GREEN ECONOMY

2.6

Environmental profile of Spain 2012

2012 started with the recently adopted "Roadmap to a resource-efficient Europe", the objective of which is to transform the European economy into a sustainable economy by 2050. Its goals include: promotion of competitiveness, reduction in resource utilisation in the production and consumption of goods, and the creation of companies and job opportunities from activities like recycling.

Increasing the efficient use of resources, that is, using the limited resources of the earth in a sustainable manner, is crucial in order to assure growth and employment. When growth and economic development are encouraged and, at the same time, the natural environment continues to provide environmental resources and services that guarantee our well-being, we are encouraging green growth. Therefore, the green economy gives natural resources a high value, promoting sustainable use and preserving biodiversity; additionally, it offers new business lines that allow companies to be more competitive and grow. At Rio +20 a common understanding was reached concerning the meaning of the green economy: "an economy that contributes to reducing the consumption of energy, raw material and water, that minimises the generation of pollution and greenhouse gases, and encourages the reduction and reuse of waste".

The United Nations Environmental Program (UNEP) defines green employment as being jobs that reduce the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable. They therefore help to cut the consumption of energy, raw materials and water, to de-carbonise the economy and reduce greenhouse-gas emissions, to minimise or avoid all together all forms of waste and pollution, and to protect and restore ecosystems and biodiversity.

The green economy is a potential engine for employment creation that should be encouraged in a more determined manner during this crisis. Renewable energies, sustainable transport, housing energy efficiency, industry and waste management are sectors that offer great potential. In this sense, an important concept is that of a 'circular economy', in which 'waste is considered as a valuable resource to be included in the production chain, reducing production costs and minimising landfill'.

KEY MESSAGES

- The energy intensity of the Spanish economy is below the EU average, consuming less energy per unit of GDP generated. After a period of stability, from 2004, the energy intensity in Spain has reduced at a faster rate than in the EU.
- The consumption of materials in Spain reflects the performance of the economy, with continuous growth until 2007, followed by a phase of contraction that saw the figures fall to 1998 levels. During the period 2007-2010 the fall was 37%.
- Spain remains the second leading country in terms of EMAS registered organisations within the EU, representing around 28% of the total (June 2012). In 2012 the number of registered organisations has increased slightly.
- Spain has designed a domestic strategy for the reduction of greenhouse gases through projects in a wide range of sectors. In the first round of selection of the Clima Projects, promoted by MAGRAMA, 194 projects were presented, with 37 of them being selected. It is estimated that these projects will allow for a reduction in emissions of up to 800,000 t of CO_2 -eq.
- In 2010 Spain contributed around 6% of the environmental taxes of the EU (the sixth largest country in terms of contributions). As a percentage of GDP, the Spanish contribution was the lowest of the EU-27 countries with environmental taxes representing only 1.65% of GDP, while the European average was 2.37%.

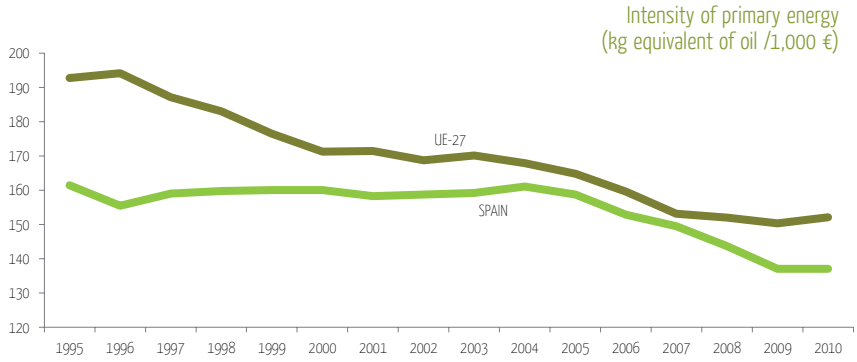
INDICATORS

- Energy intensity of the economy
- Total material requirement
- Organisations with Eco-Management and Audit Scheme (EMAS)
- Spanish carbon fund "Clima Projects"
- Environmental Taxes

An example of the initiatives carried out by the Ministry of Agriculture, Food and Environment for promoting economic development and employment creation within the framework of the fight against the climate change, are the 'Clima Projects'. At the end of November 2012 the results of the first invitation for proposals were published, during which 37 out of the 194 projects presented for the avoidance of emissions in agriculture, transport, the residential sector or the waste sector, were selected. The indicator 'Carbon Fund Clima Projects' describes the improvements made in this sense.

