

Data of the environment in Catalonia

2007



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Territorial distribution of population

Groups of municipalities according to intervals of population. 2006

Intervals (inhabitants)	Municipalities		Population	
	Partial	Accumulated %	Partial	Accumulated %
0 - 1.000	496	52,4	197.958	2,8
1.001 - 5.000	253	79,2	575.556	10,8
5.001 - 10.000	86	88,3	593.788	19,2
10.001 - 20.000	51	93,7	715.701	29,2
20.001 - 50.000	37	97,6	1.094.217	44,5
50.001 - 100.000	13	98,9	885.437	56,9
More than 100.000	10	100,0	3.072.040	100,0
Total	946		7.134.697	

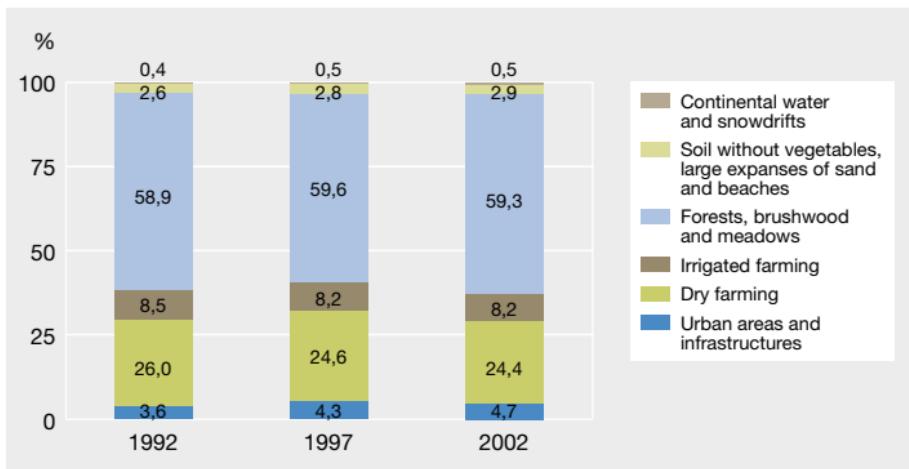
Geographical distribution of population. 2006

Municipalities	Municipalities	Population (inh.)	Area (km ²)	Density (inh./km ²)
Mountain ⁽¹⁾	294	315.817	14.650,04	22
Coast	70	3.123.783	2.112,23	1.479
Rest of municipalities	582	3.695.097	15.133,03	244
Total	946	7.134.697	31.895,30	224

⁽¹⁾ Tossa de Mar is not included, as it is considered a coastal municipality.

Environmental data

Land use



Structure of economic activity 2005

Activity sectors	VAB pm ⁽¹⁾	% of the total	% variation ⁽²⁾	Employed (thousands)	% of the total	% variation
Agriculture	2.457	1,5	-2,6	80,2	2,4	11,1
Industry	37.238	22,8	-0,1	783,9	23,8	3,8
Construction	16.360	10,0	5,4	348,5	10,6	-0,7
Services	106.951	65,6	4,3	2.078,5	63,2	7,8
Total	163.006	100,0	3,3	3.291,1	100,0	5,9

⁽¹⁾ Millions of euros.

⁽²⁾ Referring to the previous year, at constant prices.

Structure of economic activity 2006

Activity sectors	VAB pm ⁽¹⁾	% of the total	% variation ⁽²⁾	Employed (thousands)	% of the total	% variation
Agriculture	2.613	1,5	3,8	87,3	2,6	8,8
Industry	39.338	22,5	2,9	788,6	23,1	0,6
Construction	18.510	10,6	5,4	410,6	12,0	17,8
Services	114.554	65,5	3,8	2.132,3	62,4	2,6
Total	175.015	100,0	3,9	3.418,8	100,0	3,9

⁽¹⁾ Millions of euros.

⁽²⁾ Referring to the previous year, at constant prices.

Evolution of the number of motor vehicles

(in thousands of vehicles)

Vehicle	2001	2002	2003 ⁽²⁾	2004	2005	2006
Motorbikes	418	425	420	443	486	536
Cars	2.931	2.999	2.985	3.090	3.181	3.243
Buses, lorries and other	769	796	815	858	906	953
Total	4.118	4.220	4.220	4.391	4.573	4.732
Vehicles/1,000 inh.⁽¹⁾	647	649	649	592	641	663

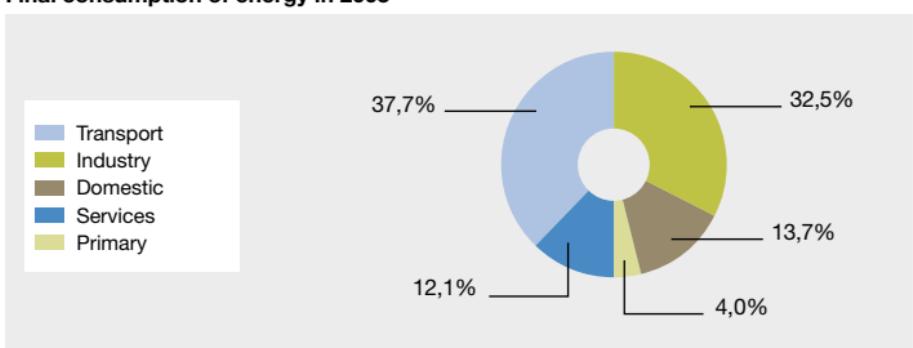
⁽¹⁾ Official population figures in each period.

⁽²⁾ Since 2003 vehicles temporarily out of service are not included.

Primary energy production and consumption. 2005

Energy	Production		Consumption	
	ktoe	%	ktoe	%
Oil	163,0	2,6	13.145,8	49,3
Nuclear	5.230,7	84,6	5.230,7	19,6
Natural gas	2,0	0,0	6.764,9	25,4
Coal	74,5	1,2	261,3	1,0
Balance of electric exchanges	0,0	0,0	576,6	2,2
Non-renewable industrial waste	57,0	0,9	57,0	0,2
Renewable energy	653,8	10,6	643,0	2,4
Hydraulic power	324,7	5,3	324,7	1,2
Urban solid waste power	117,2	1,9	117,2	0,4
Forest and farming biomass power	95,5	1,5	95,5	0,4
Wind power	20,9	0,3	20,9	0,1
Biogas power	38,4	0,6	38,4	0,1
Biofuels	50,4	0,8	39,6	0,1
Solar power	6,6	0,1	6,6	0,0
Total	6.181,1	100,0	26.679,3	100,0

Final consumption of energy in 2005



Water

Urban waste water treatment plants ⁽¹⁾. 2006

Plant	Number of plants	Treatment capacity		Total capacity in inh.-e ⁽²⁾	
		(m ³ /day)	(%)	(inh.-e)	(%)
Biological	288	2.151.827	79,42	12.559.582	80,52
Physicochemical	1	525.000	19,38	2.870.000	18,40
Lagooning	34	30.696	1,13	168.010	1,08
Other appropriate treatments	7	1.855	0,07	920	0,01
Pre-trataments	5	40.430	1,49	167.591	1,07
Total	335	2.709.378	100,00	15.598.511	100,00

⁽¹⁾ The data on inhabitant equivalent and treatment capacity refer to design.

