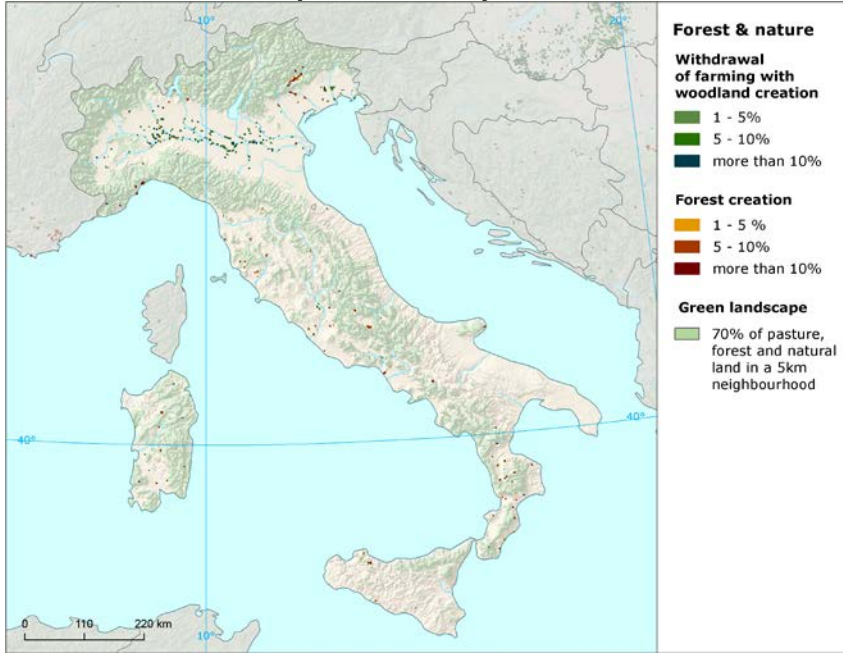
4.13. Development of agricultural areas 2006-2012 – detailed balance [ha]



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

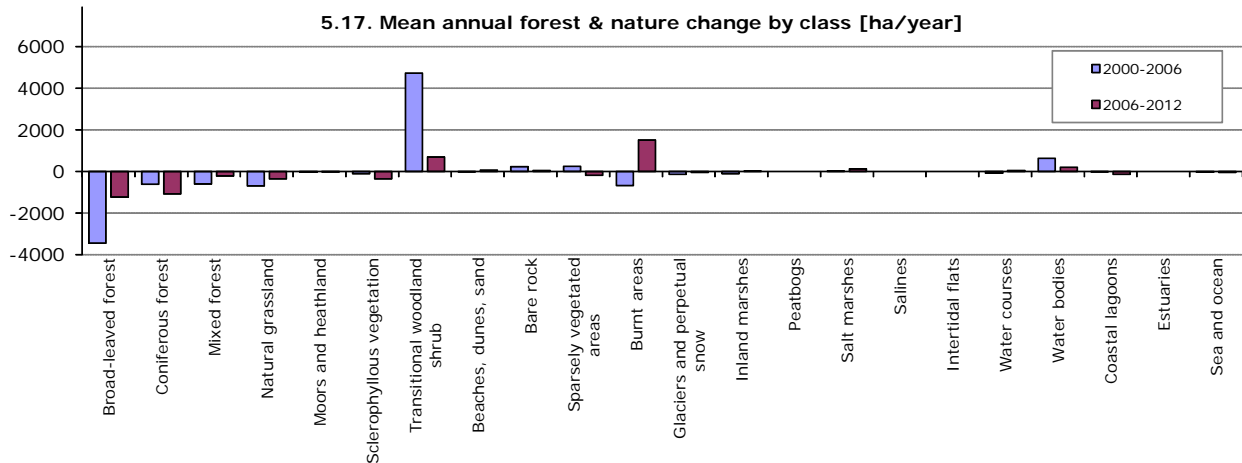
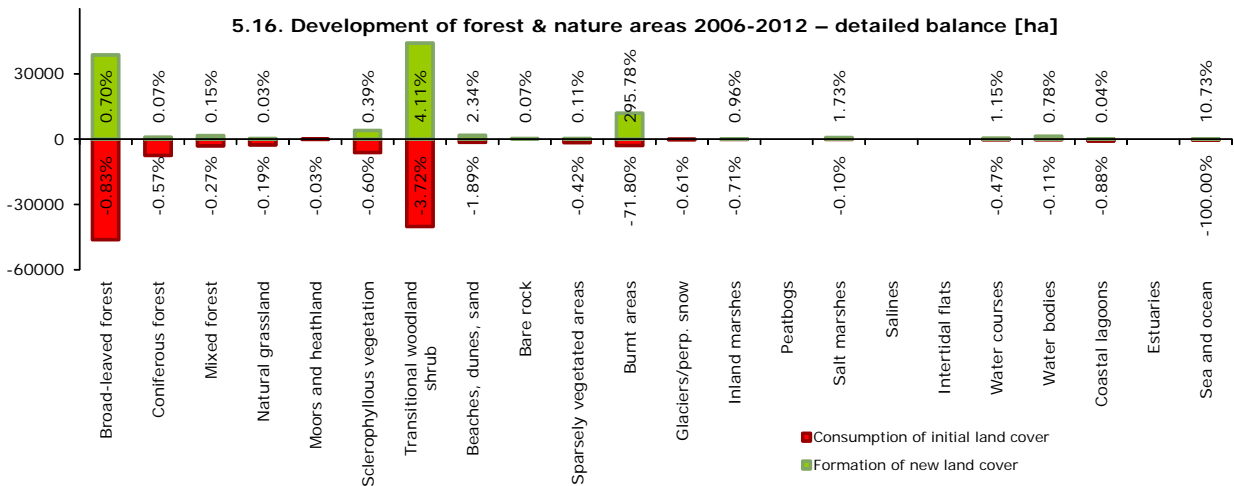


### Forest & nature (2006-2012)



### Dynamic internal exchange of natural land

In the long term, forest creation and management is the most extensive driver of natural land cover change as well as of the landscape development in general in Italy. The current intensity of this flow is similar to both previous periods. Both recent felling and transition and conversion from transitional woodland and shrub are very frequent in the country and they occur with comparable intensity. Also beside these internal forest flows, the Italian natural landscape shows high dynamics of the land cover exchange. External exchange with agriculture is not as frequent as in the period 1990-2000, however, its intensity shows an increasing trend and both conversion from forest to agriculture and opposite withdrawal of farming occur quite often and it mostly involves a conversion between broad-leaved forest and arable land. There is also significant amount of other miscellaneous conversions between different natural landscape types or classes, including semi-natural rotation and in particular changes caused by forest and shrub fires, with prevailing share of destruction of natural areas by fire.

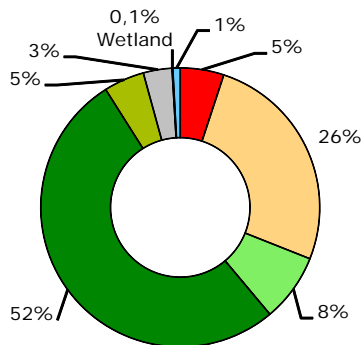




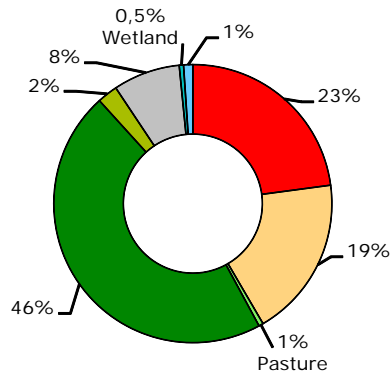
## Annex: Land cover flows and trends

### Land cover flows 2006-2012

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

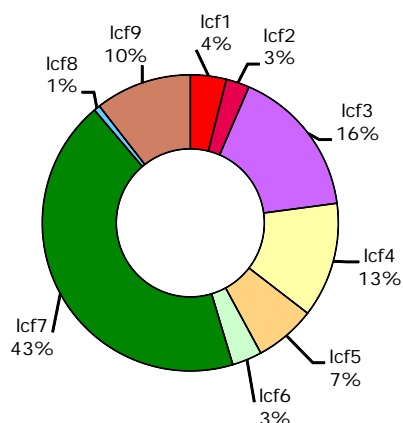


6.19. Formation of land cover 2006-2012 [% of total change area]



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

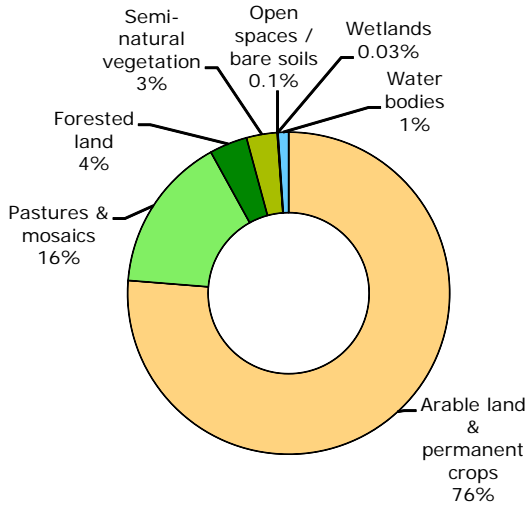
6.20. Drivers of change (LC FLOWS) 2006-2012 [% of total change area]



