Albania

Land cover 2006

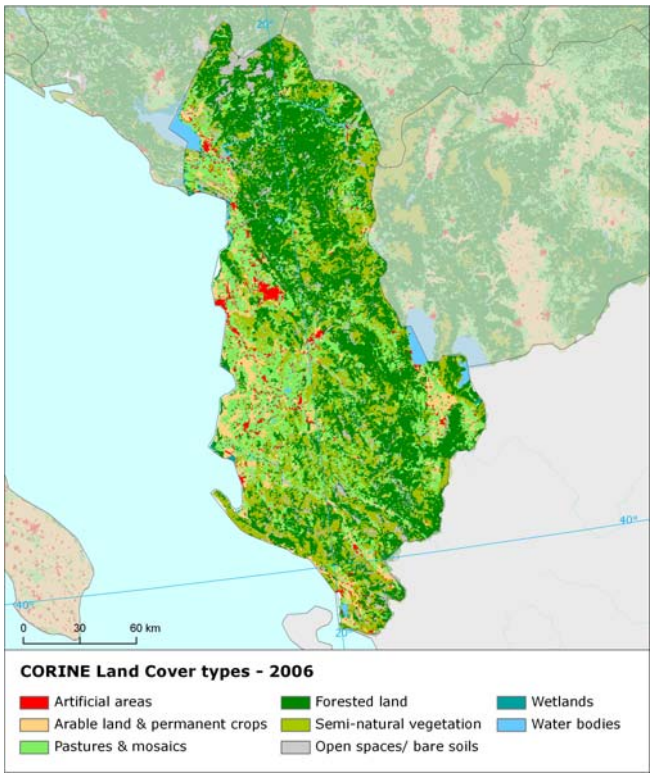
Overview of land cover & change 2000-2006

The development of Albanian landscape in the period 2000-2006 has been clearly dominated by urban residential sprawl over agricultural land. Sprawl areas are distributed mainly in surroundings of the capital city Tirana, along the main transportation network to other big cities, as well as along the Adriatic cost. The formation rate of new artificial areas is extremely high reaching more than 50% of initial artificial area (4.96% per year).

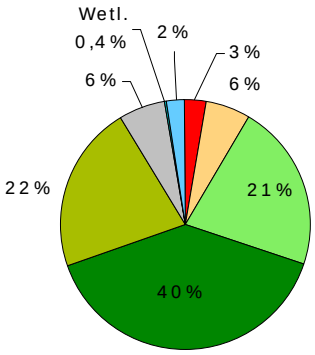
Concerning the other land types, only forested land, wetlands and water bodies have positive balance. However, total formation area of these land cover types is very small, compared to artificial surfaces. In contrast, both arable/crop land and pastures have significantly negative balance of net change related to urban sprawl. Forested land represents the land cover type with highest internal dynamics, but in fact the consumption and formation processes seem to be well-balanced.

Second major drivers of change in Albanian landscape, beside residential sprawl, are forest creation and management causing 39% of all changes. Changes in forested land are distributed over mountainous continental part of the country.

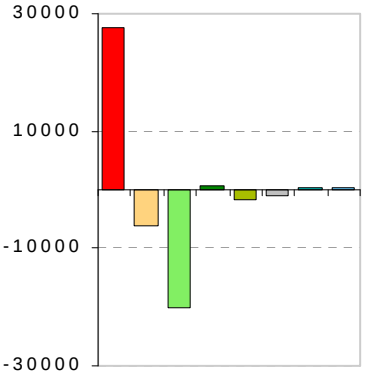
Note The results presented here are based on a change analysis of 44 land cover types mapped consistently on a 1:100.000 scale across Europe over almost two decades 1990-2006 - see Corine land cover (CLC) programme for details.
Number of years between CLC2000-CLC2006 data for Albania: 11



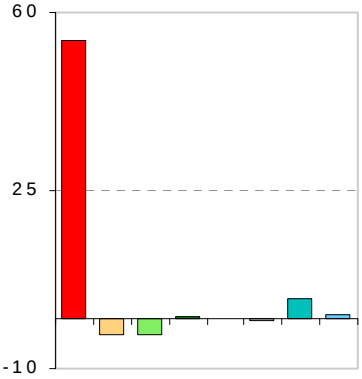
1.1. Land cover 2006 [% of total]



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



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



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

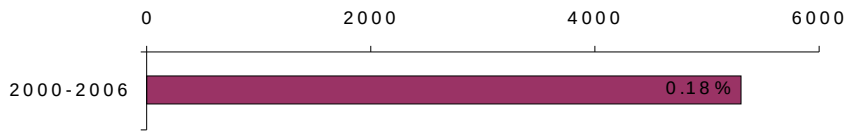
Summary balance table 2000-2006

	Artificial areas	Arable land & permanent crops	Pastures & mosaics	Forested land	Semi-natural vegetation	Open spaces / bare soils	Wetlands	Water bodies	TOTAL [hundreds ha]
Land cover 2000	**507**	**1783**	**6388**	**11267**	**6360**	**1762**	**102**	**626**	**28797**
Consumption of initial LC	3	66	216	233	19	29	3	15	584
Formation of new LC	280	5	14	239	2	17	7	20	584
Net Formation of LC	**277**	**-61**	**-202**	**6**	**-17**	**-12**	**4**	**5**	**0**
Net formation as % of initial year	*54.6*	*-3.4*	*-3.2*	*0.1*	*-0.3*	*-0.7*	*3.6*	*0.8*	
Total turnover of LC	**283**	**71**	**231**	**472**	**22**	**46**	**10**	**34**	**1168**
Total turnover as % of initial year	*55.8*	*4.0*	*3.6*	*4.2*	*0.3*	*2.6*	*9.7*	*5.4*	*4.1*
Land cover 2006	**784**	**1722**	**6186**	**11274**	**6343**	**1751**	**106**	**631**	**28797**

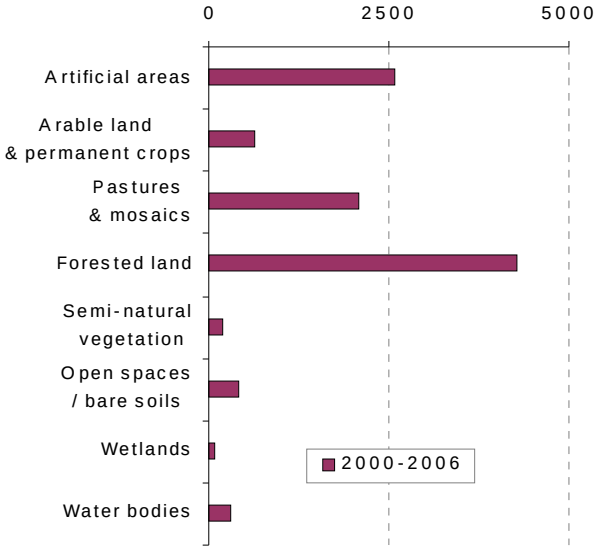
Albania

Land cover trends 2000-2006

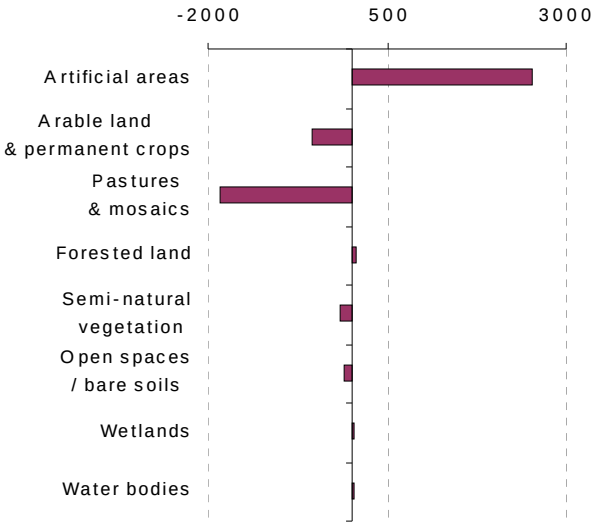
2.4. Annual land cover change [ha/year, % of total area]



