

Basic Environmental Data of Andalusia

2014

Basic Environmental Data of Andalusia 2014

This publication, released on a regular basis since 1995, includes the main cartographic and statistical information regarding the andalusian environment, well organized and summarized, providing an overview of the environmental reality in Andalusia.

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Complete book

At the beginning of each section you will find QR codes by which you will be able to access additional and extended information on each topic. All you need is a mobile device with a camera and a QR code reader application that is free downloadable. Through the Regional Ministry of Environment and Spatial Planning website you can download all the statistics and maps as interoperable web services that can be viewed by using any GIS client (Geographical Information System).

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→ www.juntadeandalucia.es/medioambiente



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ecoedición

[pilot project]

Environmental impacts

Fossil resource depletion	Ozone layer depletion	Carbon footprint
0,31 kg fossil fuel eq	8,05E-8 kg CFC · 11eq	1,02 kg CO ₂ eq
11,44 %	0,14 %	3,33 %

Impact referred to the average environmental impact of a European citizen per day



ecoedicion.eu

JUNTA DE ANDALUCÍA
REGIONAL MINISTRY OF ENVIRONMENT AND SPATIAL PLANNING

LIFE08 ENV/IE/00124



POPULATION DENSITY IN ANDALUSIA 2013 [2] [3]*

96.4 inhab./Km²

93.1 inhab./Km² in Spain 2013

SURFACE EXTENSION OF ANDALUSIA [2] [3]

87,589.9 km²

Length of the Andalusian coastline 1,101 km

505,968.4 km² in Spain

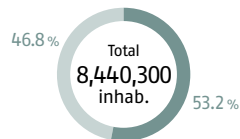
* See information sources on the back cover.

Andalusia is the most populated region in Spain and is the second largest in extension. It is located at the southernmost end of the Iberian Peninsula, with the Gibraltar Strait separating it from the African Continent by approximately 14km.

DISTRIBUTION OF ANDALUSIAN POPULATION PER MUNICIPALITY SIZE 2013 [2] [3]

Typology	Municipalities	Population
Up to 5,000 inhab.	507	10.63 %
5,001 – 20,000 inhab.	183	21.55 %
20,001 – 50,000 inhab.	52	17.17 %
50,001 – 100,000 inhab.	17	14.96 %
> 100,000 hab.	12	35.70 %
Total	771	100 %

POPULATION OF URBAN AGLOMERATIONS IN ANDALUSIA 2013



	Population (inhab.)
Urban agglomerations*	4,491,286
In the rest of Andalusia	3,949,014

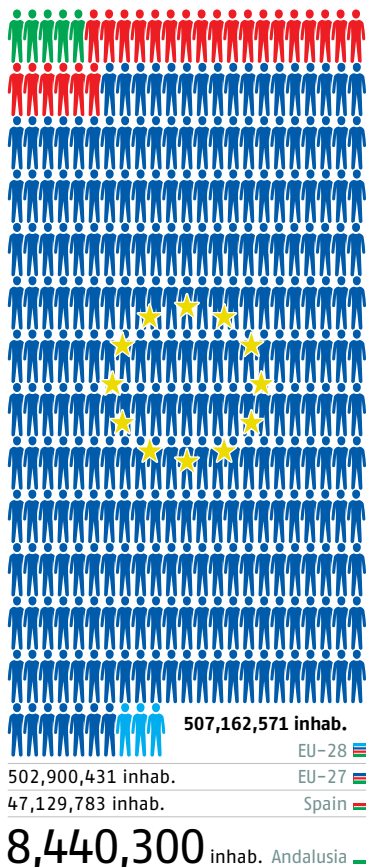
* Related to the 8 provincial capitals.



POPULATION DENSITY 2013 (inhab./Km²) AND SURFACE EXTENSION (Km²) IN THE EUROPEAN UNION [1] [2]

114.1 inhab./Km ² in UE-27
112.9 inhab./Km ² in UE-28
in UE-27 4,406,051.4 Km ²
in UE-28 4,493,712.4 Km ²

POPULATION IN ANDALUSIA, SPAIN AND THE EUROPEAN UNION [1] [2]



TERRITORIAL UNITS WITHIN THE SPATIAL PLANNING PLAN FOR ANDALUSIA





Climate and climate change



Terrain and soil



Vegetation and land use



Water

Climate, terrain and soil, vegetation and land use, and water are natural resources that shape the basis and wealth of Andalusia. Evaluating on a regular basis its state is a key action for its proper management and preservation.

Climate and climate change

2013 was a wet year regarding rainfall and normal in respect of temperatures. The total rainfall was 543 mm, over 50 mm beyond the median of the reference period, the average annual temperature was 16.2°C, only two decimal points over the reference values. The global warming index, which determines the interannual average temperature variation, have remained fairly unchanged.

CLIMATIC CHARACTERIZATION OF THE LARGE GEOGRAPHIC AREAS IN ÁNDALUSIA [6]

Geographic areas

1. Atlantic Coastline
2. Guadalquivir Depression
3. Sierra Morena
4. Mediterranean coast (up to Adra)
5. Mediterranean coast and Southeast
6. Intrabetic depression
7. Betic Mountain ranges



AVERAGE TEMPERATURES IN ANDALUSIA 2013 [8]

16.2 °C

16.1 °C during the period 1971–2000

AVERAGE RAINFALL IN ANDALUSIA 2013 [8]

543.5 mm

567 mm during the period 1971–2000

TOTAL EMISSIONS* OF GREENHOUSE GASES IN ANDALUSIA 2011 [7]

53,762 ktCO₂eq

350,484 ktCO₂eq in Spain 2011 [7]

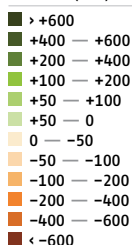
* Gross emissions data, without subtracting carbon sinks.

Climate type	Annual average temperature (°C)	Annual temperature range (°C)	Annual average rainfall (l/m ²)	Annual rainy days	Months within dry period	Days with frosts	Days with snowfall
1. Oceanic Mediterranean	17–19	10–16	500–700	75–85	4–5	Free	Free
2. Continental Mediterranean	17–18	18–20	500–700	75–100	4–5	2–20	Exceptional
3. Semi-arid Mediterranean	16–17	18–20	600–800	75–100	3–4	20–40	1–5
4. Subtropical Mediterranean	17–19	13–15	400–900	50–75	4–5	Free	Exceptional
5. Subdesertic Mediterranean	17–21	13–16	< 300	< 50	6–8	0–10	Exceptional
6. Continental Mediterranean	13–15	17–20	300–600	60–80	4–5	30–60	2–6
7. Mountain Mediterranean	12–15	16–20	400–1,000	60–100	3–4	30–90	2–30

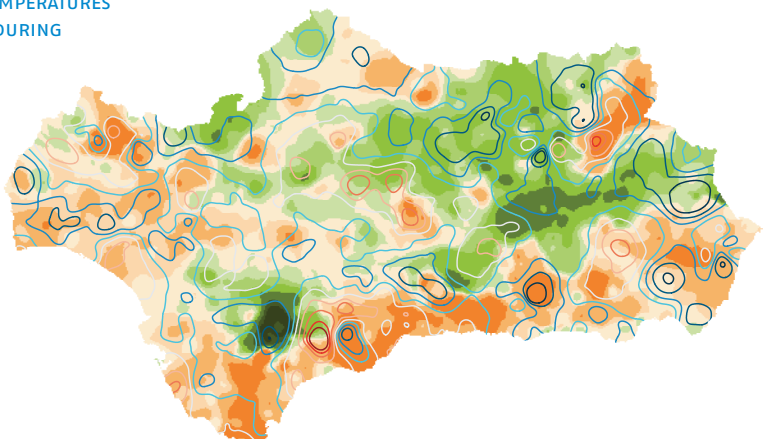
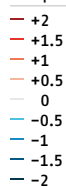
TOTAL RAINFALL DEVIATIONS AND AVERAGE TEMPERATURES IN 2013 COMPARED TO THE AVERAGE VALUES DURING THE PERIOD 1971–2000 IN ÁNDALUSIA [8]



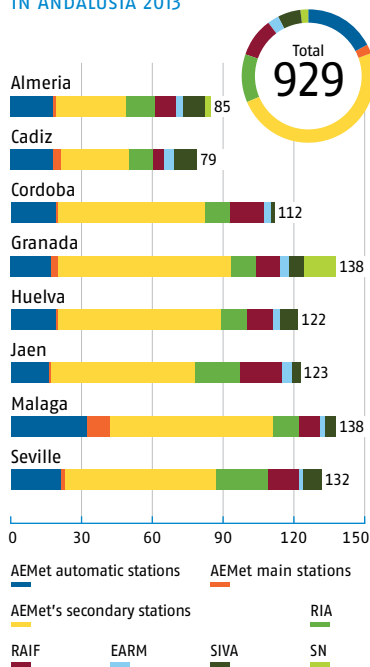
Rainfall (mm)



Temperature °C

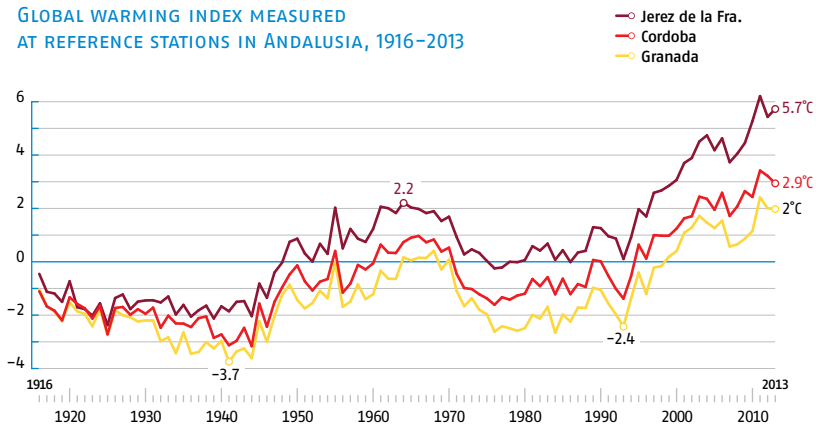


OPERATIONAL METEOROLOGICAL STATIONS IN ANDALUSIA 2013



AEMet: Spanish Meteorological Agency;
 RIA: Agroclimatic Information Network;
 RAIF: Phytosanitary information and alert network;
 SIVA: Surveillance of Air Quality Network;
 EARM: Support network for the INFOCA Plan;
 SN: Sierra Nevada Station Network.

GLOBAL WARMING INDEX MEASURED AT REFERENCE STATIONS IN ANDALUSIA, 1916-2013

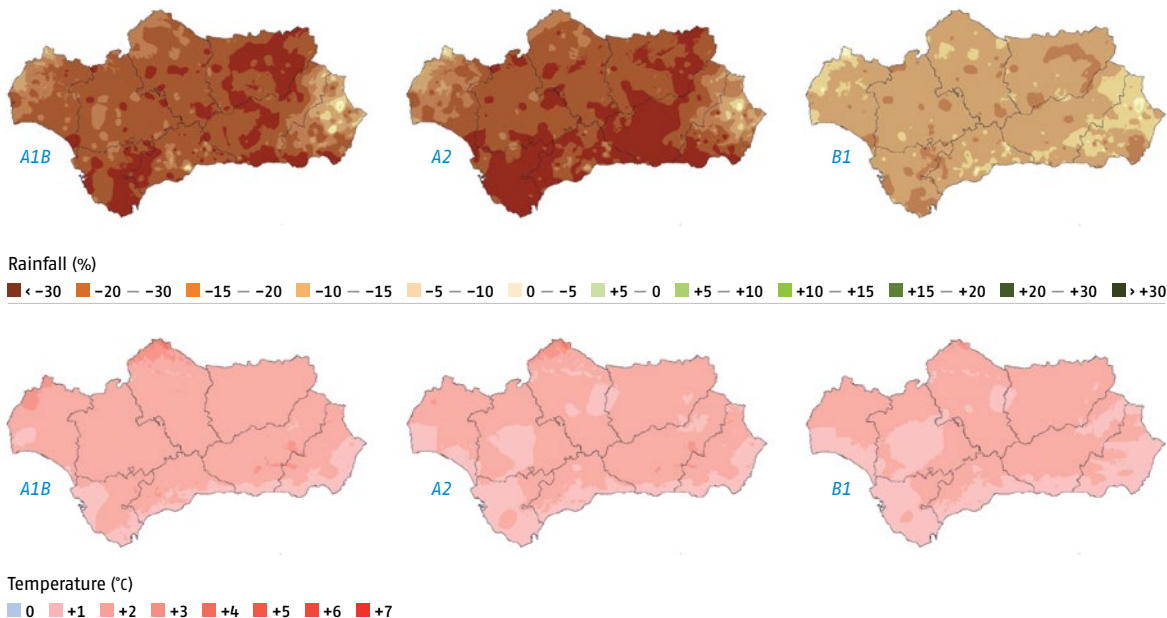


COMPARISON OF THE EVOLUTION OF GREENHOUSE GASES (GHG) BETWEEN SPAIN AND ANDALUSIA [7]

	1990	2005	2009	2010	2011
Andalusia (ktCO ₂ eq) (1)	36,466	65,158	55,485	54,323	53,762
Spain (ktCO ₂ eq) (1)	282,789	432,834	362,713	348,641	350,484
Andalusia per inhabitant (tCO ₂ eq/inhab)	5.25	8.30	6.68	6.49	6.38
Spain per inhabitant (tCO ₂ eq/inhab)	7.27	9.81	7.76	7.41	7.43
Industrial Sector in Andalusia (ktCO ₂ eq) (2)	--	32,346	25,645	23,543	23,999
Diffuse Sector in Andalusia (ktCO ₂ eq)	--	32,812	29,840	30,780	29,763

(1) Gross emissions data, without subtracting carbon sinks. (2) Industrial sector refers to facilities of the European Union Emissions Trading System (EU ETS). Cells with no data available are set as: "--".

CLIMATE SCENARIOS IN ANDALUSIA: FORESEEN VARIATIONS FOR THE 2041-2070 PERIOD WITH REGARD TO HISTORICAL SERIES



The A1B scenario describes a world characterised by a fast economic growth, based on the balanced use of different energy sources and in which regions progressively converge. The A2 scenario describes a more heterogeneous world characterised by self-sufficiency and by the preservation of local identities. The B1 scenario describes a converging world that advances towards economic, social and environmental sustainability, without additional climate-related measures.

Terrain and soil

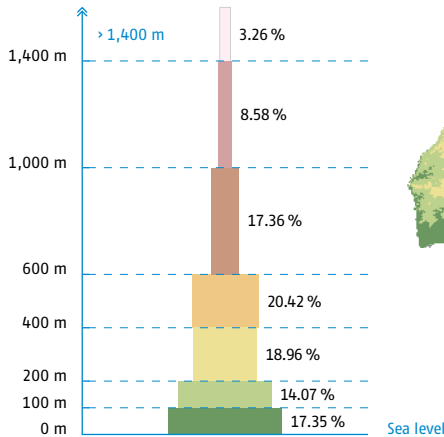
The annual monitorization of soil loss in Andalusia allows to conduct spatio-temporal analysis and environmental risk modelling, based on baseline information surveys related to vegetation cover and climate characterisation. In 2012 soil loss dropped for Andalusia as a whole and the provinces of Málaga and Cádiz recorded the highest soil loss percentage.

PERCENTAGE OF THE EXTENSION OF ANDALUSIA AFFECTED BY A HIGH OR VERY HIGH SOIL EROSION IN 2012

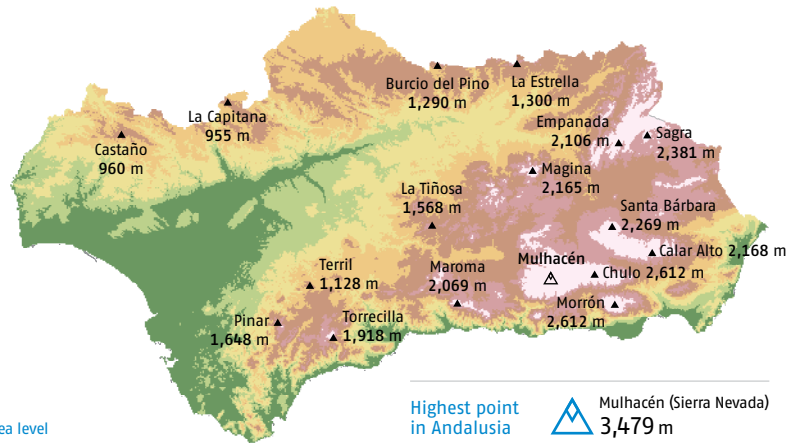
10.50 %

12.80 % average for the period 1992-2011

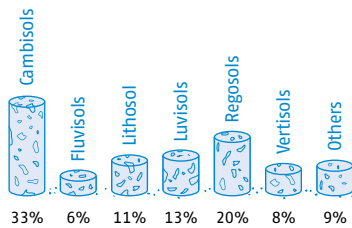
SURFACE AREA OF ANDALUSIA ACCORDING TO ALTITUDE [3]



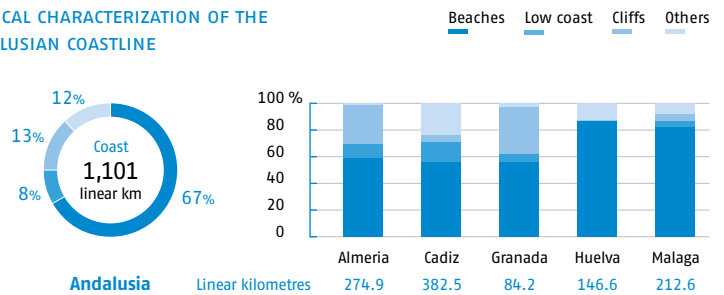
HYPSEMOMETRY [3]



CHARACTERIZATION OF SOILS IN ANDALUSIA

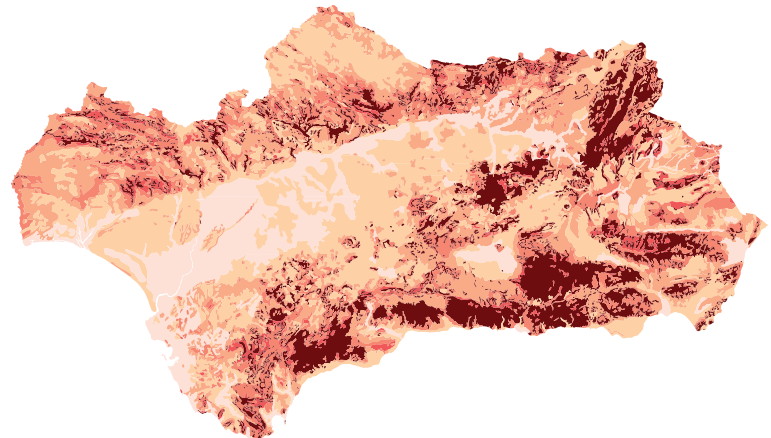


PHYSICAL CHARACTERIZATION OF THE ANDALUSIAN COASTLINE

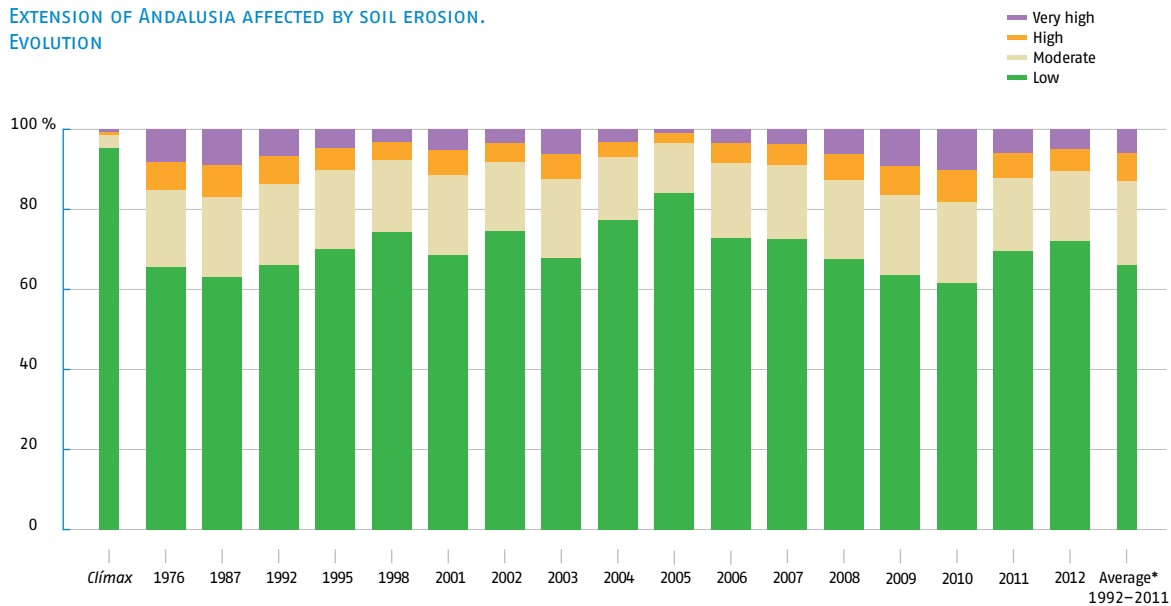


SLOPES [3]