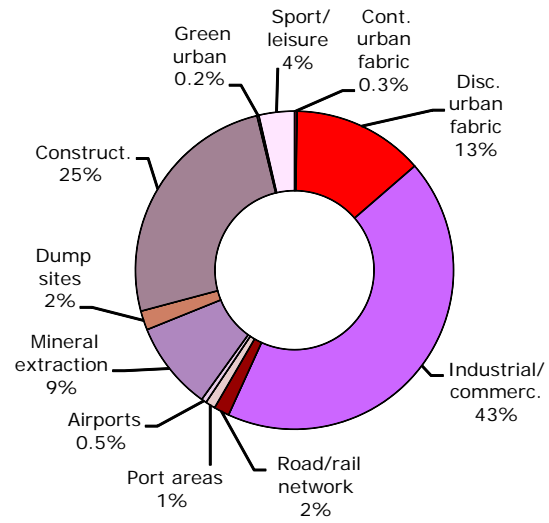
- Icf1 Urban land management
- Icf2 Urban residential sprawl
- Icf3 Sprawl of economic sites and infrastructures
- Icf4 Agriculture internal conversions
- Icf5 Conversion from forested & natural land to agriculture
- Icf6 Withdrawal of farming
- Icf7 Forests creation and management
- Icf8 Water bodies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

## Artificial areas

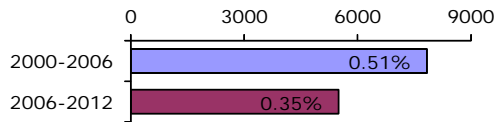
7.21. Consumption by artificial land take 2006-2012 [% of total]



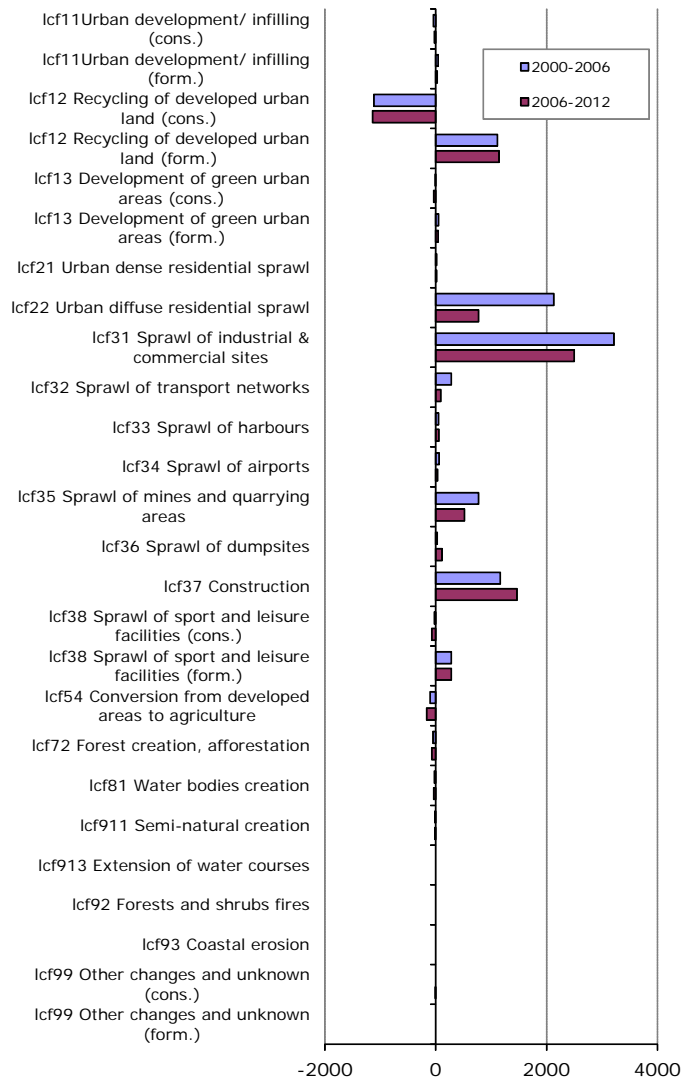
7.22. Formation by artificial land take 2006-2012 [% of total]



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



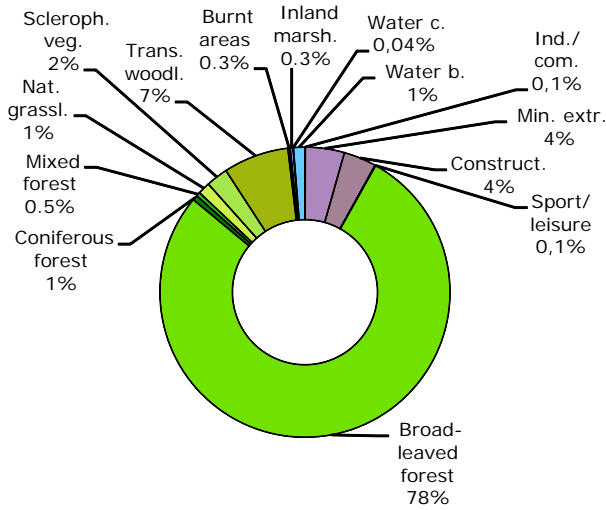
7.24. Artificial development by change drivers (LC FLOWS) [ha/year]



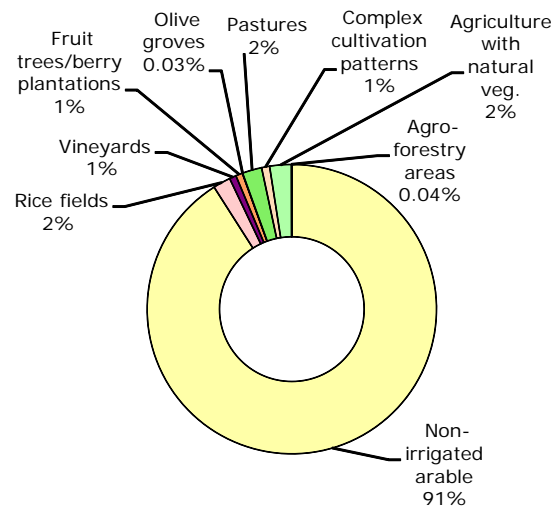


**Agriculture**

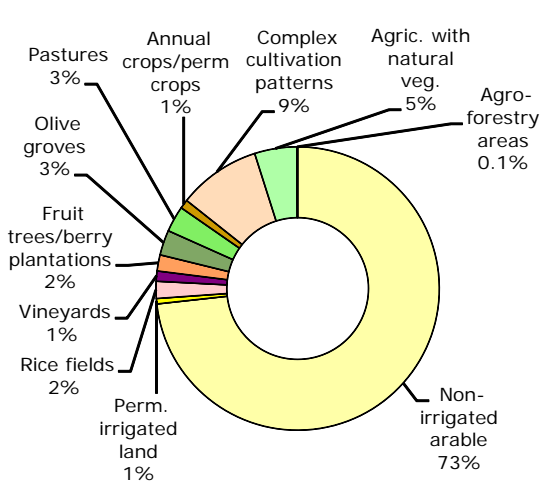
**8.25. LC consumed by agriculture 2006-2012 [% of total]**



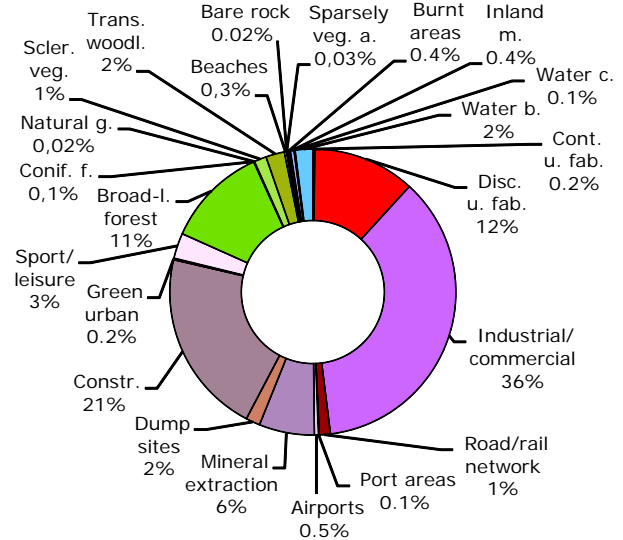
**8.26. Formation of agricultural land from non-agriculture 2006-2012 [% of total]**



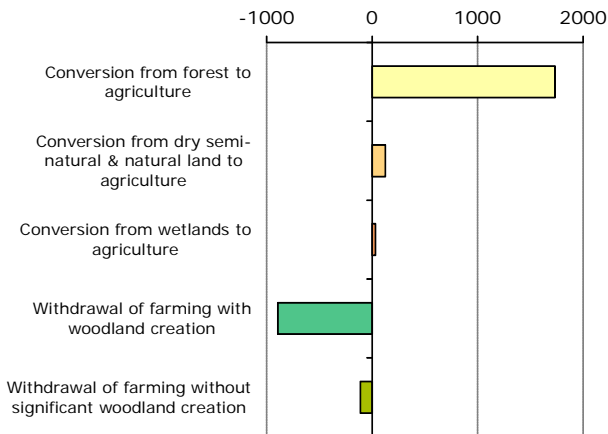
**8.27. Consumption of agricultural land by non-agriculture 2006-2012 [% of total]**



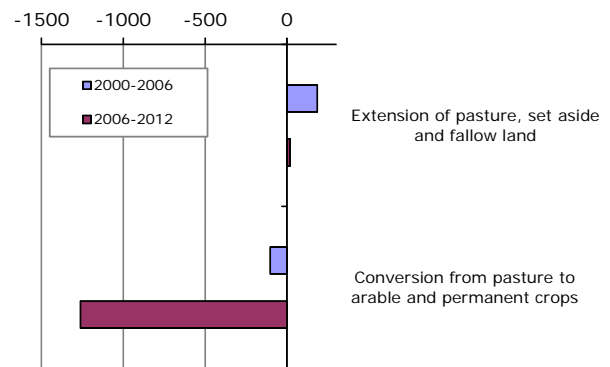
**8.28. Formation of non-agricultural land from agriculture 2006-2012 [% of total]**