⁽²⁾ inh.-e: inhabitant equivalent.

Global output of plants in service

	2001	2002	2003	2004	2005	2006
Number of plants in service	270	290	297	314	328	330
Number of plants analysed	248	275	279	301	320	326
Treated flow (m ³ /day)	1.534.239	1.606.844	1.958.800	1.972.069	1.851.074	1.879.482
Global average output of SM elimination (%)	93,6	89,3	93,2	87,1	89	87
Global average output of BOD ₅ elimination (%)	94,4	91,9	94,5	90,8	91	90
Plants in accordance with Directive 91/271/EEC (%)	93,6	95,5	95,6	92,3	85 ⁽¹⁾	-
Global average output of COD5 elimination (%)						83

⁽¹⁾ Since 2004 we also consider the plants located in environmentally sensitive zones treating more than 10,000 inh.-e, which, despite complying with their design, do not attain the Directive's aims regarding the removal of nutrients.

Treatment evolution and destination of sludge produced in plants (tons of fresh material)

	2001	2002	2003	2004	2005	2006
Sludge removed according to destination	401.784	384.358	326.860	312.792	366.399	388.422
Agriculture and gardening	267.281	248.459	222.663	219.678	272.125	150.510
Quarry restoration	4.966	2.661	-	-	-	527
Landfill	126.744	133.223	104.197	93.115	70.509	45.688
Ecobrick and other	2.793	15	-	-	-	-
Energy recovery	-	-	-	-	23.765	-
External composting	-	-	-	-	-	181.978
Other destinations ⁽¹⁾	-	-	-	-	-	9.719
Treated sludge	73.015	199.680	335.348	296.874	471.248	472.365
Thermal drying	18.883	33.270	61.940	55.115	202.732	182.364
Composting ⁽²⁾	54.132	113.781	145.383	136.955	179.272	219.596
Aerobic/anaerobic digestion	-	143.463	128.025	104.804	89.244	-
Dehydration ⁽³⁾	-	-	-	-	-	70.405

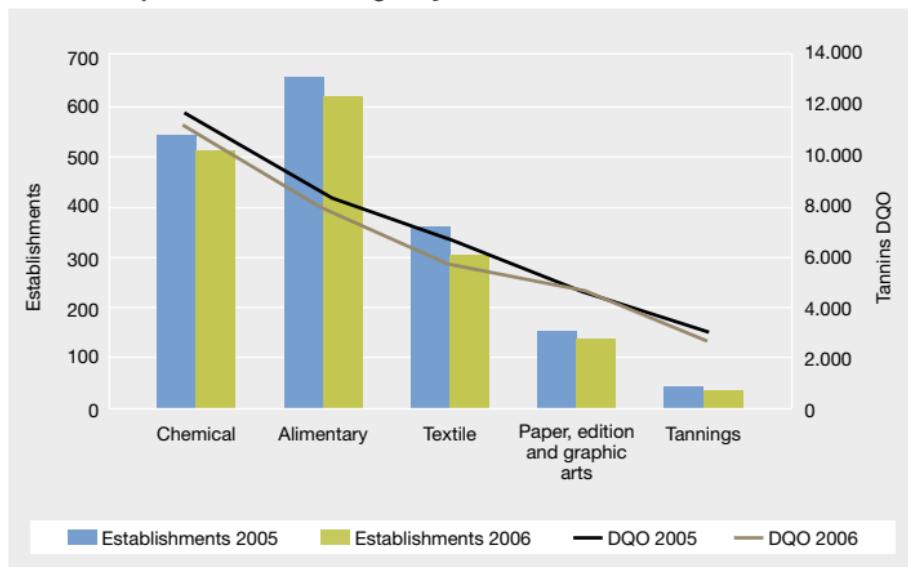
⁽¹⁾ Special treatments.

⁽²⁾ It includes composting of thermal drying, like organic amendment or as a complementary treatment.

⁽³⁾ Other waste water treatment plants.

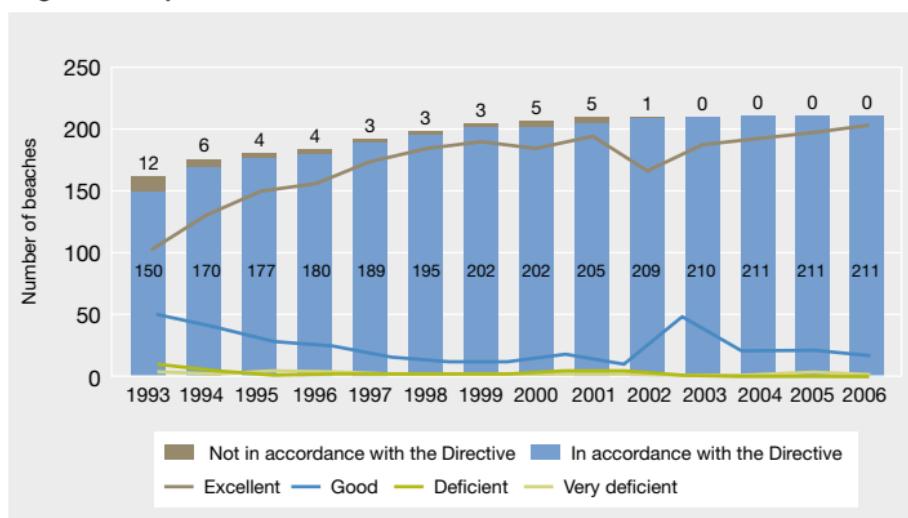
Evolution of pollutant load discharged by industrial centres

(1)



(1) According to the Declaration of use and pollution of water (DUCA): sections B (05.02) and C, D and E of CCAE, it exceeds the parameters indicated in the regulation, if 7,000 m³/year are exceeded. In this case, when non-discharged water represents more than 50% of total consumption, systems of treatment should be available in accordance with Decree 103/2000, of 6th March, modified by Decree 47/2005, of 22nd March.