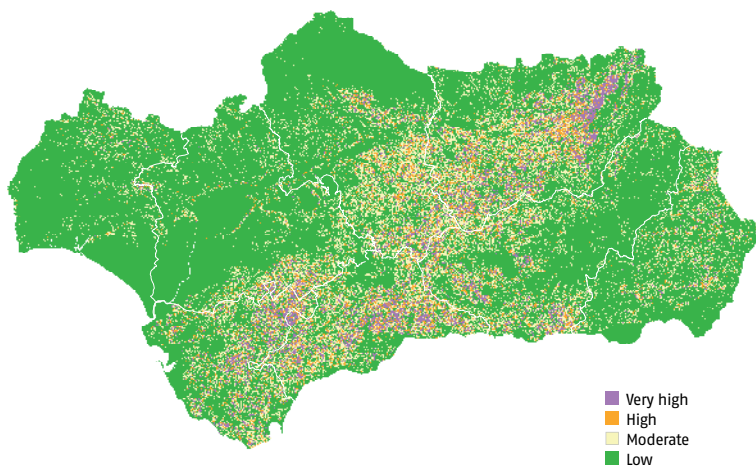
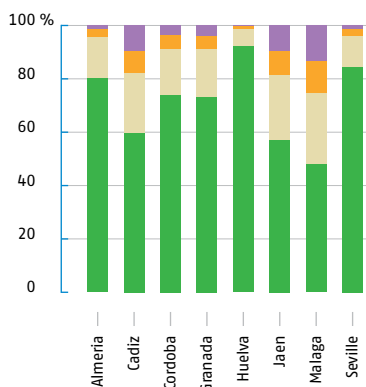
Slopes	Surface in Andalusia %
0 — 2%	13.3
2 — 7%	27.2
7 — 15%	24.2
15 — 30%	15.7
30 — 45%	3.1
> 45%	16.5



EXTENSION OF ANDALUSIA AFFECTED BY SOIL EROSION. EVOLUTION



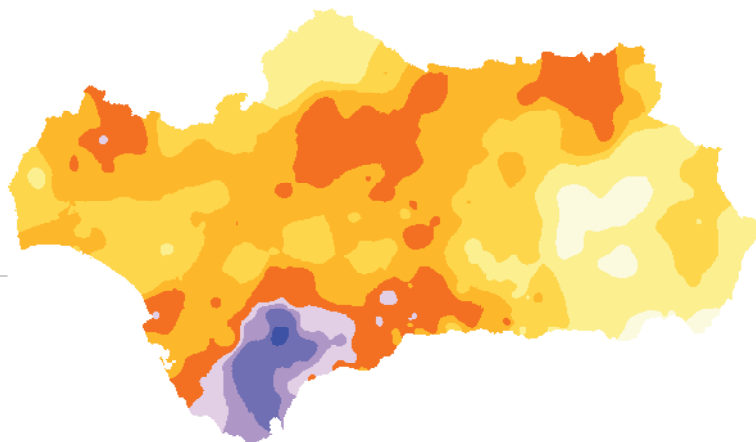
SOIL LOSS IN ANDALUSIA 2012



EROSIVITY IN ANDALUSIA 2012

Mj × mm / ha × hr × year

- 0 — 250
- 250 — 500
- 500 — 750
- 750 — 1,000
- 1,000 — 1,500
- 1,500 — 2,000
- 2,000 — 3,000
- 3,000 — 5,000
- > 5,000



Erosivity regional average in Andalusia 2012

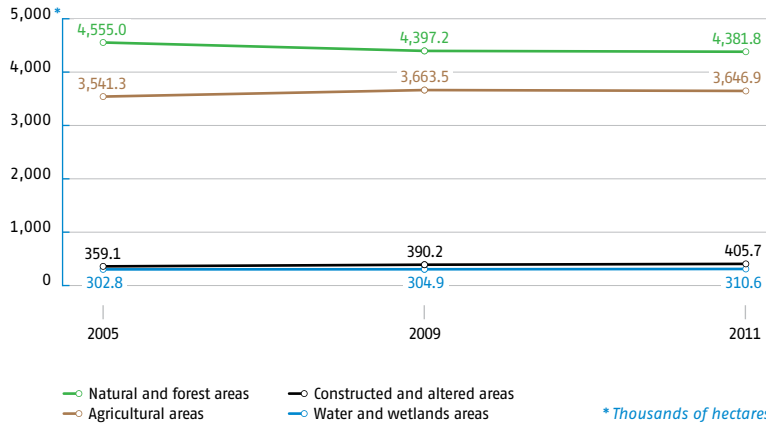
887.41 Mj × mm / ha × hr × year

Rain erosivity level are measured in: $\frac{\text{(megajoule} \times \text{millimetre)}}{\text{(hectare} \times \text{hour} \times \text{year)}}$

Vegetation and land cover

Environmental indicators are developed for monitoring the state of vegetation, enabling the characterization of phenomena such as drought and hydrological stress situations. Moreover, land cover monitoring in Andalusia is conducted on the basis of the current edition of the Spanish Land Cover Information System (SIOSE by its acronym in Spanish) updated in 2011, which keeps a detailed scale level 1:10,000.

LANDCOVER EVOLUTION IN ANDALUSIA¹



NATURAL AND FOREST AREAS¹

43,852.83 km²

Main land cover in Andalusia 2011:
50.1 % on regional surface

REGIONAL TERRITORY WITH STRESSED AND NON STRESSED VEGETATION. HYDROLOGICAL PERIOD 2012-2013²

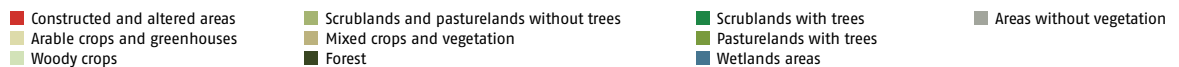
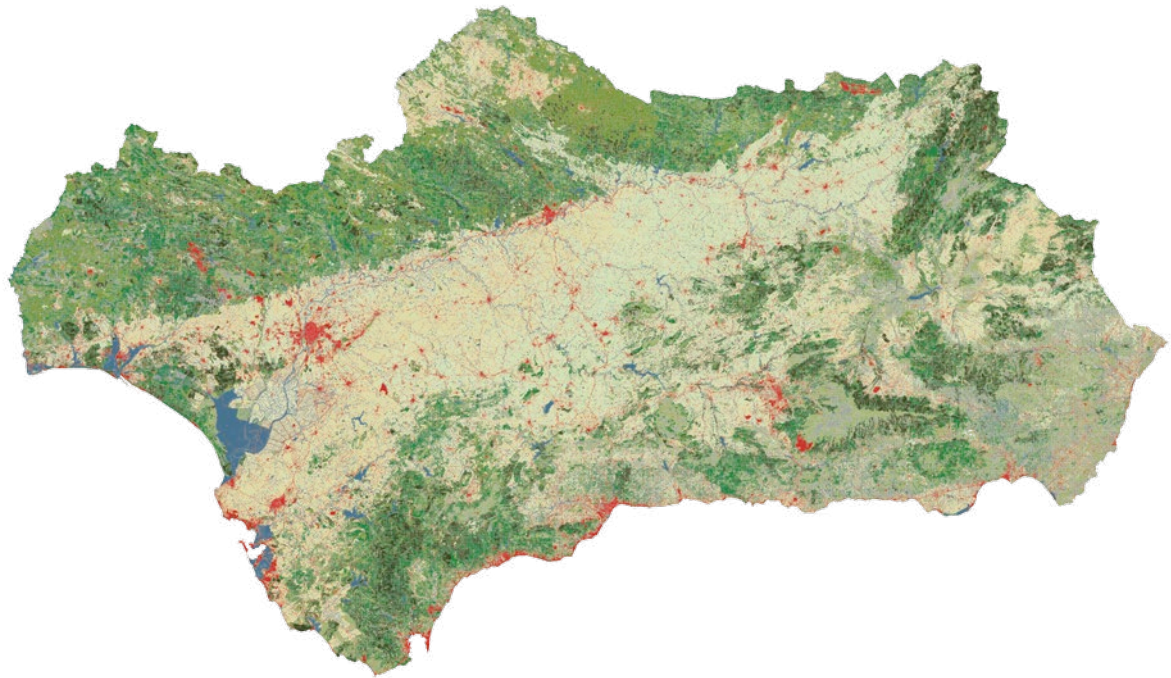
9 %

36 % historical series average value (1992-2013)

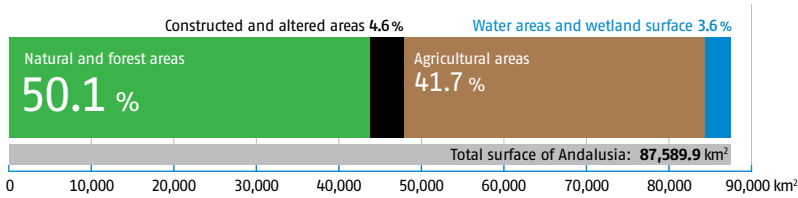
1. Information obtained from the mapping database of SIOSE-Andalusia project (Spanish Land Cover Information System).

2. Percentage of stressed vegetation obtained from the TERRA MODIS images on NDVI (Normalize Difference Vegetation Index).

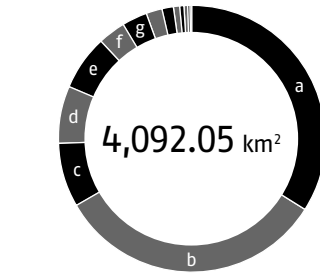
LANDCOVER MAP 2011



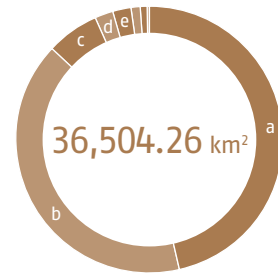
GENERAL DISTRIBUTION OF LAND COVER 2011¹



■ Natural and forest areas		%
a. Scrublands with trees	24.0	
b. Scrublands	22.7	
c. Pasturelands with trees	18.5	
d. Pasturelands	8.9	
e. Coniferous forest	7.4	
f. Quercinae forest	5.9	
g. Scrublands and mixed trees	2.9	
h. Mixed crops and vegetation	2.1	
i. Bare soil	2.1	
j. Mixed forest	1.5	
k. Eucalyptus forest	0.9	
l. Unstructured soil	0.9	
m. Pasturelands and mixed trees	0.8	
n. Firewall	0.5	
o. Other broad-leaved trees forest	0.4	
p. Burnt areas	0.3	
q. Beaches, dunes, sands and cliffs	0.1	



■ Constructed and altered areas		%
a. Road and rail networks	34.1	
b. Mixed urban land	32.7	
c. Industrial areas	7.8	
d. Mine sites	7.1	
e. Agricultural and livestock farming facilities	6.7	
f. Office, service and commercial areas	3.2	
g. Leisure, cultural and sport facilities	3.0	
h. energy infrastructures	2.1	
i. Green urban areas	1.4	
j. Dump sites	0.7	
k. Airports	0.5	
l. Other technical infrastructures	0.5	
m. Ports	0.2	
n. Forestry facilities	0.1	

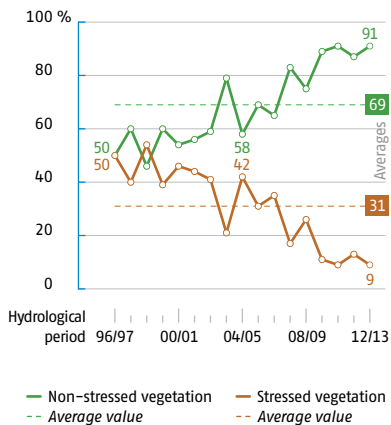


■ Agricultural areas		%
a. Arable crops	46.4	
b. Olive groves	40.5	
c. Fruit trees	6.5	
d. Citrus trees	2.2	
e. Mixed crops and vegetation	2.1	
f. Greenhouses	1.2	
g. Vineyards	0.9	
h. Woody crops	0.1	

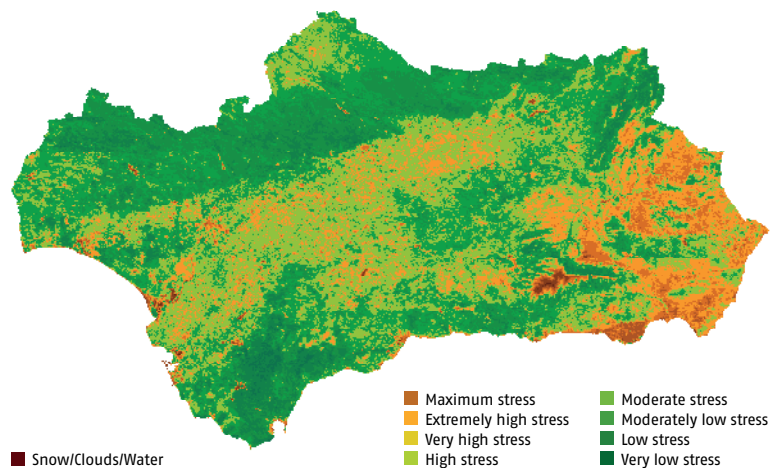


■ Water and wetland areas		%
a. Rivers and water courses with and without vegetation	48.7	
b. Artificial wetlands	29.6	
c. Other natural wetlands	21.7	

REGIONAL TERRITORY WITH STRESSED AND NON STRESSED VEGETATION



AVERAGE VEGETATION INDEX. HYDROLOGICAL PERIOD 2012–2013

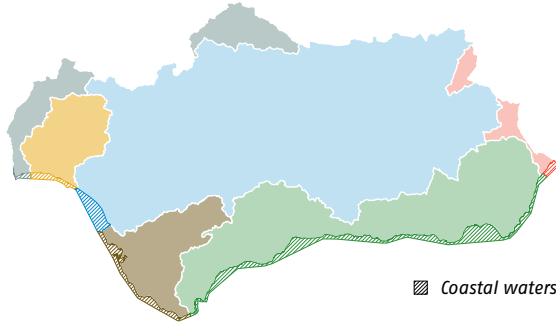


Water

The hydrological period 2012–2013 ended with reservoirs at 77.3% of their capacity, a total of 9,216 hm³ of dammed water. During 2012 the waste water treatment capacity of Andalusian municipalities continued to follow a positive trend, however a population of over 2 million inhabitants equivalent didn't have access to water treatment systems.

RIVER BASIN DISTRICTS

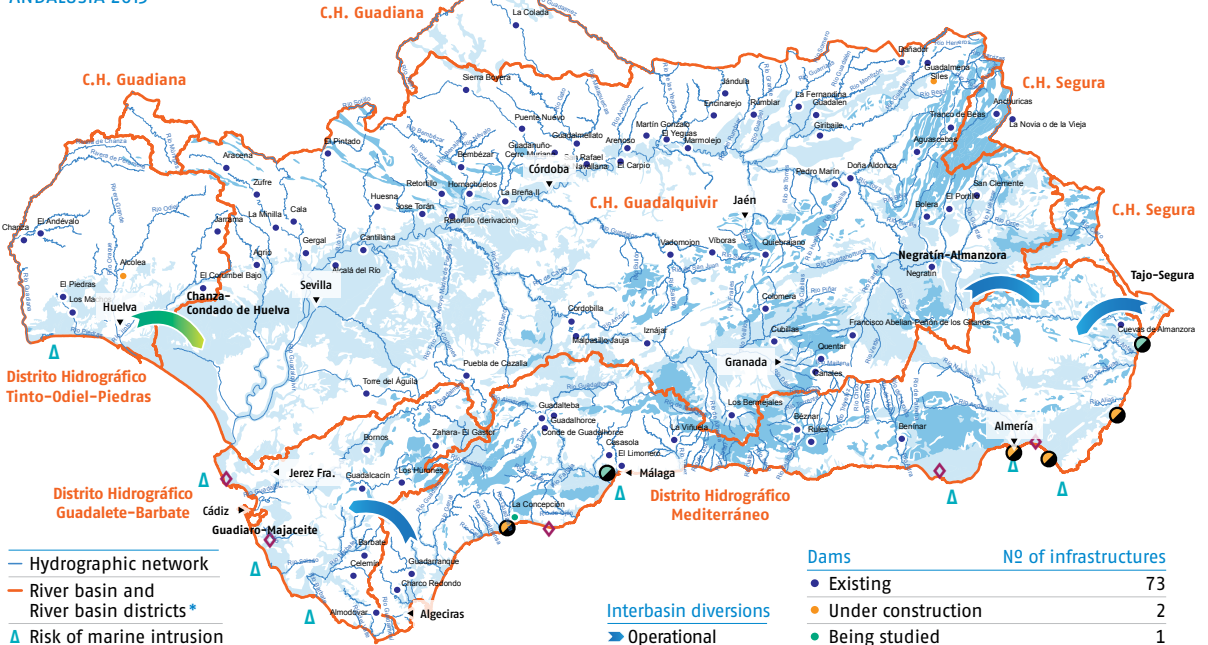
According to the Water Framework Directive (Directive 2000/60/CE) river basin districts are defined as the area of land and sea, made up of one or more neighbouring river basins together with their associated groundwaters and coastal waters, which is identified under Article 3 (1) as the main unit for management of river basins.



River basin districts

River basin districts	Land area in Andalusia
Spanish part of the Guadiana RBD	5,600 Km ²
Tinto-Odiel-Piedras RBD	4,700 Km ²
Guadalquivir RBD	51,500 Km ²
Guadalete-Barbate RBD	6,000 Km ²
Andalusian Mediterranean RBD	18,000 Km ²
Segura RBD	1,800 Km ²

WATER RESOURCES IN ANDALUSIA 2013



- Hydrographic network
- River basin and River basin districts*
- ▲ Risk of marine intrusion

* In this map both, river basins and river basin districts limits, are represented. The Junta de Andalucía is responsible of water management in river basin districts, whereas river basins are managed by each basin body dependent on the State General Administration.

WATER BALANCE IN ANDALUSIA 2013

-717 hm³

5,464 hm³ of water resources
6,181 hm³ of water demand

STATE OF THE URBAN WASTE WATER TREATMENT PLANTS IN ANDALUSIA 2012

81.03 % operative

11,919,300 inhab/eq of equivalent load

BLUE FLAGS GRANTED TO ANDALUSIAN BEACHES 2013

78

COASTAL BATHING WATER QUALITY 2013

94.4 % are of excellent quality

Dams	Nº of infrastructures
● Existing	73
● Under construction	2
● Being studied	1
Non conventional resources	
● Debrining plants	2
● Desalination plants	4
◆ Wastewater treatment plant with reuse	5

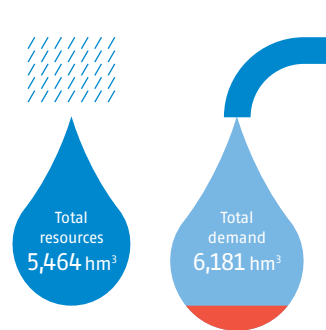
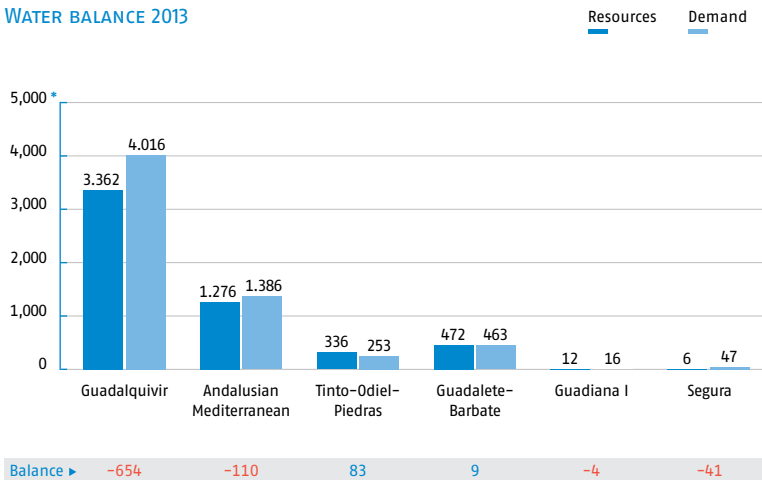
Interbasin diversions

- ▶ Operational
- ▶ In project

Aquifers

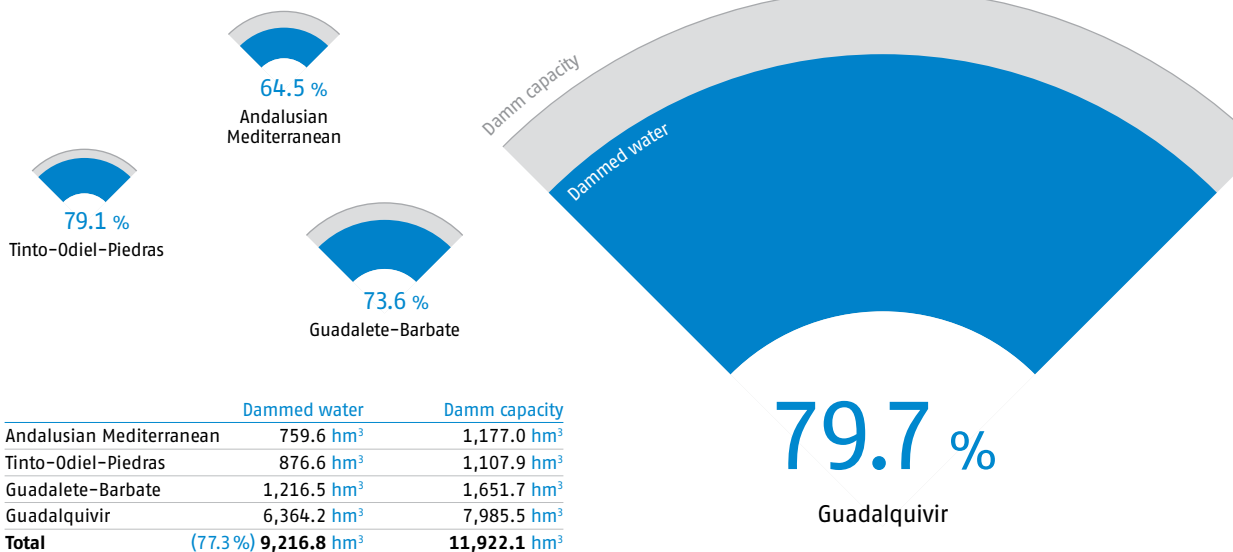
- Detritic
- Carbonated

WATER BALANCE 2013

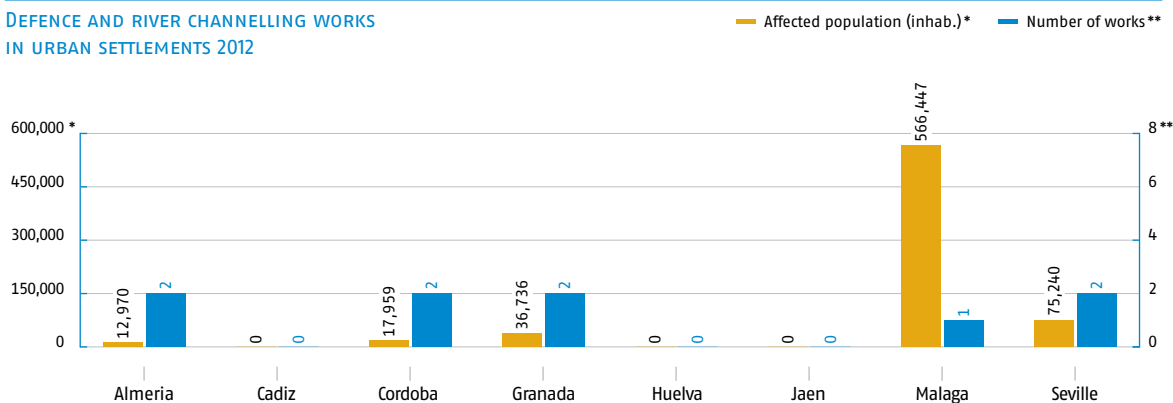


Andalusia
-717 hm³

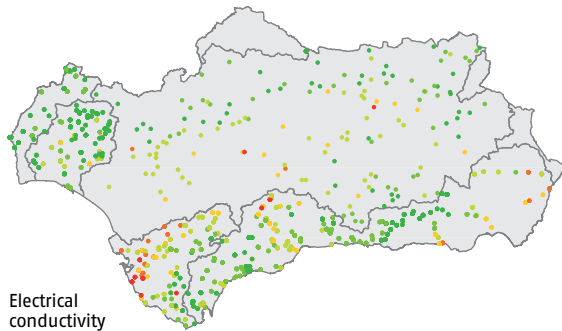
DAMMED WATER IN ANDALUSIA PER RIVER BASIN AND RIVER BASIN DISTRICTS 2013



DEFENCE AND RIVER CHANNELLING WORKS IN URBAN SETTLEMENTS 2012



QUALITY OF SURFACE WATERS IN ANDALUSIA



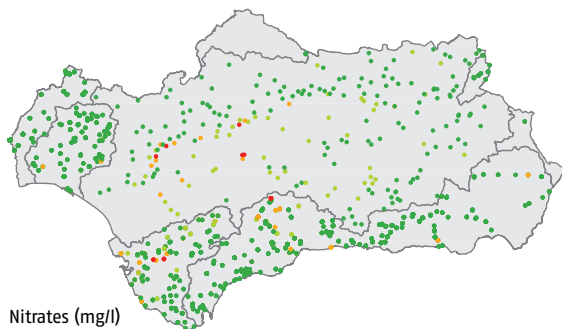
Electrical conductivity at 20°C (µS/cm)

- < 400
- 400 — 800
- 801 — 2,000
- 2,001 — 4,000
- 4,001 — 8,000
- > 8,000



BOD (mg/l O₂)

- < 3
- 3 — 10
- 11 — 30
- 31 — 120
- > 120



Nitrates (mg/l)

- < 15
- 15 — 25
- 26 — 50
- > 50

Measurements carried out in 2013, except for the Guadalquivir basin where data are only available for 2010.

