

16 November 2016

**Environmental accounts. Air Emission Accounts.**  
**Base 2010. Accounting series 2010 – 2014**

**In 2014, the Spanish economy emits 324.2 million tonnes of greenhouse gases, 0.2% more than in 2013**

**In the 2010-2014 period, emissions have been reduced by 8.9%**

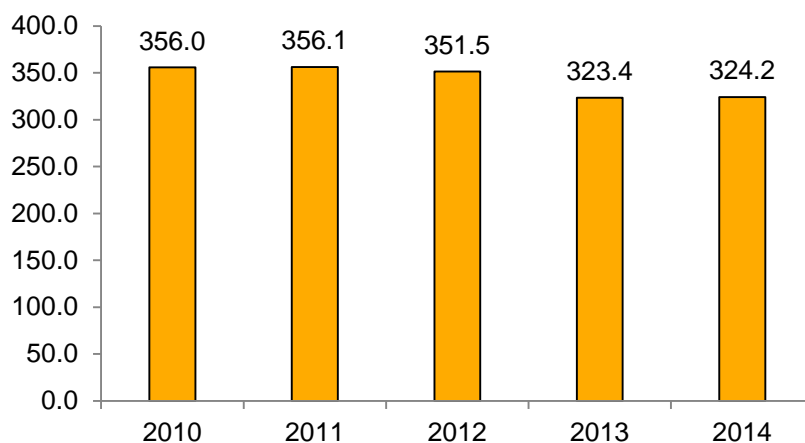
Greenhouse gas (GHG) emissions into the atmosphere increased by 0.2% in 2014, as compared with the previous year, reaching 324.2 million tonnes of equivalent CO<sub>2</sub> (tCO<sub>2</sub>e)<sup>1</sup>.

In the period 2010-2014, emissions were reduced by 8.9%.

**Greenhouse gases**

Total emissions

Unit: millions of tonnes of equivalent CO<sub>2</sub> (tCO<sub>2</sub>e)



<sup>1</sup> In order to compare the atmospheric emissions, greenhouse gas emissions, other than carbon dioxide are transformed into their equivalent value of carbon dioxide (CO<sub>2</sub>e) multiplying the mass of the gas in question by its global warming potential.

## Results by branches of activity and households

The sectors that reduced their emissions the most in 2014 were *Electricity, gas, steam, air conditioning, and water supply* (4.8%) and *Agriculture, forestry and fishing* (2.1%). Households, as final consumers, increased their emissions by 2.7%.

## Greenhouse gas emissions by branches of economic activity and households

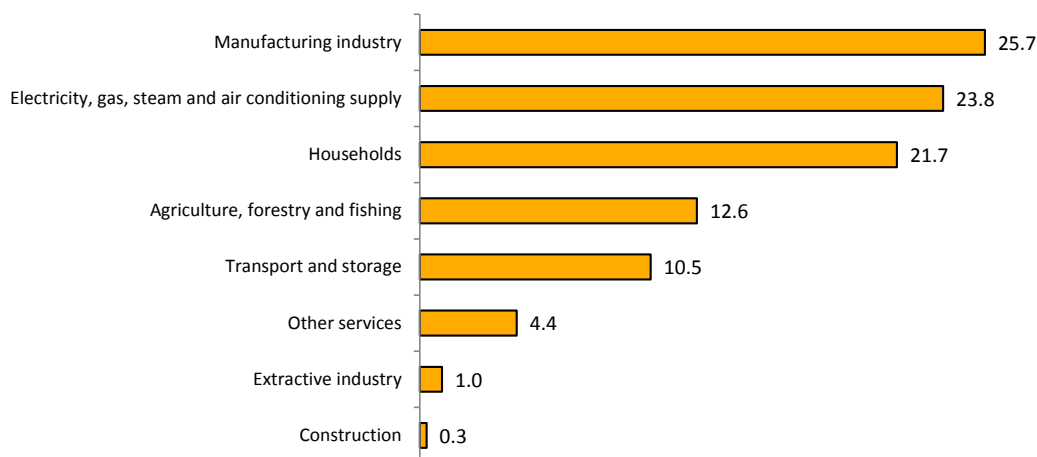
Unit: thousands of tonnes of equivalent CO<sub>2</sub>

	2014	% over the total	% interannual variation
Agriculture, forestry and fishing	40,923.3	12.6	2.1
Extractive industry	3,200.5	1.0	-2.6
Manufacturing industry	83,291.6	25.7	-1.4
Electricity, gas, steam and air conditioning supply	76,977.1	23.8	4.8
Construction	1,025.0	0.3	-4.4
Transport and storage	34,164.6	10.5	-6.9
Other services	14,214.1	4.4	-10.0
Households	70,375.2	21.7	2.7
<b>TOTAL</b>	<b>324,171.3</b>	<b>100.0</b>	<b>0.2</b>

Greenhouse gas emissions were mainly due to *Manufacturing industry*, which concentrated 25.7% of the total number of emissions in 2014. In turn, *Electricity, gas, steam, air conditioning, and water supply* emitted 23.8% of the total, and *households* did so by 21.7%.