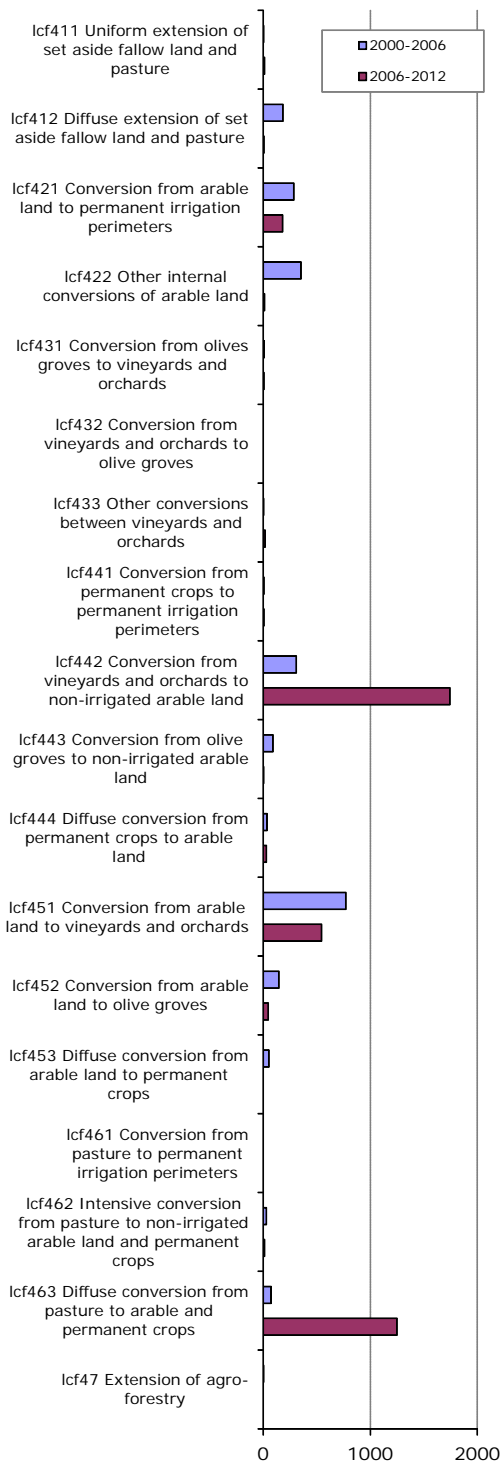
**8.29. Main annual conversions between agriculture and forests & semi-natural land 2006-2012 [ha/year]**



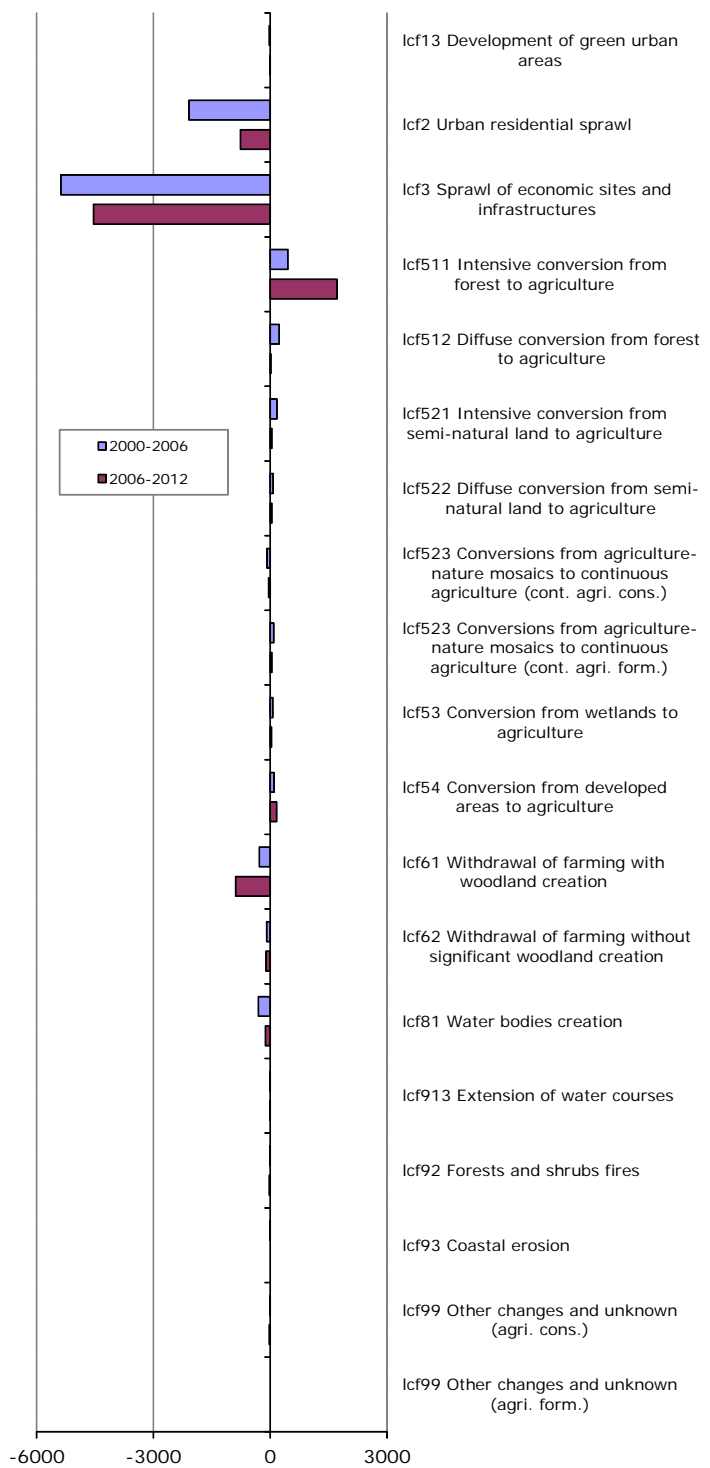
**8.30. Mean annual conversion between arable land and pasture [ha/year]**



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

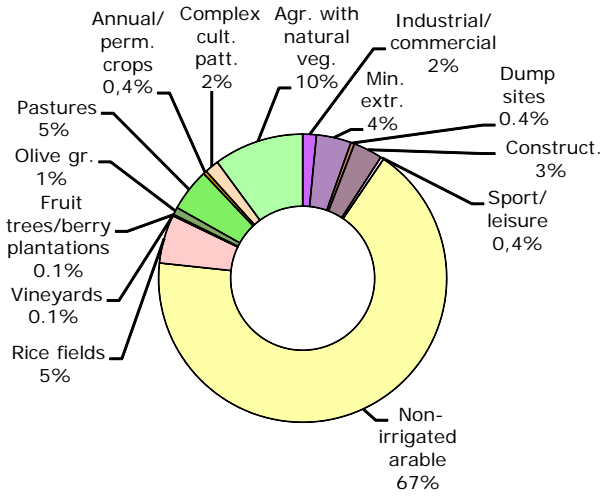


9.32. Mean annual conversions between agriculture and other LC types [ha/year]

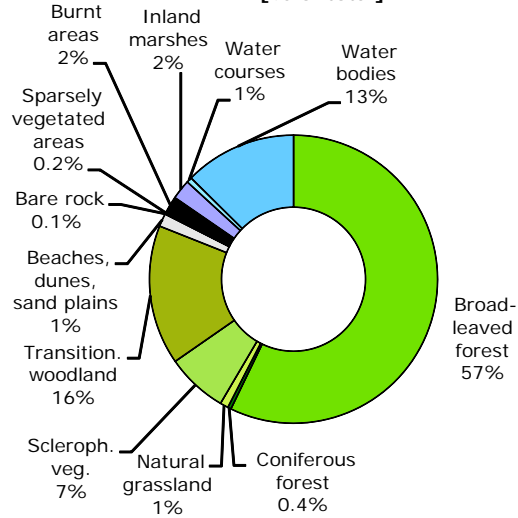


**Forest & nature**

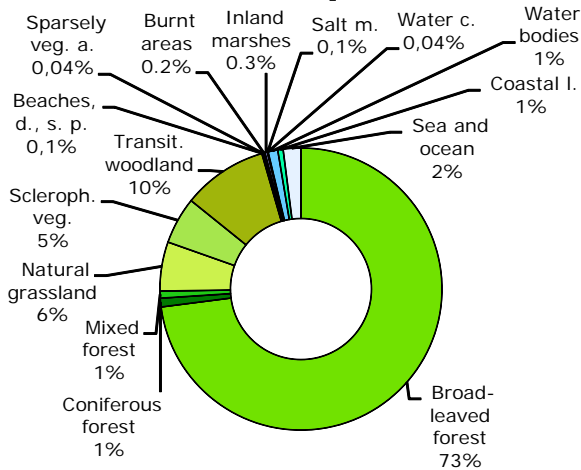
**10.33. LC consumed by forest & nature 2006-2012 [% of total]**



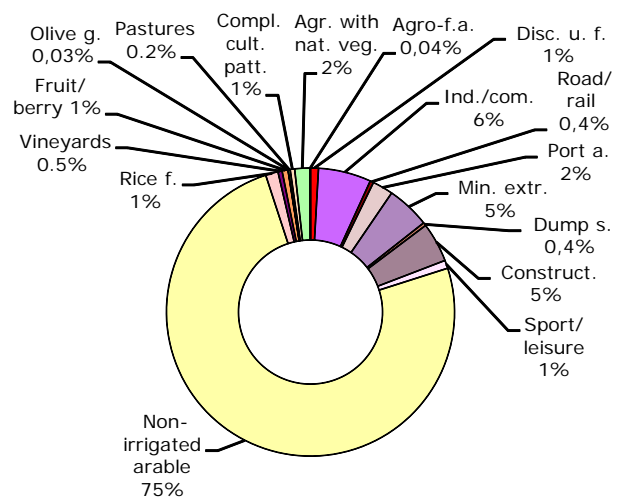
**10.34. Formation of forest & nature land from non-forest /nature 2006-2012 [% of total]**



