

# 2.14

# HOUSEHOLDS



The environmental pressure exerted by all households in the EU is highly significant because it is responsible for 60% of Gross Domestic Product in the UE-27. The need to reduce this impact led to the creation of the European Strategy for 2020, which expressly includes aspects related to reducing energy consumption and increasing natural resource consumption efficiency.

The number of people in both European and Spanish households is generally decreasing and that trend is pushing up the total number of households. In Spain, the number of people per household has fallen by almost 11% over the period 2000-2010.

Increases have been observed in one and two-person households. These two types of households are the most common (48.6%) and their numbers continue to increase. On the contrary, households made up of five, six or more people are increasingly scarce, accounting for only 6.2% of total. The only type of households that have remained fairly stable are those made up of four people, which recorded a slight increase (2.8%) over the reference period.

Because of the direct relationship between household income and their level of consumption, households with more income consume the most. Similarly, the consumption of households and the environmental pressure they exert are clearly correlated, as increased consumption entails greater energy use and the creation of more waste.



### SPAIN: POPULATION AND HOUSEHOLDS 2000-2010

	2000	2005	2010	Change 2000-2010
Population	40,499,791	44,108,530	47,021,031	16.10
Households	13,086,197	14,865,707	17,068,196	30.43
Ratio of Population-Households	3.09	2.97	2.75	-10.98

Source: Population: INE. Municipal register as at 1 January 2000-2010  
Households: INE. Household Budget Survey 2000-2005 and Household Budget Survey 2006-2010.

### KEY MESSAGES

For the first time since 2000, household gross disposable income stopped growing in 2009, recording a decrease of almost €670 per household.

Energy consumption has remained relatively stable since 2000, displaying a downward trend since 2006, although it rose slightly in 2010.

Water consumption per household has been declining year after year, recording significant decreases.

The number of passenger cars per household increased in 2010, after dropping for several years. Even so, there are fewer cars per household than in 2000.

Waste production per household continued the downward trend that has been virtually constant since 2000.

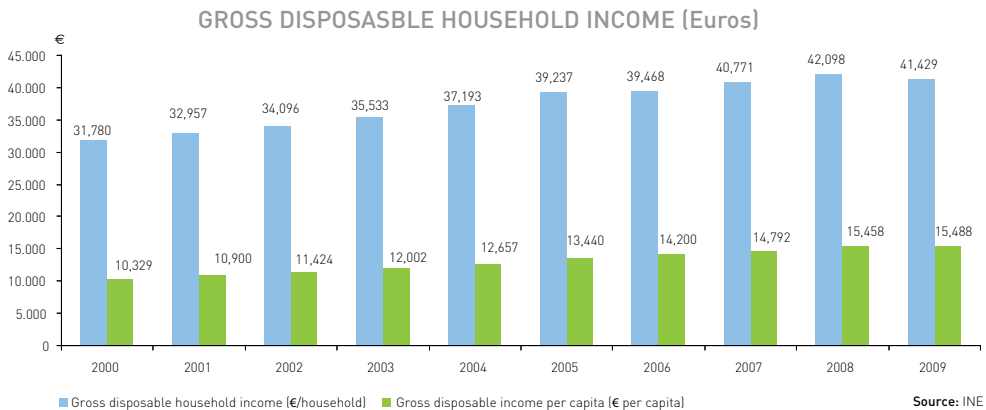
While the number of households and their gross income continued to increase to 2009, energy consumption, water consumption, waste production and CO<sub>2</sub> emissions per household decreased.

### INDICATORS

- Gross disposable household income
- Energy consumption per household
- Water consumption per household
- Number of passenger cars per household
- Urban waste production per household
- Eco-efficiency in households

## Gross disposable household income

Gross disposable income per household bucked the upward trend that started in 2000 with a decrease of 1.6% in 2009



According to the INE, Spain has reversed the growth trend observed since 2000 (Spanish Regional Accounts, 2008-2011 series. First estimate 2011 (30 March, 2012)). Average gross income per household reached €41,429 in 2009 (1.6% less than the previous year, while income per capita amounted to €15,488, up by 0.2% on 2008). Taking 2000 as a reference (index = 100), gross income per household rose by 30.4% in 2009, while income per capita increased by 49.9%.