Energy intensity of the economy

Primary energy intensity is lower than the EU average; in 2010 it was almost 10% lower



Source: EUROSTAT

Directive 2012/27/CE, of 25 of October 2012, on energy efficiency, establishes a common framework of measures for the promotion of energy efficiency within the EU, in order to ensure the achievement of the main target of 20% energy efficiency by 2020 and to pave the way for further energy efficiency improvements beyond that date. Article 3 states that each Member State will set up an indicative national energy efficiency target based on consumption, primary/final savings or energy intensity. The Directive obliges the Member States to report on the progress made in relation to the national energy efficiency targets. Among the indicators to be used are primary or final energy intensity and the intensity per sector.

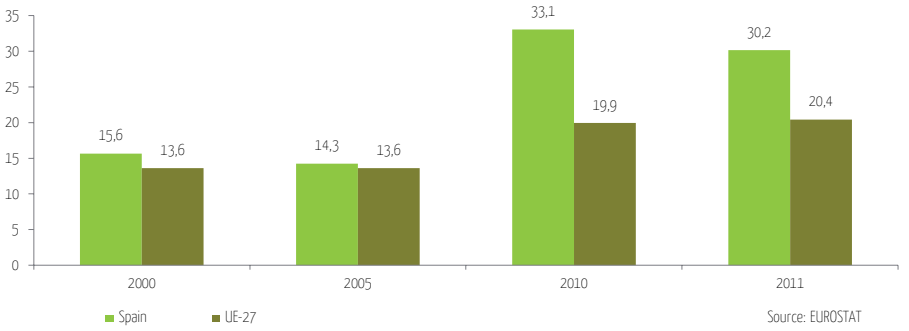
Energy intensity is a way of evaluating energy efficiency. It analyses whether there has been lower energy consumption while maintaining an equivalent or higher level of economic activities or benefits.

Primary energy efficiency in Spain is lower than the EU average, with the gap widening as of 2007. In 2010 it was 9.9% lower. The trend of Spain's energy intensity was stable up to 2004 (with one one-off decrease in 1996) and decreasing from that year. This decrease was especially significant between 2005 and 2009, while 2010 stabilised at 2009 values.

Improving energy efficiency is one of the most effective ways of improving energy security and reducing the emissions of greenhouse gases and other polluting substances. The use of renewable energy sources guarantees these aspects, while creating direct employment in the

production phase and indirect employment in the research phase. The percentage of Spain's energy production coming from renewable sources is higher than the EU-27 average, although this production is highly influenced by the annual rainfall and the capacity to generate hydro-electric energy. The year 2010 registered the highest percentage of electricity generated from renewable sources so far. In 2011 this was 30.2% in Spain, while the EU average was 20.4%. Only Sweden, Austria, Portugal, Latvia and Denmark had percentages higher than Spain.

Percentage of electricity from renewable sources (%)



NOTES

- This indicator evaluates the energy consumption of an economy and therefore its energy efficiency. It is calculated each year by the ratio of primary energy consumption (expressed in kg of oil equivalent) to GDP (expressed as chain-linked volumes referred to 2005 prices).
- Energy efficiency is understood to mean the use of less energy inputs to maintaining an equivalent level of economic or services activity. By contrast, energy saving is a wider concept that also includes the reduction of consumption through changes in behaviour or a decrease in economic activity.

SOURCES

- Eurostat, 2013. Information from the Eurostat website: Database by themes / Environment and Energy / Energy / Energy statistics – Main Indicators / Energy Intensity of the Economy / Annual data

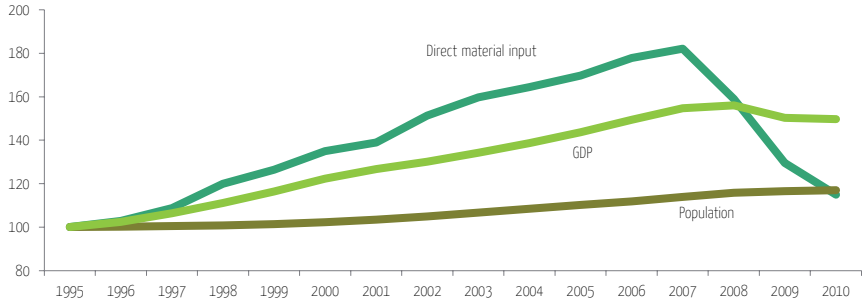
FURTHER INFORMATION

- http://www.eea.europa.eu/
- http://www.idae.es/

Total material requirement

Material consumption falls, decoupling from GDP and population growth

National consumption of materials (Index; 1995=100)



