Country fact sheet

Land cover 2012





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European Environment Agency

Land cover 2012

Overview of land cover & change 2006-2012

The overall speed of land cover development in France doubled almost twice, compared to the previous period 2000-2006. With a mean annual land cover change rate of 0,20% (which is the same as in the period 1990-2000), France is just slightly below the European average. The landscape exchange in the country is driven by forest creation and management (which intensity increased more than twice, compared to the previous period, and is the main reason for the increase of overall land cover exchange) and also by artificial sprawl.

As usual in Europe, forest creation and management is driven mostly by internal forest conversions, with prevailing share of recent felling and transition in the case of France.

Artificial sprawl has comparable intensity as in both previous periods 1990-2000 and 2000-2006, which is slightly above the average among European countries in 2006-2012. Sprawl in France has three major drivers: diffuse residential sprawl (which shows slightly decreasing tendency, compared to both previous periods), sprawl of industrial and commercial sites (stable) and construction (showing increasing tendency from 1990). Beside land take, there is also significant amount of recycling of developed urban land (represented mostly by transformation of former constructions sites into urban fabric, commercial, industrial or transportation units).

Other conversions of agricultural and natural landscape show relatively low intensity, comparing with the above mentioned flows – which is similar pattern to 2000-2006, however, the intensity of internal agricultural conversions was significantly higher in the period 1990-2000.

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 France: 6



CORINE Land Cover types - 2012







1.2. Net change in land





Artificial areas

Semi-natural vegetation

A rable land & permanent crops
Pastures & mosaics
O pen spaces/ bare soils
Wetlands



Summary balance table 2006-2012 rtificial areas [hundreds ha] Forested land ø Open spaces/ bare soils Semi-natural later bodies vegetation õ lands **Pastures** mosaics OTAL Wetl Land cover 2006 29815 167456 159813 155602 22283 9530 3923 4714 553135 Consumption of initial LC 275.2 412.3 533.9 5274.1 34.4 117.6 4.8 3.3 6655 Formation of new LC 1072.3 179.9 68.1 5264.3 28.6 15.9 7.2 19.1 6655 Net Formation of LC 797.1 -232.4 -465.8 -9.7 -5.7 -101.7 2.4 15.9 0 Net formation as % of initial year -0.1 0.1 0.3 2.7 -0.3 0.0 0.0 -1.1 Total turnover of LC 1347.5 592.2 602.0 10538.4 63.0 133.5 12.0 22.4 13311 0.3 1.4 0.3 0.5 Total turnover as % of initial vear 4.5 0.4 0.4 6.8 2.4 Land cover 2012 30612 167223 159347 155592 22278 9428 3925 4730 553135

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

2.4. Annual land cover change

Summary trend figures	2000-2006	2006-2012
Annual land cover change [ha/year]	60092	110925
Annual land cover change as % of initial year	0.11%	0.20%
Land uptake by artificial development as mean annual change [ha/year]	13991	14118
Agricultural land uptake by urban and infrastructures development as mean annual change [ha/year]	12603	12278
Net uptake of forests and semi-natural land by agriculture as mean annual change [ha/year]	-257	327
Net conversion from pasture to arable land and permanent crops as mean annual change [ha/year]	1355	1860
Forest & other woodland net formation as mean annual change [ha/year]	-1267	-162
Dry semi-natural land cover net formation as mean annual change [ha/year]	199	-1775
Wetlands & water bodies net formation as mean annual change [ha/year]	455	305







Artificial surfaces sprawl (2006-2012)

Stable pace of artificial development

Artificial land take shows comparable intensity in all three observing periods 1990-2000, 2000-2006 and 2006-2012. With a mean annual artificial land take rate of 0.49%, it is slightly above European average in the period 2006-2012. Also the internal structure of sprawl is similar, as land take is driven by diffuse residential development (showing slightly decreasing tendency, compared to both previous periods), extension of industrial and commercial sites (stable intensity), construction (showing increasing tendency from 1990) and also extension of mines and quarrying areas to a lesser extent (also with almost stable intensity). Regarding the geographical distribution, the artificial development, again, shows similar pattern as in both previous periods, with major concentrations around all major cities, and dense scattered sprawl, in particular over western, southern and north-eastern part of the country. Beside the land take, there is also significant amount of recycling of developed urban land in France, represented mostly by transformation of former construction sites into developed urban fabric, commercial, industrial or transportation units. This flow shows a rapidly increasing trend when comparing all three observing periods.