Households in seven Autonomous Communities exceeded the national average, as did those in the autonomous cities of Ceuta and Melilla. At the top of the list was Navarre with €51,918/household, followed by the Basque Country (€51,137) and Madrid (€50,671). As regards the ACs below the national average (€41,678), Extremadura registered the lowest income per household with €32,454. In terms of gross disposable income per inhabitant, 10 Autonomous Communities exceeded the national average, with the Basque Country recording the highest income (€20,416), followed by Navarre, Madrid and Catalonia. The community with the lowest income was also Extremadura (€11,841), followed by Andalusia and the Canary Islands.

Moving on, according to the Household Budget Survey, average annual expenditure per household nationally stood at €30,410 in 2009, which was 4.8% less than the 2008 figure (€31,953).

## AVERAGE EXPENDITURE PER HOUSEHOLD. 2009

EXPENDITURE ITEM	PERCENTAGE CHANGE 2009/2008
Total expenditure	-3%
Average expenditure per household	-4.8%
Average expenditure per person	-3.7%

Source: INE. Household Budget survey 2009

The Living Conditions Survey 2004–2009 (INE) provides information on average net annual income per household and per person (see table below).

## INE. HOUSEHOLD BUDGET SURVEY 2009

	2003	2004	2005	2006	2007	2008	2009
Net annual income per household (€)	21,626	22,471	23,539	24,606	26,101	26,500	25,732
Net annual income per person (€)	7,618	7,943	8,437	8,945	9,594	9,865	9,627

Source: INE. Living conditions survey, 2009. Provisional data.

## SOURCES

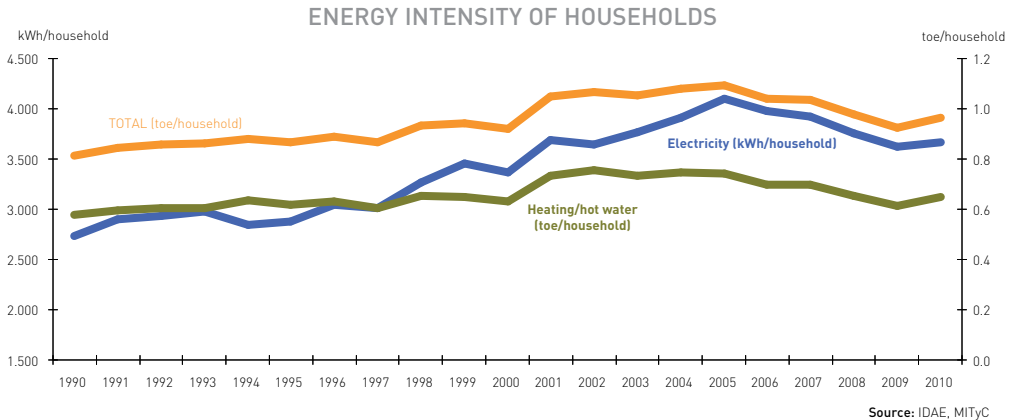
- National Institute of Statistics, 2012. INEBase. Spanish Regional Accounts. Base 2000. Gross disposable household income. 2000-2008 series.

## FURTHER INFORMATION

- <http://www.ine.es/inebase>

## Energy consumption per household

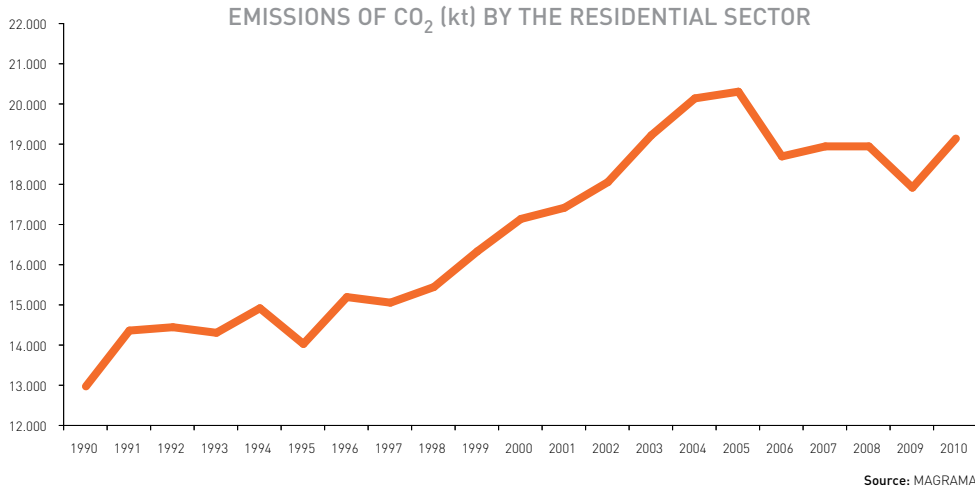
In 2010 household energy consumption rose by 4.13%, bucking a four-year downward trend