## Greenhouse gas emissions

Percentage structure in 2014



### Emissions by type of gas

There are different types of greenhouse gases. By level of emission, the main greenhouse gases are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O).

CO<sub>2</sub> - carbon dioxide atmospheric emissions increased by 0.4% in 2014, as compared with 2013. Within the 2010-2014 period, those emissions were reduced by 10.5%.

In 2014, CH<sub>4</sub> - methane emissions increased by 0.2%. Within the 2010-2014 period, those emissions were reduced by 2.0%.

In turn, N<sub>2</sub>O - nitrous oxide emissions increased by 4.0% in 2014 and decreased by 1.5% within the 2010-2014 period.

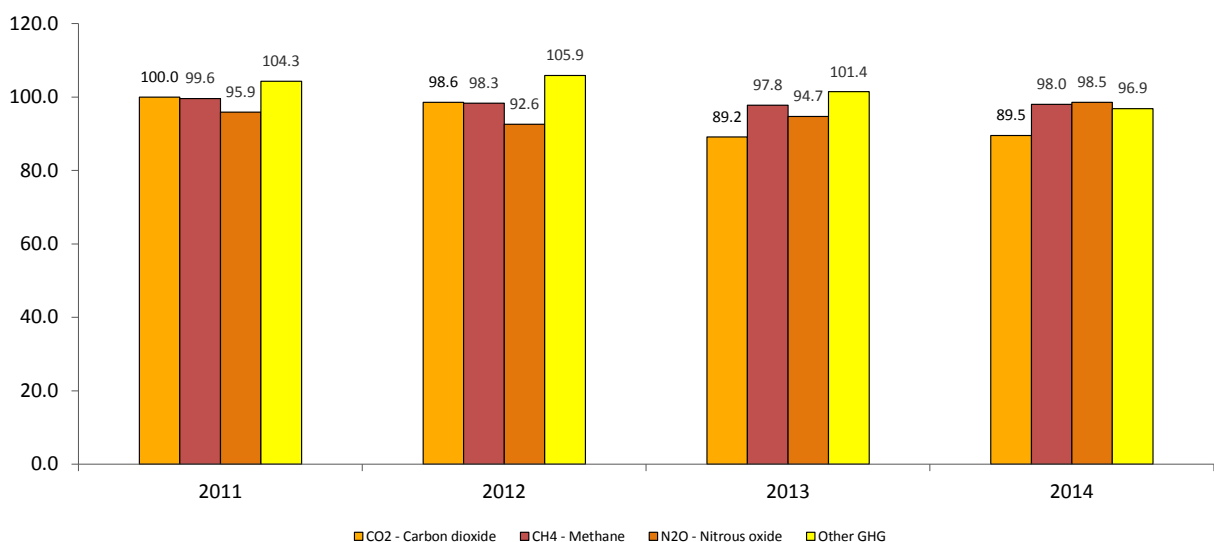
### Greenhouse gas emissions by type of gas

Unit: thousands of tonnes of equivalent CO<sub>2</sub>

	2014	% over the total	% interannual variation	% variation of 2010
CO <sub>2</sub> - Carbon dioxide	259,449.6	80.0	0.4	-10.5
CH <sub>4</sub> - Methane	32,062.8	9.9	0.2	-2.0
N <sub>2</sub> O - Nitrous oxide	14,289.0	4.4	4.1	-1.5
Other GHG	18,370.0	5.7	-4.5	-3.1
<b>TOTAL</b>	<b>324,171.3</b>	<b>100.0</b>	<b>0.2</b>	<b>-8.9</b>

### Greenhouse gas emissions

Variation index. Reference year 2010 = 100



### Carbon dioxide, methane and nitrous oxide emissions by branch of activity

In 2014, the greatest quantities of carbon dioxide (CO<sub>2</sub>) emitted corresponded to *Manufacturing industry*, which emitted 75.5 million tonnes, *Supply of electrical energy, gas, steam, air conditioning and water*, which emitted 62.4 million tonnes of CO<sub>2</sub>, and households, which emitted 62.1 million. As a whole, they represented 77.0% of the total of CO<sub>2</sub> atmospheric emissions.

*Agriculture, cattle breeding, forestry and fishing* emitted the highest quantities of methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) in 2014. More specifically, it was 17.4 million tonnes of CO<sub>2</sub> of equivalent CH<sub>4</sub> (54.3% of the total) and 10.3 million of tCO<sub>2</sub>e of equivalent N<sub>2</sub>O (72.0%).