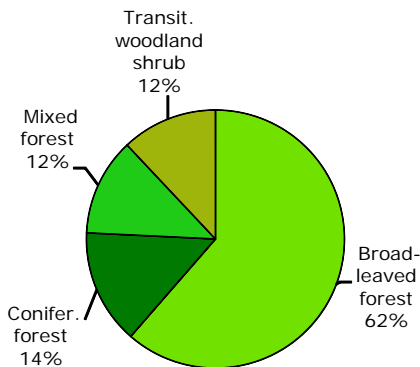
**10.35. Consumption of forest & nature land by non-forest/nature 2006-2012 [% of total]**



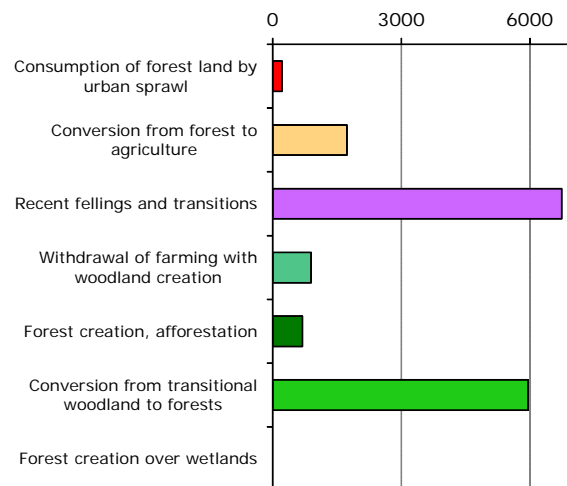
**10.36. Formation of non-forest/nature land from forest & nature 2006-2012 [% of total]**



**10.37. Forested land 2012 [% of total area]**

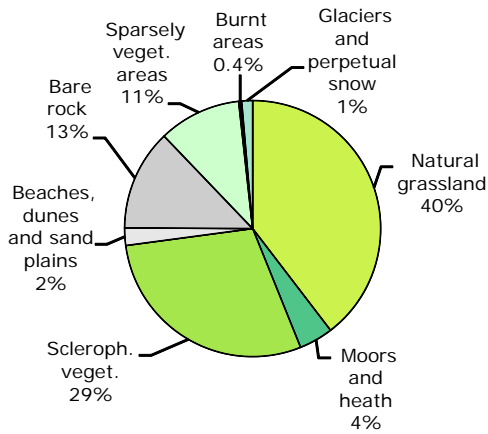


**10.38. Main trends in woodland & forests consumption/formation 2006-2012 [ha/year]**

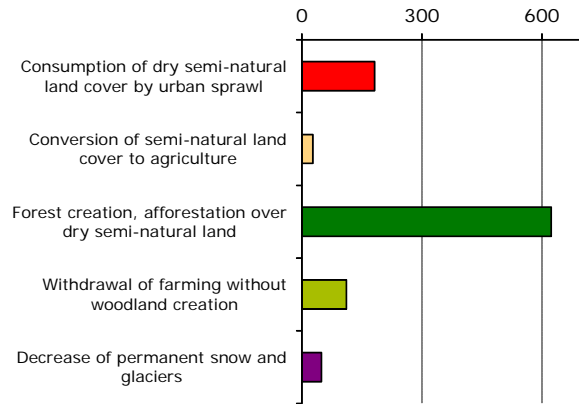




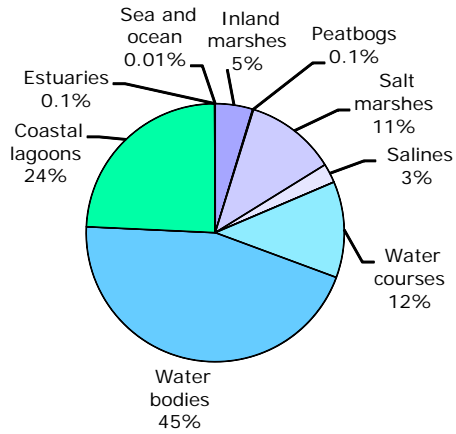
11.39. Dry semi-natural areas 2012 [% of total area]



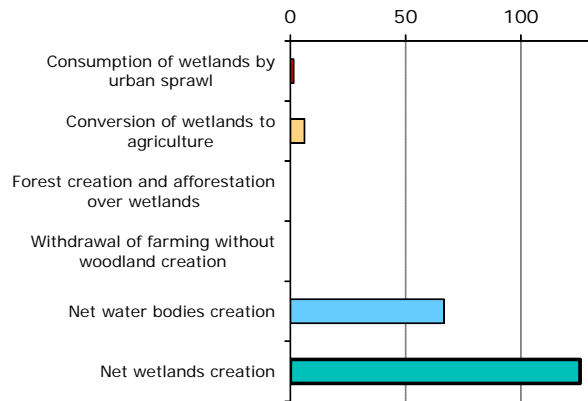
11.40. Main trends in dry semi-natural land consumption/formation 2006-2012 [ha/year]



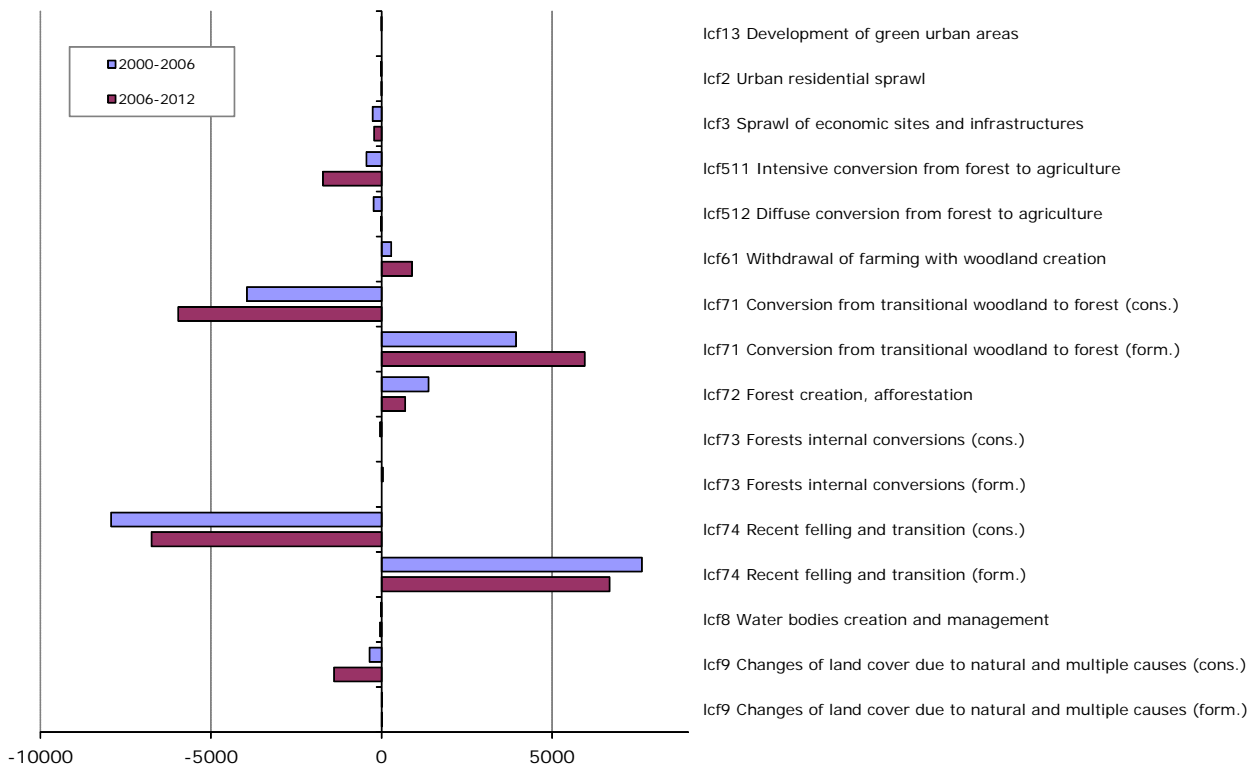
11.41. Wetlands & water 2012 [% of total area]