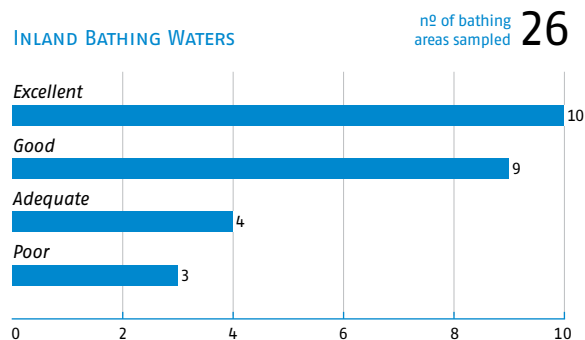
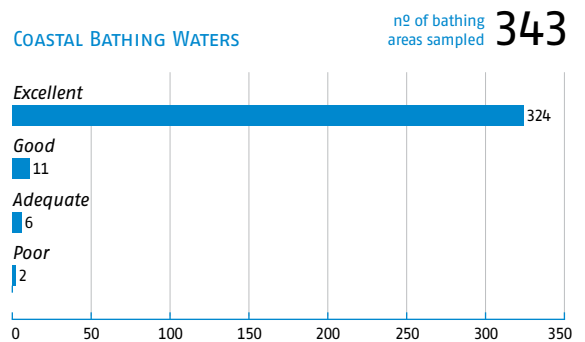
URBAN WASTE WATER TREATMENT PLANTS IN ANDALUSIA, 2012

Provinces	Under construction		Operative	
	Number	eq. load	Number	eq. load
Almeria	1	1,342	135	1,026,256
Cadiz	3	55,748	71	1,918,439
Cordoba	2	17,137	45	1,129,060
Granada	6	21,137	84	977,117
Huelva	7	115,867	64	782,660
Jaen	5	147,438	80	733,816
Malaga	3	15,294	81	2,507,352
Seville	6	65,550	55	2,844,600
Andalusia	33	439,513	615	11,919,300

The term Equivalent load refers to the theoretical number of persons who would generate a wastewater volume equal to adding up the amount produced by the population, the industry, agricultural and livestock activities.

The data included in this chart indicates the number of waste water treatment plants (WWTP) either under construction or operational in each one of the urban agglomerations in Andalusia, updated according to the Andalusian Water Purification Strategy 2010-2015.

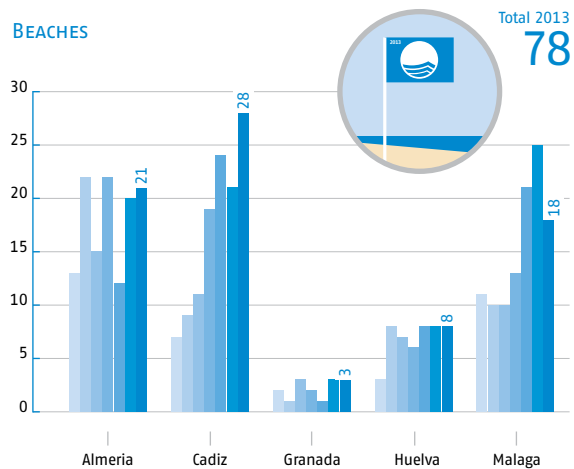
BATHING WATER QUALITY IN ANDALUSIA 2013 [9]



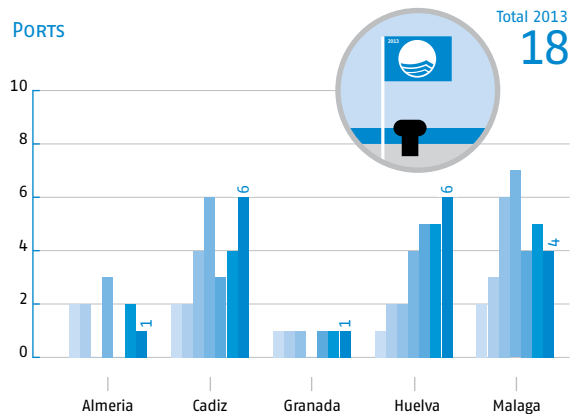
BLUE FLAGS GRANTED TO ANDALUSIA [10]

1993 1995 2000 2005 2010
2012 2013

BEACHES

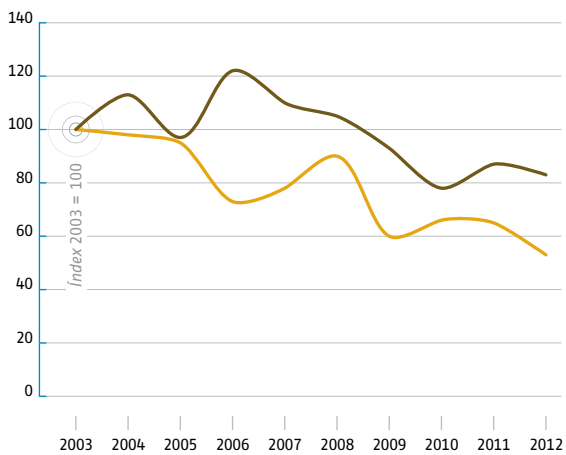


PORTS

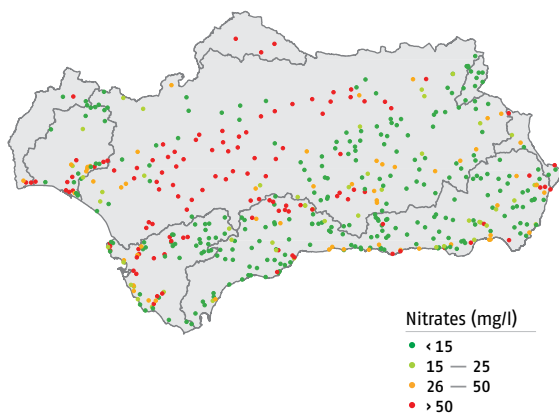
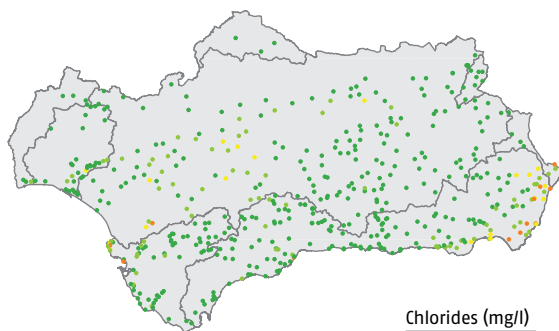
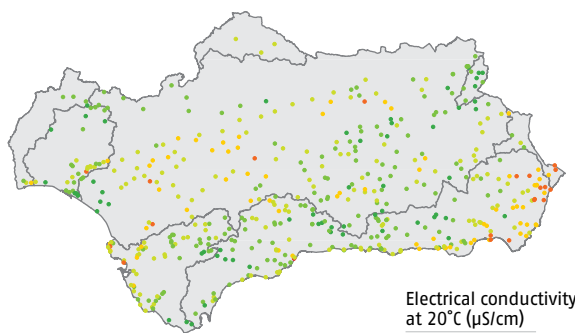


POLLUTION DISCHARGED ALONG THE ANDALUSIAN COASTLINE

Type of effluents
— Urban
— Industrial



GROUNDWATER QUALITY IN ANDALUSIA



Measurements carried out in 2013, except for the Guadalquivir basin where data are only available for 2010.



Natura 2000 Network



Protected natural areas

Andalusia has an extensive protected natural areas network called RENPA (by its acronym in Spanish), it includes protection designations at regional, national, european (through Natura 2000 Network) and international level. In 2013, the zoning for the Biosphere Reserves of Doñana and Sierra Nevada were updated.

Natura 2000 Network

In 2013 the natural reserve Laguna de Fuente de Piedra was declared special area of conservation, furthermore its *Natural Resources Management Plan* was approved.

SPECIES OF COMMUNITY INTEREST* IN ANDALUSIA

96

172 species in Spain

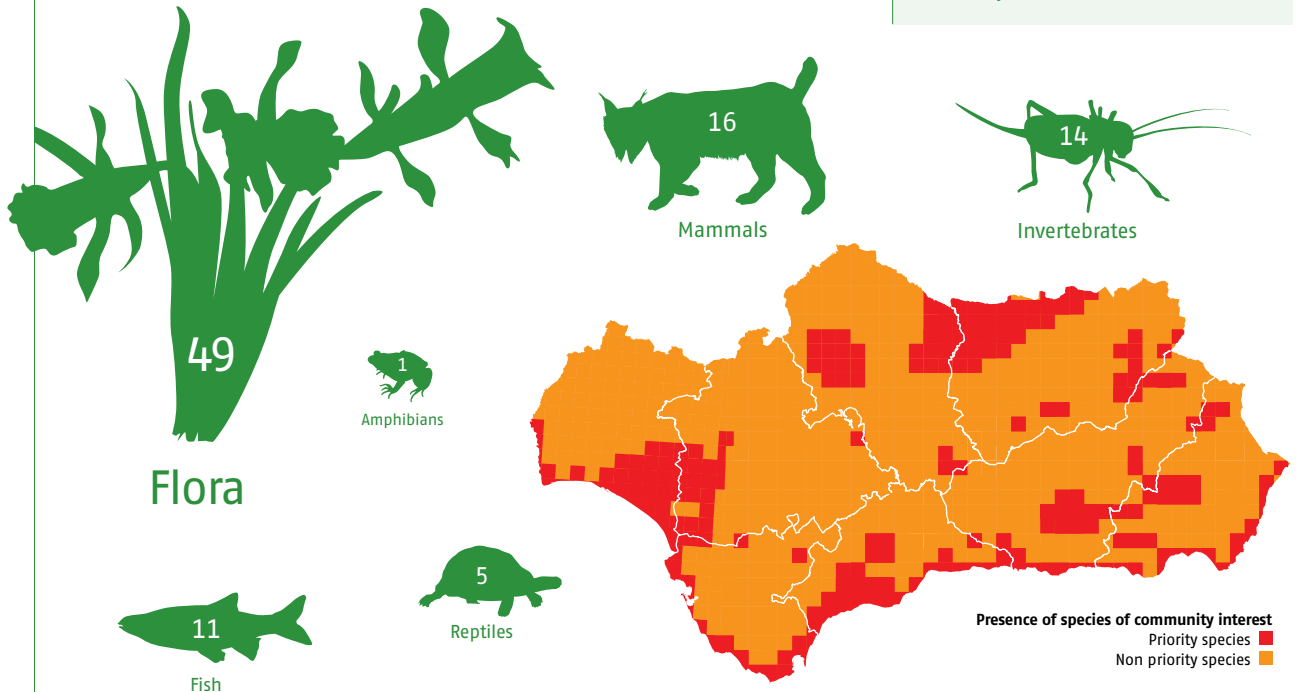
CATTLE TRACKS MARKING IN ANDALUSIA 2013

8,875 Km

Classified cattle tracks 34,045 km

* Flora and fauna taxa.

SPECIES OF COMMUNITY INTEREST IN ANDALUSIA*



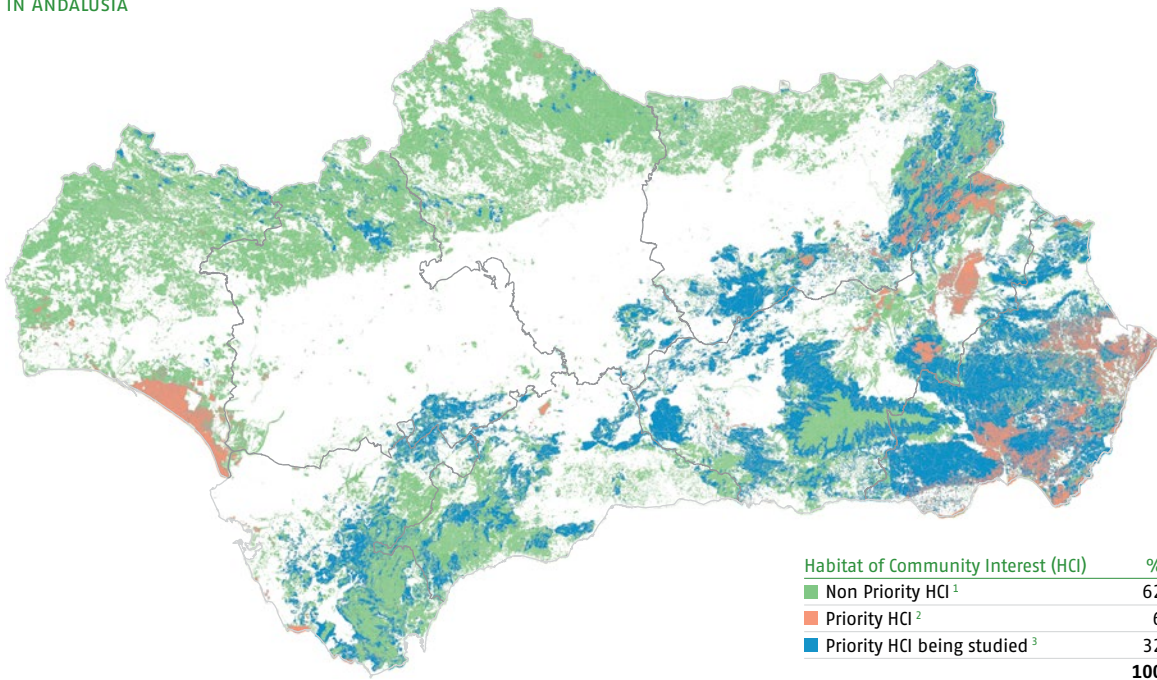
Presence of species of community interest
 Priority species ■
 Non priority species ■

Groups	■ Priority species			■ Non priority species			■ Total species		
	Andalusia	**	Spain	Andalusia	**	Spain	Andalusia	**	Spain
Flora	18	56 %	32	31	45 %	69	49	49 %	101
Invertebrates	1	33 %	3	13	65 %	20	14	61 %	23
Fish	1	50 %	2	10	71 %	14	11	69 %	16
Amphibians	0	0 %	1	1	50 %	2	1	33 %	3
Reptiles	1	100 %	1	4	50 %	8	5	56 %	9
Mammals	3	75 %	4	81	75 %	16	16	80 %	20
Totales	24	56 %	43	72	56 %	129	96	56 %	172

* Flora and fauna taxa.

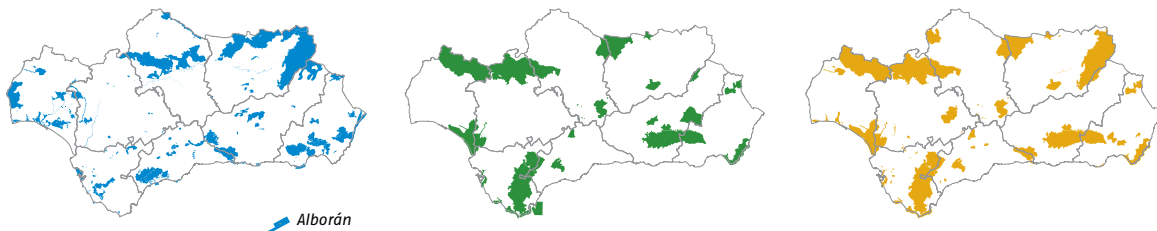
** Percentage of Andalusia based on the species present in Spain.

HABITATS OF COMMUNITY INTEREST IN ANDALUSIA



1. Surface with any priority HCI present.
2. Surface with at least one priority HCI present.
3. Surface which accounts for the habitat 6220 (Pseudo-steppe with grasses and annuals (Thero-Brachypodietea), its priority status is currently being studied.

NATURA 2000 SITES IN ANDALUSIA

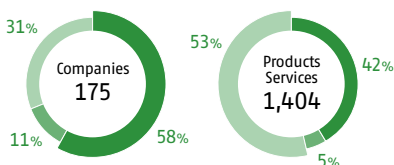


Designation	Number	Surface (ha)
■ SCI Sites of Community Importance	189	■ 2,583,608.0
■ SPA Special Protection Areas	24	■ 1,343,630.5
■ SAC Special Areas of Conservation	63	■ 1,644,320.3

Natural protected areas

According to the *Decreto (Decree) 95/2003 of April 8th*, the RENPA is an integrated and unitary system for all Andalusian protected areas under special protection in accordance to the regional, national and community legislations or international conventions and regulations.

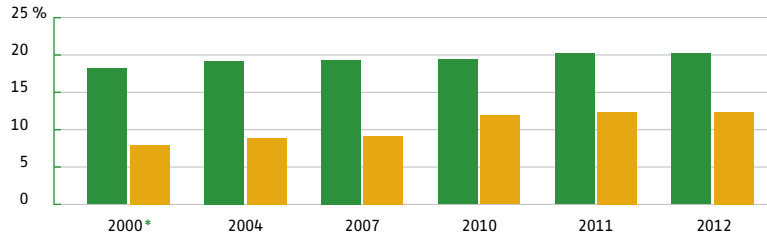
NATURAL PARK OF ANDALUSIA BRAND 2013



Activity sectors	Companies	*
■ Nature tourism	102	583
■ Natural product	19	72
■ Craftwork	54	749
Total	175	1,404

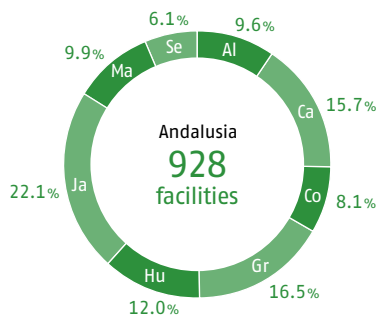
* Number of products or services.

EXTENSION OF PROTECTED TERRITORY IN ANDALUSIA AND SPAIN [7]



*Natura 2000 Network areas have not been included. For Andalusia, declared Sites of Community Interest (SPA+SAC) have been included. Data for Spain dates from 2001. The data for Spain has been provided by the Public Bank of Environmental Indicators as well as from the Environmental Profile of Spain 2012.