This indicator measures energy consumption per household broken down into electrical usage (kWh/household) and heating/hot water (toe/household). It is estimated that in 2010, each household consumed 3,663 kWh for electrical usage and 0.649 toe for heating. While consumption for electrical usage increased by 1.08% in regard to the previous year, that for heating/hot water rose by 5.67%. Total consumption stood at 0.964 toe/household compared to 0.926 toe/household in 2009, an overall increase of 4.13%. However, when assessing these figures it should be noted that the number of households increased from 17.06 million in 2009 to 17.17 million in 2010.

This increase in energy consumption puts an end to the trend observed over the last four years. However, if the period 2000-2010 is considered, the increase in consumption would be 22.4%, which yields an annual average growth rate of 4.78%. In the same period, the number of homes increased from 13.08 million to 17.2 million, an increase of 23.9%. There is clearly a direct link between the number of households and electricity consumption.

On the other hand, energy consumption entails emissions of greenhouse gases such as CO<sub>2</sub>. Residential combustion plant emissions rose by 6.8% in 2010 compared to the previous year. As can be appreciated in the graph below, CO<sub>2</sub> emissions per household have displayed an upward trend most years and have risen by 47.7% since 1990, an average growth of 2.26%. In order to understand this indicator properly, it is worth recalling that the number of households has also risen over the period of reference.



#### NOTES

- At the Kyoto summit, Spain set a target of reducing greenhouse gases by 15% in 2012 in regard to 1990 levels.

#### SOURCES

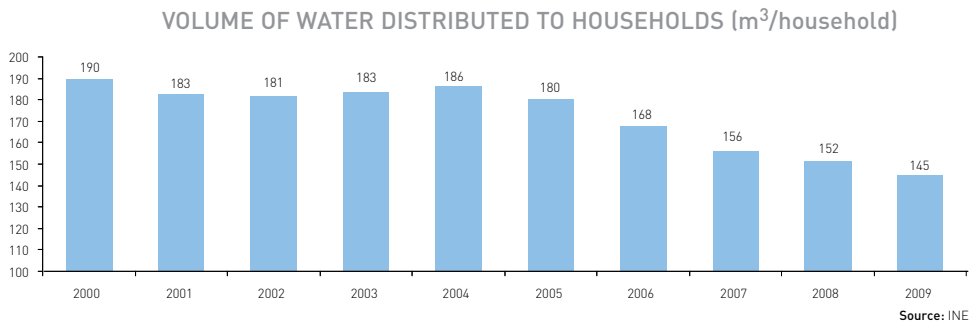
- Institute for Diversification (IDAE), 2011. Annual report on energy Indicators. 2010.
- Ministry of Agriculture, Food and Environment, 2012. Inventory of Emissions of Greenhouse Gases in Spain. 1990-2010. Communication to the Secretariat for the Framework Convention on Climate Change and Kyoto Protocol. Directorate-General for Environmental Quality and Assessment.

#### FURTHER INFORMATION

- <http://www.idae.es>
- <http://www.eea.eu.int>
- <http://www.minetur.es>
- <http://epp.eurostat.ec.europa.eu>

## Water consumption per household

In 2009, a total of 145 m<sup>3</sup> of water were distributed to each household, 4.6% less than the previous year



Spanish households consumed a total of 2,494 hm<sup>3</sup> of water in 2009, a reduction of 1.8% on the previous year in which, in absolute figures, 2,540 hm<sup>3</sup> of water were consumed.

Average annual consumption per household stood at 145 m<sup>3</sup>, compared to 152 m<sup>3</sup> the previous year (4.6% less), following the downward trend in average annual water consumption per household that started in 2005 and which has fallen by 22%.

Average consumption per person per day (149 litres) dropped by 3.2% in 2009 in relation to the previous year, indicating a more efficient use of resources.