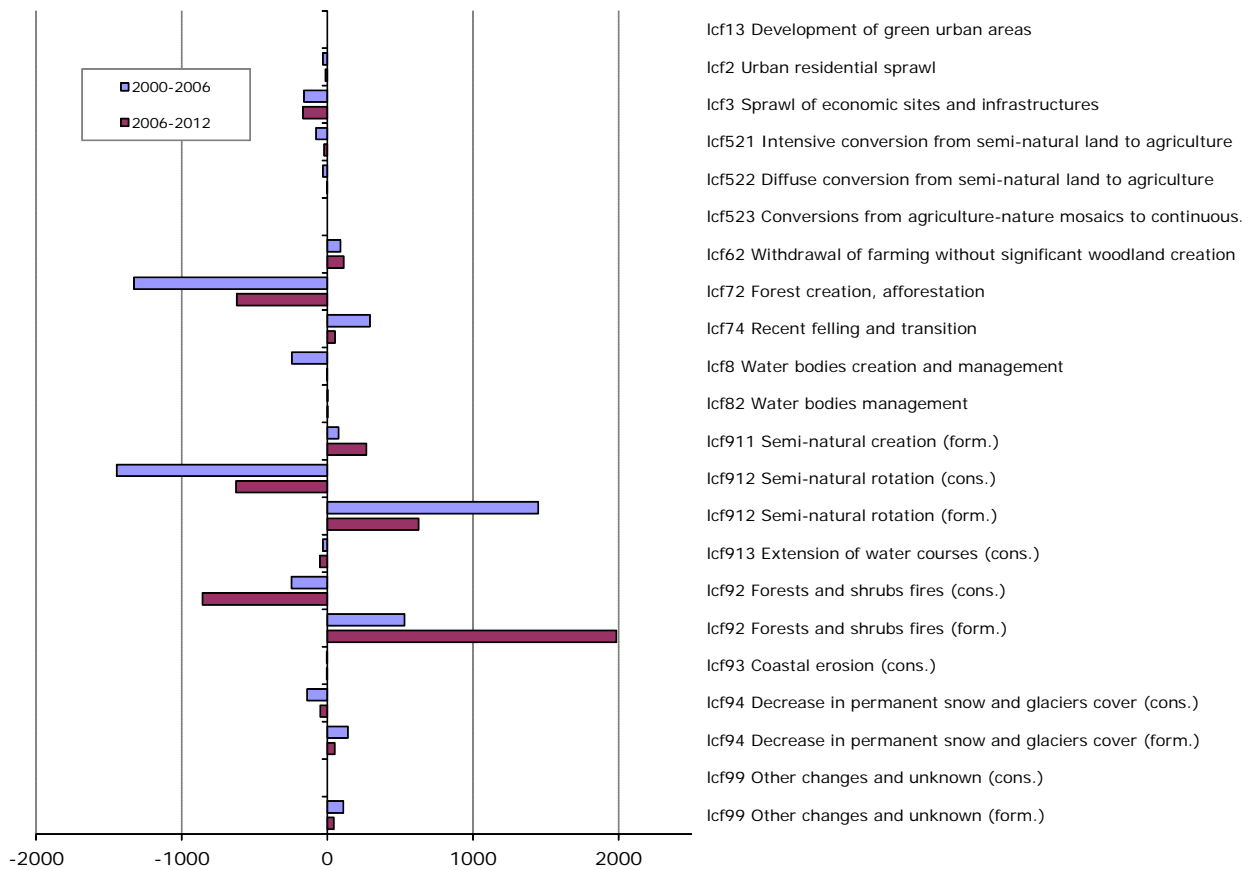
11.42. Main trends in wetlands & water consumption/formation 2006-2012 [ha/year]



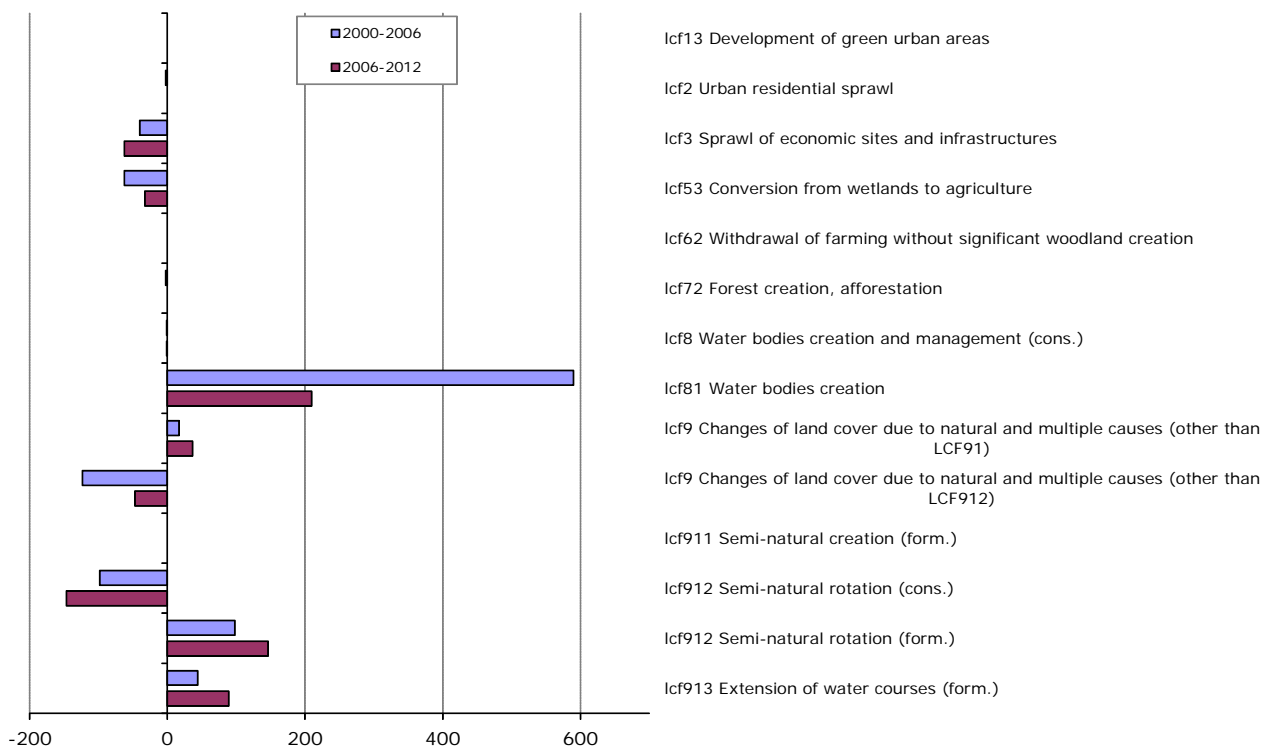
11.43. Mean annual conversions of forest & other woodland [ha/year]