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

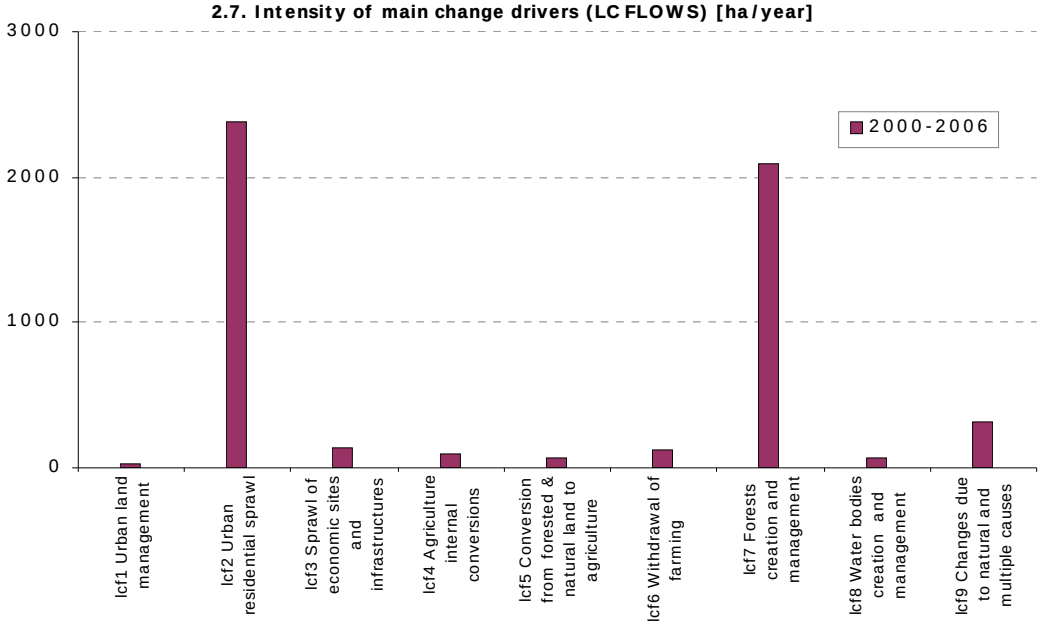


2.6. Net annual change of LC types [ha/year]



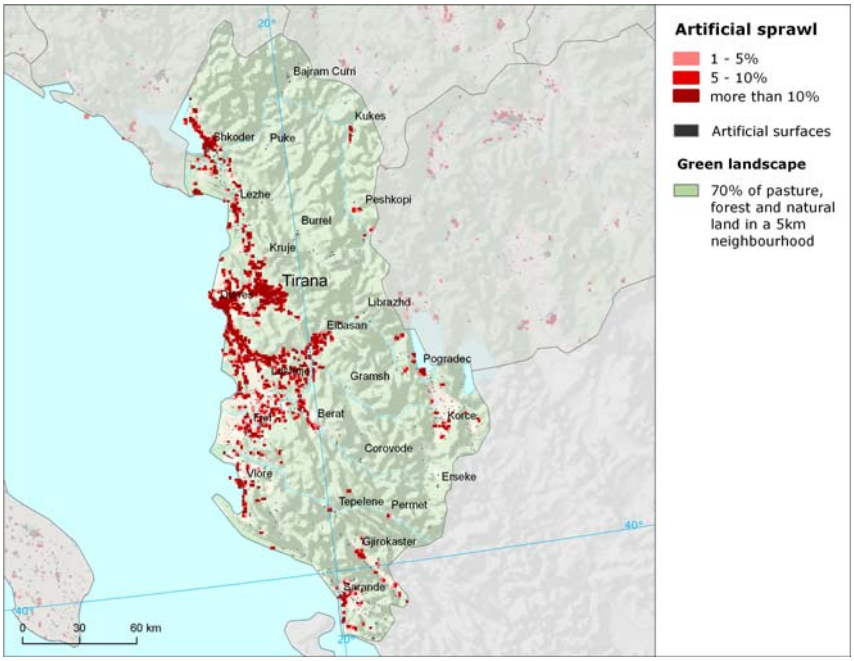
Summary trend figures	2000-2006
Annual land cover change [ha/year]	**5311**
Annual land cover change as % of initial year	**0.18%**
Land uptake by artificial development as mean annual change [ha/year]	2518
Agricultural land uptake by urban and infrastructures development as mean annual change [ha/year]	2319
Net uptake of forests and semi-natural land by agriculture as mean annual change [ha/year]	-49
Net conversion from pasture to arable land and permanent crops as mean annual change [ha/year]	-26
Forest & other woodland net formation as mean annual change [ha/year]	58
Dry semi-natural land cover net formation as mean annual change [ha/year]	-240
Wetlands & water bodies net formation as mean annual change [ha/year]	78

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

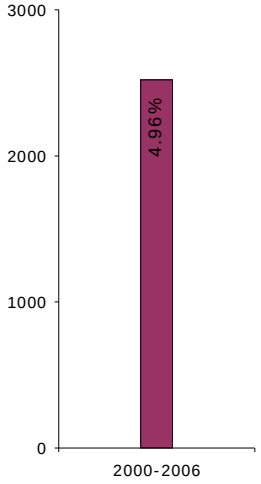


Albania

Artificial areas



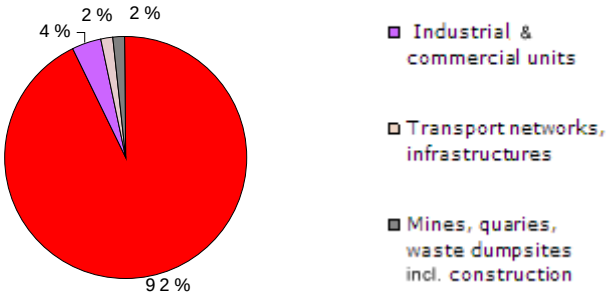
3.8. Artificial land take [ha/year, % of initial year]



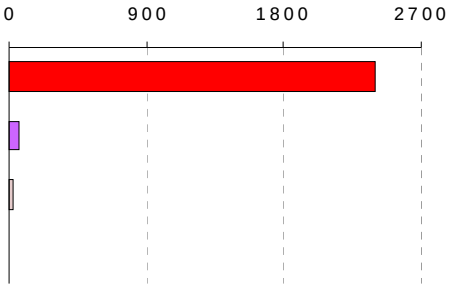
Extremely high rate of urban residential sprawl

The dominant driver of the extremely high annual rate of artificial land take (4.96%) in Albania is discontinuous residential sprawl, accompanied only to a very low extent by industrial/commercial sprawl. On the consumption side, mostly agricultural land have been taken, with prevailing share of pastures and mosaics (almost ¾ of total up-taken area), followed by semi-natural vegetation and forested areas to a lesser extent (see graph 7.21). As already mentioned, percentage rate of artificial formation is extremely high, compared to other European countries. For better understanding, more than 50% increase of initial artificial area represents almost land take of 10 football pitches a day! Main built-up area increase is seen in close proximity to the capital Tirana, on the outskirts of other big agglomerations and along the transport main network. Expansion of urban areas is clearly visible also along the coast.

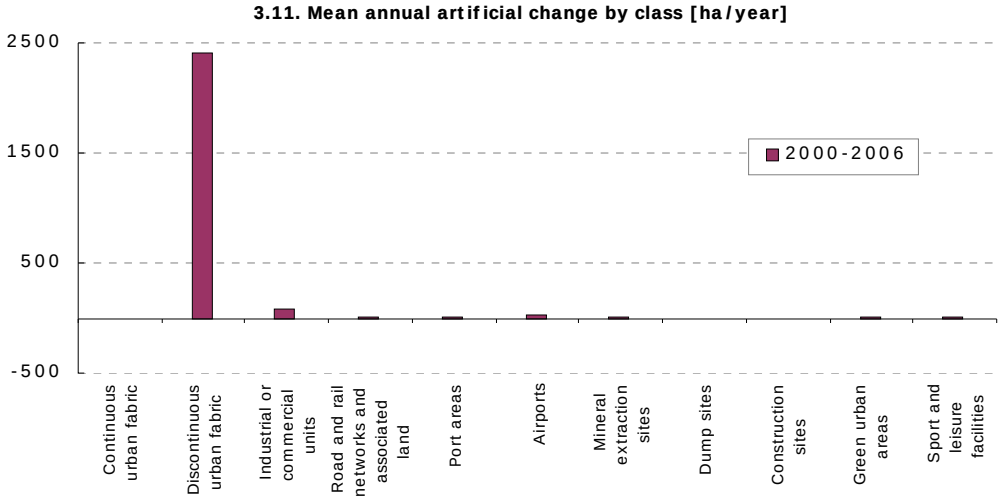
3.9. Artificial surfaces 2006 [% of total area]



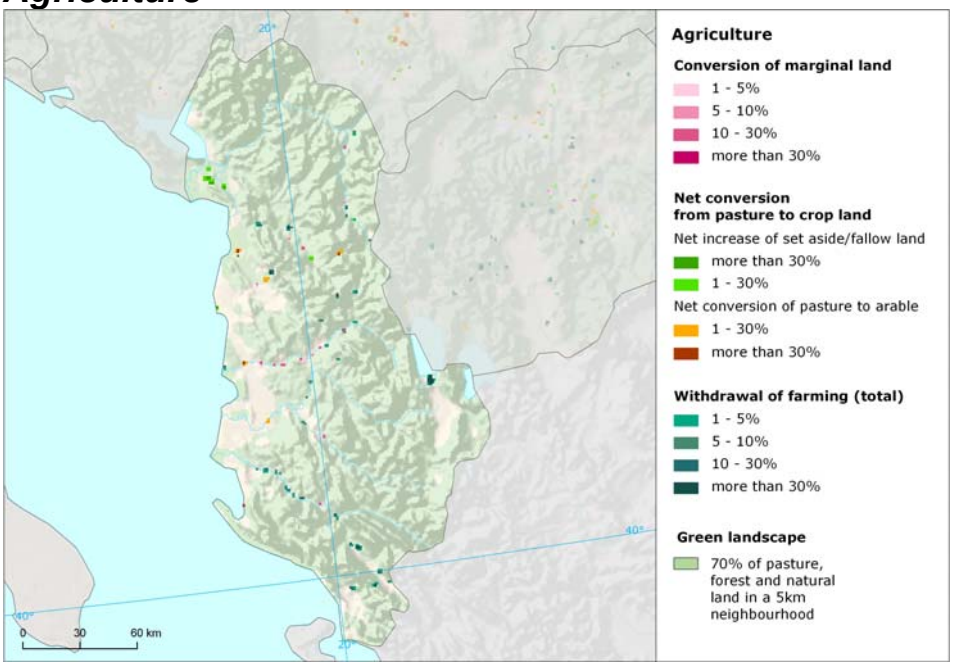
3.10. Artificial land take 2000-2006 [ha/year]