GDP for 2010 is provisional
Source: INE

The most important natural resources (raw materials, metals, energy, biodiversity, water, etc...) are the basis of economic growth. A basic pillar of the Commission's roadmap towards a more sustainable Europe is efficient consumption of resources, identifying those economic sectors with the highest consumption. The main guidelines to be followed include: competitiveness, growth based on lower resource use (in production and consumption of goods), creation of green jobs and eco-engineering.

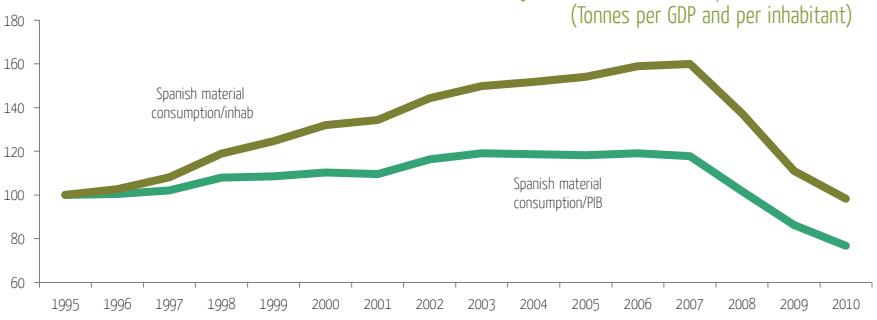
The consumption of materials in Spain reflects the behaviour of the economy. Firstly, coinciding with the phase of economic expansion, growth in the consumption of materials is seen up to 2007, the year which saw the highest level recorded so far: 931,722,370 t. As of then, the fall has been significant, decreasing to 587,422,250 t in 2010. In relative terms, the growth between 1995 and 2007 was 82.2% while the decrease from 2007 to 2010 was 37%. The fall over three years was equal to half of the growth over the previous 12 years.

With respect to GDP and population, the graph shows the decoupling that occurred in recent years between the behaviour of these two variables and the consumption of materials, with the three growing up to 2007, although at different rates, before an abrupt change.

The intensity of the consumption of materials both per inhabitant and per unit of GDP also shows a decreasing trend from 2007 in the case of population and 2006, in the case of GDP. In the first case, the figures show falls of 14%, 19% and 21% in 2008, 2009 and 2010 respectively, and in relation to the previous year. Overall, between 2007 and 2010, the decrease has been 38.6%, meaning that the footprint of consumption of materials per inhabitant has been reduced by that percentage in three years. In fact, while in 2007 20.76 t per inhabitant were consumed, in 2010 the consumption was 12.75 t.

In relation to GDP, in 2006 1,181.64 t per million Euros were consumed, compared to 761.1 t consumed in 2010, a decrease of 35.6%.

Intensity of the national consumption of materials
(Tonnes per GDP and per inhabitant)



Data for 2010 is provisional
Source: INE

In 2009, Spain was the fourth largest country in terms of the consumption of materials in the EU (8.9%). Italy, France and Germany being the three countries with larger consumptions than Spain.

NOTES

- The indicator presents the national consumption of materials as it is calculated by the National Statistics Institute, and it represents the total quantity of materials used directly in economy. The material flow accounts show the physical material inputs that enter the national economic system and the outputs to other economies or to the natural environment. Domestic extraction includes the annual quantity of solid, liquid and gaseous raw materials (excluding water and air) taken from the natural environment to use as material inputs in the economic system. They include biomass, minerals and fossil fuels.

SOURCES

- National Statistics Institute, 2013. Material flow accounts. Series 1995-2010. In INEbase/Entorno físico y medio ambiente/Estadísticas sobre medio ambiente/ Cuentas ambientales / Cuentas de flujos de materiales. Serie 1995-2010 / Principales indicadores de flujos de materiales /