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

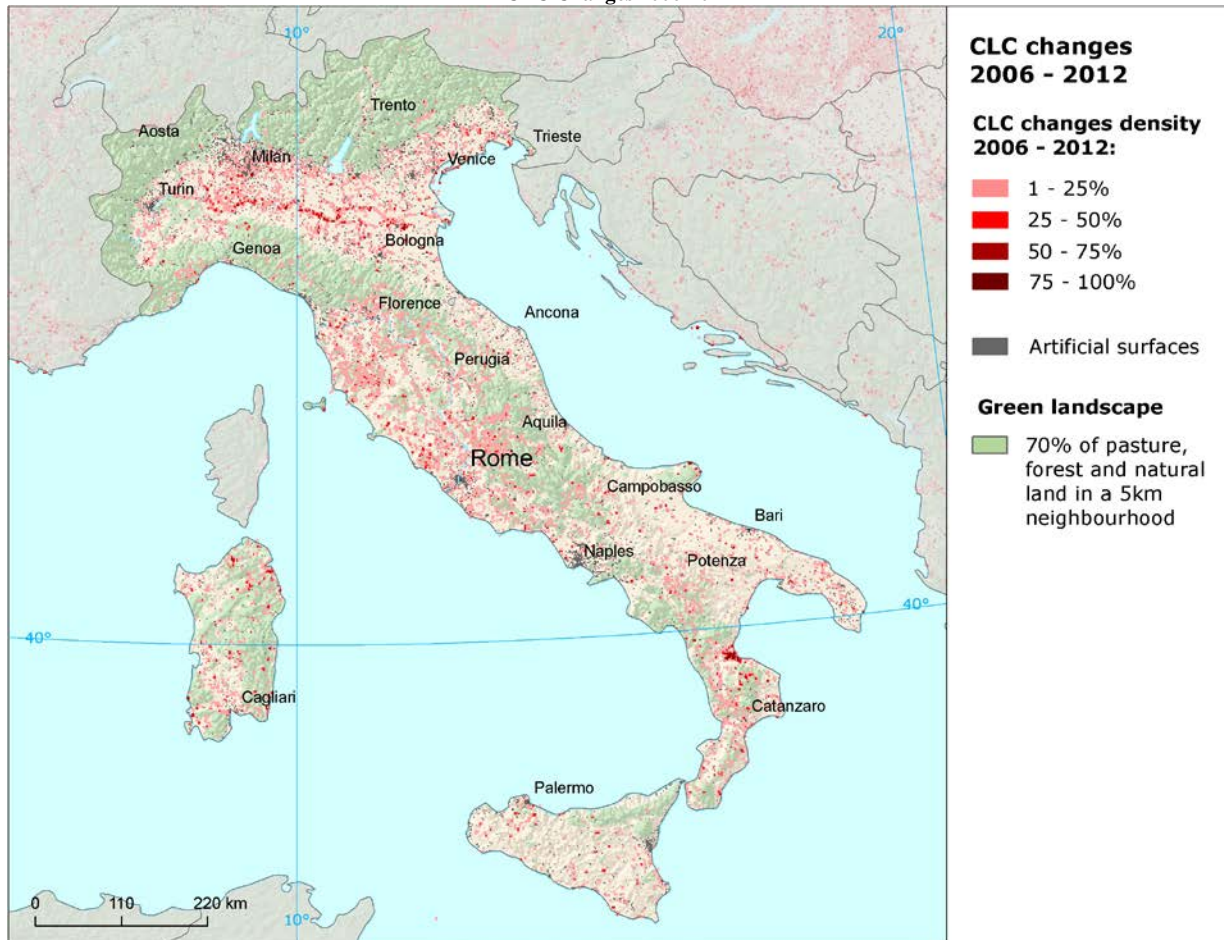


12.45. Mean annual conversions of wetlands and water LC [ha/year]

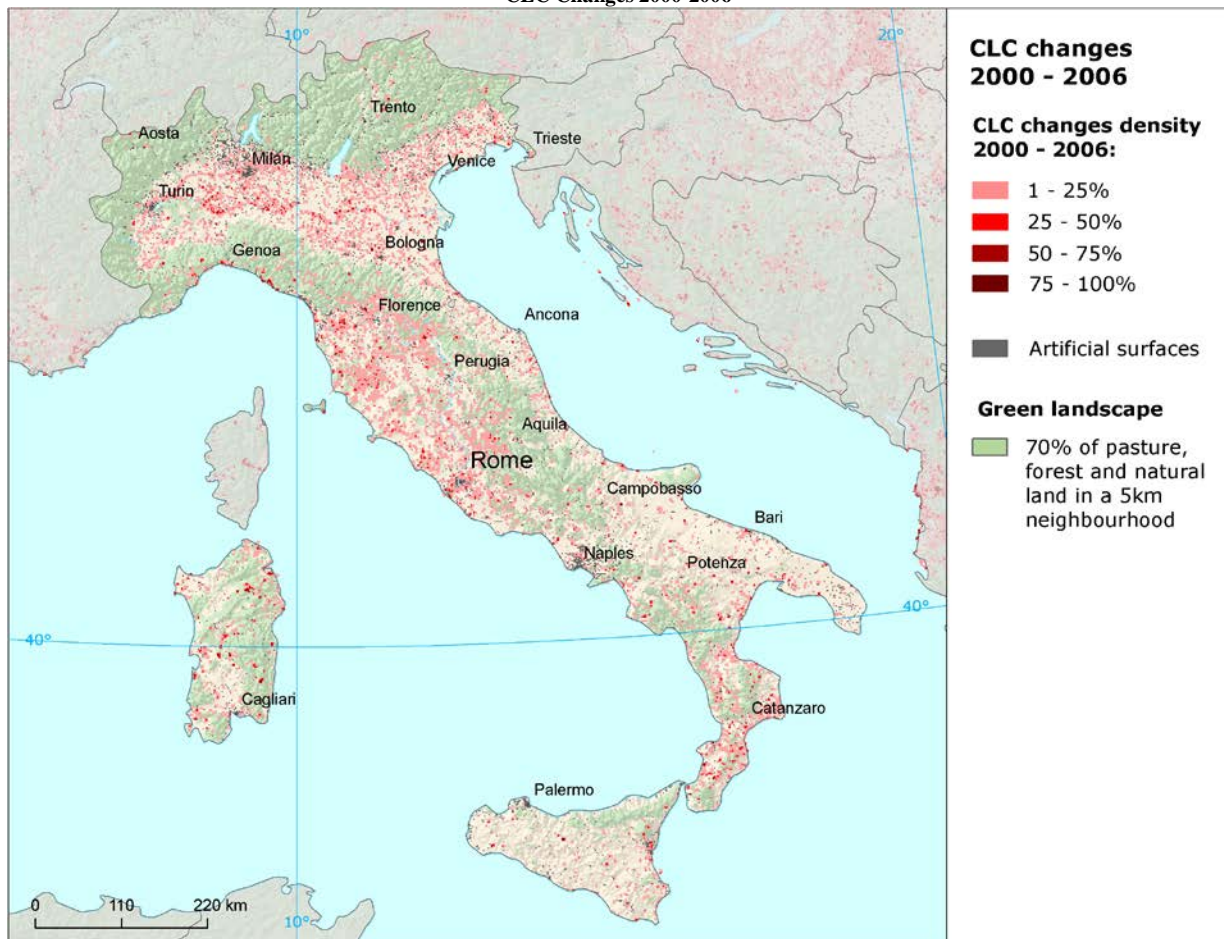


# Italy

### CLC Changes 2006-2012

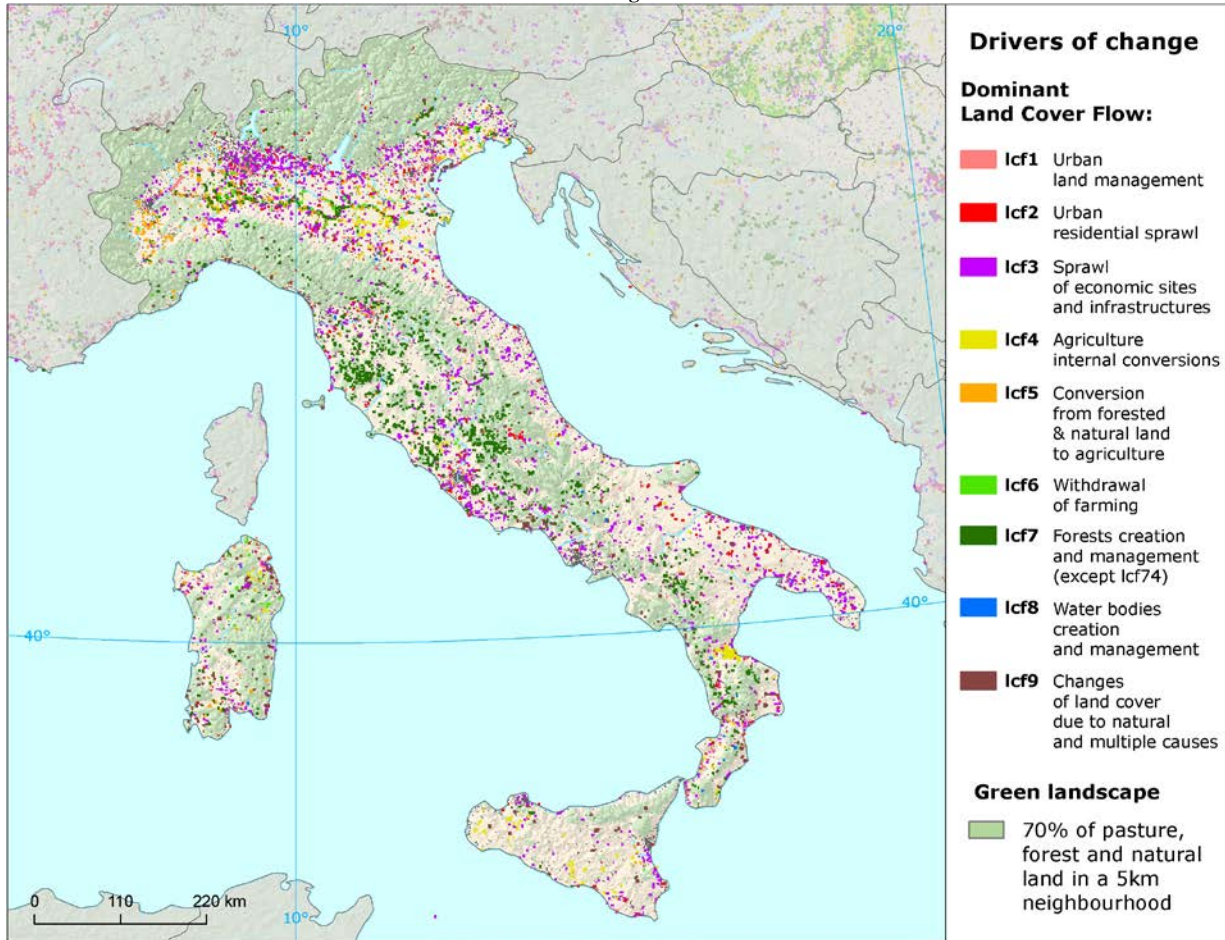