Degree of compliance with Directive 76/160/EEC



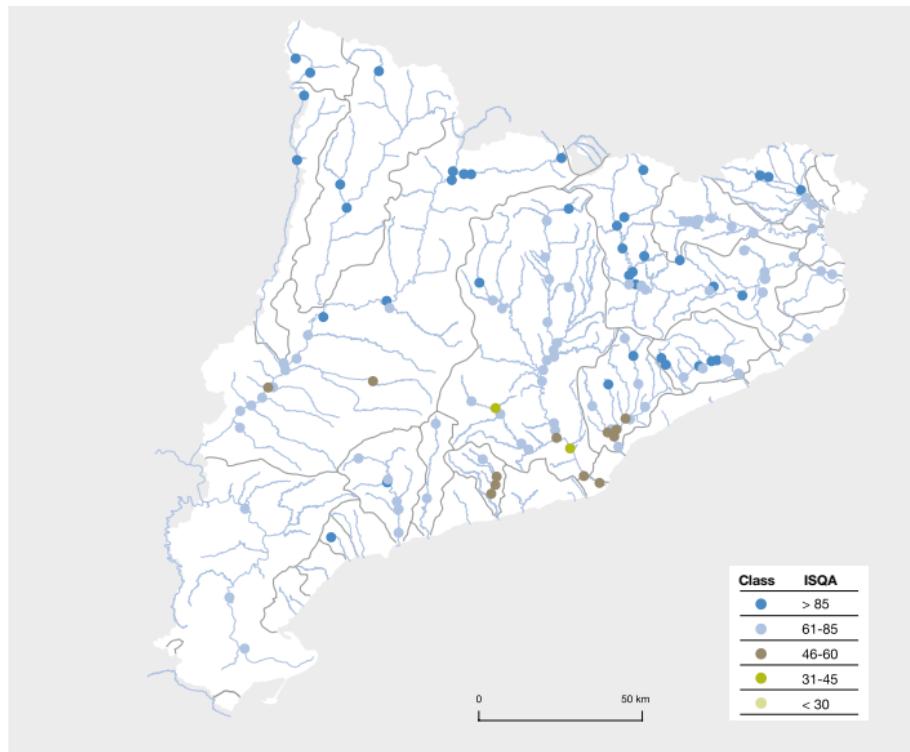
Water quality and quantity control points

	2000	2001	2002	2003 (1)	2004 (2)	2005	2006
Quality control networks	6.438	5.991	6.519	5.699	5.794	5.670	6.273
Surface water	714	754	775	167	236	226	225
Ground water	1.416	1.333	1.600	1.445	1.468	1.362	1.567
Marine water	4.308	3.904	4.144	4.087	4.090	4.083	4.481
Quantity control networks	738	772	808	768	757	778	803
Ground water	430	430	430	380	380	405	370
Surface water	308	342	378	388	377	398	-

(1) In 2003, the number of control points in surface water is lower than in the previous ones, since the sampling rate and the number of controlled parameters have been intensified.

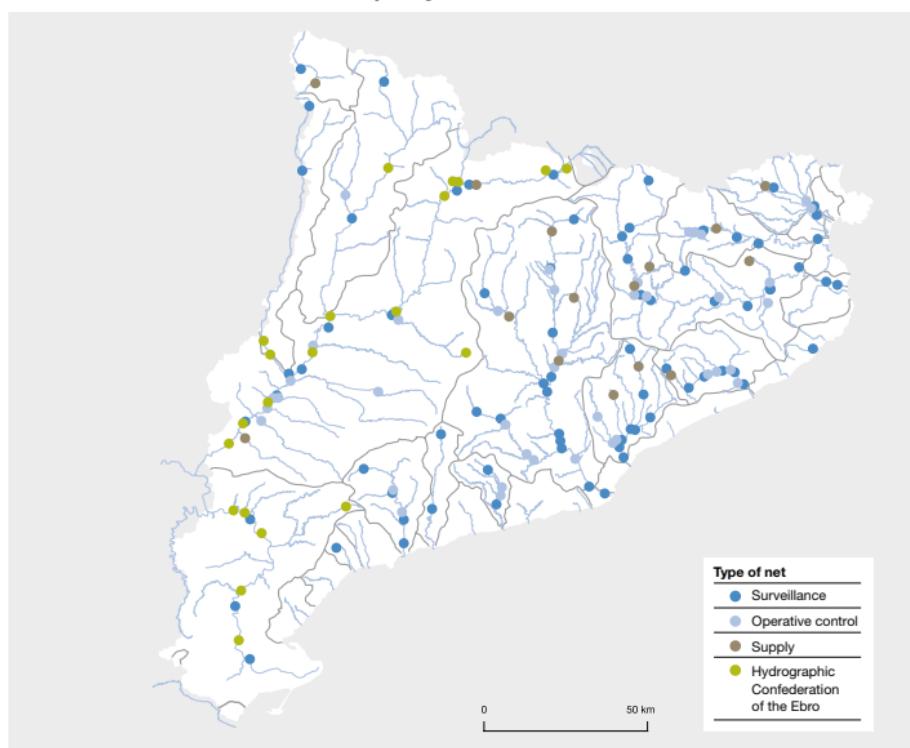
(2) Since 2004 all points where manual quantity control is undertaken (in rivers, water channels and marshes) have been counted.

Surface water quality. Average data of ISQA. 2006⁽¹⁾



⁽¹⁾ This map shows the average data of ISQA classified according to the Catalan Sanitation Programme. ISQA is a simplified index of water quality calculated from temperature, suspended matter, oxidability, dissolved oxygen and conductivity.

Control network of surface water quality⁽¹⁾



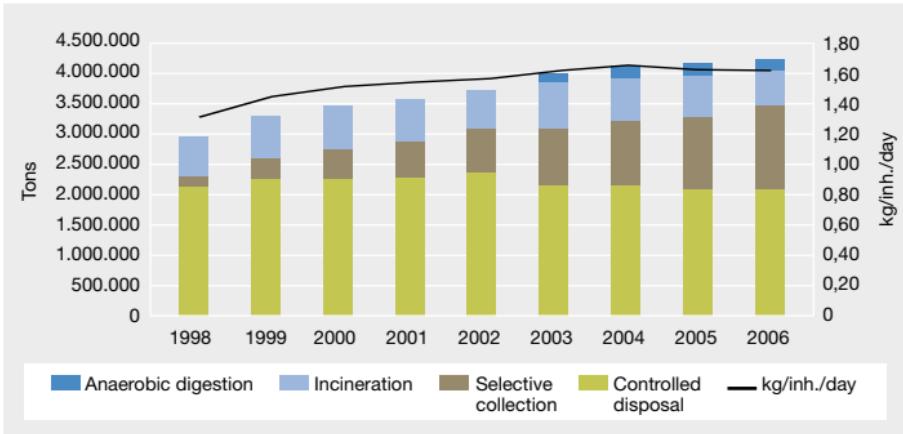
⁽¹⁾ This map shows the type of control network.

Waste

Final destination of municipal waste

Municipal waste production 2006: 4.259.980 tones

Production coefficient (kg/inh./day) 2006: 1,64



Municipal waste is waste coming from domestic activities and shops, offices or services activities whose nature or composition are comparable to domestic waste.

Based on the official population figures published by IDESCAT.

Selective collection. 2006

Waste	Tons collected	Generation coefficient (kg/inh./yr) ⁽¹⁾
Glass	183.006	26,2
Paper and cardboard	419.379	60,0
Light packaging	94.672	13,5
Organic matter ⁽²⁾	256.119	36,6
Batteries	519	0,1
Medicines	490	0,1
Large packaging	161.377	23,1
Pruning-gardening	66.729	9,5
Textile	5.869	0,8
Collection centres ⁽³⁾	172.400	
Total selective collection	1.360.558	

⁽¹⁾ Official population in 2005 published by IDESCAT.

⁽²⁾ Population only considered where the selective collection is well-established.