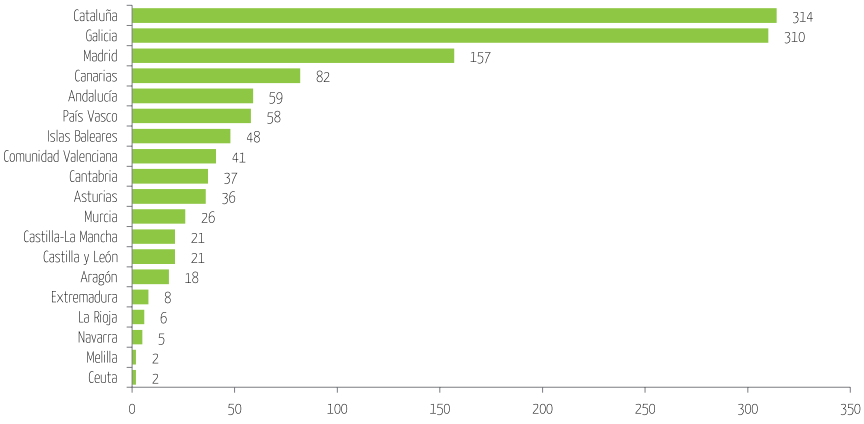
FURTHER INFORMATION

- www.ine.es
- www.unep.org/greeneconomy
- http://epp.eurostat.ec.europa.eu/

Organisations with Eco-Management and Audit Scheme (EMAS)

In 2012 the number of organisations in the EMAS system continued to increase, although at a lower rate compared to previous years

Number of Spanish Organizations registered with EMAS. Year 2012



Source: MAGRAMA

At 31 of December 2012 in Spain there were 1,261 organisations registered in the Eco-Management and Audit Scheme (EMAS), 0.96% more than the previous year, and 1.01% more than in 2010. This data confirms that Spanish companies continue to rely on EMAS as a suitable environmental management system. In terms of distribution by sector, hotels and accommodation make up 31% of the organisations, public administration 25%, while the architecture and engineering sector has 14%. Overall services account for more than the half of the organisations registered in EMAS (68%) while industry has 32%.

In terms of the autonomous communities, the distribution of the number of organisations registered with EMAS is very varied. The autonomous communities with the largest number of organisations registered are Catalonia, Madrid, Galicia and the Canary Islands. For the promotion and support of the implantation of the EMAS Regulation, the different autonomic administrations have given economic, technical and administrative incentives (delivery of regional

prizes for the best environmental statement, delivery of diplomas, workshops, aid to SMEs for the implementation of EMAS co-financed by the European Regional Development Fund, etc.).

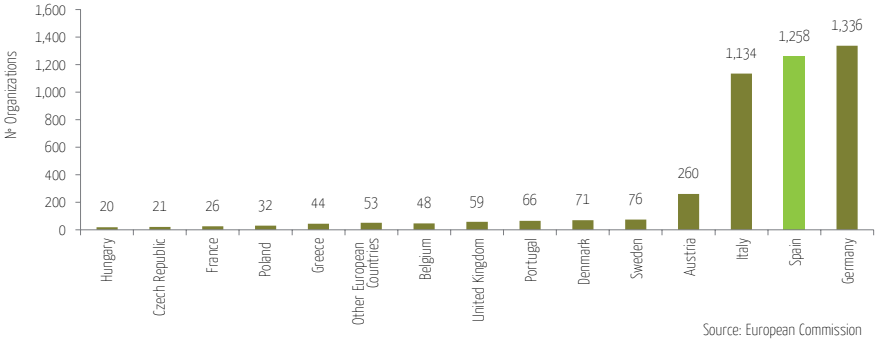
Organizations and sites adhered to EMAS in Spain

Year	Organisations	Sites
2010	1,248	1,612
2011	1,249	1,525
2012	1,261	1,561

Within the European framework, at the end of 2011, 4,511 organisations were EMAS registered. By June 2012 this number had slightly decreased, to 4,504 organisations, with the distribution among countries as seen on the graph. Spain continues to maintain its place as the second leading country among the members of the EU in terms of registrations, with 27.9% of the total, behind Germany, with 29.7%.

Small and medium enterprises, with more than 33% and 26% of the registrations respectively, are the organisations that rely most on the system, compared to large and micro enterprises, which show lower percentages (18% and 23% respectively).

Organisations with Environmental Management Systems (EMAS) in EU countries with over 10 Organisations registered



Source: European Commission

The data for 2013 points towards a reduction in the number of organisations that use the EMAS system. The estimate at 31 of March is for around 3,700 organisations to be registered in Europe. The economic crisis of recent years (provoking the closure of a significant number of companies and driving internal cost reductions at those still operating), the reduction of public subsidies for the development of these systems and the updating and tidying up of the database are some of the main reasons behind the reduction.