Albania



Agriculture



Agriculture land up-taken

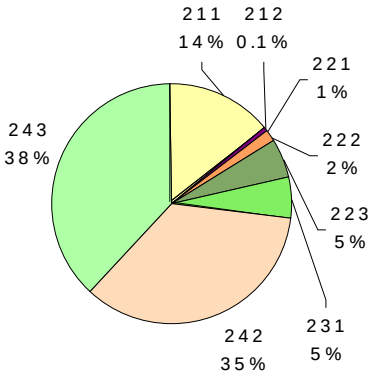
Agriculture in Albania is characterised by high share of agricultural land with significant areas of natural vegetation and complex cultivation patterns. The rest of agricultural land consists mainly of arable land, olive groves and pastures.

All agricultural classes have negative balance of net change, with largest consumption of area by complex cultivation patterns, followed by agriculture with natural vegetation and arable land. In percentage values, vineyards lost most of its initial area (almost 15%), followed by complex cultivation patterns with almost 5% consumption rate. Agricultural areas have been consumed mostly by diffuse residential sprawl and also by sprawl of economic sites and infrastructures and withdrawal of farming with transitional woodland creation to a lesser extent. Only small amount of new agricultural land has been created through conversion from wetlands, dry semi-natural land or forest.

Compared to intensive external consumption of agricultural land, the amount of internal changes in agricultural areas is almost negligible. Extension of pastures (mainly diffuse) is the prevailing internal agriculture flow, partly balanced by opposite diffuse conversion from pasture to arable/crop land (see 8.30). Besides, there also occurs relative high rate of conversion from non-irrigated arable land to permanently irrigated land, but very small in absolute numbers.

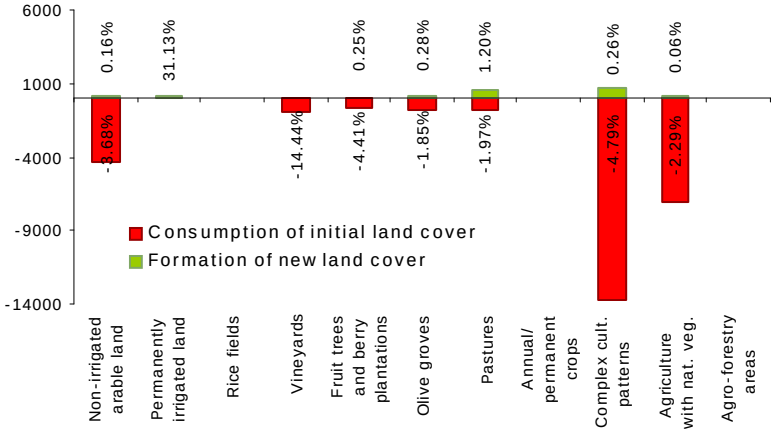
Albania

4.12. Agricultural areas 2006 [% of total area]

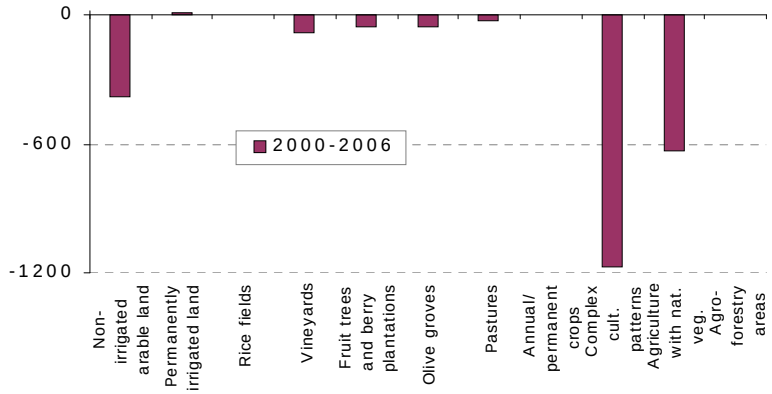


- 211 Non-irrigated arable land
- 212 Permanently irrigated land
- 213 Rice fields
- 221 Vineyards
- 222 Fruit trees and berry plantations
- 223 Olive groves
- 231 Pastures
- 241 Annual crops associated with permanent crops
- 242 Complex cultivation patterns
- 243 Agriculture land with significant areas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

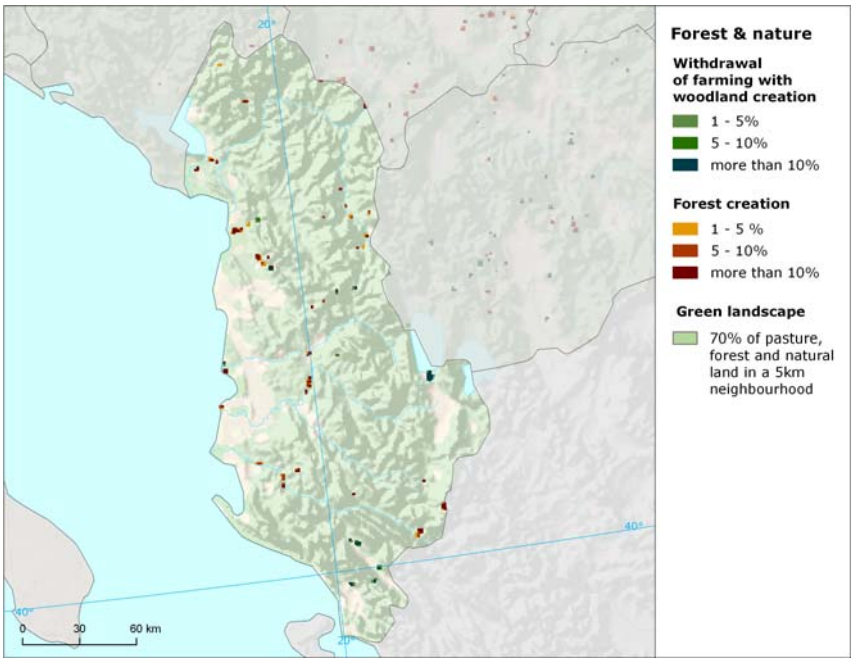
4.13. Development of agricultural areas 2000-2006 – detailed balance [ha]



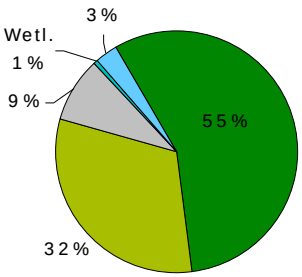
4.14. Mean annual agricultural change by class [ha/year]



Forest & nature



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

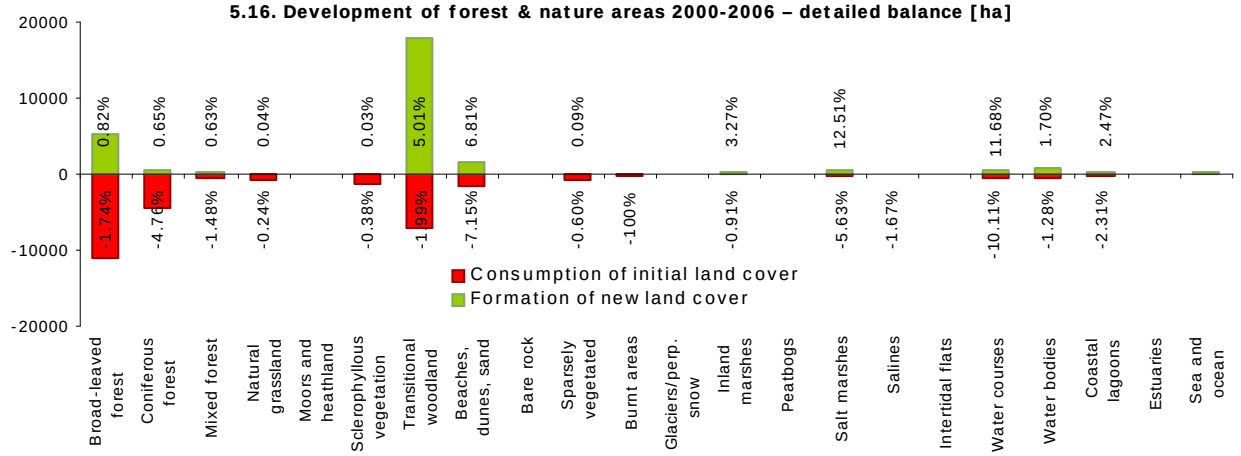


- Forest
- Semi-natural vegetation
- Open spaces/ bare soils
- Wetlands
- Water bodies