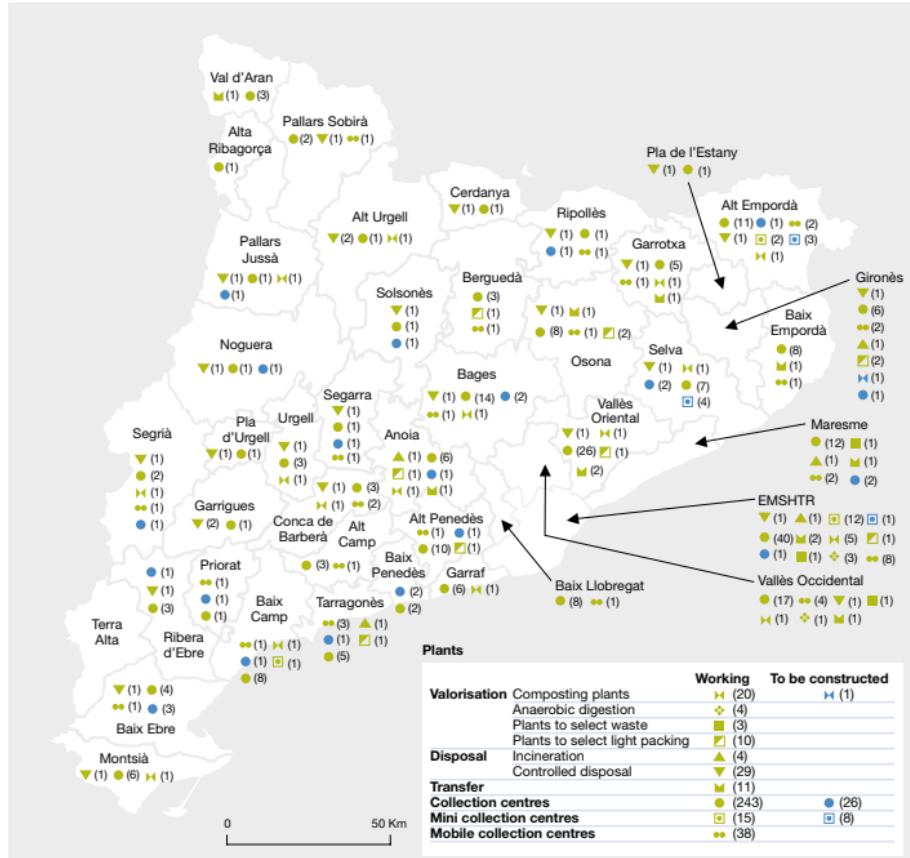
⁽³⁾ Except glass, paper, large packaging, pruning and gardening and batteries collected in a collection centre.

Treatment of declared industrial waste

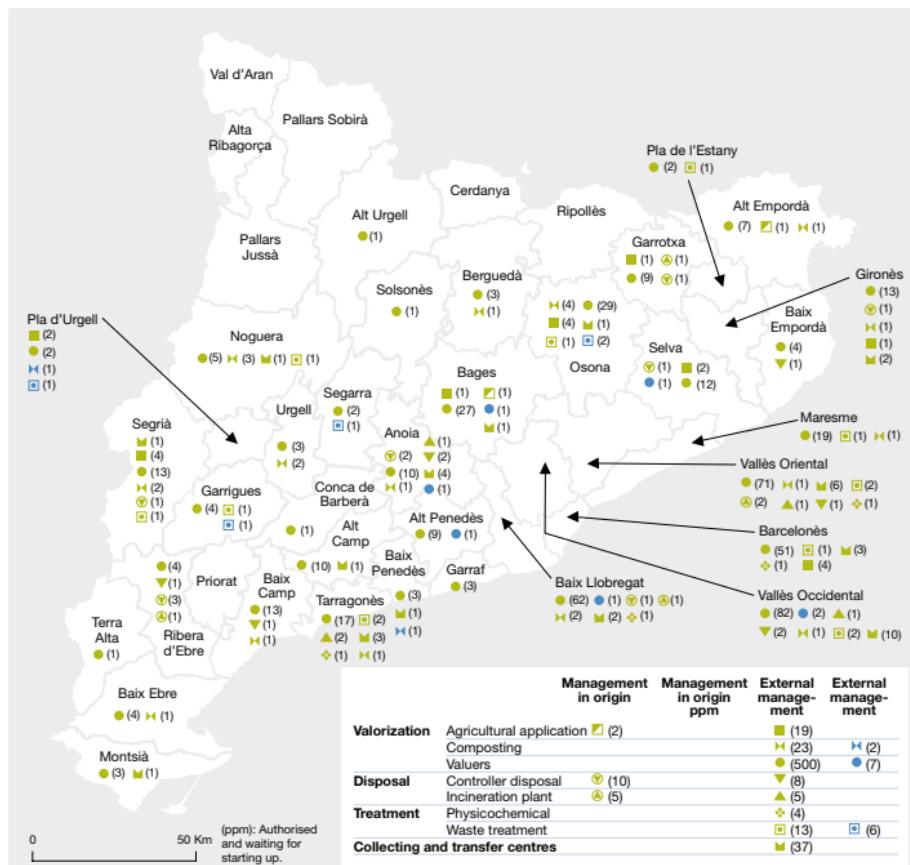
(tons)

Treatment	Special		Non-special		Total	
	2005	2006	2005	2006	2005	2006
Recovery	409.064	435.627	3.569.636	3.513.640,39	3.978.700	3.949.267
Sub-product	22.076	17.059	240.536	216.876,74	262.612	233.936
Storage	9.288	8.773	38.670	28.425,96	47.958	37.199
Physicochemical-biological plant	122.237	111.709	283.075	219.355,91	405.312	331.065
Controlled disposal	75.187	66.765	1.297.375	1.156.424,85	1.372.562	1.223.190
Incineration	133.793	89.324	137.180	121.25,49	270.973	101.450
Insufficient management	1.747	2	17.467	10.686,39	19.214	10.689
No specified management	23.887	1.188	17.354	17.634,32	41.241	18.822
Total	797.279	730.448	5.601.293	5.175.170,05	6.398.572	5.905.618