PUBLIC USE FACILITIES IN PROTECTED NATURAL AREAS 2013



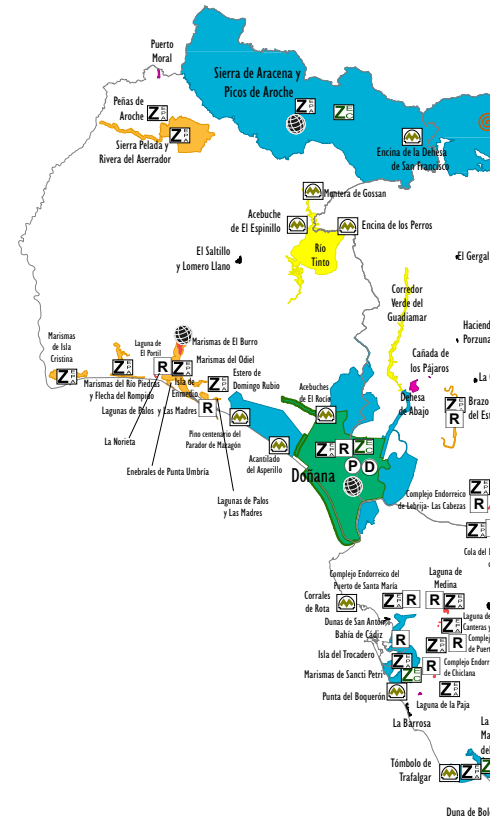
Provinces	Number of facilities
Almería	89
Cádiz	146
Córdoba	75
Granada	153
Huelva	111
Jaén	205
Malaga	92
Seville	57
Andalusia	928

Typology	Type of facilities	Number
Educational activities	Nature workshop	10
Aids to recreation	Camping site	9
	Mountain Hotel	6
	Recreational area	126
	Rural house	8
Sightseeing of natural landscapes	Viewpoint	173
Information	Visitors' centre	38
	Information point	29
Specialised environmental interpreting	Ecomuseum	5
	Botanical garden	12
Observation of wild fauna	Public use observatory	65
	Wild fauna park	2
Protection / shelter overnight stays	Refuge	8
	Bivouac shelter	5
	Controlled camping area	21
Interpreting routes	Cycle lane and cyclotourism routes*	29
	Signalled path	366
Others	Camping areas, craft houses, bar-restaurant stands and scientific observatorio**	16
Total		928

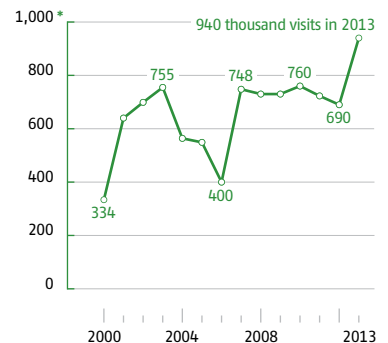
*12 facilities and 18 cycle routes.

**3 camping areas; 1 craft house; 5 bar-restaurant stands and 7 scientific observatories.

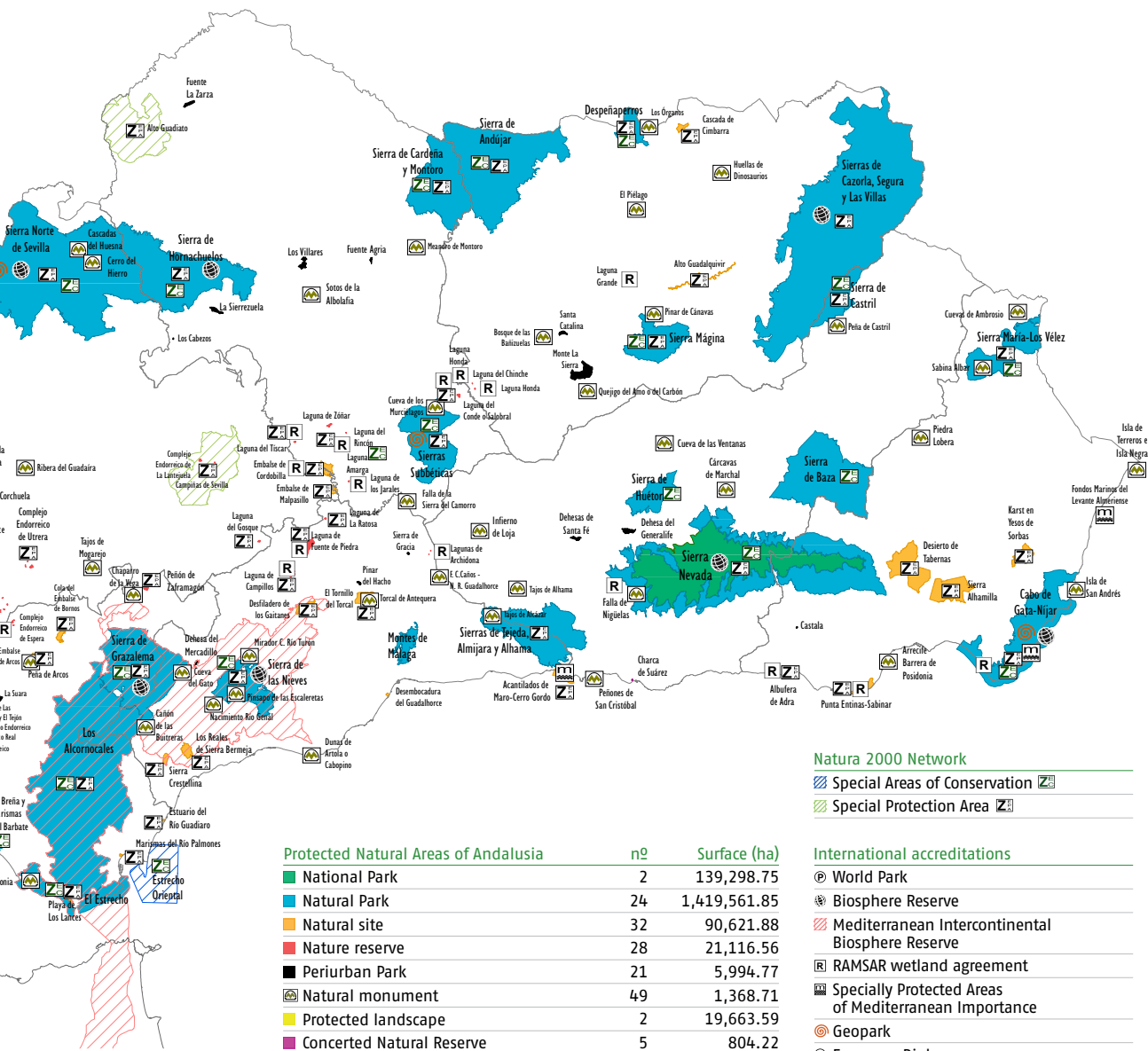
PROTECTED NATURAL AREAS NETWORK OF ANDALUSIA 2013



EVOLUTION OF THE NUMBER OF VISITS TO RECEPTION AND INFORMATION FACILITIES 2000-2013



*Thousands of visits.



Protected Natural Areas of Andalusia	nº	Surface (ha)
National Park	2	139,298.75
Natural Park	24	1,419,561.85
Natural site	32	90,621.88
Nature reserve	28	21,116.56
Periurban Park	21	5,994.77
Natural monument	49	1,368.71
Protected landscape	2	19,663.59
Concerted Natural Reserve	5	804.22

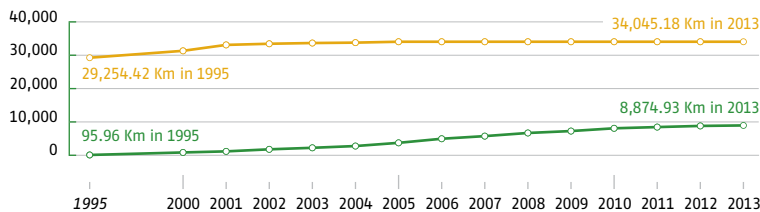
Natura 2000 Network

- Special Areas of Conservation
- Special Protection Area

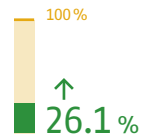
International accreditations

- World Park
- Biosphere Reserve
- Mediterranean Intercontinental Biosphere Reserve
- RAMSAR wetland agreement
- Specially Protected Areas of Mediterranean Importance
- Geopark
- European Diploma

CATTLE TRACKS IN ANDALUSIA



Classified length (orange line) Approved boundaries (green line)



Approved boundaries in Andalusia 2013



5,338 Cattle tracks in Andalusia 2013



Forests



Biodiversity and geodiversity



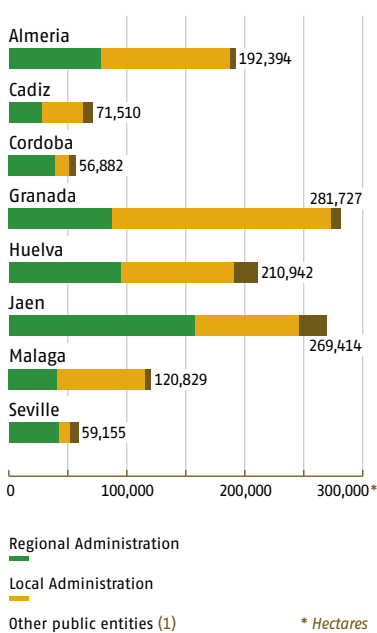
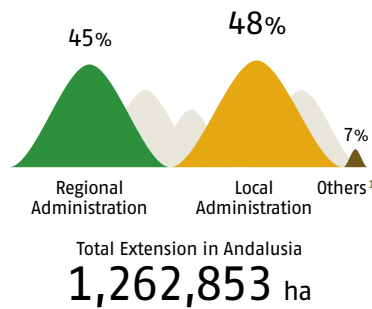
Hunting and Recreational Fishing management

Andalusia's natural heritage is one of the richest, most diverse and valued in Europe. A pro-active approach must be taken to preserve its wide variety of habitats, wild fauna and flora, and cultural landscapes, by providing mitigation measures to cope with impacts caused by human activities, and corrective actions to promote environmentally-beneficial traditional land uses which have gradually been abandoned.

Forests

Forested areas in Andalusia are of great significance because of their large surface and enormous potential in terms of ecological, economical, cultural and social productivity. Hence the importance of ensuring the sustainable management and use of the Andalusian forest heritage and its resources.

OWNERSHIP OF THE PUBLIC FORESTS OF ANDALUSIA 2012



PUBLIC FOREST EXPLOITATIONS IN ANDALUSIA 2013

Type	Amount
Apiculture	30,660 Beehives
Acorn	556.50 Bovine heads
Biomass	273,184.13 t
Cork	6,215,153.63 kg
Manure	120,800.03 kg
Fruit	5,848,321.60 kg
Firewood	36,782,757.50 kg
Wood	357,682.40 m ³
Scrub	3,969,876 kg
Pasture	180,475.82 Bovine heads
Mushrooms, truffles, lichens	150,150.50 kg
Others	72,800 kg

Cork: includes male cork (of poorer quality), "curruca" or winter felling male cork and gentle cork (of a better quality). Fruit: includes wild olive tree fruits, locust beans, almonds, chestnuts, pine cones, acorns and other fruits. Firewood: includes broad-leaved trees, coniferous and other firewoods. Wood: includes broad-leaved trees and coniferous wood. Scrub: includes medicinal, aromatic and ornamental plants, heathers, esparto, retama and other scrubs. Pasture: Includes firewall pastures.

PERCENTAGE OF TREES DAMAGED IN SAMPLED PLOTS* IN ANDALUSIA 2013

14.9 %

16.7 % in Spain

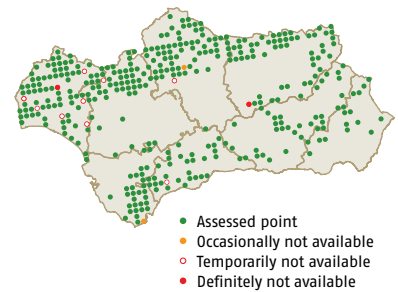
BURNT DOWN FOREST AREA IN ANDALUSIA 2013

2,072 ha

58,985 ha in Spain**

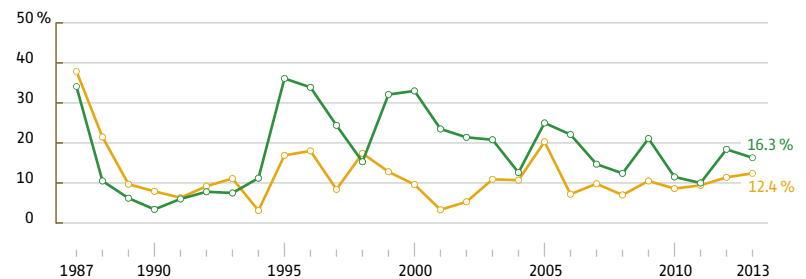
* Trees considered as damaged are those with more than 25% of defoliation, including snags or removed snags.
** Provisional data for 2013 provided by regional governments. Source: MAGRAMA.

LOCATION OF SAMPLE PLOTS OF SEDA NETWORK: CAMPAIGN 2013

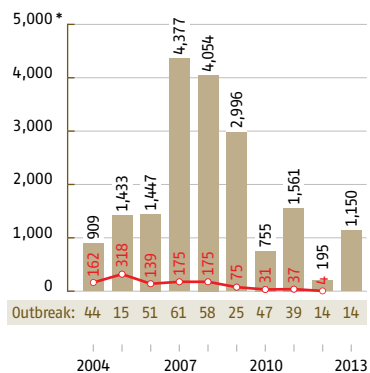


SEDA network: Andalusian network for Damage Monitoring in Forest Ecosystems

PERCENTAGE OF TREES DAMAGED BY PLAGUES BY GROUPS OF SPECIES IN SAMPLED PLOTS [7]



EVOLUTION OF SURFACE AFFECTED BY PINE SHOOT BEETLES, ATTACK INDEX AND NUMBER OF OUTBREAKS

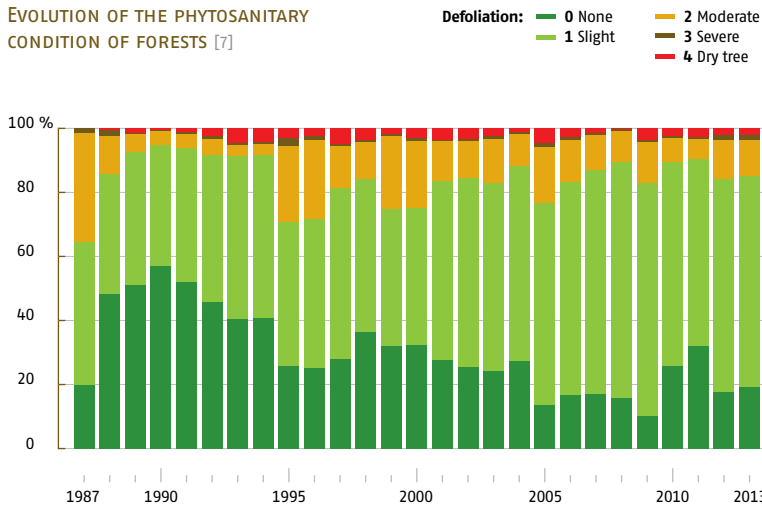


■ Affected surface (ha)*
 ○ Attack index (ha)*

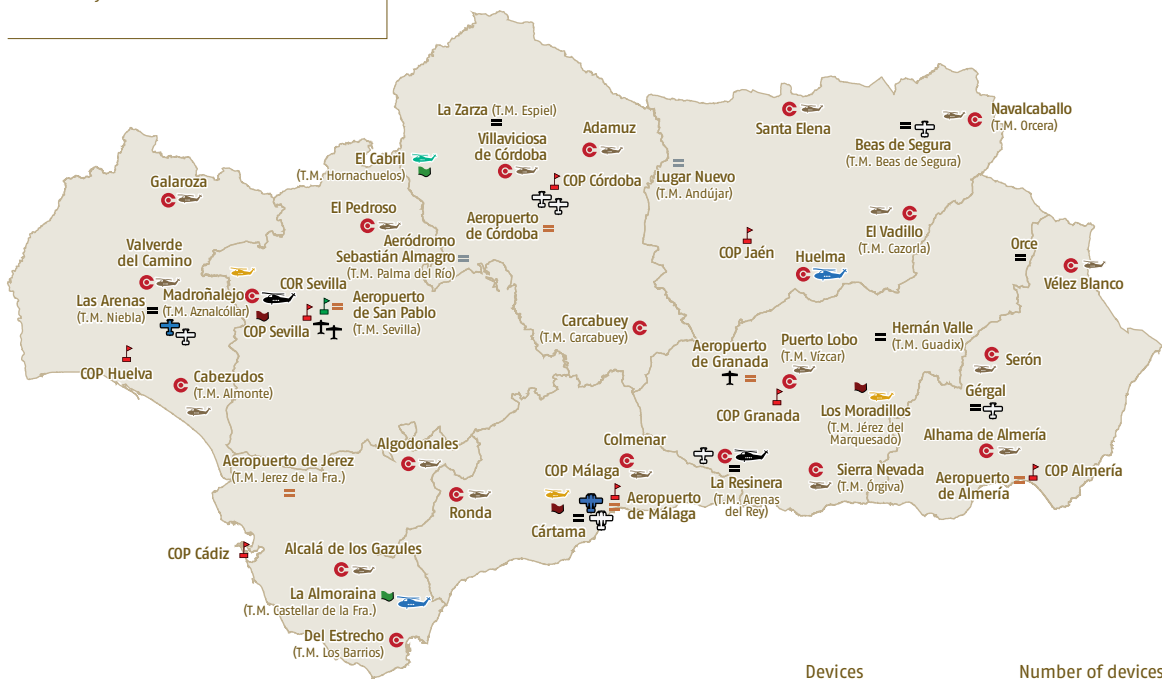
Attack index represents the surface of dead trees directly caused by pine shoot beetles.

Attack index for 2013 is not available.

EVOLUTION OF THE PHYTSANITARY CONDITION OF FORESTS [7]



INFOCA PLAN DEVICES 2013



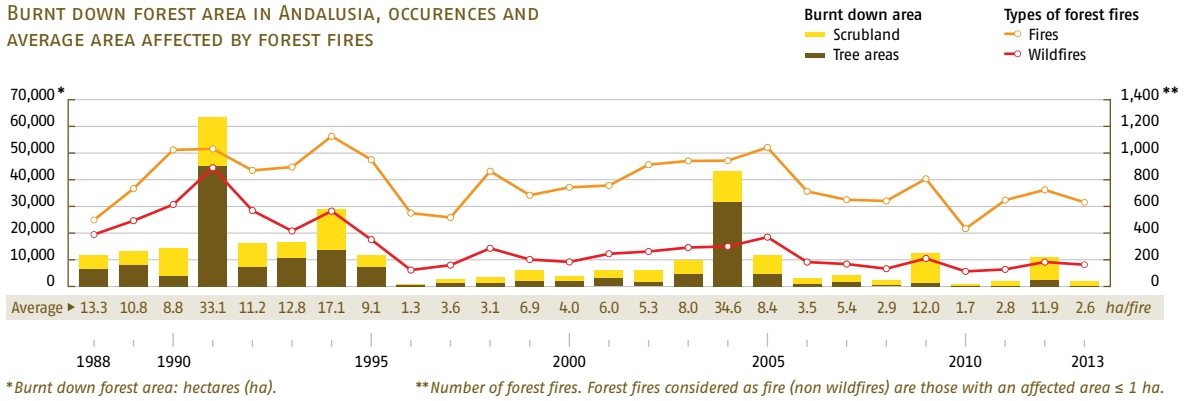
Helicopters	Number of devices
HTER 900 – 1,000 l (litre)	18
HTEB 1,000 – 1,200 l	3
HEP 4,500 l	2
HEP 4,500 l from MAGRAMA	2
HTER 900 l from ENRESA	1

Planes	Number of devices
Amphibious plane 5,500 l	1
Amphibious plane 5,500 l from MAGRAMA	1
Land loaded plane 2,100–3,100 l	6
Land loaded plane " from MAGRAMA	1
Regional coordination and surveillance	3

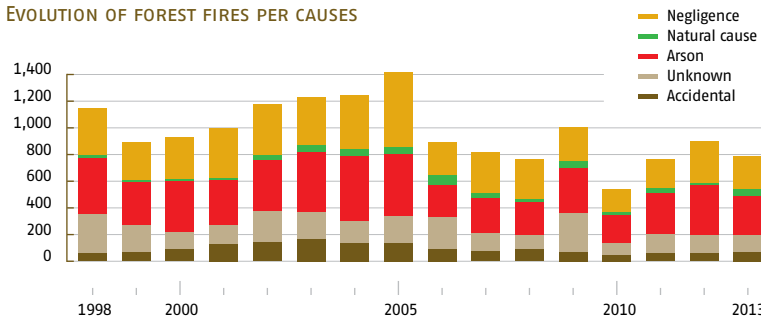
Devices	Number of devices
Forest defence centres	23
Provincial Operational Centres	8
Regional Operational Centres	1
Airfields owned by CMAYOT	7
Other airfields	2
Civil airports	6
Special brigade bases	3
Other support bases MAGRAMA / ENRESA	2

HEP: Heavy firefighting helicopter. HTEB: Helicopter for brigade transport and firefighting. HTER: Helicopter for specialist transport and firefighting. MAGRAMA: Ministry of Agriculture, Food and Environment. CMAYOT: Regional Ministry of Environment and Spatial Planning. ENRESA: National Radioactive Waste Company.

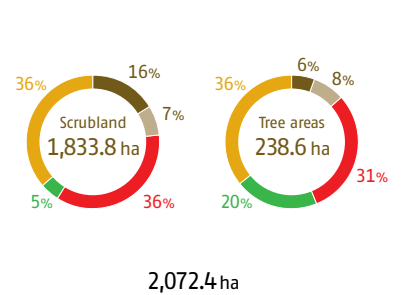
BURNT DOWN FOREST AREA IN ANDALUSIA, OCCURENCES AND AVERAGE AREA AFFECTED BY FOREST FIRES



EVOLUTION OF FOREST FIRES PER CAUSES



BURNT DOWN AREAS PER CAUSES 2013



Biodiversity and geodiversity

Andalusia works intensively for the conservation and recovery of wild fauna and flora. Also geological heritage conservation has been recently included in its nature conservation policy.

Hunting and Recreational Fishing management

Hunting and inland fishing fulfil various functions with economic, social and sportive significance, but it also helps diversify the rural economy. In Andalusia, the management and planning of these activities is based on its policy framework for conservation, management and sustainable exploitation of biodiversity.