NOTES

- EMAS is a voluntary European standard that recognises those organisations that have implemented an Environmental Management System (EMS) and have committed to continuous improvement, verified through independent audits.
- Regulation 1221/2009 (CE) of 25 November (known as EMAS III Regulation) modified the previous Regulation 761/2001 of 19 March 2001. Currently EMAS III extends its scope to all companies no matter what sector they belong to.
- With RD 239/2013, of 5 April, establishing the rules for the application of the Regulation (CE) Nº 1221/2009 of the European Parliament and the Council, of 25 of November 2009, on the voluntary participation of organisations in a European environmental management and audit system (EMAS), and repealing Regulation (CE) nº 761/2011 and the Decisions 2001/681/CE and 2006/193/CE of the Commission, the Secretary of State for the Environment will be in charge of the EMAS Register for organisations with sites in one or several third Countries outside the EU that have established a bilateral agreement with Spain for this purpose.

SOURCES

- European EMAS data: information provided by the EMAS web of the Commission. Available in: European Commission/Environment/EMAS/EMAS documents/Statistics
- Data for Spain: Ministry of Agriculture, Food and Environment, 2013. Directorate-General for Environmental Quality and Assessment and Natural Environment.

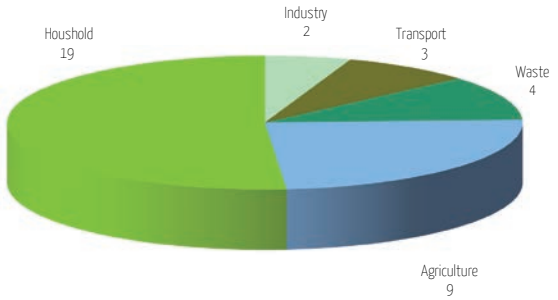
FURTHER INFORMATION

- http://ec.europa.eu/environment/emas/
- http://www.magrama.gob.es/es/. Available in: Calidad y evaluación ambiental/Sistema Comunitario de Ecogestión y Ecoauditoría: EMAS

Spanish Carbon Fund 'Clima Projects'

Spain has drawn up a domestic strategy for the reduction of greenhouse gas emissions (GHG) through projects in a wide number of sectors.

Sectorial distribution of the 2012 CLIMA projects contracts.
Total 37 projects



Spurce: MAGRAMA

The Carbon Fund, created by Law 2/2011, of 4 March, on Sustainable Economy, has been conceived as a new climate finance instrument. The implementation of the fund pursues the target of reducing emissions in Spain through the 'Clima Projects' scheme.

Within the framework of this strategy, this is a useful tool to develop projects carried out in Spain for the reduction of greenhouse gases emissions, through the acquisition of the reductions in GHG emissions that these projects achieve.

There is a twin objective:

- In the first place, to be able to reduce emissions across a wide range of sectors, so as to comply with climate change commitments, and do that through a real reduction in the inventory of Spanish GHG emissions.
- To promote, at the same time, the development of low-carbon economic activity in our country, taking advantage of market niches that create employment and economic activity in line with 'green economy' principles.

As a result of the first invitation for Clima Project proposals, on 11 of February 2012, the purchase of the GHG reductions from the 37 projects that are going to be undertaken was formalised. The selected projects have a wide and balanced regional distribution and will allow a reduction of emissions of up to 800,000 t of CO_2-eq. In terms of the distribution by sectors, it can be confirmed that a wide range of sectors are included, distributed as follows: 19 projects in the residential, commercial and institutional sector, nine in the agriculture sector, four in the waste sector, three in the transport sector and two in the industrial sector.

NOTES

- The indicator evaluates the result of the Clima Projects, developed within the framework of the Carbon Fund. 2012 saw the first invitation for proposals.

SOURCES

- Data provided by the Spanish Office for Climate Change. Ministry of Agriculture, Food and Environment.