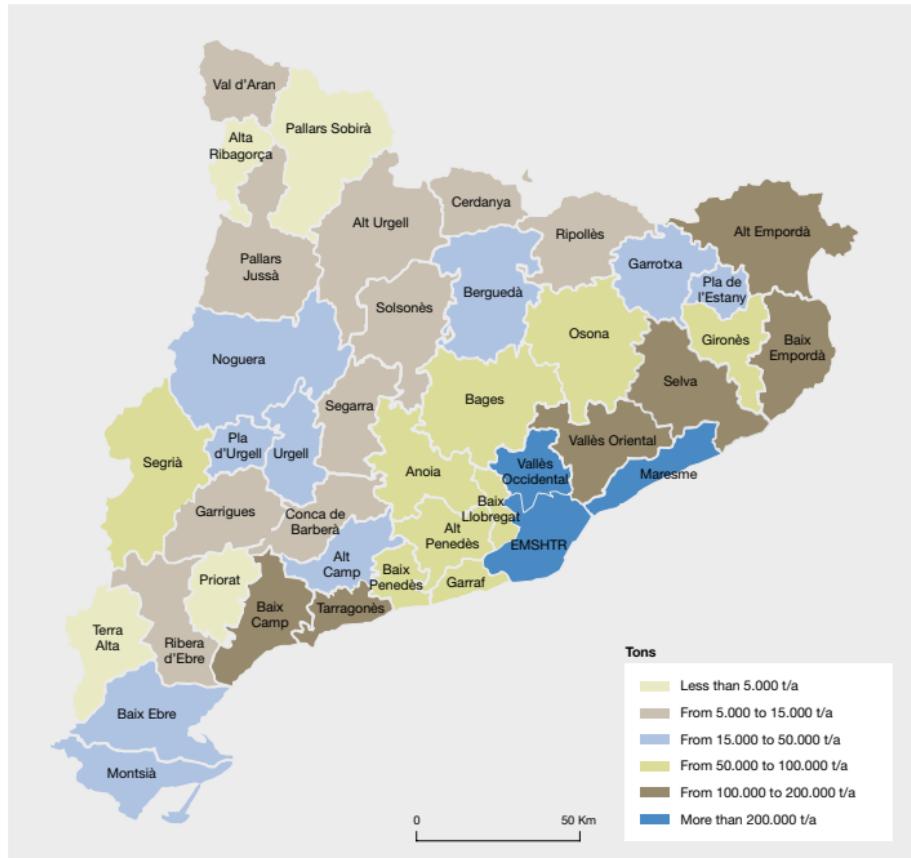
Municipal waste treatment infrastructures in 2006



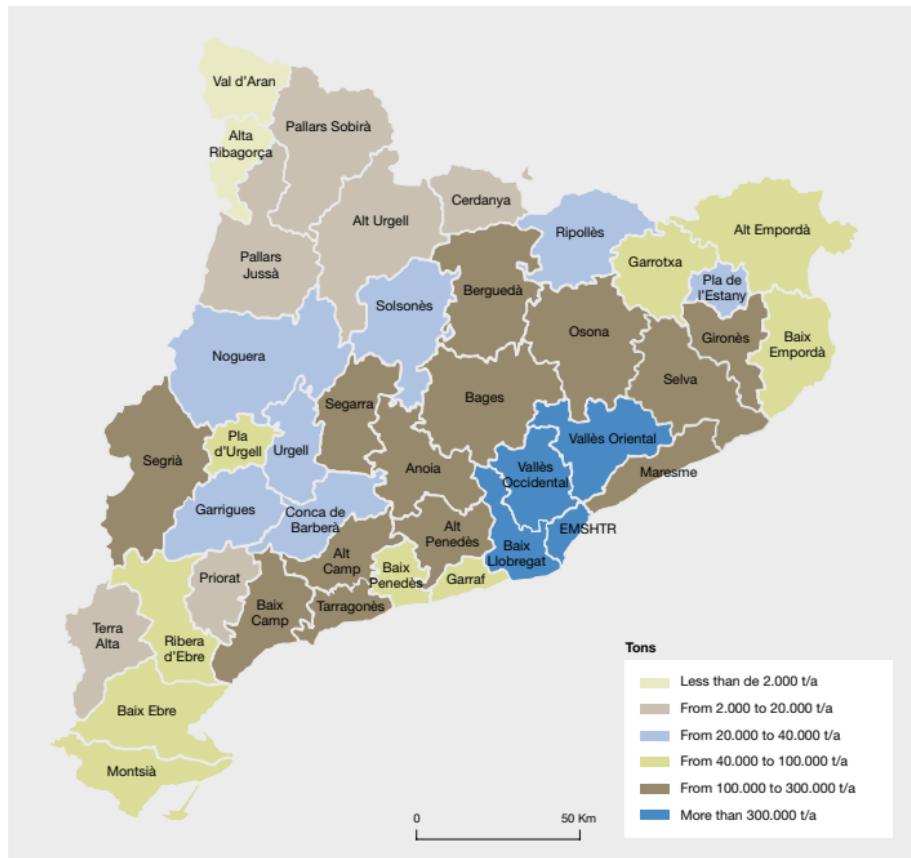
Industrial waste treatment infrastructures in 2006



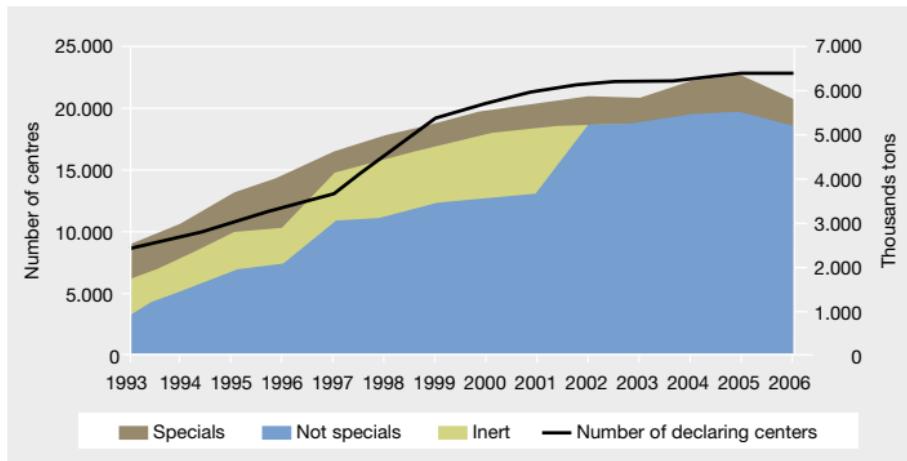
Municipal waste produced in 2006



Industrial waste declared in 2006



Evolution of the number of declaring centres and declared industrial waste



Waste of industries and treatment plants is counted out. There are not the business agents. With the entry into force of the European Waste Catalogue in 2002, the category inert waste is eliminated (type 210 of waste) and becomes non-special (149) or special in some cases (61).

Industrial waste declaration in economic sectors

Sub-sector CCAE ⁽¹⁾	Sector	Tons		
		2005	2006 ⁽²⁾	2006 ⁽³⁾
10	Extraction and accumulation of anthracite, hard coal, lignite and peat	11	32	-
15	Food and drink industry	1.164.769	1.263.127	63
17	Textiles industry	111.403	107.921	12
19	Hide preparation, tanning and finishing; fur manufacture, leather goods, saddlery and shoe shop	34.432	32.298	-
20	Wood and cork industry, except furniture, basketwork and esparto workshop	140.637	122.274	-
21	Paper industry	401.609	357.872	66
22	Publishing, graphic arts and reproduction of registered supports	136.883	157.284	-
24	Chemicals industry	667.904	674.053	583
25	Manufacture of rubber and plastic products	142.686	132.205	-
26	Manufacture of other non-metallic mineral products	374.770	432.645	-
27	Metallurgy	596.733	563.040	-
28	Manufacture of metallic products except machinery and equipment	336.782	431.776	132
29	Machinery and mechanical equipment construction industries	81.620	85.696	18
31	Manufacture of machinery and electrical material	65.148	68.087	-
34	Manufacture of motor vehicles, trailers and semi-trailers	317.177	343.425	-
36	Manufacture of furniture; other manufacturing industry	64.405	80.540	1
37	Recycling	209.113	109.383	-
40	Production and distribution of electrical energy, gas, steam and hot water	97.941	149.182	-
90	Public sanitation activities	1.238.275	108.830	556.043
	Other	216.275	128.825	205
Total		6.398.573	5.348.495	557.123

⁽¹⁾ Catalan Classification of Economic Activities.