### CLC Changes 2000-2006

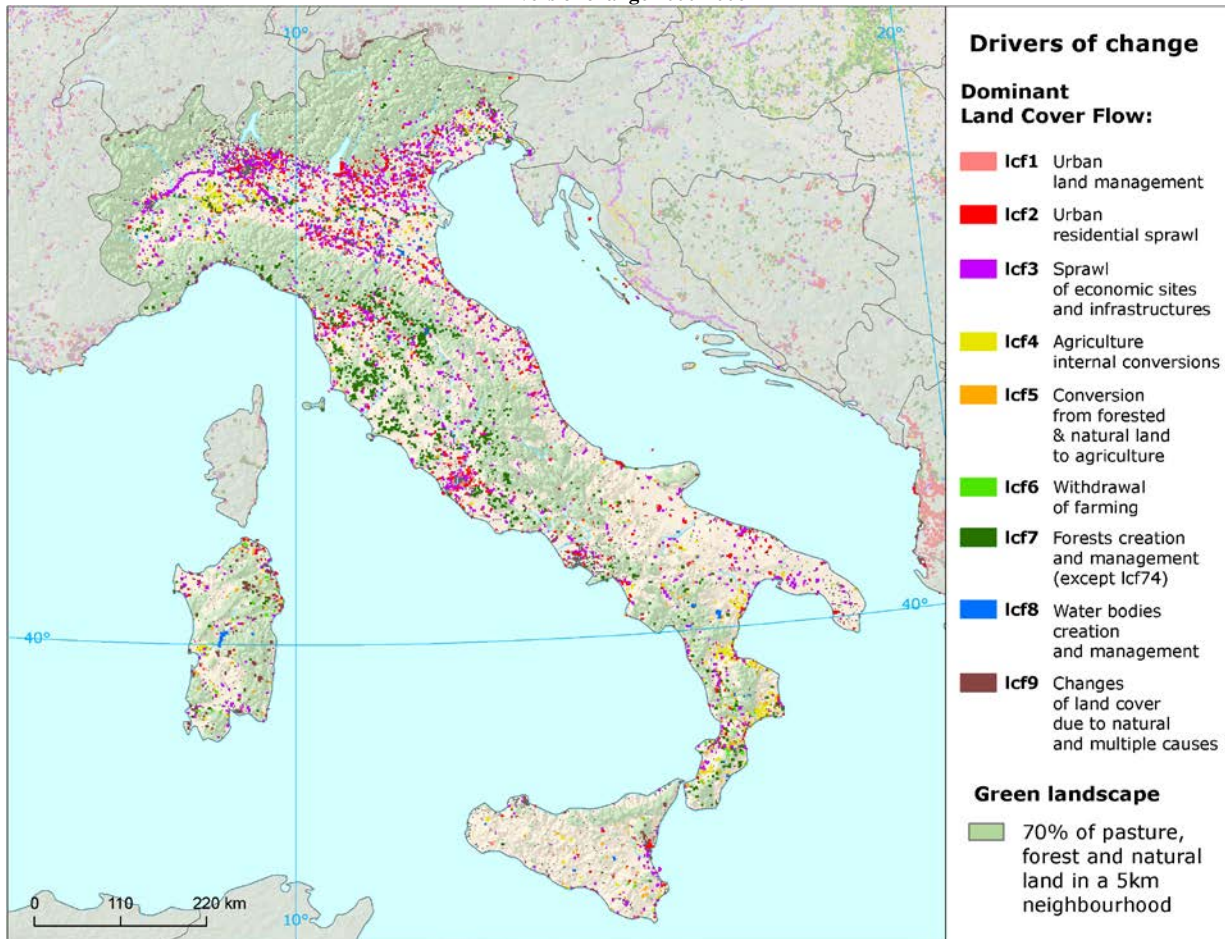




Drivers of change 2006-2012



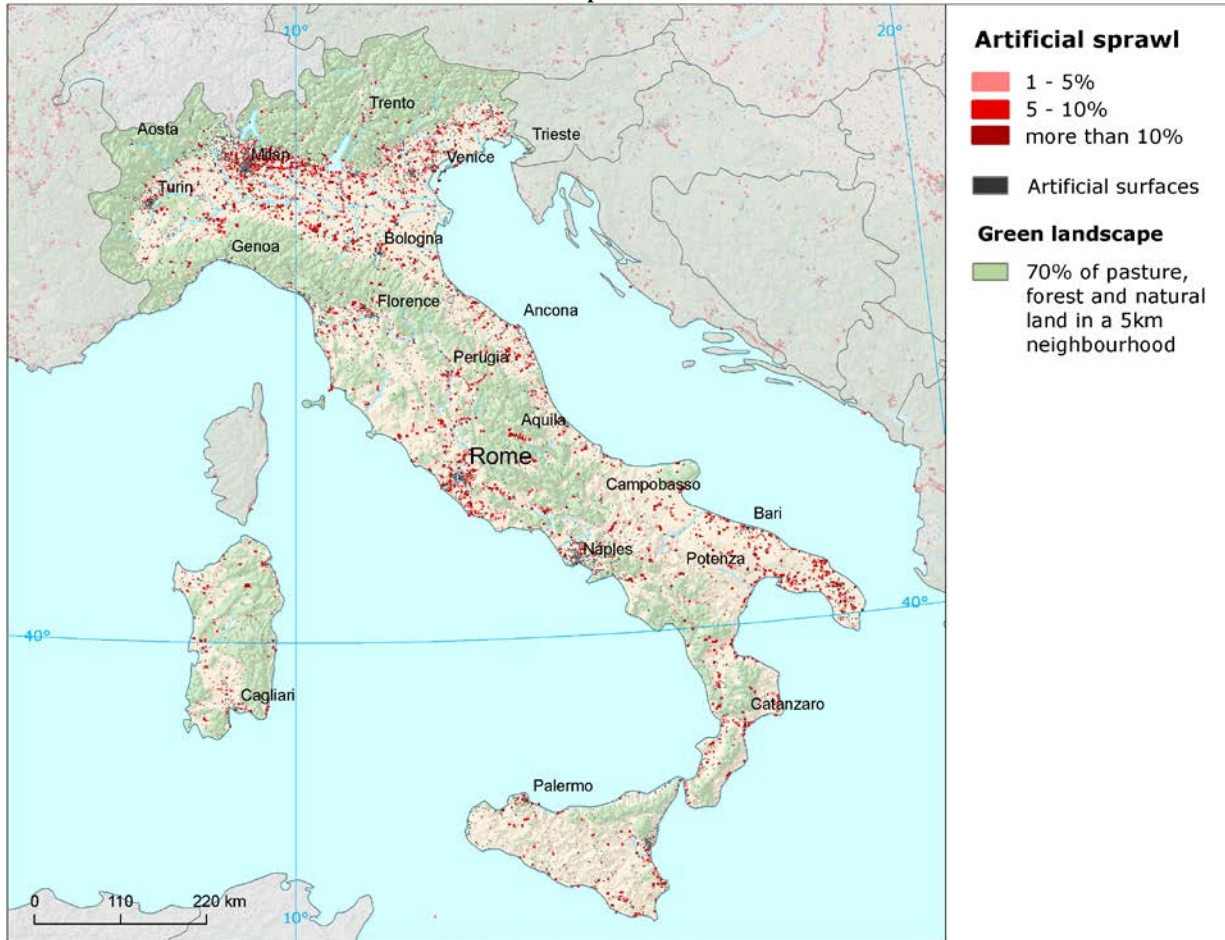
Drivers of change 2000-2006



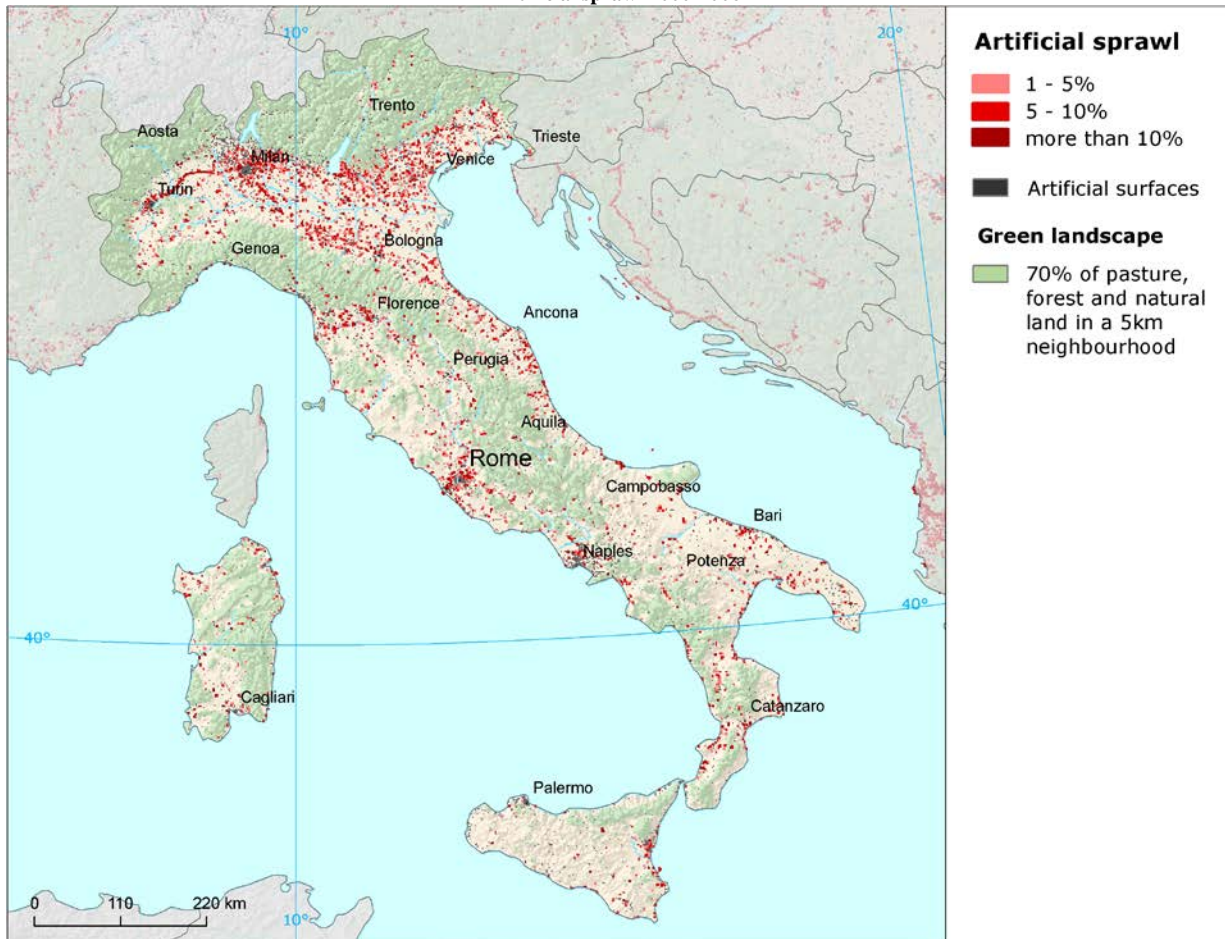


# Italy

Artificial sprawl 2006-2012