AVERAGE WATER CONSUMPTION PER INHABITANT PER DAY (litres)

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
146	153	159	165	168	165	164	167	171	166	160	157	154	149

Households in seven Autonomous Communities exceeded the national average (149 litres per inhabitant per day) in 2009. The highest levels of consumption were recorded in Cantabria (180), Valencia (174) and Murcia (166). In contrast, the lowest average consumption was recorded by households in the Basque Country and the autonomous cities of Ceuta and Melilla (126 litres per inhabitant per day) and the Balearic Islands (127).

As regards water demand management, one important aspect to consider is the price of supply. According to the INE, the unit value of water rose by 8.4% in Spain in 2009 to an average of 1.42 €/m<sup>3</sup>, compared to €1.31 the previous year, which at the same time represented an increase on the 2007 figure.

The highest prices (euros/m<sup>3</sup>) for water were observed in the Balearic Islands (2), the Canary Islands (1.9), Murcia (1.84), Catalonia (1.76), Madrid (1.67) and Valencia (1.54) - all of which were above the national average - while the rest registered lower unit values.

#### NOTES

- The indicator is calculated using data taken from the Survey on Water Supply and Sewerage carried out by the INE between 1996 and 2009.

#### SOURCES

- INE. Survey on water supply and treatment. 1996-2009.
- INE. Survey on water supply and treatment. Press release from June 27, 2011.

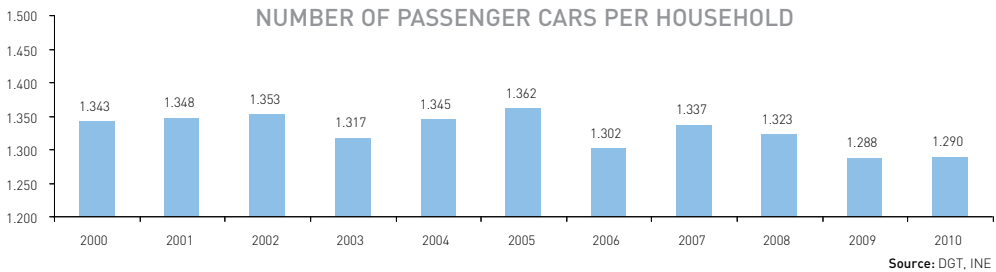
#### FURTHER INFORMATION

- <http://www.ine.es>
- Eurostat: Use of water from public water supply by services and private households
- OCDE, 2011: Economic Policy Reforms 2011. Going to Growth. [Chapter 4: Housing and the economy: Policies for Renovation, p. 32-70]



## Number of passenger cars per household

In 2010, the number of passenger cars per household rose slightly again, bucking the trend despite the increase in the number of households

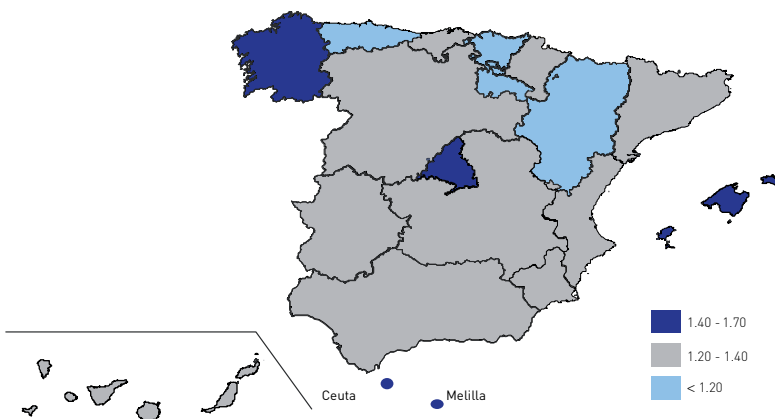


In 2010, Spain's passenger car fleet totalled 22.1 million units, 0.7% more than the previous year (163,970 cars). Meanwhile, the number of households continued the rise of recent years (0.6%) to reach 17.17 million in 2010 (102,385 households more).

Between 2000 and 2010, the number of passenger cars rose by 26.0%, while the number of households witnessed a larger increase of 31.2%.

The number of cars per household exceeded the national average (1.29 passenger cars per household) in nine Autonomous Communities and in the autonomous cities of Ceuta and Melilla, which were at the top of the table with 1.84 passenger cars per household. They were followed by the Balearic Islands (1.56), Galicia (1.42), Madrid (1.40), Murcia (1.37), Extremadura (1.36) and Cantabria (1.32). Castile-La Mancha, the Canary Islands and Andalusia were also above the national average (1.3), while the remaining Autonomous Communities were below it. La Rioja (1.09), the Basque Country (1.11) and Aragon (1.13) were at the other end of the scale.