ENDANGERED SPECIES OR SPECIES UNDER SPECIAL PROTECTION IN ANDALUSIA 2013

700

GAME PRESERVES IN ANDALUSIA 2013

7,485 Hunting 45 Fishing

FAUNA AND FLORA PRESERVATION AND MANAGEMENT NETWORKS AND FACILITIES 2013

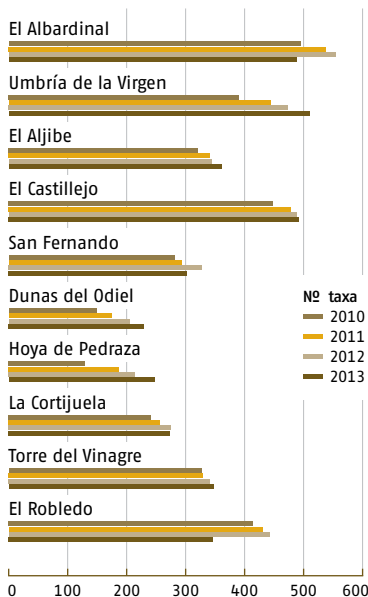
Types of facilities	Number
Nurseries	7
Botanical and Mycological gardens	12
Collections not included in the network	3
Andalusian Plant Germplasm Bank	1
Vegetal Propagation Laboratory	1
Iberian lynx breeding centre	2
Bearded vulture breeding centre	1
Breeding centre for other endangered sp.	3
Hunting reference stations	7
Andalusian network of endangered species recovery centres	8
Total	45



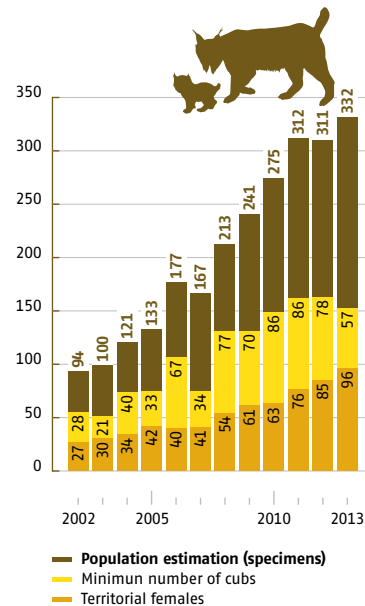
ENDANGERED SPECIES OR SPECIES UNDER SPECIAL PROTECTION IN ANDALUSIA

		Fungus	Flora	Fauna
Andalusian catalogue of endangered species	Extinct	-	5	1
	Endangered	4	64	71
	Vulnerable	4	113	89
	Under special protection	9	96	456
Total number of species		17	278	617

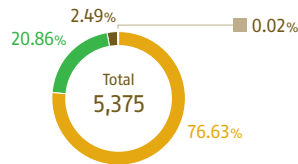
FLORA TAXA PRESENT IN NATURAL AREA BOTANICAL GARDENS



EVOLUTION OF IBERIAN LYNX BREEDING POPULATIONS



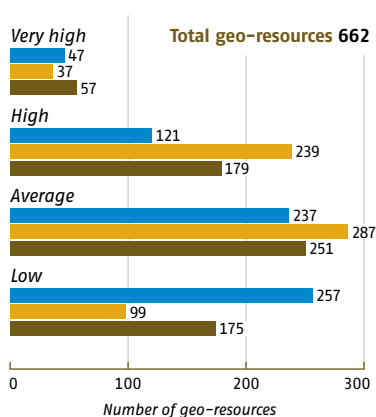
ADMISSIONS IN CREAS¹ NETWORK PER ANIMAL GROUP 2013



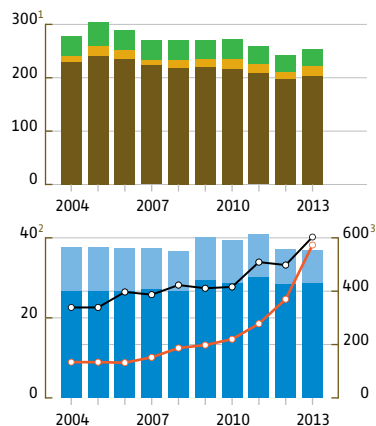
Animal group	Specimens*
Birds	4,119
Terrestrial reptiles	1,121
Land mammals	134
Amphibians	1

1. Recovery Centres for Endangered Species.
*Provisional data of nº of specimens.

ASSESSMENT OF THE ANDALUSIAN GEO-RESOURCES INVENTORY



EVOLUTION OF HUNTING AND FISHING LICENCES PER TYPE 2004-2013



Classes hunting licenses			Classes fishing licenses		
A	P	E1	P	P surcharge	E2
B					
C					
Total 2013:	253,004		Total 2013:	38,062	

GAME AND FISHING PRESERVES IN ANDALUSIA 2013

Provinces	Hunting		Fishing					
	Preserves	Sur. (ha)	Type	Regime	Preserves **	Len. (km)	Sur. (ha)	
Almeria	753	663,862	Trout	High mountain	1	1	3.48	-
Cadiz	805	571,300						
Cordoba	1,448	1,130,456	Cyprinidae*	Intensive	1	0	-	12.80
Granada	1,089	938,888	Trout	High mountain	5	5	30.09	72.42
				Low mountain	6	1	24.76	210.30
				Intensive	1	0	3.20	-
Huelva	812	783,648	Cyprinidae*	Intensive	3	2	-	48.94
Jaen	877	1,248,218	Trout	High mountain	6	6	34.09	-
				Low mountain	16	6	84.33	289.11
				Intensive	3	0	10.69	-
Malaga	446	577,441	Trout	Low mountain	2	2	16.34	-
Seville	1,255	1,142,811	Trout	Intensive	1	0	5.70	-
Andalusia	7,485	7,056,625			45			

*Cyprinidae and other species preserves. **Fishing preserves without death.

1. Unit: thousand of hunting licences (Class A: Firearms and other procedures authorized + big game hunting, aquatic birds and partridge hunting with firearms; Class B: without firearms + big game hunting, aquatic birds and partridge hunting without firearms; Class C: male partridge birdcall + falconry + hound licence).
2. Unit: thousand of fishing licences (Class P: Licence for fishing all species except trout; Class P surcharge: Licence for fishing trout).
3. Unit: fishing licences (Class E1: Motorboat licence; Class E2: Row boat licence).



In times of economic crisis, a green economy approach appears to be a feasible alternative, based on the principles of sustainable development, fostering sectors such as renewable energies, ecotourism, organic farming or waste management, among others.

ECONOMIC DATA [2]

International market	2011	2012*
Imports	29,211,534,000 €	31,245,613,061 €
Exports	22,851,124,000 €	25,054,835,588 €
Balance	-6,360,410,000 €	-6,190,777,474 €

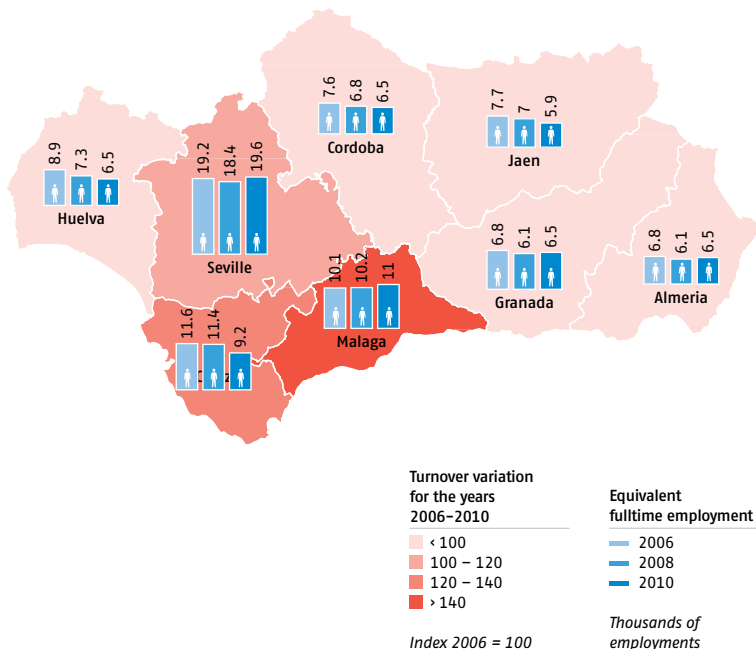
Employed population in Andalusia 2013

	Males	Females	Total
Employed	1,428.2	1,115.9	2,544.1
Unemployed	766.6	685.4	1,452.0
Employment rate	66.0 %	52.0 %	58.8 %
Unemployment rate	34.9 %	38.1 %	36.3 %

GDP and INCOME	GDP per capita 2012*	Gross Available income per capita 2011*
Andalusia	16,744 €	12,011 €
Spain	22,297 €	14,992 €

*Provisional data.

ECONOMIC ACTIVITY IN THE ENVIRONMENTAL SECTOR



MOTORIZATION RATE 2012

70.39 vehicles/100 inhab.

66.02 in Spain

ECOLOGICAL AGRICULTURE SURFACE IN ANDALUSIA 2012

949,025 ha

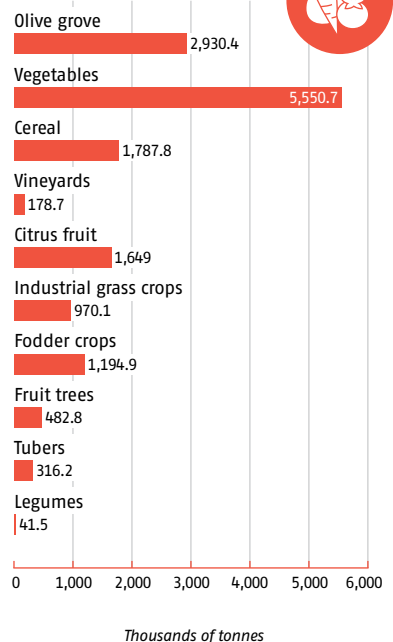
CONSUMPTION OF RENEWABLE ENERGY IN ANDALUSIA 2012

3,294.9 ktoe*

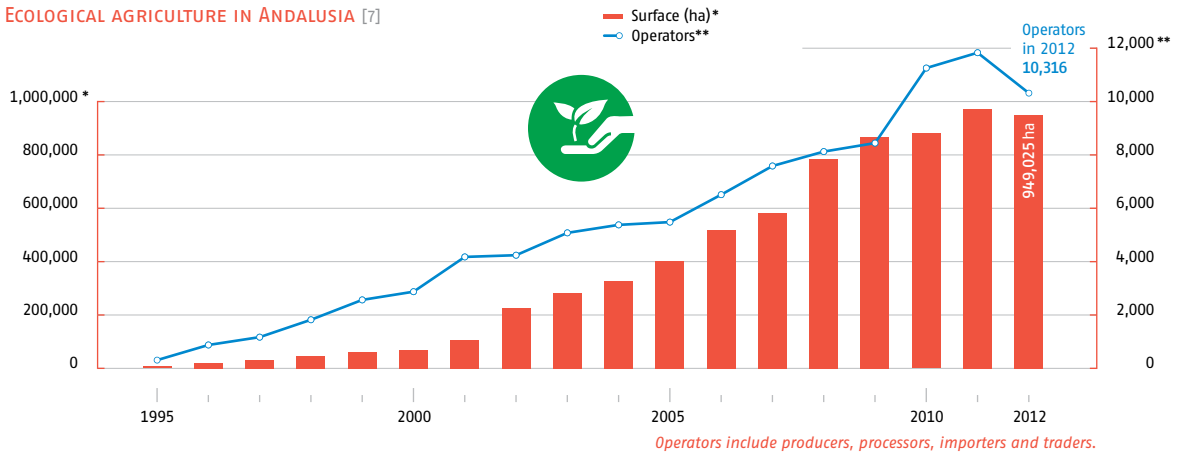
+5.65 %
with regard to the EU target

*kilo tonnes of oil equivalent.

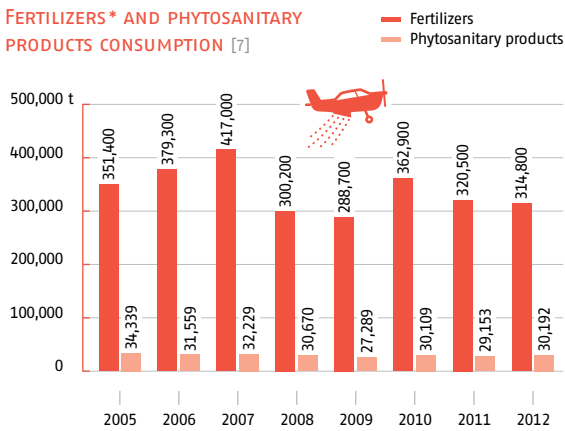
PRODUCTION OF AGRICULTURAL CROPS 2012 [4]



ECOLOGICAL AGRICULTURE IN ANDALUSIA [7]

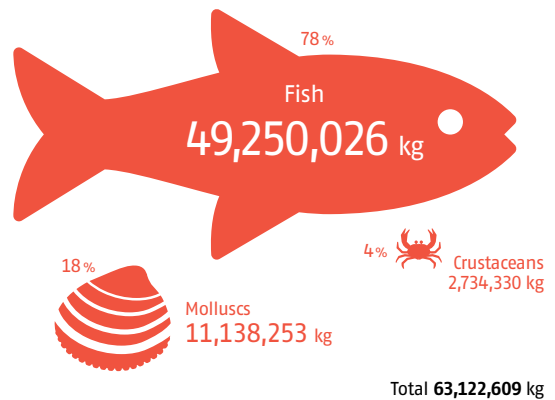


FERTILIZERS* AND PHYTOSANITARY PRODUCTS CONSUMPTION [7]



*Fertilizers consumption statistics in agriculture.

FRESH FISH AUCTIONS 2012 [4]

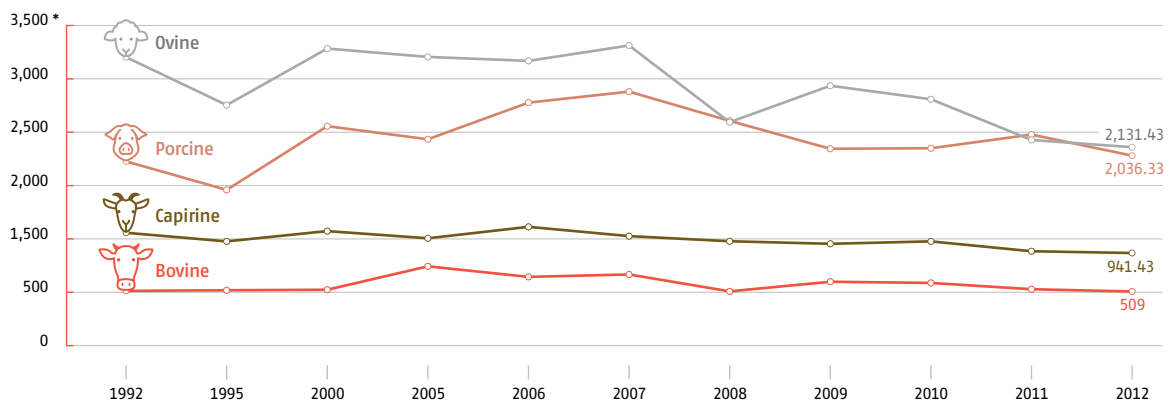


MARINE AQUACULTURE 2012 [4]

Cultivation system	Algae	Crustaceans	Molluscs	Fish	Total
Breeding farms	-	17.017.000 units	8.000.000 units	20.644.000 units	45.661.000 units
Grow out farms	1,68 t	164 t	1.247 t	6.274 t	7.687 t

LIVESTOCK [4]

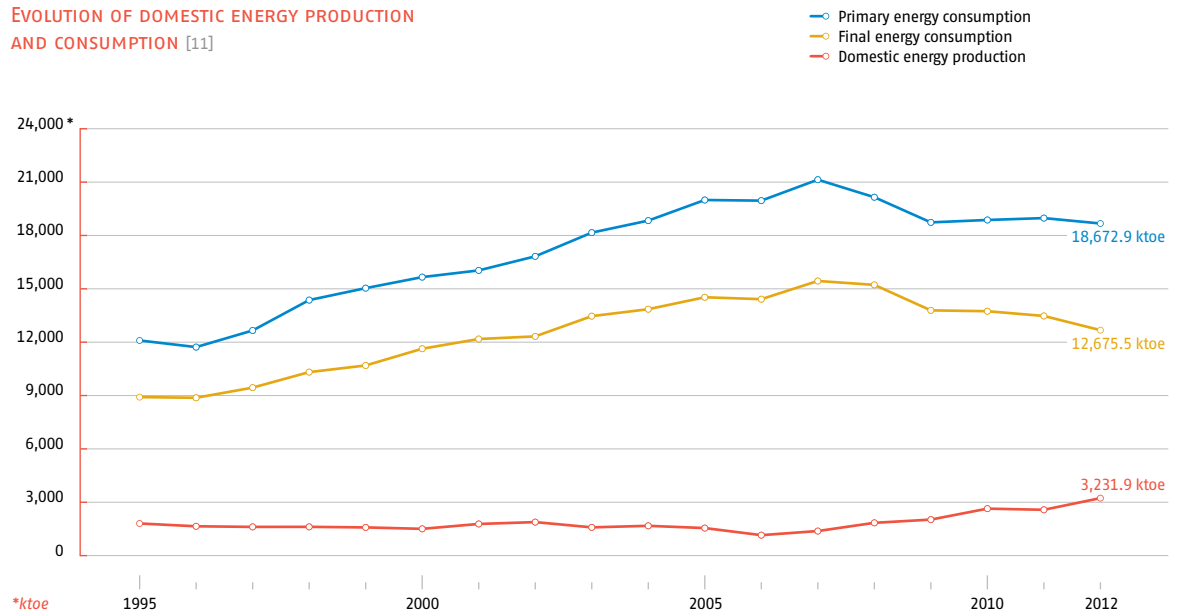
*Thousands of livestock.



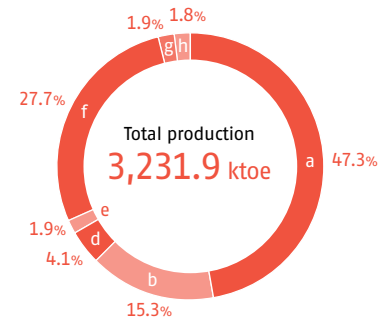
The energy indicators for Andalusia show in 2012 a favourable trend in full compliance with the objectives of the *Andalusian Plan for Sustainable Energy 2007-2013*.

The green industrial production has also recorded a positive evolution based on water supply and sanitation activities, waste management and decontamination.

EVOLUTION OF DOMESTIC ENERGY PRODUCTION AND CONSUMPTION [11]



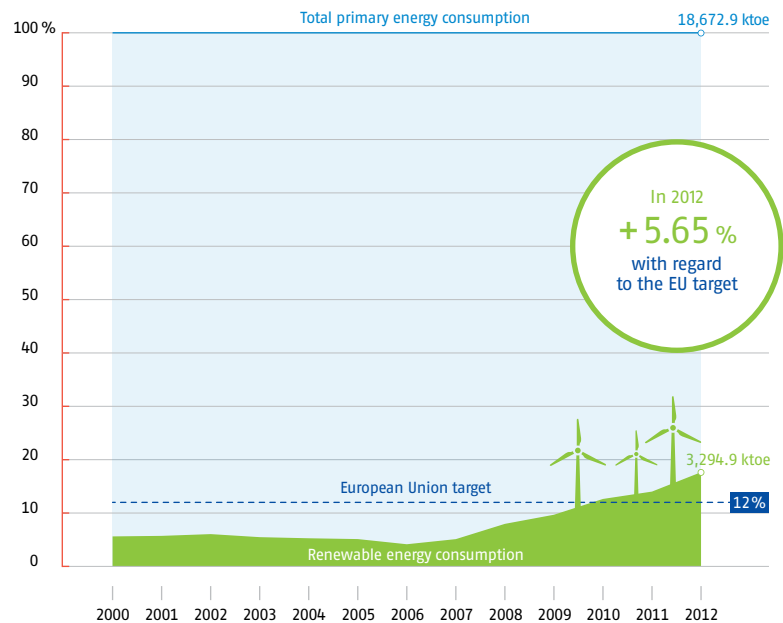
DOMESTIC ENERGY PRODUCTION 2012 [11]



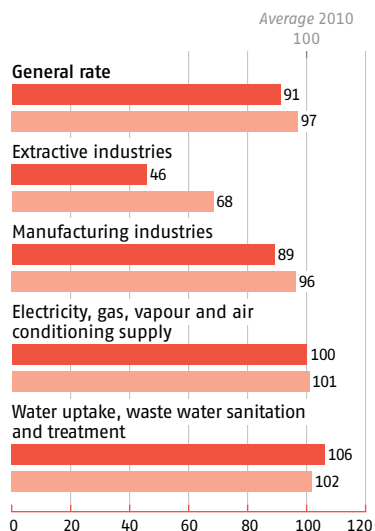
Source	Production
a. Biomass	1,527.2 ktOE
b. Wind	495.3 ktOE
c. Coal	--
d. Photovoltaic	132.7 ktOE
e. Hydraulic	61.5 ktOE
f. Solar Thermal Electricity	896.4 ktOE
g. Solar Thermal Energy	61.0 ktOE
h. Natural gas	57.7 ktOE

*No data available for Coal.