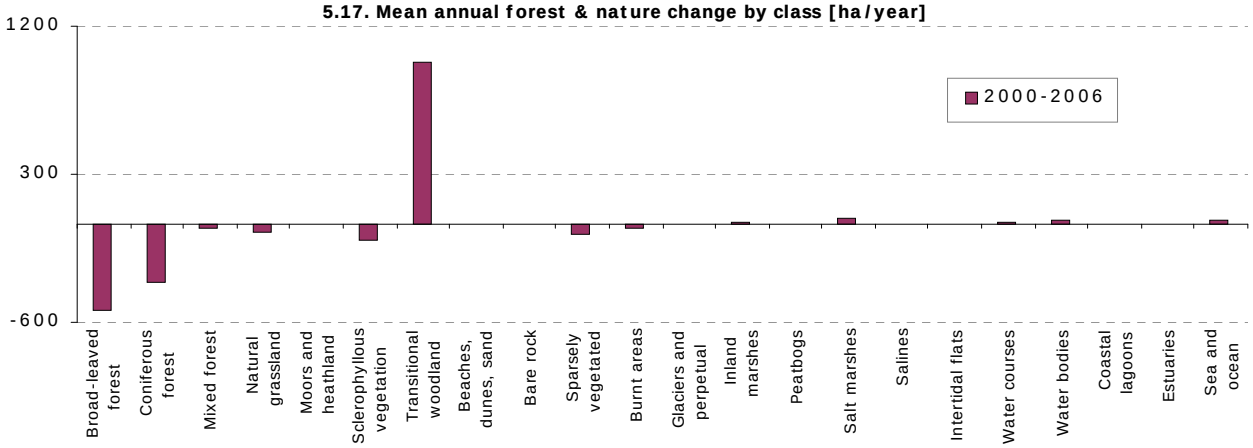
Woodland creation, land uptake by residential sprawl

Forest and nature areas in Albania consist mainly of forested land (with predominant share of broad-leaved forest and transitional woodland), followed by semi-natural vegetation (mainly sclerophyllous vegetation and natural grasslands) and sparsely vegetated areas. Changes of natural land cover consist mostly of internal changes of forested land. The other significant drivers of natural land cover change are withdrawal of farming with woodland creation and residential land uptake, followed by forest creation over dry semi-natural areas, conversion of burnt areas into transitional woodland and water bodies and water courses extension over beaches and agricultural land.

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



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

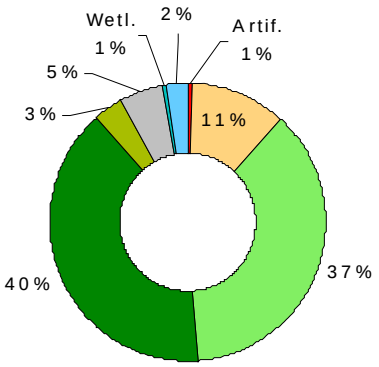


Albania

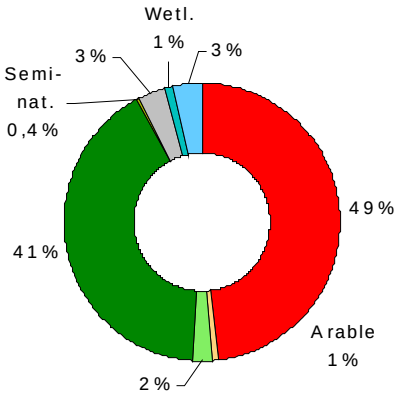
Annex: Land cover flows and trends

Land cover flows 2000-2006

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

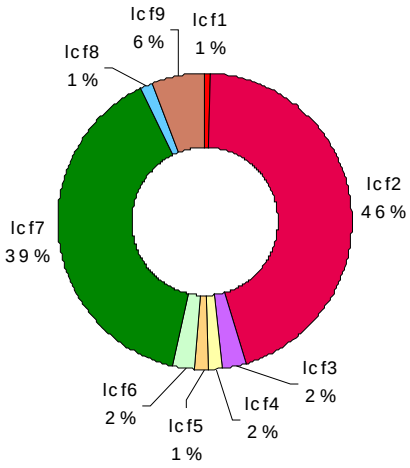


6.19. Formation of land cover 2000-2006 [% of total change area]



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

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

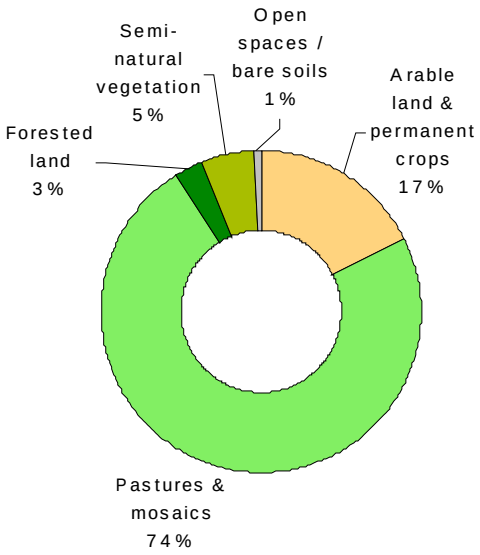


- lcf1 Urban land management
- lcf2 Urban residential sprawl
- lcf3 Sprawl of economic sites and infrastructures
- lcf4 Agriculture internal conversions
- lcf5 Conversion from forested & natural land to agriculture
- lcf6 Withdrawal of farming
- lcf7 Forests creation and management
- lcf8 Water bodies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

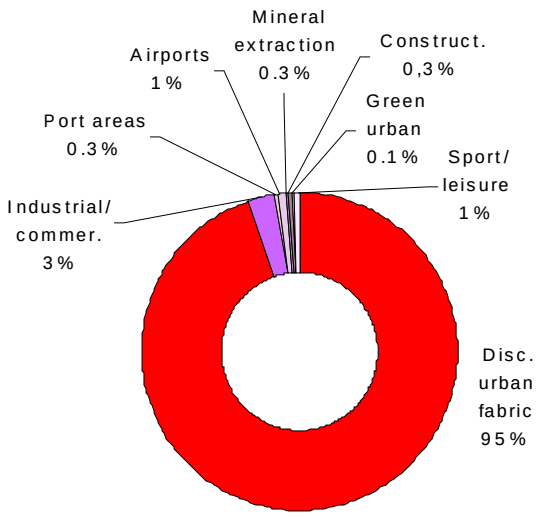
Albania

Artificial areas

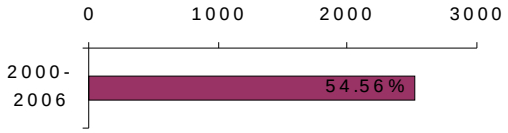
7.21. Consumption by artificial land take 2000-2006 [% of total]



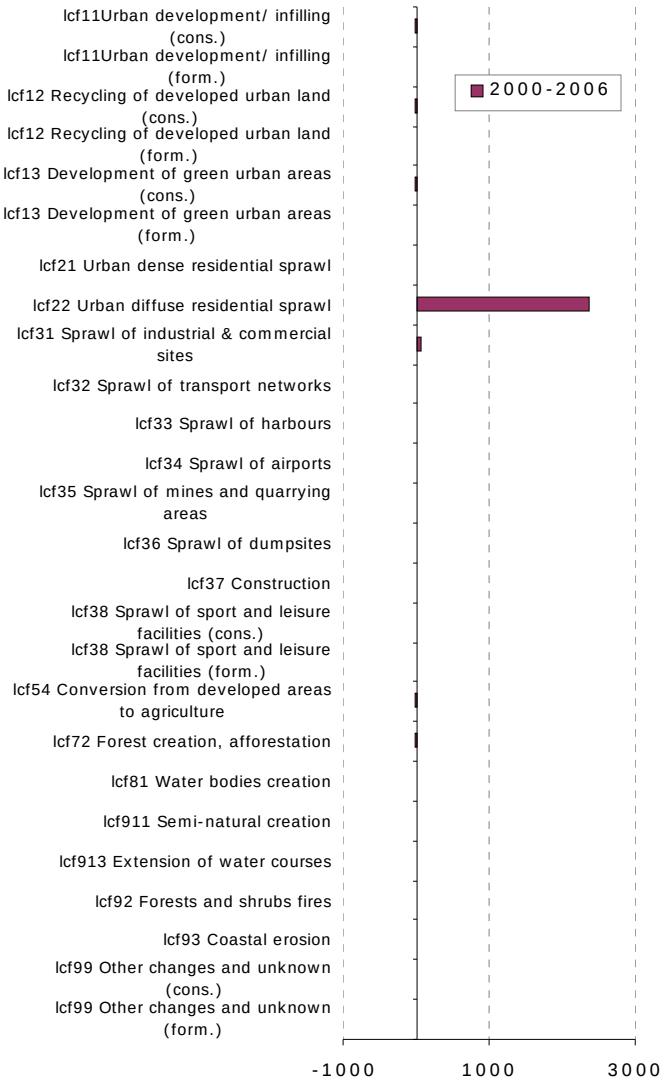
7.22. Formation by artificial land take 2000-2006 [% of total]