⁽²⁾ The datum for industrial waste stated for 2006 by the industries.

⁽³⁾ The datum for industrial waste stated for 2006 by the treatment plants.

Biodiversity

Current situation of Plan for Areas of Natural Interest (PEIN) and Natura 2000 Network

	Situation a 31.12.2006			
	Number of areas	Terrestrial hectares	Marine hectares	Percentage in respect to the total
PEIN	165	960.102	77.818	29,91
NASP ⁽¹⁾	17	294.119	3.627	
Natural Park	11	243.863		
Natural Site of National Interest	3	12.039		
Nature Reserve	2	1.865		
National Park	1	39.979		
NWR	4			
Natura 2000 Network	8 ecological types ⁽²⁾	957.051	83.104	29,83 ⁽³⁾

⁽¹⁾ Including nature wildlife reserves.

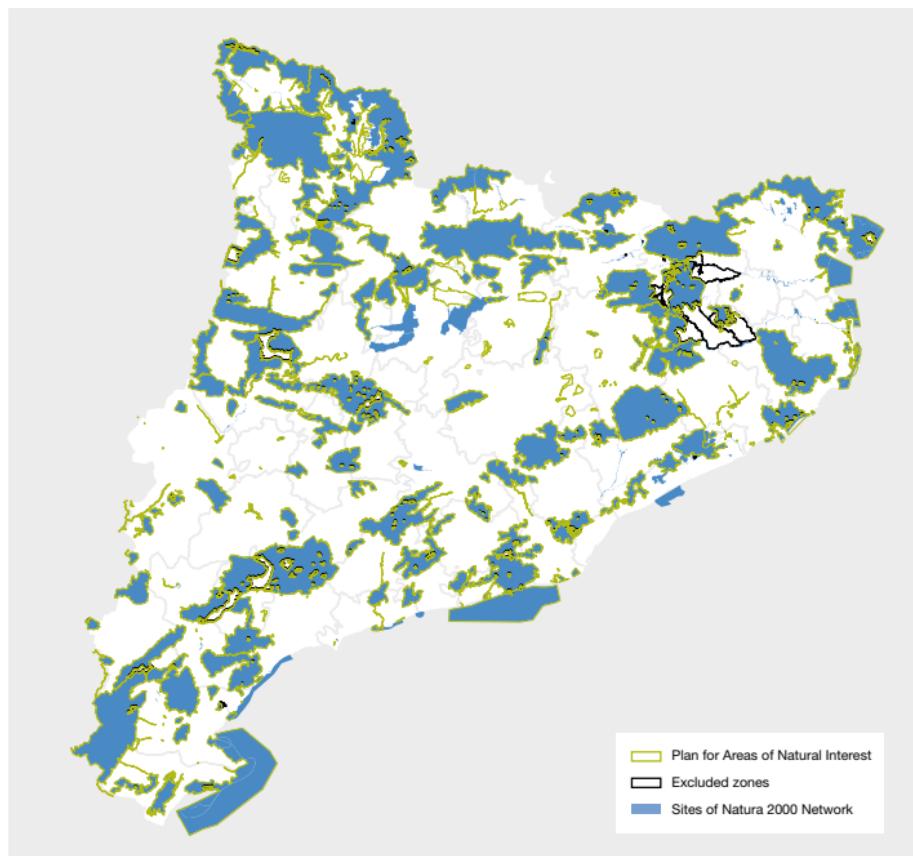
⁽²⁾ Pyrenean sites – Pre-Pyrenean sites – Agricultural plain – Inland mountain – Inland water – Coastal mountain – Coastal marshes and marine areas.

⁽³⁾ Total terrestrial.

NASP: Natural Area of Special Protection.

NWR: Declared Nature Wildlife Reserve, pending approval with regard to definitive demarcation.

Plan for Areas of Natural Interest (PEIN) 2006 and Natura 2000



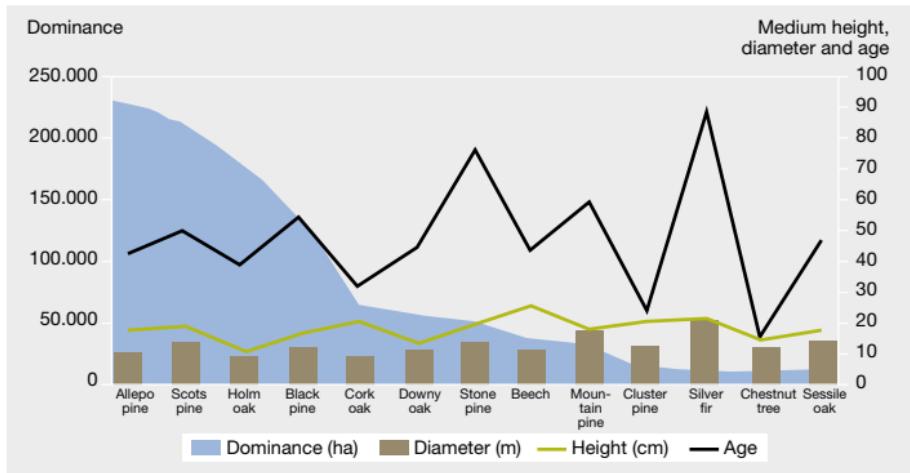
Parks of Catalonia. 2006

	Year of creation	Terrestrial ha ⁽¹⁾	Marine ha	Observ. (protection areas, etc.)	Visitors ⁽²⁾
National Parks					
Aigüestortes i Estany de Sant Maurici	1955	14.119		26.733	296.361
Natural Parks					
El Cadí-Moixeró	1983	39.671			430.000
Volcanic Region of La Garrotxa	1982	12.007			600.000
Aiguamolls de l'Empordà	1983	4.729			45.488
Delta de l'Ebre	1983	7.313	489		988.000
Montserrat	1987	3.630		4.039	2.242.000
El Montseny	1987	17.372		12.748	-
Sant Llorenç del Munt i Serra de l'Obac	1987	9.638		4.056	-
Cap de Creus	1998	10.813	3.073		435.000
Els Ports	2001	35.051			120.000
Serra de Montsant	2002	9.192			49.000
L'Alt Pirineu	2003	69.850			150.000
Natural Sites of National Interest					
Pedraforca	1982	1.671			-
Poblet	1984	3.408			186.000
L'Albera	1986	4.108			16.595
Pinya de Rosa	2003	50			-
Nature Reserves					
Delta del Llobregat	1987	297		201	95.000
Marine Reserves					
Illes Medes	1990		511		216.000
Masia Blanca (i zona d'amortiment)	2000		448		-
Areas protected by urban legislation					
Collserola	1987	6.535			-
Garraf	1986	12.377			-
Montnegre-Corredor	1989	15.010			-
Montesquiu	1986	547			-
Olièrdola	1992	609			-

⁽¹⁾ Some ENPE areas can be included in other protection classifications, such as nature reserves.