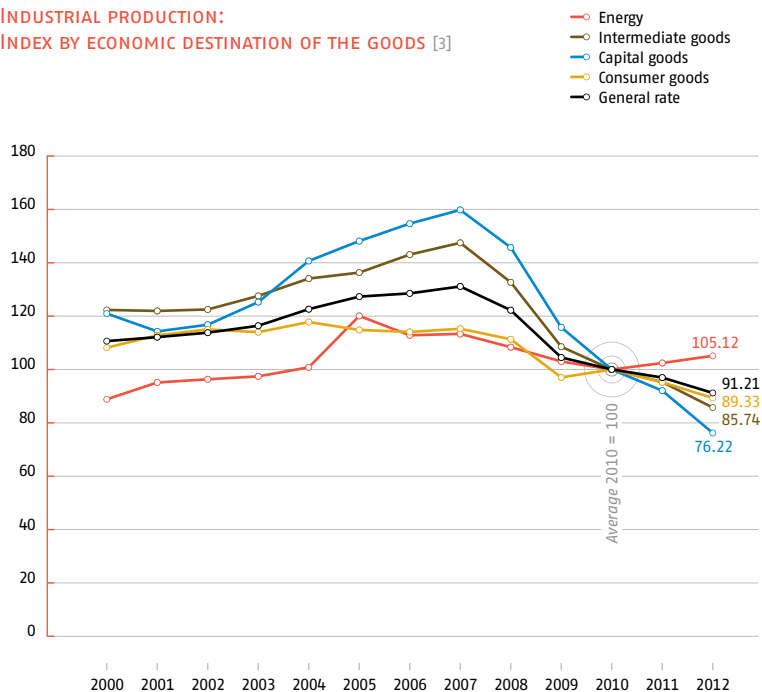
RENEWABLE ENERGIES PENETRATION INDEX IN ANDALUSIA [11]



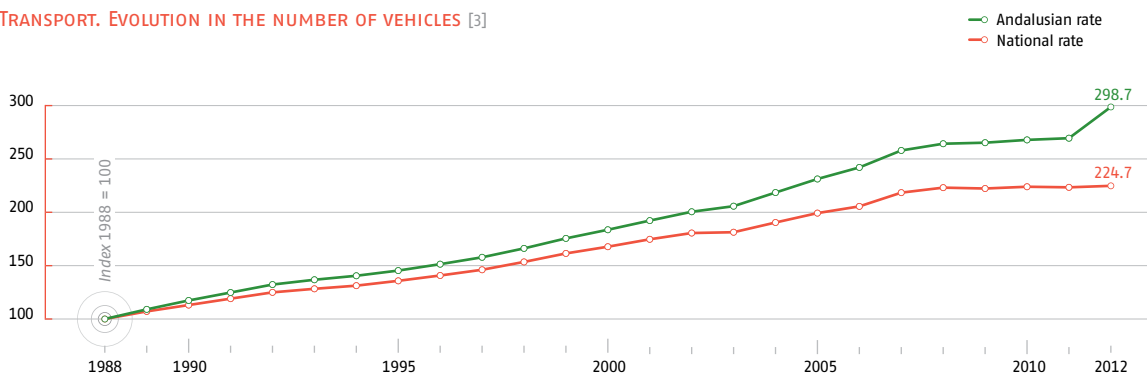
INDUSTRIAL PRODUCTION: INDEX BY FIELDS OF ACTIVITY [3]



INDUSTRIAL PRODUCTION: INDEX BY ECONOMIC DESTINATION OF THE GOODS [3]



TRANSPORT. EVOLUTION IN THE NUMBER OF VEHICLES [3]



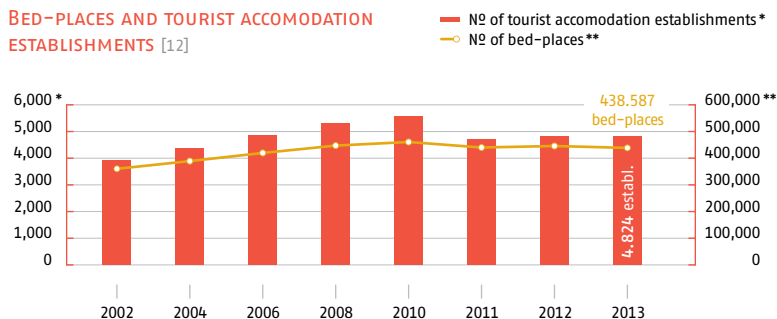
1988, base year = 1,991,224 vehicles in Andalucía and 13,881,323 in Spain

MOTORIZATION RATE 2012 [2][3]

	Spain	Andalusia
Vehicles	31,203,203	5,947,829
Population (inhab.)	47,265,321	8,449,985
Vehicles/ 100 inhab.	66.02	70.39

The population figures coming from the municipal register revision to 1 January 2012.

BED-PLACES AND TOURIST ACCOMMODATION ESTABLISHMENTS [12]



Provisional figures. The accommodation type includes: Hotel, hotel-apartment, shelter, rural house, guesthouse, hostel, apartment and camp site.



Waste management



Environmental prevention



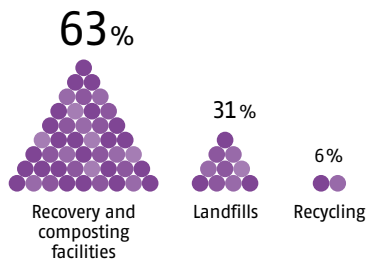
Air quality

Environmental prevention instruments, pollution control and monitoring procedures and a proper waste management are key to ensuring the quality of the environment.

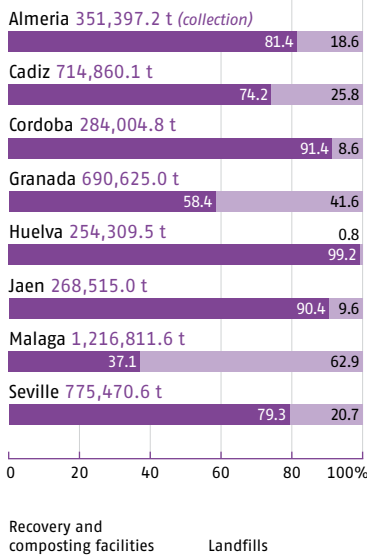
Waste

Urban waste production has followed a stable trend during the past four years. Efforts are still focused on recovery and composting, as well as strengthening the waste recycling facilities network. The provision of containers for selective collection of waste and packaging recycling rate show a positive evolution. Moreover, the production of declared hazardous waste in 2012 has increased compared to the previous year, as have the number of registered centres that produce this kind of waste, with a 5% rise.

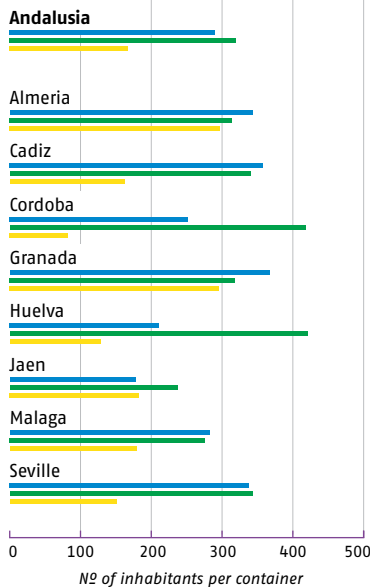
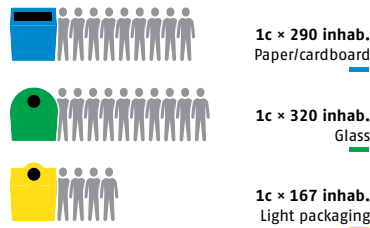
URBAN WASTE TREATMENT IN ANDALUSIA 2012



URBAN WASTE COLLECTION AND TREATMENT IN ANDALUSIA 2012



CONTAINERS RATIO FOR SELECTIVE COLLECTION OF URBAN WASTE 2012



* Regulation target: 500 inhabitants per container.

TOTAL URBAN WASTE COLLECTION IN ANDALUSIAN CITIES 2012

4,819,481 t

URBAN WASTE IN ANDALUSIAN CITIES 2012

1.56 kg/inhabitant/day

1.27 kg/inhabitant/day in Spain 2012*

DECLARED HAZARDOUS WASTE PRODUCTION IN ANDALUSIA 2012

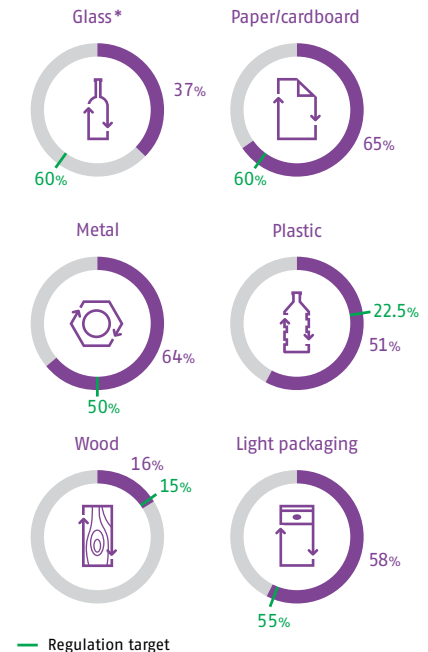
247,947 t

* Data estimated by Eurostat.

t = ton

CONTAINER RECYCLING RATE 2012

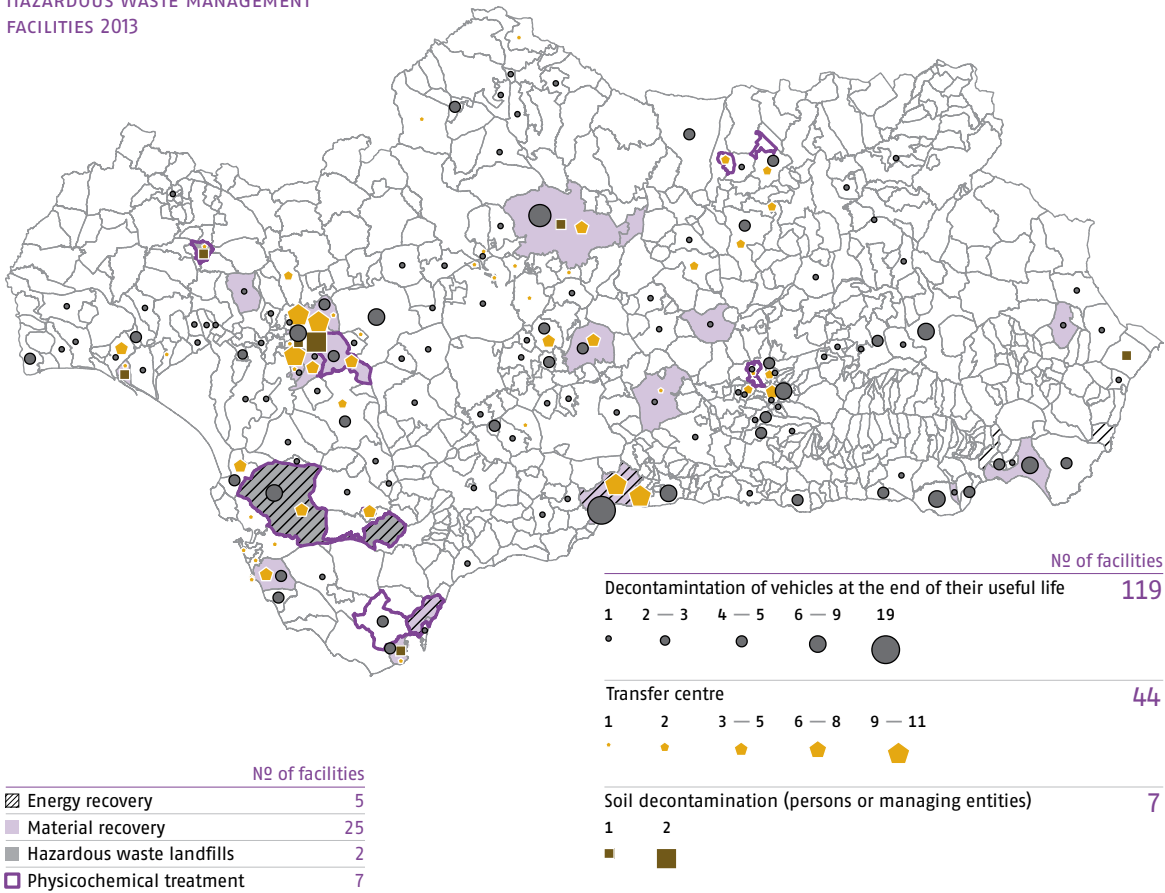
[13] [14]



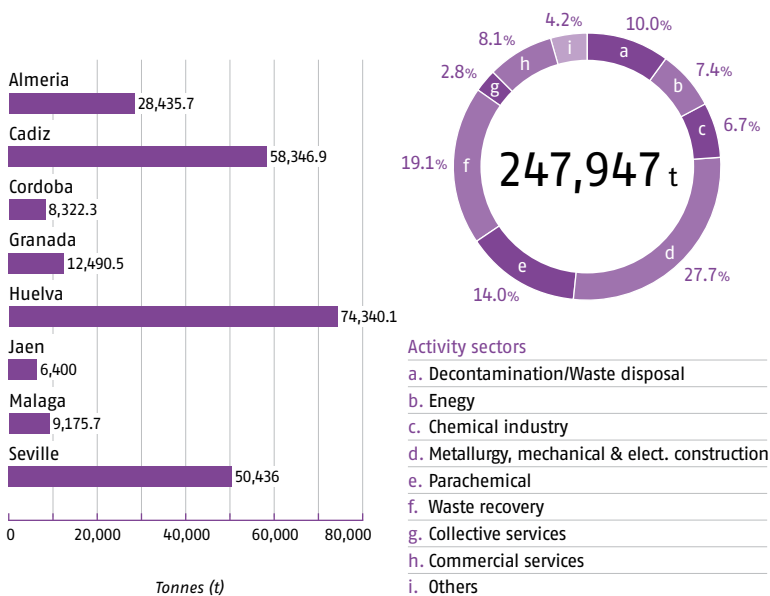
* Complementary garbage collection is not included as they have not been provided.

Container recycling rate considers the number of recycled packaging with regard to the amount of packaging put on the market.

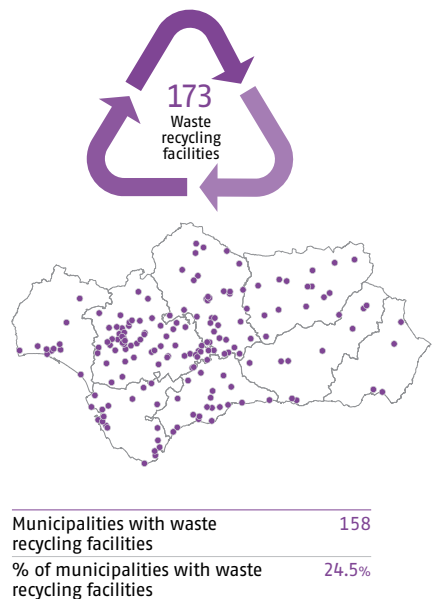
HAZARDOUS WASTE MANAGEMENT FACILITIES 2013



DECLARED HAZARDOUS WASTE PRODUCTION IN ANDALUSIA PER PROVINCE AND PER ACTIVITY SECTORS 2012



WASTE RECYCLING FACILITIES NETWORK IN ANDALUSIA 2013

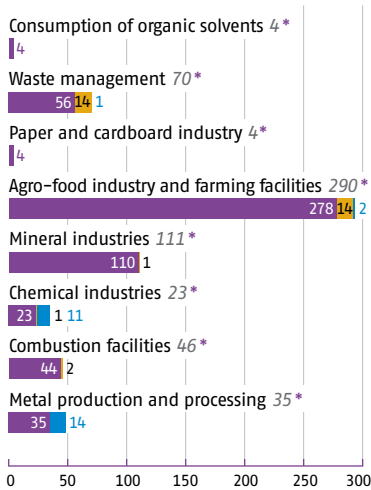


Environmental prevention

At the end of 2013, 95% of facilities subject to integrated pollution prevention and control legislation (Integrated Environmental authorizations) were authorised installations. There are other actions and activities that must account for unified environmental authorizations (AAU by its acronym in Spanish) or an environmental qualification. Between 2008 and 2013, 1,225 AAU were granted in Andalusia.

STATUS OF INTEGRATED ENVIRONMENTAL AUTHORIZATIONS IN ANDALUSIA 2013

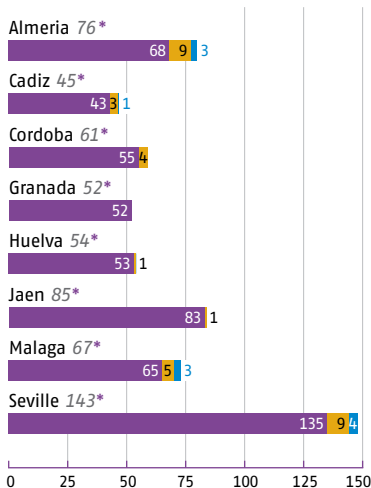
PER ACTIVITY SECTORS Total granted 554



Granted authorizations: 554
 Authorizations in process: 32
 Requests: 28

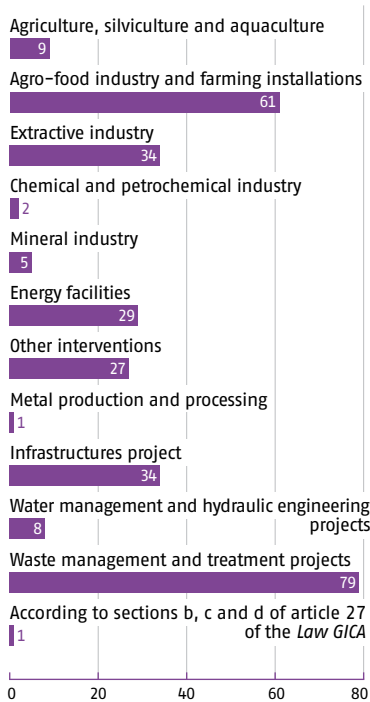
*No of registered facilities.

PER PROVINCES

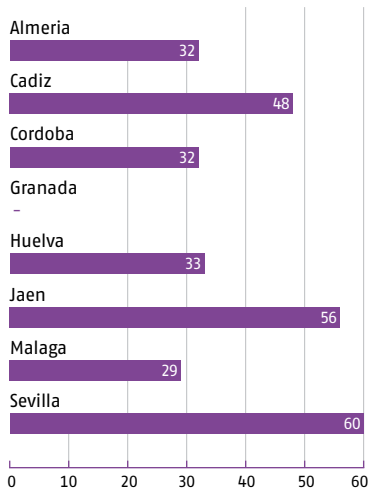


UNIFIED ENVIRONMENTAL AUTHORIZATION REQUESTS INITIATED IN ANDALUSIA 2013

PER ACTIVITY SECTOR Total 290



PER PROVINCES



INTEGRATED ENVIRONMENTAL AUTHORIZATIONS IN ANDALUSIA 2013

584 registered facilities

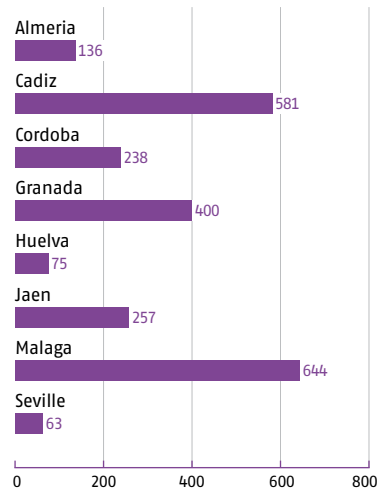
ENVIRONMENTAL QUALIFICATION REQUESTS INITIATED IN ANDALUSIA 2013

PER ACTIVITY SECTORS Total 2,394



1. Selling petrol and other fuels.
 2. Hotels and tourits apartments.
 3. And general machinery repair shops.

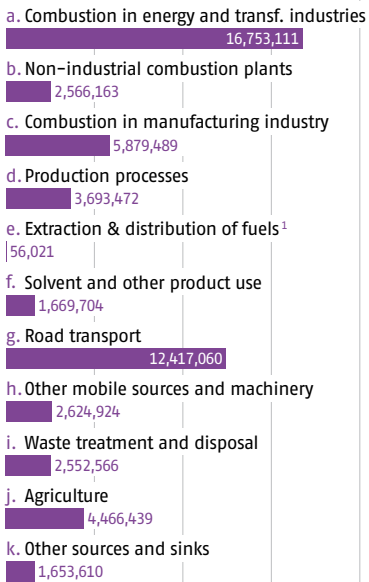
PER PROVINCES



ATMOSPHERIC GREENHOUSE GAS EMISSIONS IN ANDALUSIA 2011

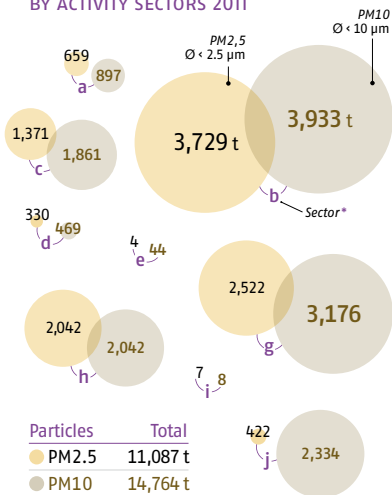
54,332,559 t CO₂ eq.

ATMOSPHERIC GREENHOUSE GAS EMISSIONS BY ACTIVITY SECTORS IN ANDALUSIA 2011 [7]



1. Fossil fuels and geothermal energy.

ATMOSPHERIC PARTICLES EMISSIONS BY ACTIVITY SECTORS 2011

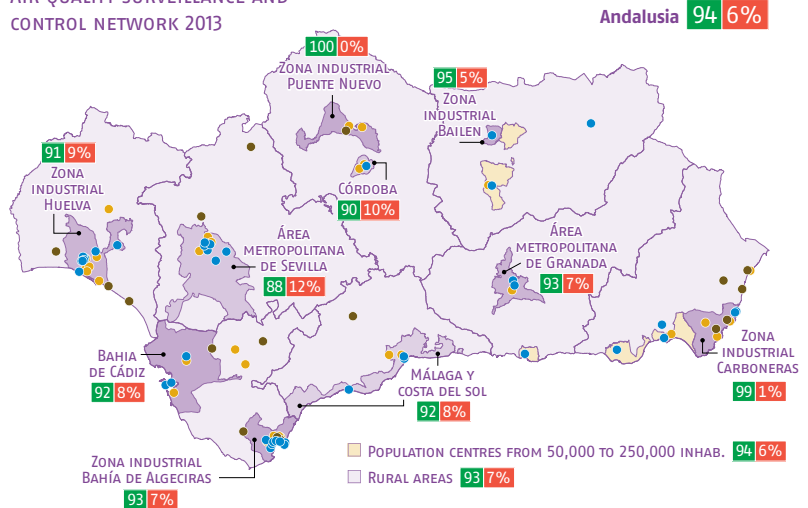


*As can be seen in the above graphic, 'f' and 'k' activity sectors emit zero tonnes of both particles. Ø = particles diameter.