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



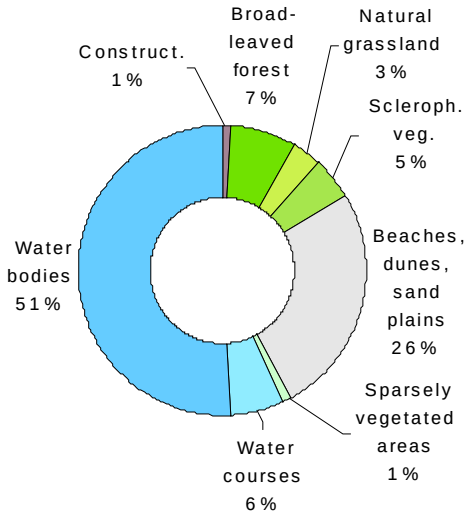
7.24. Artificial development by change drivers (LC FLOWS) [ha/year]



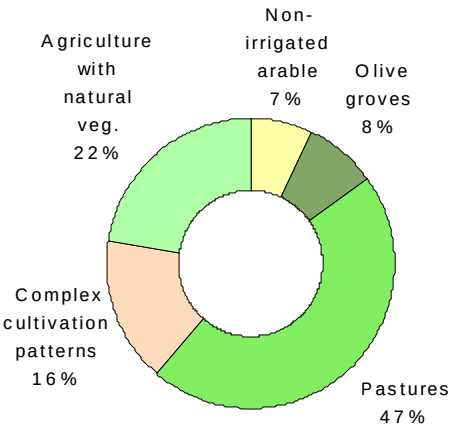
Albania

Agriculture

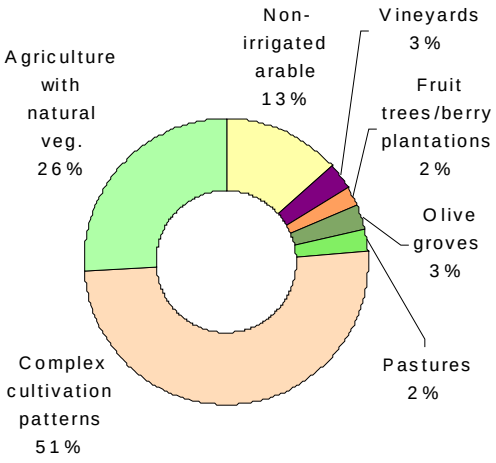
8.25. LC consumed by agriculture 2000-2006 [% of total]



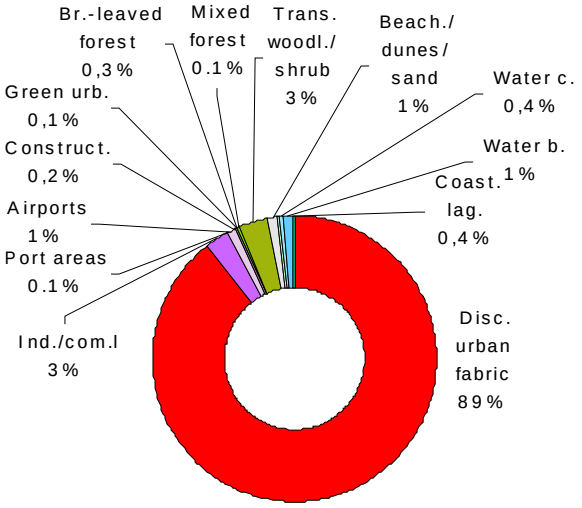
8.26. Formation of agricultural land from non-agriculture 2000-2006 [% of total]



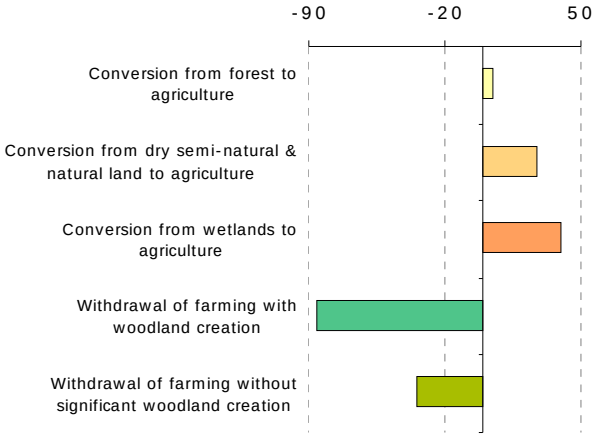
8.27. Consumption of agricultural land by non-agriculture 2000-2006 [% of total]



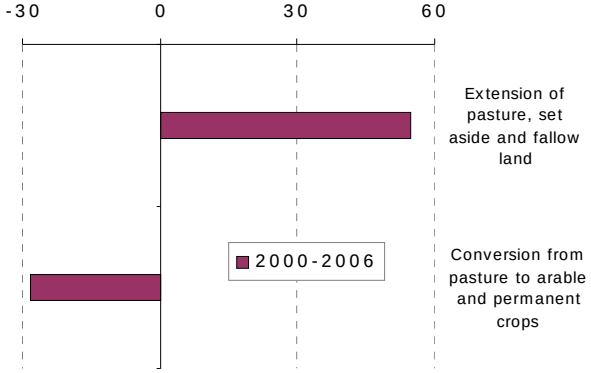
8.28. Formation of non-agricultural land from agriculture 2000-2006 [% of total]



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]



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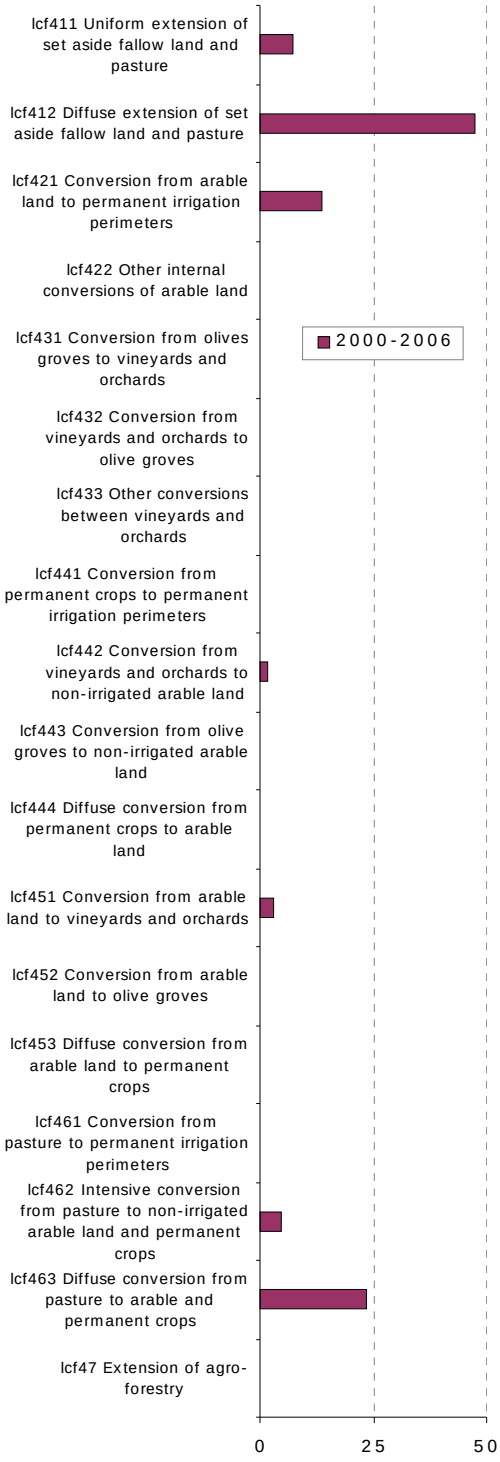
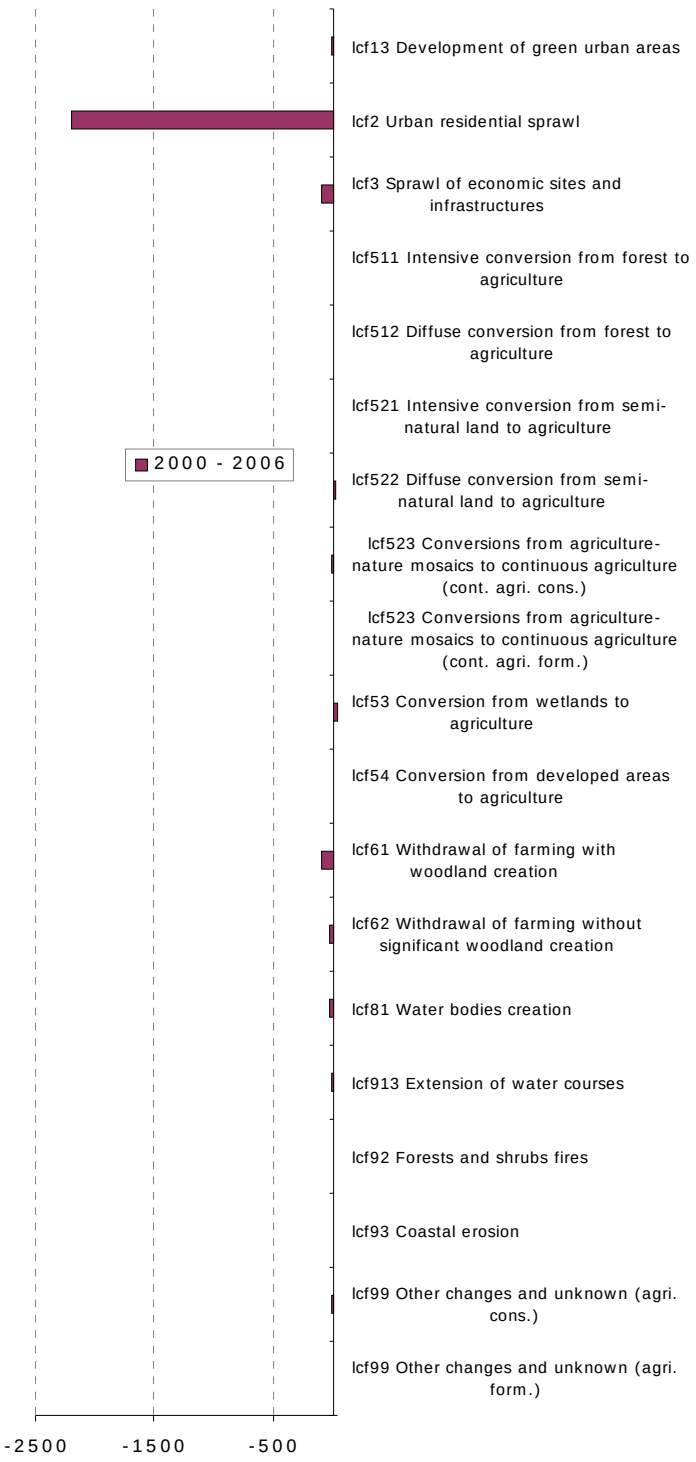
9.31. Mean annual agriculture internal conversions [ha/year]