⁽²⁾ Estimated figures.

Main tree species in Catalonia



Source: Forest and Ecological Inventory of Catalonia, 1988-1998. CREAf.

Open cast mining according to its degree of restoration. 2007

Degree of restoration	Dossier		Surface areas	
	Number	%	Hectares	%
Briefed and/or authorized open cast mining when it is not evident that they have pioneered the exploitation	392	14,3	1.257	9,8
Open cast mining in exploitation and with no restoration started	772	28,1	4.798	37,6
Open cast mining in exploitation with integrated restoration	416	15,1	4.156	32,6
Restored open cast mining in guarantee period	243	8,8	1.211	9,5
Restored open cast mining with a returned deposit (467 activities) or of DPH ⁽¹⁾ (459 activities)	926	33,7	1.342	10,5
Total	2.749	100	12.764	100

⁽¹⁾ Public Water Resources.

Number of declarations of environmental impact issued in 2006 ⁽¹⁾

Actions	2000	2002	2003	2004	2005	2006
Harbours	3	1	0	1	3	0
Linear infrastructures	34	22	18	33	6	9
Basins	0	0	0	1	1	1
Industrial activities	13	64	50	48	78	133
Soil use transformation	4	5	10	15	4	3
Affecting PEIN areas	24	3	9	12	5	9
Total	78	95	87	107	97	155

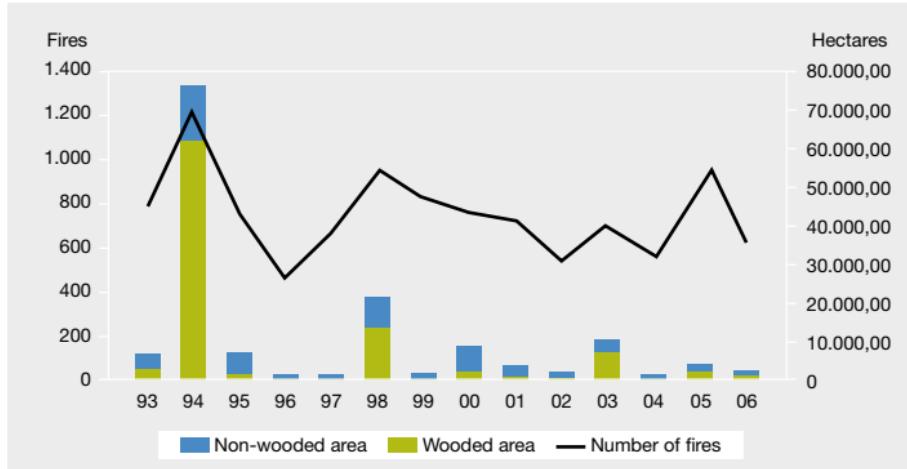
⁽¹⁾ According to date of Environmental Report.

Hunting and fishing areas 2006

	Number of areas	Area in hectares
Authorised hunting/fishing		
National hunting reserves	7	235.047
Controlled hunting zones	14	87.518
Controlled fishing zones	320	1.513 ⁽¹⁾
Protected areas		
Wildlife preserves	79	10.565
Hunting preserves	2	389
Fishing preserves	224	-

⁽¹⁾ Area in km².

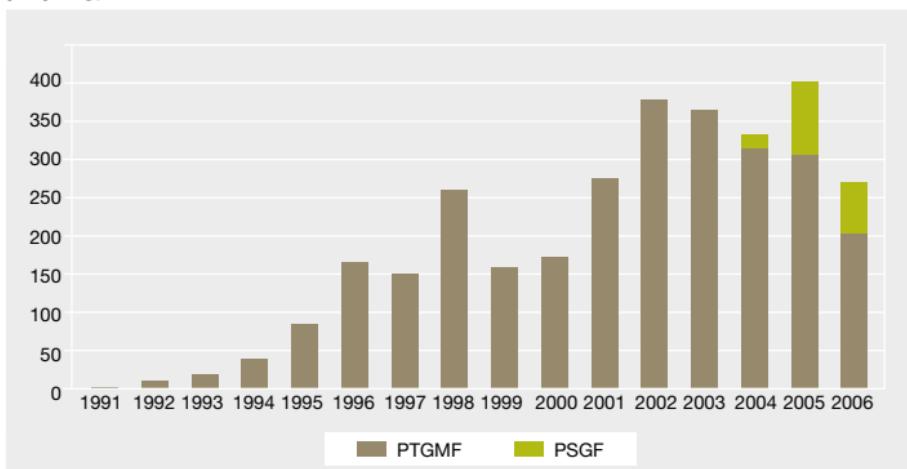
Evolution of number of fires and affected area



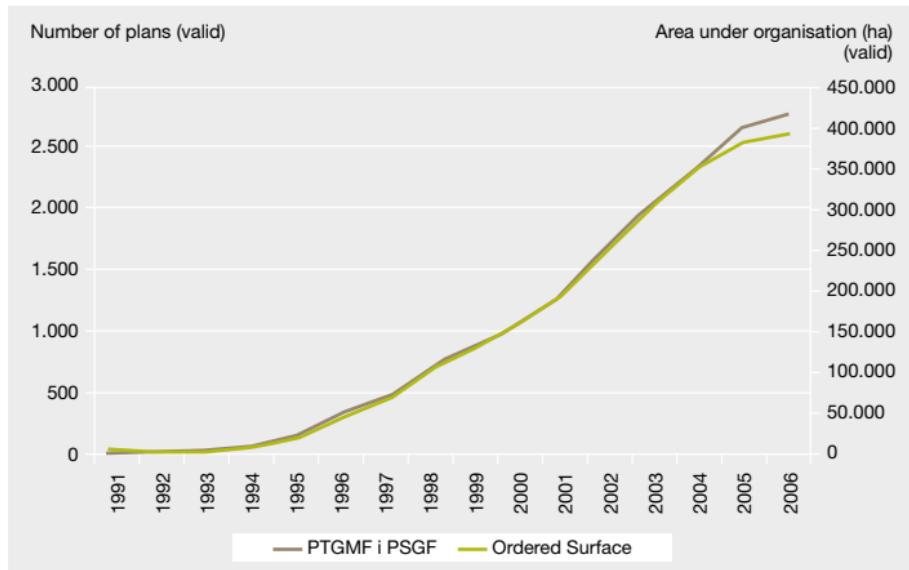
Evolution of the forest planning of private property (technical plans and simple plans). 2006