NUMBER OF PASSENGER CARS PER HOUSEHOLD (2010)



**NOTES**

- On 31/12/2010, Spain's national vehicle fleet totalled 31,086,035 units; the most common vehicles were passenger cars (71.25%), followed by motorcycles (8.71%).
- In 2010, 1,074,198 vehicles were withdrawn from circulation, of which 91.38% (981,587) were passenger cars, a smaller number than in previous years.
- The upward trend in favour of diesel-powered vehicles continued at the expense of those that use petrol. Thus, in 2000 27% of passenger cars ran on diesel, while by 2010 that figure had risen to 53.89%.
- In 2010, more than half of passenger cars (61.1%) had a cylinder capacity of less than 1600 cm<sup>3</sup>. This further accentuates the downward trend observed in passenger car cylinder capacity.

**SOURCES**

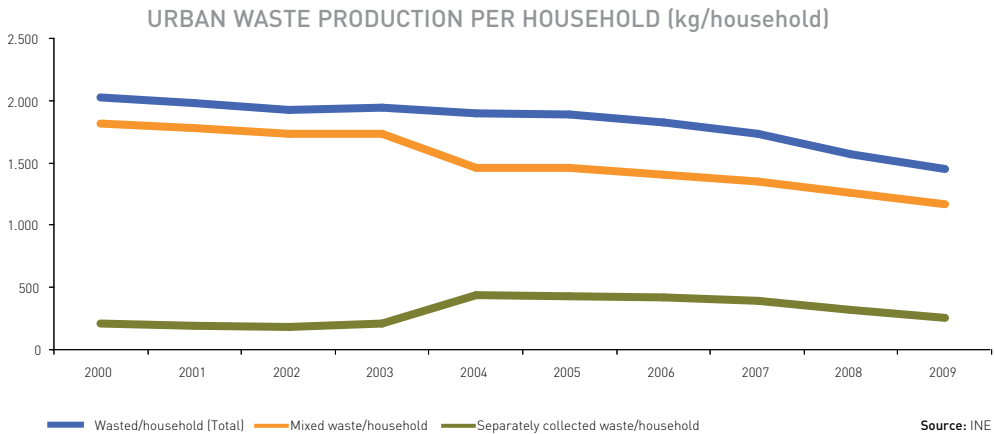
- Households: INE. Household Budget Continuous Survey, 1998-2004 and Household Budget Survey, 2006 base, 2006-2010 series.
- Passenger cars: DGT. General Statistical Yearbook, 2010.

**FURTHER INFORMATION**

- [http:// www.ine.es/inebase](http://www.ine.es/inebase)
- [http:// www.dgt.es/estadisticas.htm](http://www.dgt.es/estadisticas.htm)

## Urban waste production per household

The total amount of urban waste per household decreased by 6.8% in 2009; the average annual waste generated per household was 1,450.5 kg/year



In 2009, waste management companies collected a total of 24.3 million tonnes of waste from the residential sector, 7.8% less than the previous year. This drop further accentuates the downward trend in urban waste, which has reached 1999 levels. This averages out at 1,451 kg of urban waste per household, the lowest amount recorded in the last decade.

In 2009, 81.2% of urban waste was classified as mixed waste, while the remainder was classified as separately collected urban waste. Continuing the trend from previous years, in 2009 the amount of separately collected waste also decreased (16.3%) from 5.3 to 4.4 million tonnes.

Ten communities recorded volumes above the national average (1,451 kg/household): Navarre (1,803 kg/household), Cantabria (1,656 kg/household), Castile and Leon (1,606 kg/household), Castile-La Mancha (1,567 kg/household), Andalusia (1,552 kg/household), Madrid (1,544 kg/household), the Canary Islands (1,538 kg/household), Murcia (1,506 kg/household), the Balearic Islands (1,481 kg/household) and the Basque Country (1,453 kg/household). The rest of autonomous communities recorded volumes below the national average, with households in Valencia generating the least amount of waste at 1,222 kg per household.