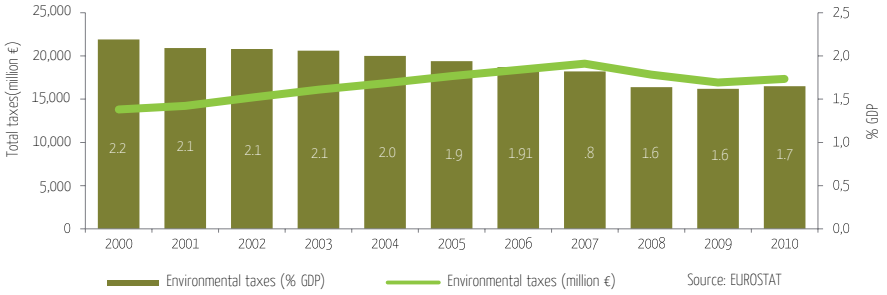
FURTHER INFORMATION

- http://www.magrama.gob.es/es/cambio-climatico/temas/fondo-carbono/Con2013_proy_clima_piloto.aspx/
- RD 1494/2011, of 24 of October, which regulates the Carbon Fund for a Sustainable Economy.

Environmental taxes

In 2010 Spain contributed almost 6% of the environmental taxes of the EU-27, although it was once again the country with the lowest level of environmental taxes in terms of GDP

Environmental taxes.
Total as a percentaje of GDP



The EU Commission considers that environmental taxes can act as a tool in achieving established environmental objectives and, at the same time, provide appropriate incentives to reduce harmful emissions, for example of GHG. In fact the revision of countries' tax systems and increases in ecological taxes form part of EU initiatives.

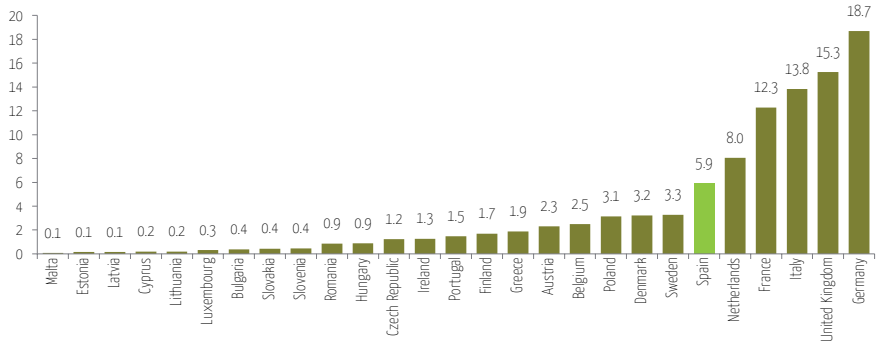
In 2008 and 2009 in Spain there was a decrease in the amount of environmental taxes collected, bucking the upward trend seen up to 2007. Nevertheless, in 2010, there was a 2.34% increase, to reach a total of 17,333 million euros.

Spain was one of the six countries of the EU-27 in 2010 with the highest contributions, with almost 6%. Germany (18.7%), United Kingdom (15.3%), Italy (13.8%), France (12.3%) and Netherlands (8.0%), were the five countries with the highest contributions for that year.

Nevertheless, as a percentage of GDP, the Spanish contribution was the lowest of the EU-27 countries. In Spain, environmental taxes in 2010 represented only 1.65% of the GDP. The average of the EU-27 was 2.37%, while countries like Denmark and Netherlands had a rate of 4%, the highest of the 27.

The distribution of taxes by activity in 2010 was similar to previous years: close to 82% came from energy, 17% from transport and 1% from pollution.

Contribution of european countries (UE-27).
To environmental taxes by 2010 (%)



Source: EUROSTAT

NOTES

- Under the harmonised statistical framework developed in 1997 jointly by Eurostat, the European Commission, the OECD and the International Energy Agency (IEA), environmental taxes are defined as those applied to a physical unit (or similar) of a material that has a proven and specific negative impact on the environment. These include all taxes on energy and transport but exclude value added tax. The taxes in question are mandatory payments collected by the Government or other administrative bodies, and the benefits to the taxable person are not directly linked to the payment.
- Spain's main environmental taxes are as follows:
  - Energy taxes: Hydrocarbon tax, electricity tax, tax on retail sales of certain hydrocarbons, Canary Islands special tax on oil-based fuel.
  - Transport taxes: special tax on certain means of transport, motor vehicle tax.
  - Pollution taxes: state duty on waste discharge, regional taxes (autonomous community) on pollution, waste dumping and waste discharges into the sea.

SOURCES

- Information from the Eurostat web. Available in: Statistics/Data/Database by themes/Environment and energy/Environment/Monetary flow accounts/Environmental tax revenue
- INE: Environmental taxes. 1995-2010 Series. Available in: INEbase / Entorno físico y medio ambiente/ Estadísticas sobre medio ambiente / Cuentas ambientales / Impuestos ambientales. Serie 1995-2010 / Resultados nacionales

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