Year	PTGMF valid	Area under organisation with PTGMF (ha) valid	Number of PTGMF approved per year	Area under organisation with PTGMF (ha) per year
2000	1.049	165.915,5	169	28.541,1
2001	1.310	207.153,3	261	41.237,8
2002	1.681	261.720,1	371	54.782,2
2003	2.037	312.508,0	356	50.787,8
2004	2.268	343.959,0	308	43.658,5
2005	2.396	358.688,0	303	36.944,1
2006	2.605	390.408,0	203	30.281,7
Year	PSGF valid	Area under organisation with PSGF (ha) valid	Number of PSGF approved per year	Area under organisation with PSGF (ha) per year
2004	17	250,2	17	250,2
2005	112	1.306,0	94	1.050,8
2006	180	2.055,5	67	739,6
Total PTGMF and PSGF 2006	2.785	392.463,5	270	31.021,3

Distribution of technical plans (PTGMF) and simple plans (PSGF) approved, in private property, 1991-2006

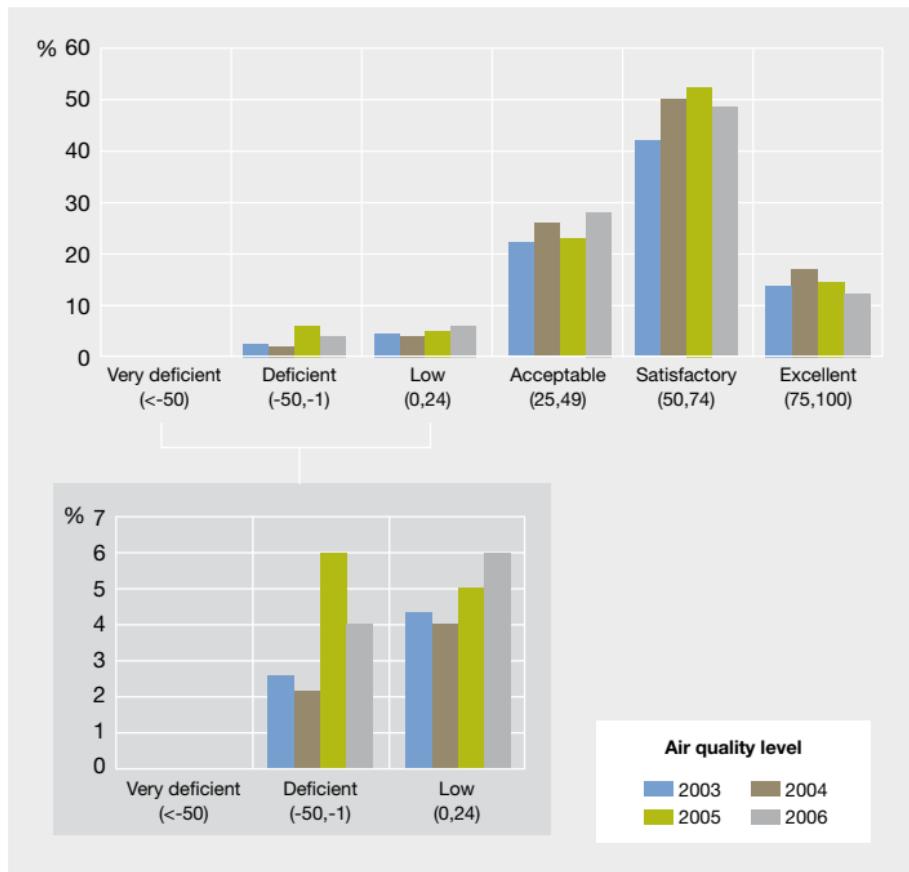


Evolution of the number of plans approved and planned area (ha) in private forest property



Atmosphere

Distribution of ICQA⁽¹⁾ values according to air quality level



⁽¹⁾ ICQA was calculated using levels of: carbon monoxide (CO), nitrogen dioxide (NO₂), sulphur dioxide (SO₂), ozone (O₃) and suspended particles PM10 and PST.

Control of ozone immission levels

	2000	2001	2002	2003	2004	2005	2006
Total number of sensors	47	48	37	39	42	47	50
Stations exceeding population alert threshold ⁽¹⁾	0	0	1	0	0	1	1
Stations exceeding population information threshold ⁽²⁾	12	20	9	22	10	20	20
Time value exceeding population information threshold (units)	61	96	41	222	43	111	110
Average level ($\mu\text{g}/\text{m}^3$)	61	62	60	61	60	61	47
Maximum level ($\mu\text{g}/\text{m}^3$)	273	272	384	288	234	246	250

⁽¹⁾ 240 $\mu\text{g}/\text{m}^3$ in one hour (RD 1796/2003).

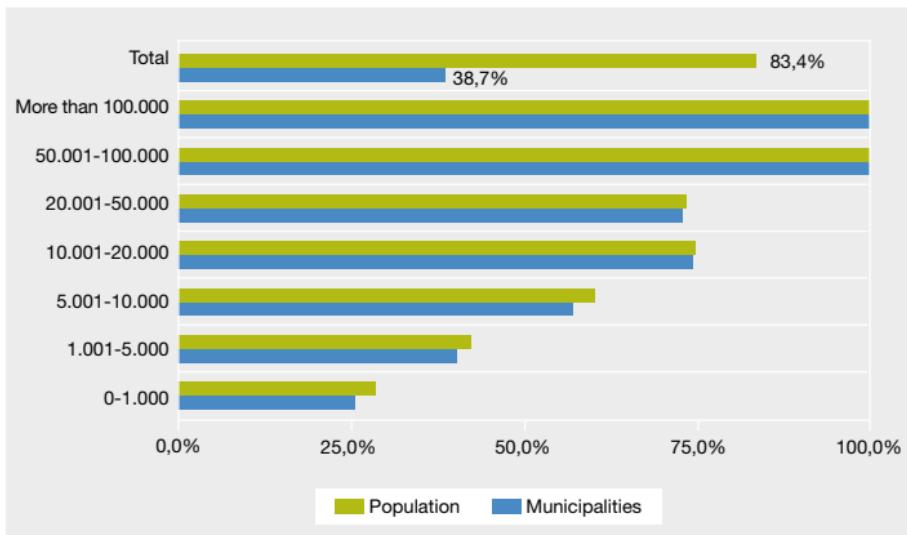
⁽²⁾ 180 $\mu\text{g}/\text{m}^3$ in one hour (RD 1796/2003).

Voluntary systems to protect the environment

Number of companies with voluntary systems to protect the environment System

System	2000	2001	2002	2003	2004	2005	2006
Ecolabel	8	8	8	9	8	7	11
Emblem of environmental quality guarantee							
Products	803	806	806	819	808	848	1.100
Services	1	28	53	109	131	147	165
Eco-Management and Auditing System (EMAS)	59	110	130	148	147	159	190

Local bodies subscribing the Aalborg Charter 2006



Percentages are calculated on the total of municipalities and/or population for each interval considered.

Sources:

Department of the Environment and Housing
Department of Territorial Policy
and Public Works
Department of Employment and Industry
Departament of Governance and Public
Administration Institute of Statistics
of Catalonia
Institute of Statistics of Catalonia

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