**SOURCES**

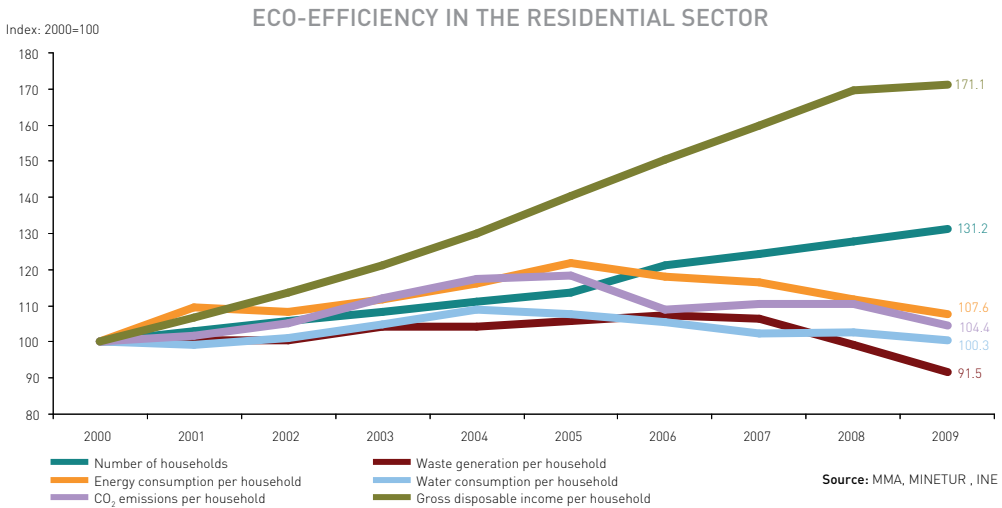
- Households: INE. Household Budget Continuous Survey. 1998-2004 and Household Budget Survey. 2006 base. 2006-2010 series.
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**FURTHER INFORMATION**

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- <http://www.eea.europa.eu>
- <http://www.epp.eurostat.ec.europa.eu>
- OCDE: Economic Policy Reforms, 2011: Going to Growth [Housing and Economy: Policies for Renovation, p31-70]

## Eco-efficiency in households

In 2009, whilst the number of households continued to rise, gross income, energy and water consumption, waste generation and CO<sub>2</sub> emissions per household all dropped to a greater or lesser extent



During the period shown in the graph, 2000-2009, the number of households rose by 31.2% from 13 million in 2000 to 17.1 million in 2009, while gross disposable household income increased by 71.1%.

Between 2000 and 2009, Spanish households as a whole have progressively consumed more energy and emitted more CO<sub>2</sub> into the atmosphere, although a downward trend is observed in recent years, particularly since 2005. In contrast, water consumption increased halfway through the decade, to fall back in 2009 to 2000 levels. In terms of waste produced by Spanish households, there has been a decrease of approximately 9%. This is one of the most positive trends in recent years.

With regard to energy consumption, there has been a gradual decrease since 2005, following the growth observed in the first five years of the decade. Water consumption per household has also gradually decreased, standing at 145 m<sup>3</sup>/year in 2009, compared to 190 m<sup>3</sup> in 2000. As commented for all the indicators, the continuous increase in the number of households must be taken into account when interpreting these figures.

**NOTES**

- For the purpose of calculating the indicator, the annual variation rate of each of the component indicators was used. The indicator's values were then set at 100, and 2000 was established as the base year. The most recent data on waste is from 2009, which is why the indicator only considers the variables up to this year.

**SOURCES**

- Number of households: INE. Household Budget Continuous Survey. 1998-2004 and Household Budget Survey. 2006 base. 2006-2009 series.
- National institute of Statistics, 2012. INEBase. Spanish Regional Accounts. 2000 base. Gross disposable household income. 2000-2008 series.
- Waste: INE, 2011. INEBase. Survey on the collection and treatment of urban waste. Several years.
- Institute for Diversification (IDAE), 2011. Annual report on energy Indicators. 2010.
- Ministry of Agriculture, Food and Environment, 2012. Inventory of Emissions of Greenhouse Gases in Spain. 1990-2010. Communication to the Secretariat for the Framework Convention on Climate Change and Kyoto Protocol. Directorate-General for Environmental Quality and Assessment and the Natural Environment.
- Ministry of Industry, Energy and Tourism, 2011: Energy in Spain 2010.
- Water consumption: INE, 2011. INEBase. Survey on water supply and treatment. Several years.

**FURTHER INFORMATION**

- <http://www.ine.es>