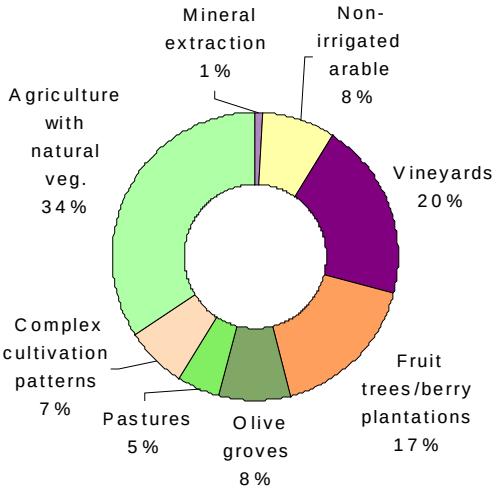
9.32. Mean annual conversions between agriculture and other LC types [ha/year]



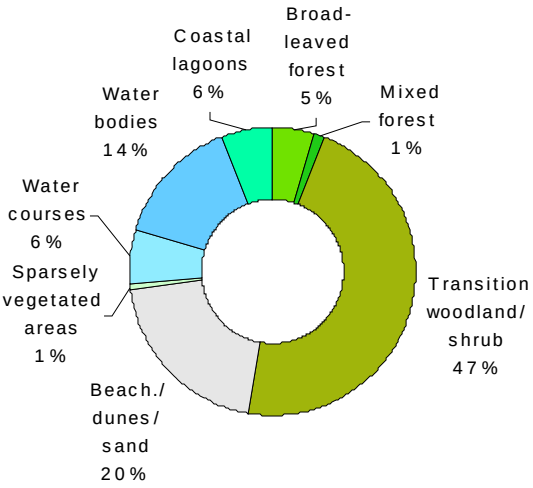
Albania

Forest & nature

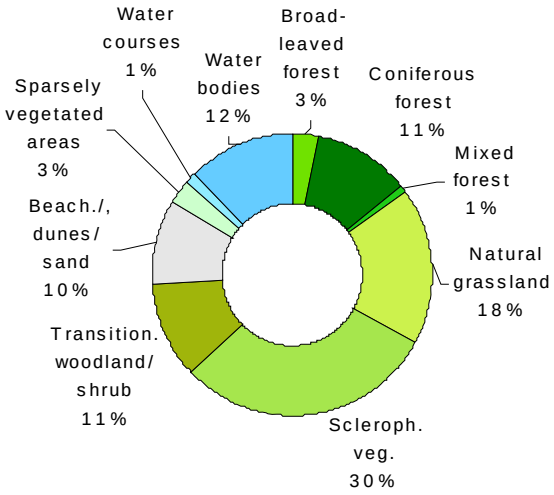
10.33. LC consumed by forest & nature 2000-2006 [% of total]



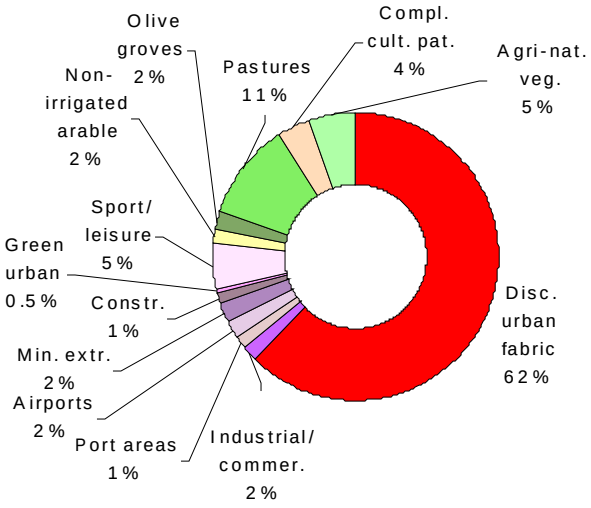
10.34. Formation of forest & nature land from non-forest /nature 2000-2006 [% of total]



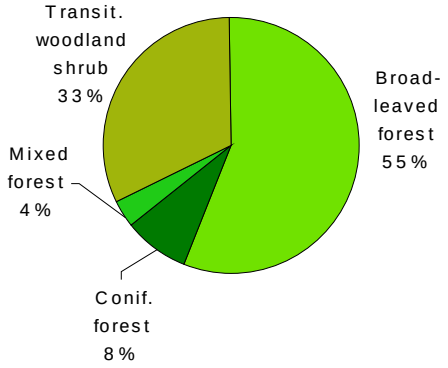
10.35. Consumption of forest & nature land by non-forest /nature 2000-2006 [% of total]



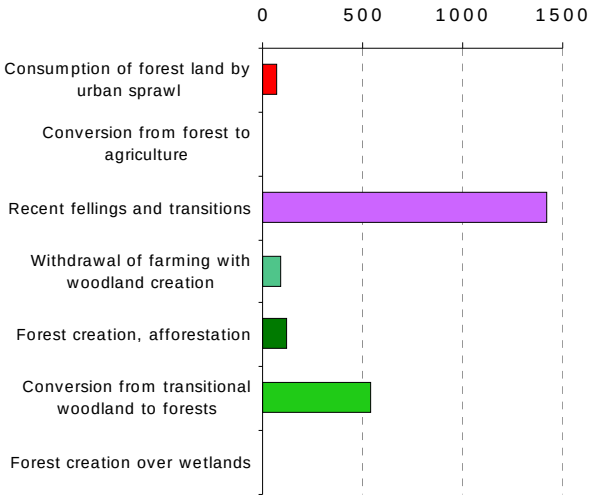
10.36. Formation of non-forest /nature land from forest & nature 2000-2006 [% of total]



