

Countries and regions

Spain



Main themes and sectors addressed in the national State of Environment report

Starting in 2004, the indicator based report “**Environmental Profile of Spain**”^[1] has been published every year. It provides an annual snapshot of the environmental situation in the country, analyses major pressures on the environment and monitors effectiveness of policies. Since 2012, the report is available through an 'app'^[2] developed for tablets and smart phones. It describes 82 indicators organized in 17 environmental and sector areas: Air Quality and atmospheric emissions, Water, Land, Nature, Coasts and marine environment, Green Economy, Environmental Research, Development and Innovation, Waste, Agriculture, Energy, Industry, Fishing, Tourism, Transport, Households, Urban environment, Natural and technological disasters. There is also a chapter devoted to autonomous communities.

Key findings of the State of Environment report

Social and economic aspects

In 2012 Spain was the fifth most populated country in the EU-27 and had the fourth highest population growth during the 2000 to 2012 period (+15.3 %). From 2002 to 2009 Spanish GDP, measured in terms of purchasing power parity, was above the EU-27 average.

Air quality and emissions to the atmosphere

In 2012, Spain was responsible for 7.5% of the total emissions of the EU-28, emitting 7.28 tonnes of CO₂-eq/inhabitant, a figure lower than the average values recorded in the European Union: 9.0 tonnes of CO₂-eq/inhabitant. In relation with the GDP, Spain was also one of the countries with lower emissions and in order to produce a GDP unit, 0.33 kg of CO₂-eq were released in 2012, whereas in the EU-28, such figure amounted to 0.35 kg of CO₂-eq. Troposphere ozone precursor emissions during the 1990-2011 period decreased by 25.3 %. PM 10 emissions have fallen by 23.8 % since 2000, while PM 2.5 fell by 22.5 %.

Water

Consumption per capita from public water supply decreased by 175 litres in 2004 to 142 litres in 2011. By 2009, 28.64% of the 5 125 total surface water bodies in Spain were in 'good' status. By 2012 more than half of the sampling points for fresh water bathing zones had 'excellent quality'. Zones classified as 'poor quality' decreased whilst 'good quality' zones increased.

Land

Corine Land Cover for 2006 established that only 2 % of the total surface area in Spain is covered by artificial surface, one of the lowest in the EU and well below 4.6% of EU average. Soil erosion is a challenge in Spain. 12 % of the country (6 million hectares) suffered from erosion process (soil losses > 50 tons of soil/ha/year). Desertification can be considered serious (grades of 'very high' and 'high') in 17.85 % of the Spanish surface area.

Nature

By 2012, the Natura 2000 network represented 27.19% of the total Spanish area. The total forest area covered more than 27.5 million hectares (55% of the country's surface). The total woodland area is over 18 million hectares, representing 0.39 hectares/inhabitant.

Table 1: Protected area by protection category (2013)

Protected area (PA)	PA and NATURA 2000 NETWORK	Protected Areas	NATURA 2000 NETWORK
Terrestrial (ha)	14 120 005.99	6 286 147.49	13 778 251.98
Marine (ha)	1 070 564.34	488 312.53	1 028 089.68
Total (ha)	15 190 570.32	6 774 460.02	14 806 341.66
Terrestrial area protected (%)	27.89	12.42	27.22

Source:  MAGRAMA^[3]

Green economy

The energy intensity of the Spanish economy (135.5 kgoe/EUR 1 000 by 2011) is below the EU average (144.4 kgoe/EUR 1 000). As part of the strategy to reduce of GHG emissions, 37 climate projects were selected which will allow for a reduction up to 800 000 tonnes of CO₂-equivalent.

Waste

In 2011 total municipal waste production and waste production per inhabitant decreased to 531 kg/inhabitant. The rates for packaging waste recycling and recovery increased. Spain has a paper and cardboard recycling rate close to 80%.

Agriculture and fishing

In 2011 Spain was the European country with the largest land area dedicated to organic farming at 1 845 039 hectares. In 2012, irrigated land surface was 3 522 616 hectares, which was approximately 16% of the EU's total cultivated surface area. In 2011 the capacity of the Spanish fishing fleet continued to decrease. Total production in aquaculture in 2011 experienced a year-on-year increase of 3.3%, reaching 291 235 tonnes.

Transport

In 2011, 47.1% of all vehicles used gasoline and 52.9% diesel. There has been an increase in number of hybrid vehicles with approximately 20 700 registered vehicles.

Main policy responses to key environmental challenges and concerns

Air

The **National Plan for Air Quality and Atmosphere Protection 2013- 2016**^[4] (adopted in 2013) sets the framework to improve air quality through specific actions undertaken in coordination with other sectoral plans aiming at promoting awareness and improving the information available on emissions from pollutants. Furthermore, in order to encourage take-up of vehicles with higher energy efficiency levels, incentives were set up for lower fuel consumption and CO₂ emissions and other pollutants from cars and vans. Since 2012 several Programs and Projects for the non-ETS sectors within the second period of the Kyoto Protocol (2013-2020) has been developed, such as the **Climate Projects** for promoting economic development and employment creation within the framework of the fight against the climate change, and the estimation of the "**Carbon Footprint**". Different Plans focusing on specific sectors have been set up such as "**PIMA SOL**" which promotes the reduction of GHG emissions in hotel and other tourism facilities through energy efficiency improvements, etc.