Agriculture (2006-2012)



Regeneration of agriculture internal development with prevailing conversion to arable land

The intensity of agricultural development in France is rather low, compared to forest conversions and artificial development. The internal agricultural conversions were in deep decline in the previous period 2000-2006, comparing with their intensity in the period 1990-2000, however, this decline seems to be over and agricultural development is more intensive again in the period 2006-2012, although it still does not, by far, reach the values from the period 1990-2000. Conversion from pasture to arable (with prevailing share of intensive one) is much more frequent than the opposite extension of pasture, which is the same balance of power as in both previous periods. Beside these internal flows, agricultural land (with prevailing share of arable land (46%) followed by complex cultivation patterns (28%) and pastures (20%)) is frequently consumed by sprawl of economic sites and infrastructures and also by residential sprawl. In general, both internal and spatial pattern of agriculture development is very similar to the previous periods. The increase of frequency of conversion from pasture to arable is obvious in particular along the Meuse river in the north-eastern France.



Forest & nature (2006-2012)



Internal forest conversions getting even stronger

As in many other European countries, forest creation and management, represented mostly by internal forest conversions, is the major driver of landscape development also in France. Moreover, the intensity of these flows has more than doubled, compared to the previous period 2000-2006 and is even higher currently, than in the period 1990-2000. Recent felling and transition is much more frequent than the opposite conversion from transitional woodland to forest, which shows the same balance as in the previous period. In contrast, during the period 1990-2000, the intensity of conversion from transitional woodland to forest was slightly higher, than of recent felling. Beside these internal flows, also afforestation, semi-natural rotation (both represented often by revitalization of former burnt areas) or water bodies creation were quite frequent in France in the period 2006-2012 – this is a similar pattern as in the previous periods. The only exceptions are forest and shrub fires, which were frequent in both 1990-2000 and 2000-2006 – these were not registered in the period 2006-2012.



Annex: Land cover flows and trends

Land cover flows 2006-2012



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 A griculture internal conversions
- Icf5 Conversion from forested & natural land to agriculture
- □ lcf6 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

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



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



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

















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









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









- Icf512 Diffuse conversion from forest to agriculture
- Icf61 Withdrawal of farming with woodland creation
- lcf71 Conversion from transitional woodland to forest (cons.)
- lcf71 Conversion from transitional woodland to forest (form.)
- Icf72 Forest creation, afforestation
- lcf73 Forests internal conversions (cons.)
- lcf73 Forests internal conversions (form.)
- lcf74 Recent felling and transition (cons.)
- lcf74 Recent felling and transition (form.)
- Icf8 Water bodies creation and management
- Icf9 Changes of land cover due to natural and multiple causes (cons.)
- Icf9 Changes of land cover due to natural and multiple causes (form.)

 -2000

-1000



1000

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

lcf13 Development of green urban areas lcf2 Urban residential sprawl lcf3 Sprawl of economic sites and infrastructures lcf521 Intensive conversion from semi-natural land to agriculture lcf522 Diffuse conversion from semi-natural land to agriculture Icf523 Conversions from agriculture-nature mosaics to continuous. lcf62 Withdrawal of farming without significant woodland creation lcf72 Forest creation, afforestation lcf74 Recent felling and transition Icf8 Water bodies creation and management lcf82 Water bodies management lcf911 Semi-natural creation (form.) lcf912 Semi-natural rotation (cons.) lcf912 Semi-natural rotation (form.) lcf913 Extension of water courses (cons.) lcf92 Forests and shrubs fires (cons.) Icf92 Forests and shrubs fires (form.) lcf93 Coastal erosion (cons.) lcf94 Decrease in permanent snow and glaciers cover (cons.) Icf94 Decrease in permanent snow and glaciers cover (form.) lcf99 Other changes and unknown (cons.) lcf99 Other changes and unknown (form.)



2000



0

lcf13 Development of green urban areas Icf2 Urban residential sprawl Icf3 Sprawl of economic sites and infrastructures Icf53 Conversion from wetlands to agriculture Icf62 Withdrawal of farming without significant woodland creation lcf72 Forest creation, afforestation Icf8 Water bodies creation and management (cons.) Icf81 Water bodies creation Icf9 Changes of land cover due to natural and multiple causes (other than LCF91) Icf9 Changes of land cover due to natural and multiple causes (other than LCF912) Icf911 Semi-natural creation (form.) Icf912 Semi-natural rotation (cons.) lcf912 Semi-natural rotation (form.) lcf913 Extension of water courses (form.)