10.37. Forested land 2006 [% of total area]



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



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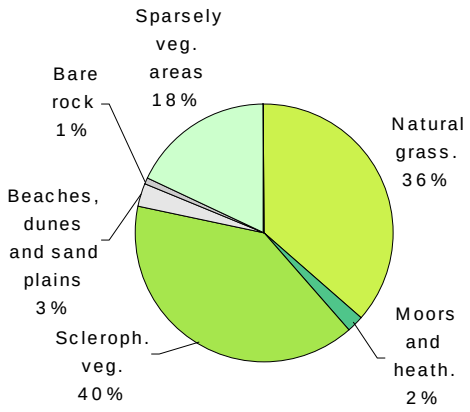
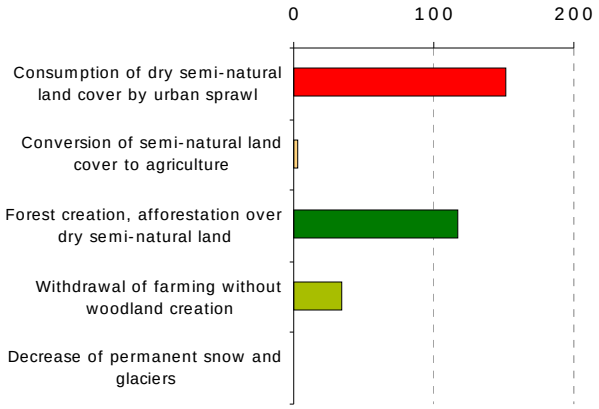
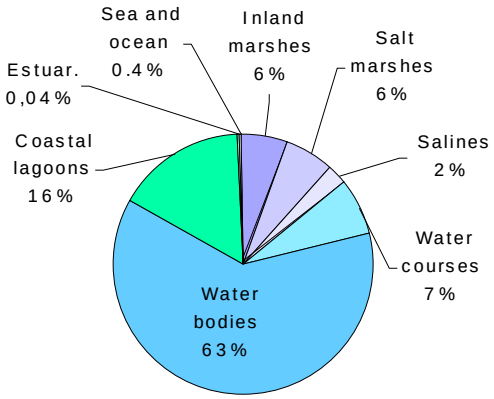
11.39. Dry semi-natural areas 2006 [% of total area]



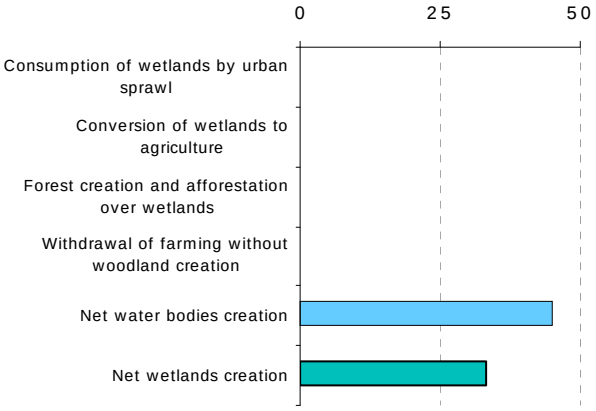
11.40. Main trends in dry semi-natural land consumption/formation 2000-2006 [ha/year]



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



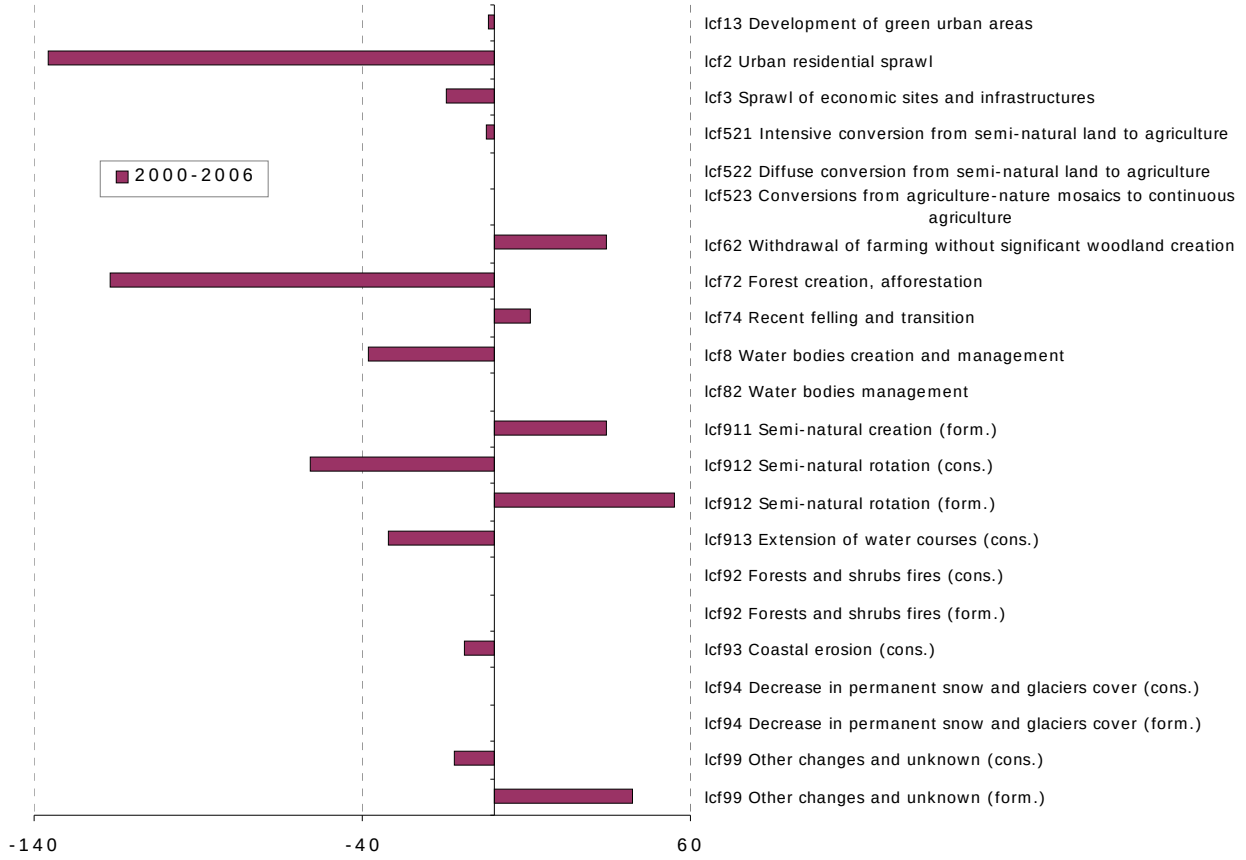
11.42. Main trends in wetlands & water consumption/formation 2000-2006 [ha/year]



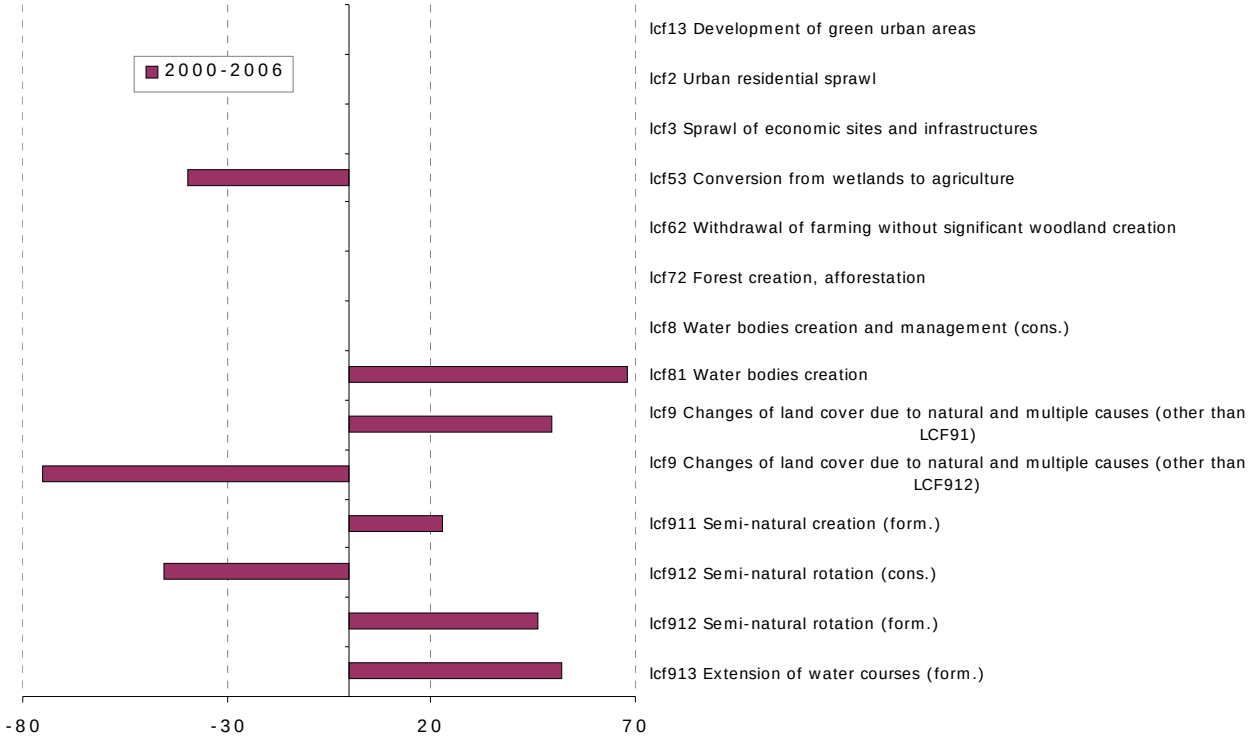
11.43. Mean annual conversions of forest & other woodland [ha/year]