Air quality

Due to pollution caused by particles and tropospheric ozone 2013 recorded 6% of days with unacceptable air quality in Andalusia. Moreover, emissions levels of tropospheric ozone precursor gases continue to drop and the thickness of the stratospheric ozone layer remains within acceptable values.

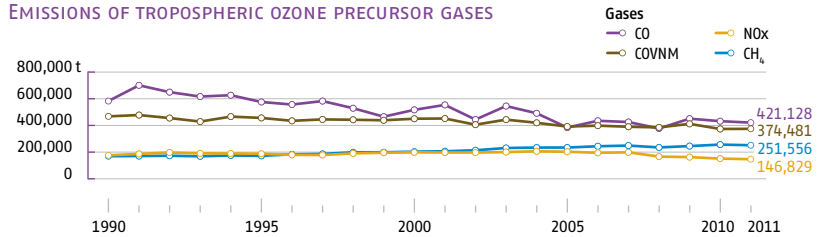
AIR QUALITY SURVEILLANCE AND CONTROL NETWORK 2013



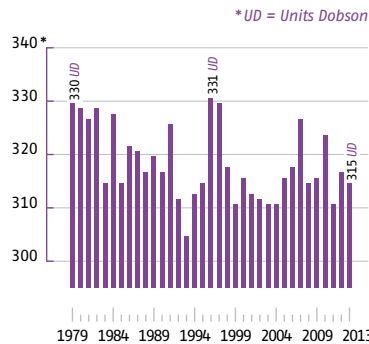
Atmospheric immissions: global rating
 ■ % days with acceptable air quality
 ■ % days with unacceptable air quality

Type	Nº of stations
● Rural	17
● Suburban	33
● Urban	42

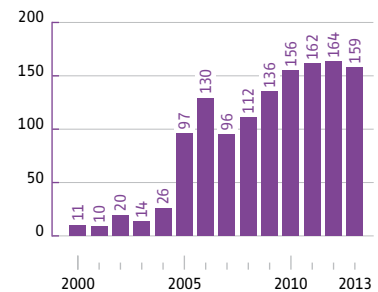
EMISSIONS OF TROPOSPHERIC OZONE PRECURSOR GASES



AVERAGE THICKNESS OF THE OZONE LAYER OVER ANDALUSIA



EVOLUTION OF NOISE INSPECTIONS AND TESTS CARRIED OUT IN ANDALUSIA 2000-2013





80% of the Andalusian population lives in cities. Between 2001 and 2011 the population grew by 18.4% and the total number of cities by 13.4%.

Some indicators are undergoing trend changes, such as urban waste collection, electricity consumption or the increase in the number of cars. On the contrary, pollutant emissions from motorised transport became more acute. Through sustainable mobility policies Andalusia promotes the bicycle use as it is the most efficient, healthy and eco-friendly means of transport.

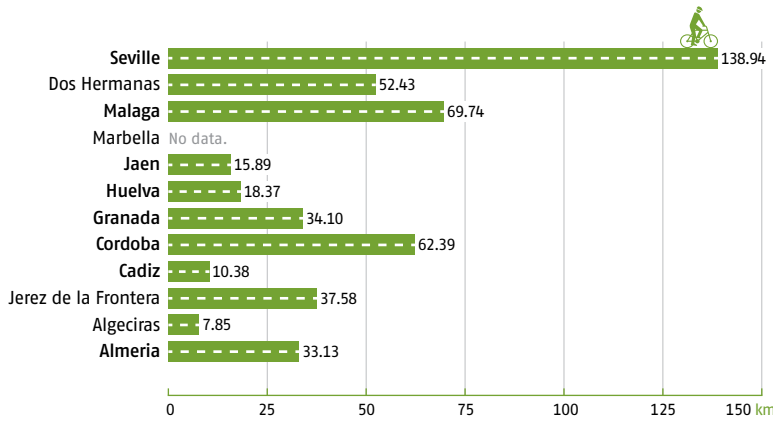
TOTAL LENGTH OF BICYCLE LANES IN ANDALUSIA [15]

1,059.58 km

URBAN WASTE COLLECTION IN ANDALUSIAN CITIES 2012

1.53 kg/person/day

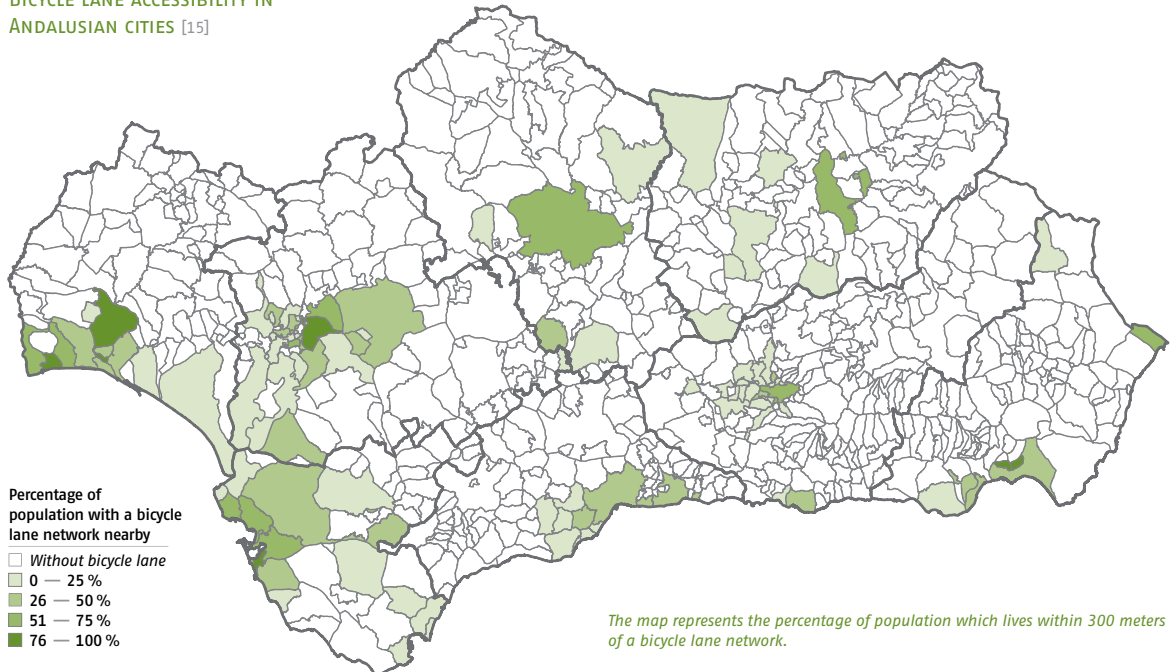
AMOUNT OF BICYCLE LANES IN CITIES WITH OVER 100,000 INHABITANTS IN ANDALUSIA 2013 [15]



RANKING OF CITIES WITH THE MOST BICYCLE LANES IN ANDALUSIA [15]

Ranking 2013	Km
1º Seville	138.94
2º Malaga	69.74
3º Cordoba	62.39
4º Dos Hermanas	52.43
5º Chiclana de la Frontera	43.31
6º El Puerto de Santa María	38.57
7º Jerez de la Frontera	37.58
8º Granada	34.10
9º Almeria	33.13
10º Rota	29.05

BICYCLE LANE ACCESSIBILITY IN ANDALUSIAN CITIES [15]

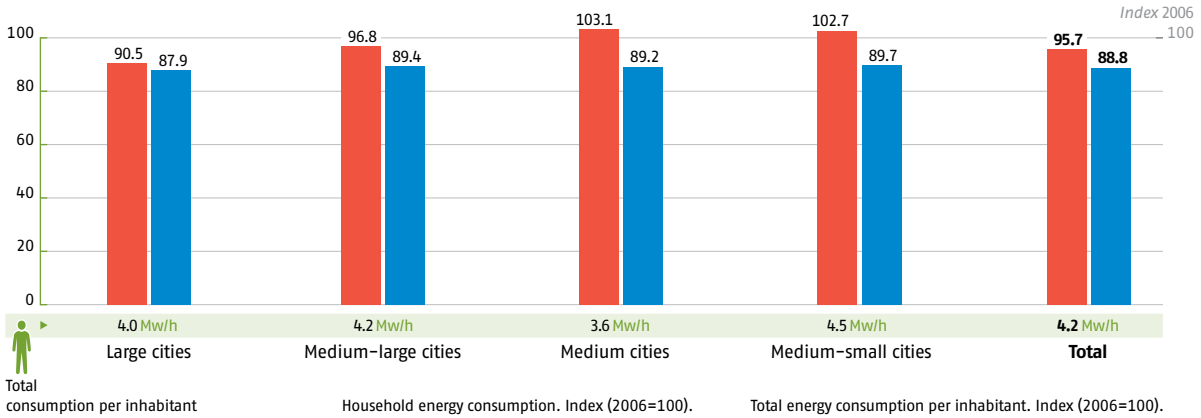


URBAN WASTE COLLECTION IN ANDALUSIAN CITIES 2006-2012

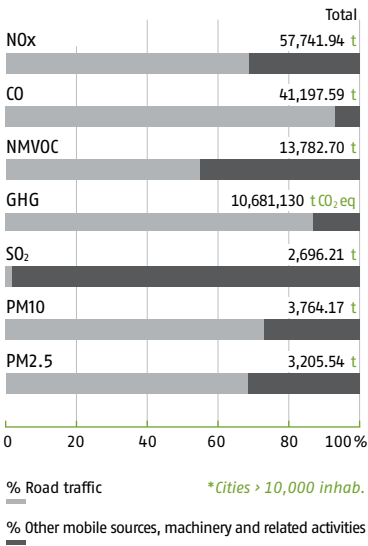


*Collection per inhabitant (kg/inhab./day).
 Large cities: over 100,000 inhabitants; Medium-large cities: 50,001-100,000 inhabitants; Medium cities: 30,001-50,000 inhabitants;
 Medium-small cities: 10,001-30,000 inhabitants; Total: cities with over 10,000 inhabitants.

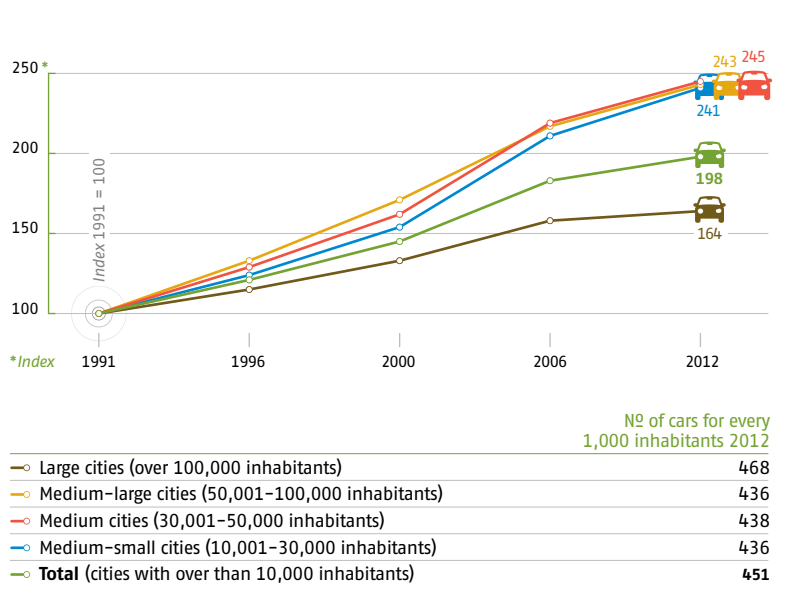
ELECTRICAL ENERGY CONSUMPTION IN ANDALUSIAN CITIES 2012 [3]



POLLUTING EMISSIONS FROM TRANSPORT IN ANDALUSIAN CITIES* 2009



EVOLUTION IN THE NUMBER OF CARS IN ANDALUSIAN CITIES 1991-2012 [3]





During 2013, Andalusian society has proven its environmental commitment through its growing participation in environmental training, education and volunteering programs.

The results of the Ecobarometer 2013 project, which reflects social perception, revealed that forest fires are the greatest environmental concern.

STUDENTS PARTICIPATING IN ENVIRONMENTAL EDUCATION PROGRAMS 2013

323,052

PARTICIPANTS IN ENVIRONMENTAL VOLUNTEERING PROGRAMS 2013

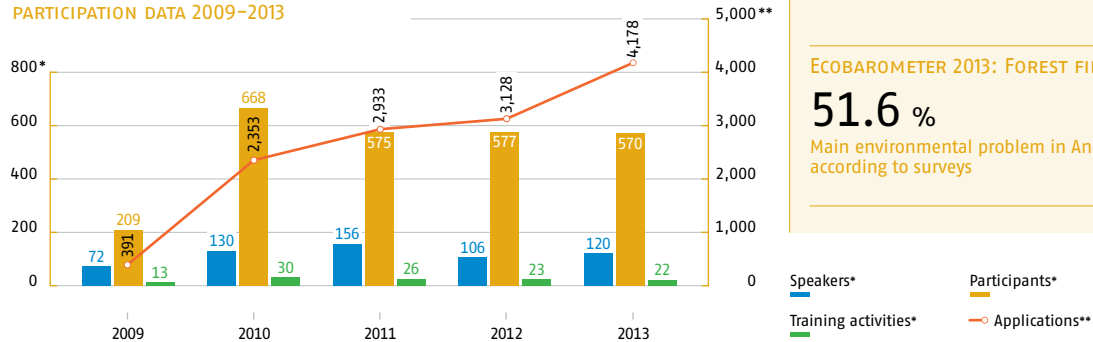
2,355

ECOBAROMETER 2013: FOREST FIRES

51.6 %

Main environmental problem in Andalusia according to surveys

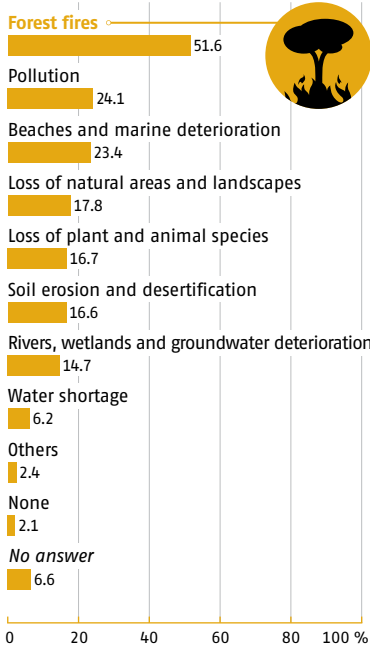
ANDALUSIAN ENVIRONMENTAL TRAINING PLAN: PARTICIPATION DATA 2009-2013



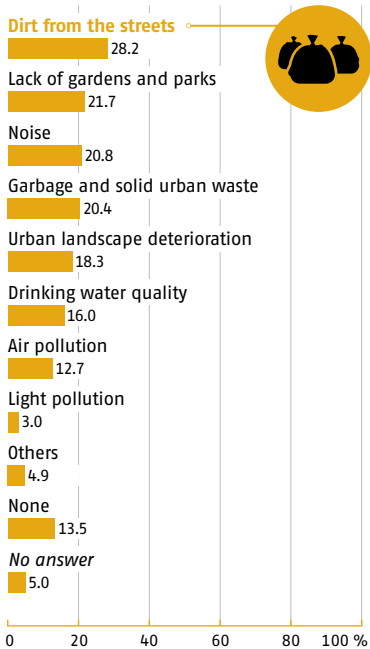
ENVIRONMENTAL EDUCATION FACILITIES 2013



Perception of the most important regional environmental problems in Andalusia



Perception of the most important local environmental problems



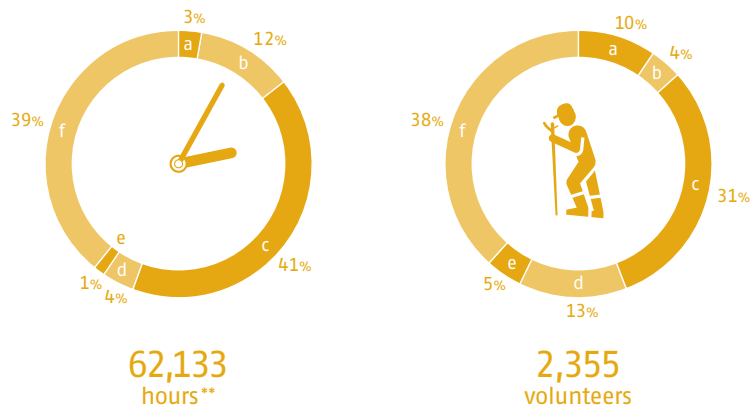
* Ecobarometer (Multiple choice questions): those surveyed indicated two environmental problems that they consider of major importance for Andalusia (regional) and for their town (local).

**ENVIRONMENTAL EDUCATION PROGRAM "ALDEA":
YEAR 2012-2013 PARTICIPATION**

Campaign	Activity	Education centres	Students	Teachers
<i>Grow up with your tree</i>	Reforestation	571	95,747	8,256
<i>Let's take care of the coast</i>	Data gathering and analysis	167	17,975	1,507
<i>Eco-schools</i>	Environmental audit	244	68,500	6,066
<i>Kyoto educates</i>	Awareness on Climate Change	346	74,846	6,725
<i>Educational trips</i>	Environmental education	-	-	-
<i>Urban sustainability</i>	Environmental awareness-raising on local sustainability	16	254	20
<i>Ecologic food</i>	Promotion of ecologic food	-	-	-
<i>Botanical gardens</i>	Knowledge of Andalusian flora	109	3,467	293
<i>Water, naturally</i>	Awareness-raising on water values	6	369	28
<i>Nature and you</i>	Environmental awareness-raising in natural areas	290	19,433	1,396
<i>Forest training centre</i>	Environmental education	9	267	34
<i>Natural park of Doñana</i>	Knowledge of natural environment	62	5,925	311
<i>Natural area of Sierra Nevada</i>	Knowledge of natural environment	27	851	63
<i>Edu-birds</i>	Knowledge of birds and their habitats	120	11,117	1,032
<i>Recapacida</i>	Awareness-raising on recycling	179	24,301	2,584
Total		2,146	323,052	28,315

Number of participants in each program, in some cases, a participant or an educative centre may have been counted more than once depending on its participation in various initiatives.

**ENVIRONMENTAL VOLUNTEERING PROGRAMS:
PARTICIPATION 2013**



Program	VWH **	Participants
a. Andalusian Ecocampus project	1,808	226
b. Environmental volunteer work camps in Andalusia	7,280	91
c. Environmental volunteer networks in natural areas	25,472	726
d. Mediterranean forest volunteering	2,403	305
e. Andarrios programme	864	108
f. Biodiversity Programmes	24,306	899
Total	62,133	2,355

** VWH: Hours of voluntary work.



The Andalusian Environmental Plan is the key strategy and guiding document for sectorial plans, programs and strategies.

Planning and budgets

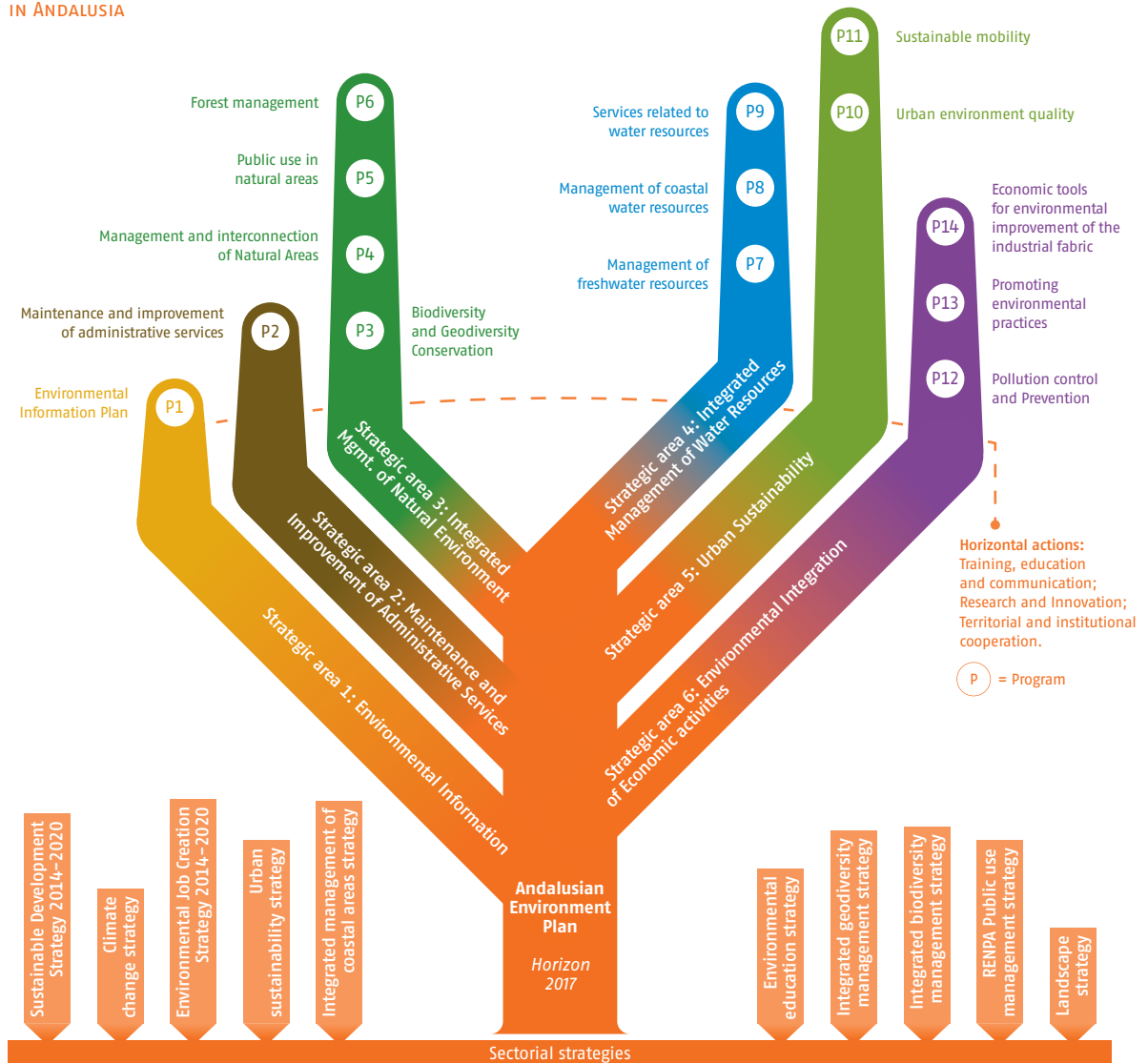
The Andalusian Environmental Plan, *Horizon 2017* places special attention on promoting green employment and encouraging entrepreneurship and eco-innovation. Almost 60% of the budget of the Regional Ministry of Environment and Spatial Planning is self-financed.