Biodiversity

Spain is the first country of EU-28 in terms of contribution to the Natura 2000 network with nearly 17% of the European net. The Network of National Parks is an integrated system for the protection and management of natural areas of an outstanding value for the Spanish Natural Heritage. Therefore, the **conservation of biodiversity** is a major concern. Two examples of recent actions aiming at protecting the nature are:

- The regulation of **invasive alien species**, with the approval in 2013 of Royal Decree 630/2013, of August 2, whereby the Spanish list of invasive alien species is regulated.
- The integration of the environment in the **tourism economic activity**, through the approval of a sectoral plan of nature tourism and biodiversity 2014-2020.

Water

The transposition of the Water Framework Directive (WFD) to the Spanish legislation in December 2003 has led to a redirecting of Spanish water policy and hydrological planning including the following priorities:

- Changing the governance model: the transition towards a sustainable water model from an economic, social and environmental perspective.
- Strengthening water security and making significant progress in the sustainable management of water resources (Green growth).
- Developing sanitation and water treatment within the urban cycle.

Coast

Spain has made important progresses in the development of the Marine Protected Areas Network, going in 2014 from 1% to 8% of marine surface protected (Spain has more than 1 million km² of jurisdictional seas). A "State Plan for the Protection of the seaside against the marine pollution" has also been adopted, and marine strategies are being designed in order to achieve good environmental status of all Spanish marine waters by 2020.

Waste

The decrease for waste per inhabitant is a consequence of the **National Integrated Plan of Waste** (PNIR 2008-2015)^[5], as well as of the implementation of prevention measures at autonomous communities and local level, and greater engagement from citizens. In 2013 Spain developed a State Waste Prevention Programme for the period 2014 to 2020 with the objective of reducing waste by 10 % by 2020.

Country specific issues

Regarding **environment and health** two initiatives could be outlined:

- The **Spanish Monitoring Plan** assesses the effectiveness of the measures taken to reduce POPs. Focused is on air at strategic points at 13 remote and 9 urban stations, using the EMEP network in collaboration with the Spanish Agency of Meteorology (AEMET).
- **Human biological bio monitoring** (HBM) has become the gold standard in pollutant exposure estimations in humans. It relies on measures of selected pollutants in air, water, food and soil, and promotes the design of a system to estimate the levels of selected pollutants in a representative sample of Spanish adults.

Regarding **natural heritage conservation**:

- The **Spanish Inventory of Traditional Knowledge on biodiversity in the framework of the Spanish Inventory on Natural Heritage and biodiversity** provides the basis to preserve and promote traditional knowledge relevant to the conservation of biodiversity. At least 1 927 species (25 % of all vascular plants) are associated with traditional use.
- Regarding biodiversity, **the Millennium Ecosystem Assessment in Spain** is the first analysis performed for the status and trends of terrestrial and aquatic ecosystems and their contribution to human welfare.
- In coast and marine environment, **the LIFE+ INDEMARES Project** aimed to quantify the Nature 2000 network in the Spanish marine environment over the past five years. It has protected more than seven million hectares of marine area.

In relation to the **water environment**:

- Spain has introduced the environmental flows (e-flows) in the first planning cycle as a prior restriction imposed in general systems of exploitation that guarantees the maintenance of ecosystems. Moreover, e-flows are considered a mandatory content of the river basin water management plans (art. 42). Spain is leading a European working group to share these experience and knowledge.
- **The National Strategy for River Restoration** emerged in 2006 with the ultimate goal to improve the ecological status of all Spanish water courses.

On Climate Change:

- A number of initiatives have arisen from the 2006 **Spanish Climate Change Adaptation Plan**, including a Health and Climate Change Observatory, a report on the impacts on health by climate change, tools such as C3E (climate change on the Spanish coast) and sectorial workshops for wildlife, agriculture, education or forestry stakeholders.
- In the field of energy, **the project for the connection of the mainland electricity system with the Balearic Islands** ensures a power supply via renewable energies. By 2013 electric power exchanges had provided an export balance of 1 266 GWh to the Balearic Islands, covering 22.3 % of demand. An evaluation in the first 120 days estimated annual emissions savings of 234 000 tons of CO₂.

SOER 2015 country briefings provide an overview of state of the environment across 39 European countries. They are part of the EEA's report SOER 2015, addressing the state of, trends in and prospects for the environment in Europe. The EEA's task is to provide timely, targeted, relevant and reliable information on Europe's environment.

For **references**, see www.eea.europa.eu/soer or scan the QR code.

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