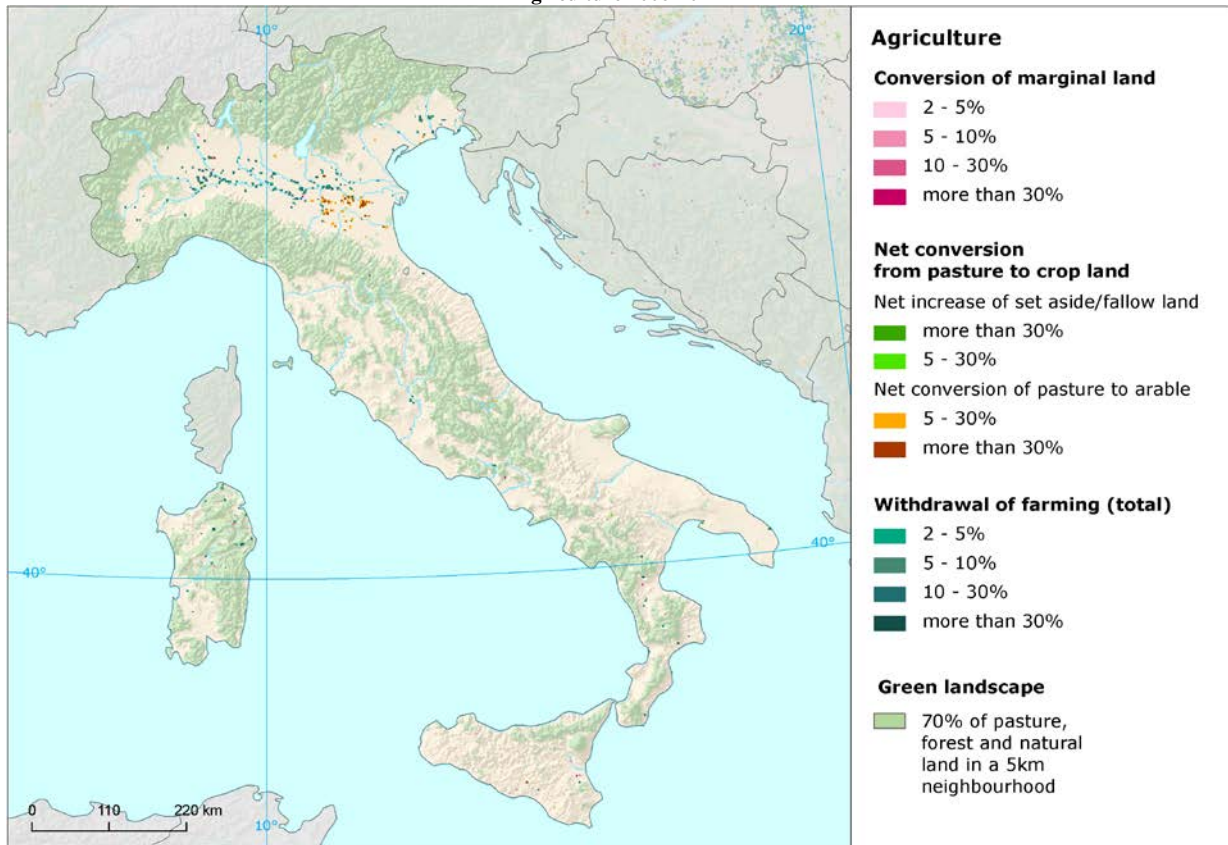


Artificial sprawl 2000-2006

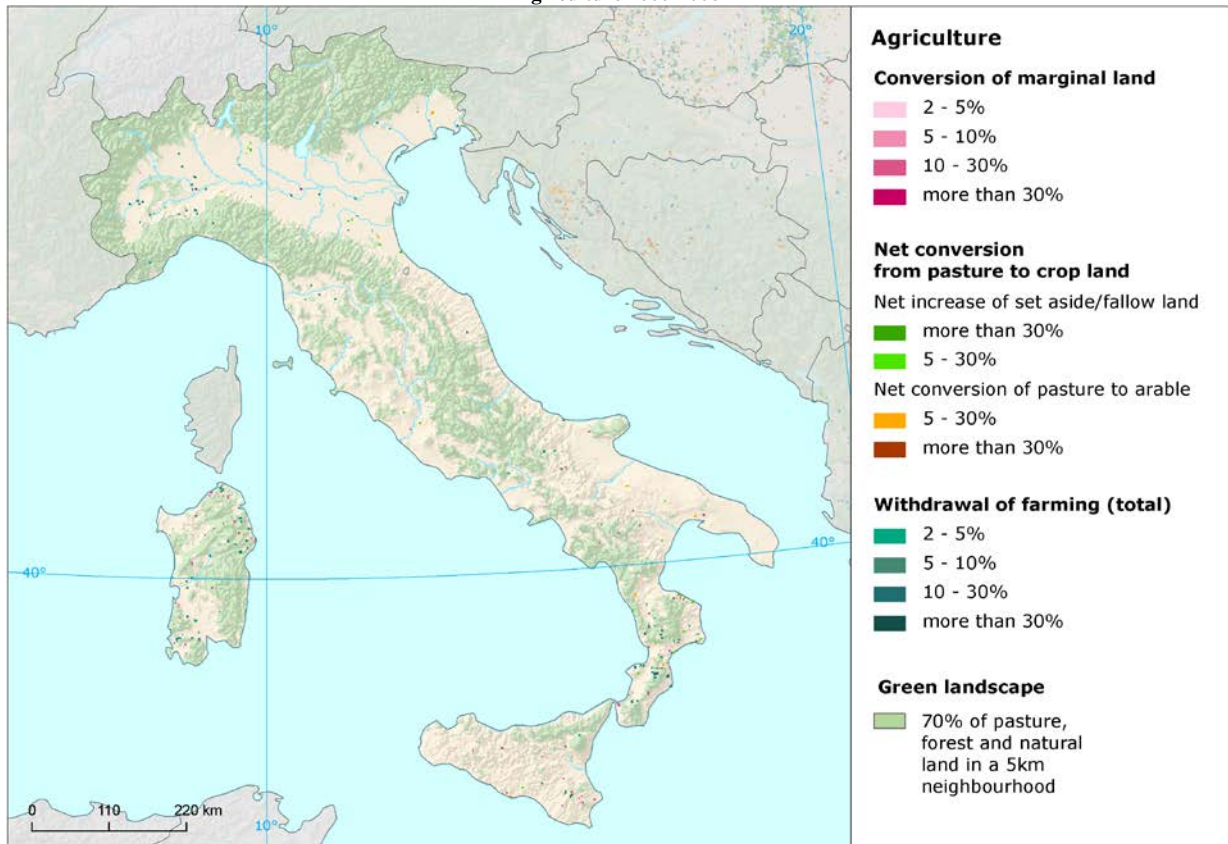


# Italy

Agriculture 2006-2012

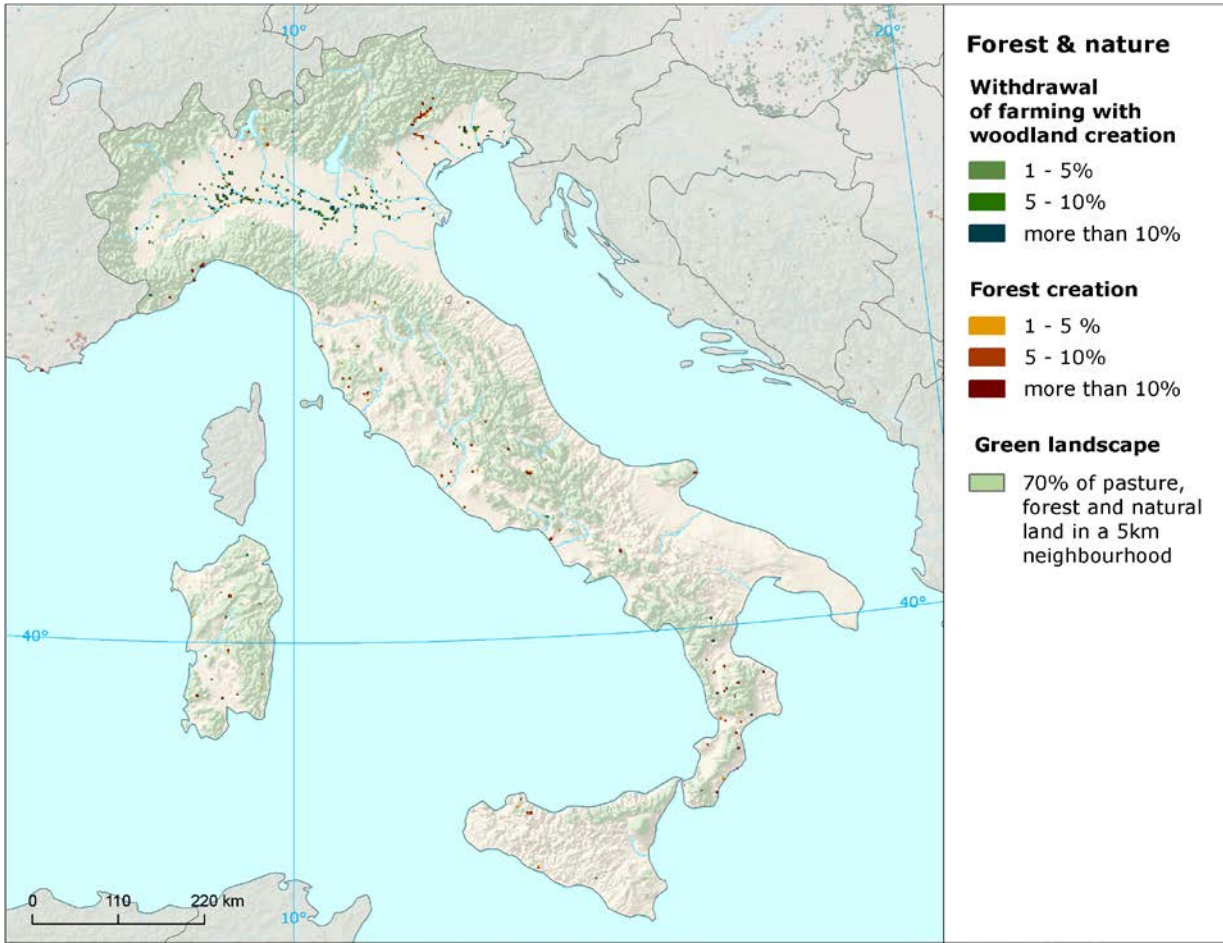


Agriculture 2000-2006





Forest and nature 2006-2012



Forest and nature 2000-2006