BUDGET OF THE REGIONAL MINISTRY OF ENVIRONMENT AND SPATIAL PLANNING EXECUTED IN 2013

587,077,640 €

58.5 % provided from the regional ministry's fund

CURRENT ENVIRONMENTAL PLANNING IN ANDALUSIA



CURRENT ENVIRONMENTAL PLANNING IN ANDALUSIA (continuation)

Sectorial plans

Andalusian Climate Action Plan
Andalusian Climate Change Adaptation Program
Andalusian Climate Change Mitigation Program
Andalusian Climate Action Plan Communication Program
Andalusian Forestry Plan 2015
Forest fire emergency plan (INFOCA)
Forest Plagues Integrated Management Plan
River Basin Districts Plans
Flood Prevention Plan
Special plans on drought
Andalusian Plan on wetlands
Andalusian Plan to Combat Desertification
Endangered species preservation and recovery plans
Flora and fauna species management plans
Andalusian Director Plan for the "dehesas"
Andalusian Plan on hunting
Game species management Plans
Recovery and Structuring Plan for the Cattle Track Network of Andalusia
Territorial Director Plan on non hazardous waste of Andalusia 2010-2019
Territorial Director Plan for hazardous waste in Andalusia 2012-2020
Environmental Inspection Plans

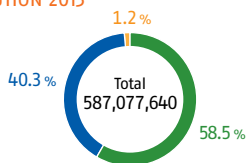
Local plans

Rivers recovery plans
Environmental quality plans
Improvement plans for air quality
Forest resources management plans (PORF)
Technical plans and forests management projects
Fishing plans per river bed transect
Sportfishing and Hunting technical plans
Integrated hunting plans
Game Areas Hunting Plans
Marine environment Self-protection plans
Forest fires Self-protection plans

Plans in Natural Protected Areas

Natural Resources Management Plans
Uses and Management Master Plans
Natural Park sustainable development plans
ACI management plans (SCI/SPA)
Public use Programs
Self-protection plans

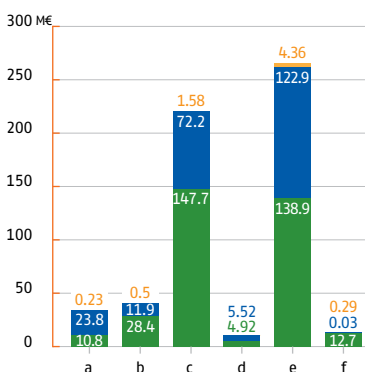
CMAYOT* BUDGET EXECUTION 2013



Sources of funds	Budget €
Regional Ministry	343.700.078
European	236.392.750
Central government ¹	6.984.812

1. Final transfers.

* Regional Ministry of Environment and Spatial Planning.

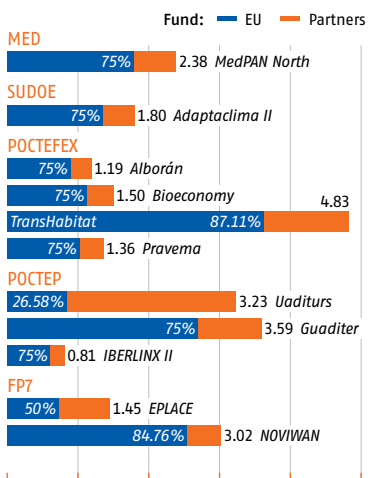


a. Prevention, environmental quality and climate change; b. Natural areas and citizen involvement; c. Environmental management; d. Sustainable development and Environmental information; e. Actions on water; f. Urbanism. "General environmental management and services", are shared with the current Regional Ministry of Agriculture, Fisheries and Rural Development in 2013, therefore not included.

CMAYOT BUDGET PROVIDED BY THE EUROPEAN FUNDS 2013

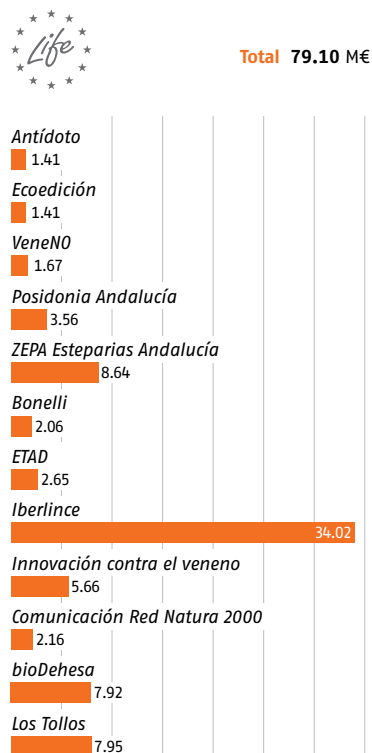
European fund	Budget €	%
ERDF	163,611,128	69.2
EAAGF-EAFRD	40,212,695	17.0
Cohesion	24,614,149	10.4
ESF	605,993	0.3
European Fisheries Fund	501,370	0.2
Others funds	6,847,416	2.9
Total	236,392,750	100.0

EUROPEAN TERRITORIAL COOPERATION PROJECTS INVOLVING CMAYOT 2013



* Budget M€: million euros.

LIFE PROGRAMME PROJECTS IN PROGRESS 2013



* Budget M€: million euros.

Main environmental regulations in Andalusia

STRUCTURE AND ORGANIZATION

Law 1/2011 of February 17th, on restructuring the Andalusian public sector.

Decree 14/8/1994 of August 2nd on restructuring the Regional Ministries (creation of the Regional Ministry of Environment).

Decree 104/2011 of April 19th, approving the internal regulations of the Environment and Water Agency of Andalusia.

Decree 142/2013 of October 1st, which establishes the organic structure of the Regional Ministry of Environment and Spatial Planning.

WATER AND COASTAL AREAS

Law 9/2010 of July 30th, on Waters of Andalusia.

Decree 14/2005 of January 18th on the transfer of means and services by the Spanish National Government to the Andalusian Regional Government regarding Hydraulic resource management.

Decree 357/2009 of October 20th, which determines the Territorial limits of the intercommunitary river basins in Andalusia.

Decree 66/2011 of March 29th, on the transfer of means and services by the Spanish National Government to the Andalusian Regional Government regarding Coastal Area planning and management.

Decree 14/2012 of January 31st, establishing the Committee of Competent Authorities of river basin districts of the intracommunity basins in Andalusia detailing its organization, functions and powers.

Decree 52/2012 of February 29th, regulating the Andalusian Water Observatory.

Order of April 23rd, 2012, approving the Preliminary Assessment of Flood Risk in Andalusia. River Basin Districts: Tinto, Odiel and Piedras; Guadalete and Barbate; and Andalusian Mediterranean Basin.

NATURAL HERITAGE

Law 2/1989 of July 18th, approving the Inventory of Protected Natural Areas of Andalusia and establishes additional protecting measures.

Law 2/1995 of June 1st, modifying the Law 2/1989 of July 18th, approving the Inventory of Protected Natural Areas of Andalusia and establishing additional protecting measures.

Law 8/1999 of October 27th on the Natural Area of Doñana.

Law 8/2003 of October 28th, on Wild Flora and Fauna.

Decree 225/1999 of November 9th on the regulation and development of the natural monument of andalusia protection figure.

Decree 95/2003 of April 8th, on the regulation of the Network of Protected Natural Areas and their Registry.

Decree 98/2004 of March 9th, creating the Inventory of Wetlands of Andalusia and the Andalusian Committee on Wetlands.

Decree 137/2006 of July 4th, on the transfer of functions and services by the Spanish National Government to the National Parks of Doñana and Sierra Nevada.

Decree 15/2011 of February 1st establishing the general planning regime of uses and activities in natural parks and approving the streamlining of administrative procedures.

Decrees on Natural Resources Management Plans of Natural Spaces declared by the Law 2/1989.

Law 2/1989 of July 18th, approving the Inventory of Protected Natural Areas of Andalusia and establishes additional protection measures.

Law 2/1995 of June 1st, modifying the Law 2/1989 of July 18th, approving the Inventory of Protected Natural Areas of Andalusia and establishing additional protection measures.

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Decrees on Natural Resources Management Plans of Natural Spaces declared by the Law 2/1989.

FOREST MANAGEMENT

Law 2/1999 of July 15th on Andalusian Forestry.

Law 5/1999 of July 29th on forest firefighting and prevention.

Law 7/2010 of July 14th, on the "Dehesa".

Law 208/1997 of September 9th on the Andalusian forest regulation.

Decree 155/1998 of July 21st, approving the Regulation for cattle tracks in Andalusia.

Decree 247/2001 of November 13th, approving forest firefighting and prevention regulation.

Decree 182/2005 of July 26th approving the Hunting Management Rules.

Decree 232/2007 of July 31st, approving the Andalusian Hunting Plan.

Decree 13/2008 of January 22nd, approving the organisation and functioning regime of the Andalusian institute for hunting and Sport fishing.

Decree 14/2008 on January 22nd, approving the certification and the gaming quality distinction of Andalusia.

Decree 371/2010 of September 14th approving the Andalusian Forest Fire Emergency Plan and modifies the Forest Fire Prevention and Firefighting Regulations approved by the Decree 247/2001 of November 13th.

Order of July 27th, 2012, for approving the Hunting Area Plan of Los Alcornocales 2012-2022.

Order of May 6th, 2014, which determines the closures and inland fisheries periods in Andalusia.

Order of June 10th, 2014, which modifies the Order of June 3rd, 2011, determining the closures and hunting periods in Andalusia.

Agreement of March 27th 2001, of the Government Council approving the Plan for the Recovery and Structuring of the Cattle Track in Andalusia.

Agreement of September 7th 2010, of the Government Council approving the adequation of the Andalusian Forest Plan Horizon 2015.

Agreement of February 21st 2012, of the Government Council formulating the Andalusian Plan for the "dehesas".

Order of October 24th, 2013, which modifies the Order of November 10th, 2000, regulating pine cone collecting of stone pine (Pinus pinea l.) in Andalusian forest areas.

ENVIRONMENTAL QUALITY AND PREVENTION

Law 7/2007 of July 9th, on the integrated management of environmental quality.

Decree 292/1995 of December 12th, approving the Regulation of Environmental Impact Evaluation in Andalusia (repealed, without prejudice to what is established by the fourth transitory disposition of the Law 7/2007, of July 9th).

Decree 297/1995 of December 19th, approving the Regulation on Environmental Qualification.

Decree 14/1996 of January 16th, approving the Regulation on Coastal Waters Quality.

Decree 189/2002 of July 2nd, approving the Flood Prevention Plan in Andalusian urban basins.

Decree 356/2010 of August 3rd, regulating the Unified Environmental Authorization, establishing the organization and working regime for the registry of authorizations for activities subject to environmental prevention and monitoring instruments, of potentially air-polluting activities and of facilities that emit volatile organic compounds, and modifying the contents of the Appendix I to the Law 7/2007 of July 9th, on the Integrated Management of Environmental Quality.

Decree 357/2010 of August 3rd, approving the Night Sky Quality Protection Regulations against light pollution.

Decree 397/2010 of November 2nd, approving the Territorial Director Plan on Non hazardous waste in Andalusia 2010–2019.

Decree 169/2011 of May 31st, approving the Energy Efficiency and Saving and the Renewable Energy Promotion Regulations in Andalusia.

Decree 239/2011 of July 12th, regulating the quality of atmospheric environment and the creation of the Registry of Air Quality Assessment Systems in Andalusia.

Decree 5/2012 of January 17th, regulating the integrated environmental authorizations and modifying Decree 356/2010 of August 3rd regulating the Unified Environmental Authorization.

Decree 6/2012 of January 17th, which approving the Regulation on protection against noise pollution in Andalusia, and modifying Decree 357/2010 of August 3rd, approving the Night Sky Quality Protection Regulations against light pollution.

Decree 7/2012 of January 17th, approving the Plan for the prevention and management of hazardous waste in Andalusia 2012–2020.

Decree 73/2012 of March 20th, approving the Regulation of waste of Andalusia.

Decree 334/2012 of July 17th, regulating the collaborating entities in environmental quality in Andalusia.

Decree 231/2013 of December 3rd, which approving improvement plans for air quality for certain areas in Andalusia.

Decree 75/2014 of March 11th, which modifies the Decree 357/2010 of August 3rd, approving the Night Sky Quality Protection Regulations against light pollution.

Order of December 29th 2011, regulating the use of forest biomass for energy.

Order of April 19th 2012, approving the technical instructions for monitoring and control of atmospheric emissions.

Agreement of June 5th 2007 of the Government Council, approving the Andalusian Climate Action Plan: Mitigation program.

Agreement of August 3rd 2010 of the Government Council approving the Andalusian Climate Change Adaptation Plan.

Agreement of May 3rd 2011 of the Government Council approving the Andalusian Urban Sustainability Strategy.

Agreement of January 31st 2012, of the Government Council, approving the Andalusian Climate Action Plan: Communication Program.

Agreement of February 14th 2012, of the Government Council, approving the Andalusian Environment Plan Horizon 2017.

ENVIRONMENTAL INFORMATION

Decree 347/2011 of November 22nd approving the structure and functioning of the Andalusian Environmental Information Network and the access to environmental information.

SPATIAL PLANNING AND URBANISM

Decree 206/2006 of November 28th, approving the Spatial Planning Plan for Andalusia.

Decree 60/2010 of March 16th, approving regulations on urban planning discipline in Andalusia.

Decree Law 5/2012 of November 27th, establishing urban planning emergency measures for coastal protection.

Decree 2/2012 of January 10th, regulating the status of buildings and settlements located on land designated as not for building in Andalusia.

Decree 36/2014 of February 11th, regulating management competences of the Junta de Andalucía on Spatial Planning and Urbanism.

Order of April 11th 2013, approving the General Plan for Spatial Planning and Urbanism for the 2013–2016 period.

Order of March 1st 2013 approving Urban Planning regulations which develop Article 4 and 5 of Decree 2/2012 of January 10th, regulating the status of buildings and settlements located on land designated as not for building in Andalusia.



The indicators listed in the following tables are a representative selection of those included in the Annual Report on the Environment in Andalusia, published by the Regional Ministry of Environment and Spatial Planning of the Junta de Andalucía.

I. ENVIRONMENTAL ELEMENTS AND FACTORS

Topic	Evolution	Situation	Trend	Indicator
Climate	↓	😊	↓	Global warming index
Water	↓	😊	↓	Water balance
	↑	😊	↑	Waste water sanitation and treatment
	—	😊	↑	Inland bathing Water Quality
	↓	😞	—	Surface Water Quality
	↓	😊	—	Groundwater quality
Energy	↓	😞	↑	Primary energy consumption in Andalusia
	↑	😊	↑	Final energy consumption per energy sources and activity sectors
	↑	😊	↑	Evolution of the Renewable Energies Development Index

II. NATURAL ENVIRONMENT EVALUATION AND MANAGEMENT

Topic	Evolution	Situation	Trend	Indicator
Soil and desertification	↓	😞	🔄	Evolution of soil erosion
Vegetation and drought	—	😞	—	Average Vegetation Index. Hydrological period 2011–2012
Land cover and land use changes	↓	😞	↓	Built and altered surfaces land cover
	↓	😞	—	Agricultural surfaces land cover
	↓	😞	—	Forest and natural areas land cover
	↑	😊	—	Waters and wetlands land cover
Biodiversity and geodiversity	↑	😊	↑	Monitoring of catalogued flora of interest
	↓	😞	—	Germplasm recollection at the Vegetal Propagation Laboratory
	↑	😞	↓	Wildlife census in Andalusia
	—	😊	—	Admission of animals in endangered
Natural Areas Network and green corridors	↑	😊	—	Protected surface in Andalusia
	↑	😊	↑	Public use facilities in the Protected Natural Areas Network of Andalusia
	↑	😞	—	Cattle Track marking
Forest environment initiatives and exploitations	↑	😞	↑	Forest fires
	↑	😞	↑	Phytosanitary state of forest areas
	↑	😊	↑	Monitoring of forest damage
	↑	😞	—	Hunting and recreational fishing activity
	↑	😞	—	Exploitation of public forests

III. ENVIRONMENTAL QUALITY EVALUATION AND MANAGEMENT

Topic	Evolution	Situation	Trend	Indicator
Quality of coastal waters	↑	☹️	↑	Polluting load of urban effluents along the coast
	↑	☹️	↑	Polluting load of industrial effluents along the coast
Air quality	↑	☹️	—	Emissions of tropospheric ozone precursor gases in Andalusia
	↑	☹️	—	Air quality index for selected stations
Waste management	↓	☹️	—	Urban waste production
	↓	☹️	↑	Urban waste Treatment in Andalusia. Evolution per typology
	↑	☹️	—	Selective collection in Andalusia
	↑	☹️	↑	Containers for urban waste collection
	↑	☹️	↑	Declared production of hazardous waste in Andalusia
	↑	☹️	↑	Number of hazardous waste treatment and/or storage facilities

IV. URBAN ENVIRONMENT, PRODUCTIVE FABRIC AND PLANNING

Topic	Evolution	Situation	Trend	Indicator
Environment and the city	↓	☹️	—	Electricity consumption in Andalusian cities
	↓	☹️	—	Urban waste production in Andalusian cities
Climate change management in Andalusia	↑	☹️	↑	Second period of the greenhouse gas emissions trading scheme (2008–2012). Drop in the emissions registered (2007–2011)
Environmental Planning and Integration	↑	☹️	—	Grant of integrated environmental authorizations
	—	☹️	—	Fertilizers consumption
	↑	☹️	—	Evolution of the organic farming surface
	↓	☹️	↓	Mobility and accessibility
	—	☹️	↑	Territorial intensity of tourism activities in Andalusia
European programs and initiatives	↓	☹️	—	EU funding managed by the Regional Ministry of Environment and Spatial Planning in environmental international cooperation projects

V. RESEARCH, INFORMATION AND PARTICIPATION

Topic	Evolution	Situation	Trend	Indicator
Environmental information and research	↑	☹️	↑	Ensuring dissemination and access to environmental information
Social perception of environmental issues	↑	☹️	↑	Citizen perception of the evolution of the environment in Andalusia
Environmental education and volunteering	↑	☹️	↑	Participation in environmental education programs ALDEA
	↑	☹️	↑	Participation in training programs at environmental education centres
	↑	☹️	↑	Participants in environmental volunteering programs
	↑	☹️	—	Hours of voluntary work in environmental volunteering programs



The environmental assessment of each indicator is made by considering three aspects: the evolution, the status and the trend. The **evolution** refers to the progress of an indicator over time. The **status** refers to an indicator's current state.

The **trend** expresses the estimated future progress of an indicator based on policies, strategies, guidelines and plans which will affect it as well as the general context. Each one of these aspects is represented by the following symbols:

- ↑ Favourable evolution or trend
- Stable evolution or trend
- ↓ Adverse evolution or trend
- ☹️ Favourable current situation
- ☹️ Stable current situation
- ☹️ Adverse current situation
- ⓘ Absence of data or insufficient data

Directory and information sources

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11071 Cádiz
- **Córdoba**
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- **Granada**
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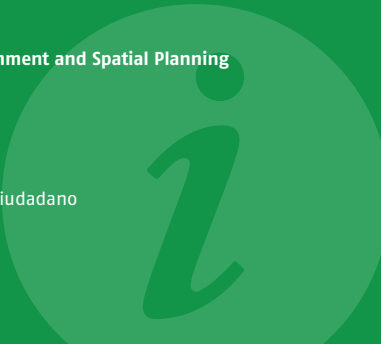
PUBLIC AGENCY ENVIRONMENT AND WATER AGENCY

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Information services

- **Environment Web Site of Regional Ministry of Environment and Spatial Planning**
www.juntadeandalucia.es/medioambiente
- **Citizen helpline**
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- **Citizen mailbox**
www.juntadeandalucia.es/medioambiente/buzondelciudadano
- **REDIAM Channel**
www.juntadeandalucia.es/medioambiente/rediam



Information sources

- [1] Eurostat.
- [2] Spanish National Institute of Statistics (INE).
- [3] Andalusian Statistics and Cartography Institute (IECA).
- [4] Regional Ministry of Agriculture, Fishing and Rural Development.
- [5] Andalusian Institute of Social Studies (IESA-CSIQ).
- [6] Encyclopaedia of Andalusia
- [7] Spanish Ministry of Agriculture, Food and Environment.
- [8] Spanish national meteorological agency (AEMET).
- [9] Regional Ministry of Equality, Health and Social Policies.
- [10] Blue Flag – The Foundation for Environmental Education.
- [11] Andalusian Energy Agency. Regional Ministry of Economy, Innovation, Science and Employment.
- [12] Regional Ministry of Tourism and Commerce.
- [13] Ecoembes.
- [14] Ecodivrio.
- [15] Regional Ministry of Public Works and Housing.

The information whose source is not mentioned corresponds to the Environmental Information Network of Andalusia (REDIAM) of the Regional Ministry of Environment and Spatial Planning of the Junta de Andalusia.



European Union

European Regional
Development Fund



JUNTA DE ANDALUCÍA
REGIONAL MINISTRY OF ENVIRONMENT AND SPATIAL PLANNING