Albania

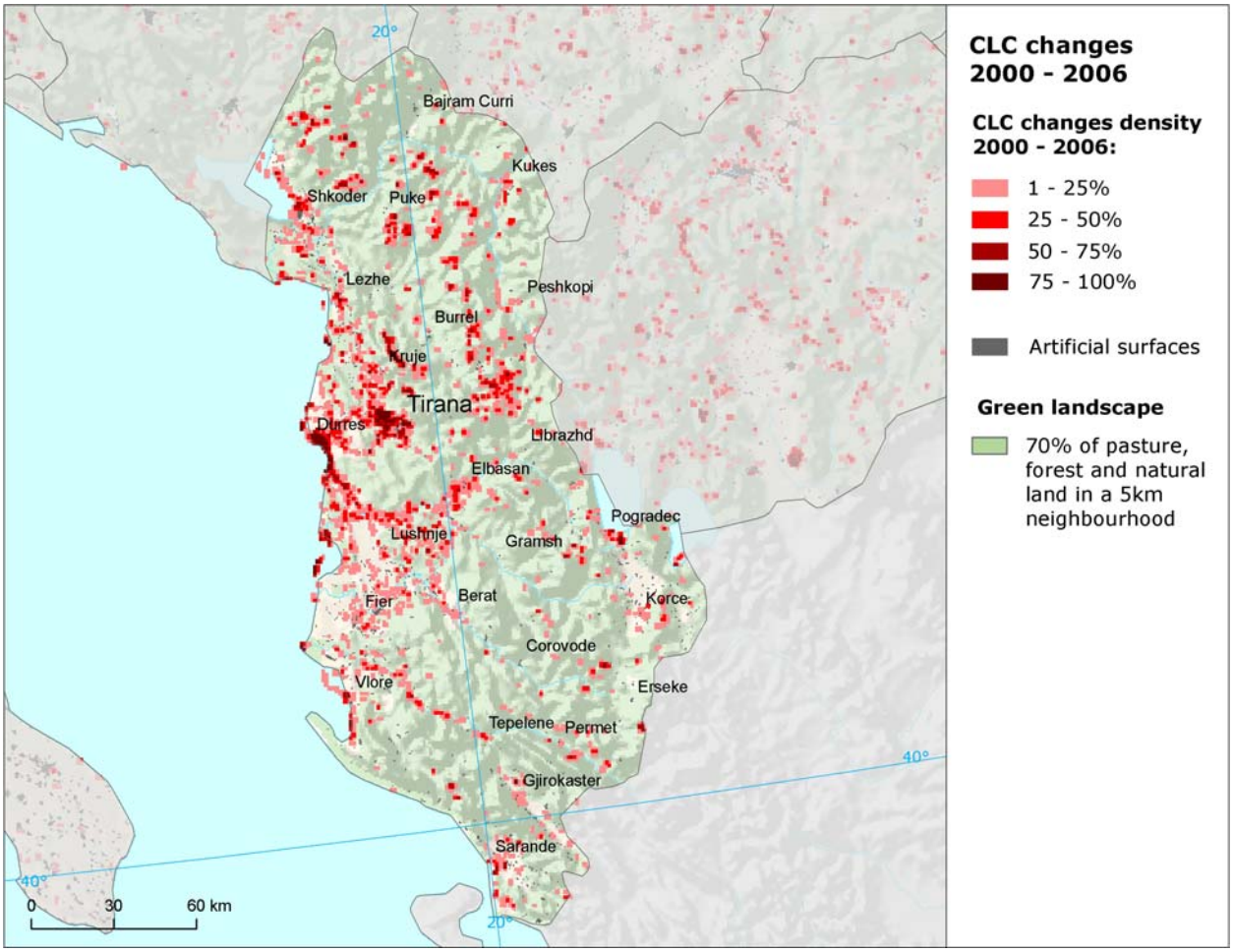
12.44. Mean annual conversions of dry semi-natural LC [ha/year]

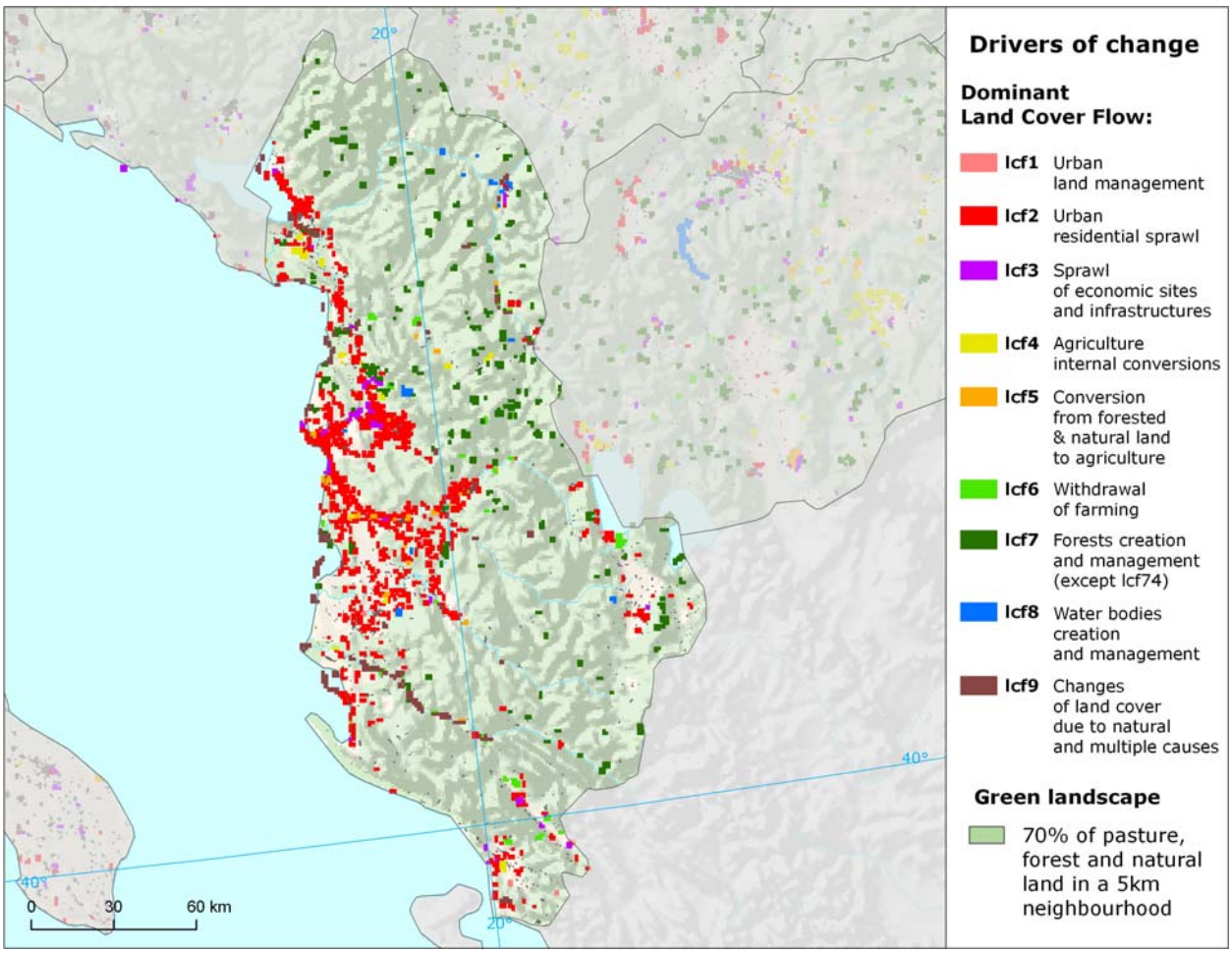


12.45. Mean annual conversions of wetlands and water LC [ha/year]



Albania


20°
Bajram Curri
Kukes
Shkoder
Puke
Lezhe
Peshkopi
Burrel
Kruje
Tirana
Durres
Librazhd
Elbasan
Pogradec
Lushnje
Gramsh
Fier
Berat
Korce
Corovode
Vlore
Erseke
Tepelene
Permet
Gjirokaster
Sarande
40°
0
30
60 km
CLC changes 2000 - 2006
CLC changes density 2000 - 2006:
1 - 25%
25 - 50%
50 - 75%
75 - 100%
Artificial surfaces
Green landscape
70% of pasture, forest and natural land in a 5km neighbourhood


20°
40°
0
30
60 km
Drivers of change
Dominant Land Cover Flow:
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 (except lcf74)
lcf8 Water bodies creation and management
lcf9 Changes of land cover due to natural and multiple causes
Green landscape
70% of pasture, forest and natural land in a 5km neighbourhood