*Supply of electrical energy, gas, steam, air conditioning and water* was responsible for the emission of 12.4 million of tCO<sub>2</sub>e of equivalent CH<sub>4</sub> and 1.8 million of tCO<sub>2</sub>e of equivalent N<sub>2</sub>O, representing 38.8% and 12.6% of the total emissions of these gases, respectively.

### Emissions of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O)

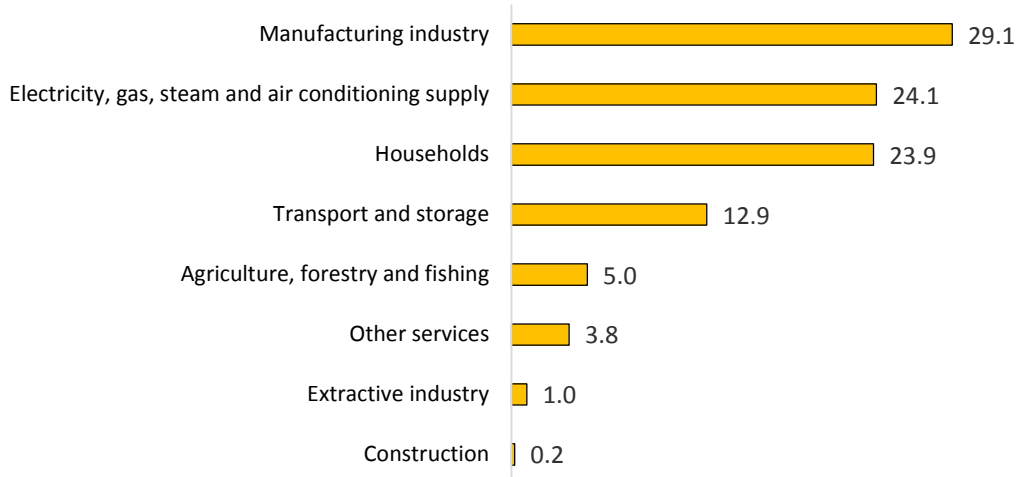
Total emissions. Year 2014

Unit: thousands of tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e)

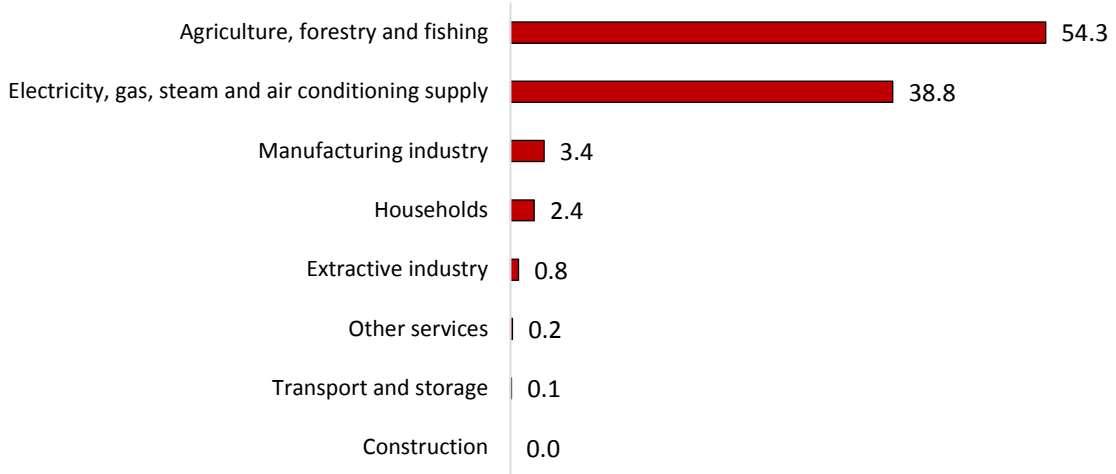
	Carbon dioxide	Methane	Nitrous oxide
Agriculture, forestry and fishing	12,896.1	17,415.9	10,290.5
Extractive industry	2,566.4	244.3	28.6
Manufacturing industry	75,513.5	1,100.6	753.2
Electricity, gas, steam and air conditioning supply	62,376.7	12,433.9	1,801.0
Construction	600.5	0.1	6.6
Transport and storage	33,458.6	28.3	318.9
Other services	9,935.4	63.0	437.1
Households	62,102.5	776.7	653.1
<b>TOTAL</b>	<b>259,449.6</b>	<b>32,062.8</b>	<b>14,289.0</b>

**Emissions of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O)**  
 Percentage structure (year 2014)

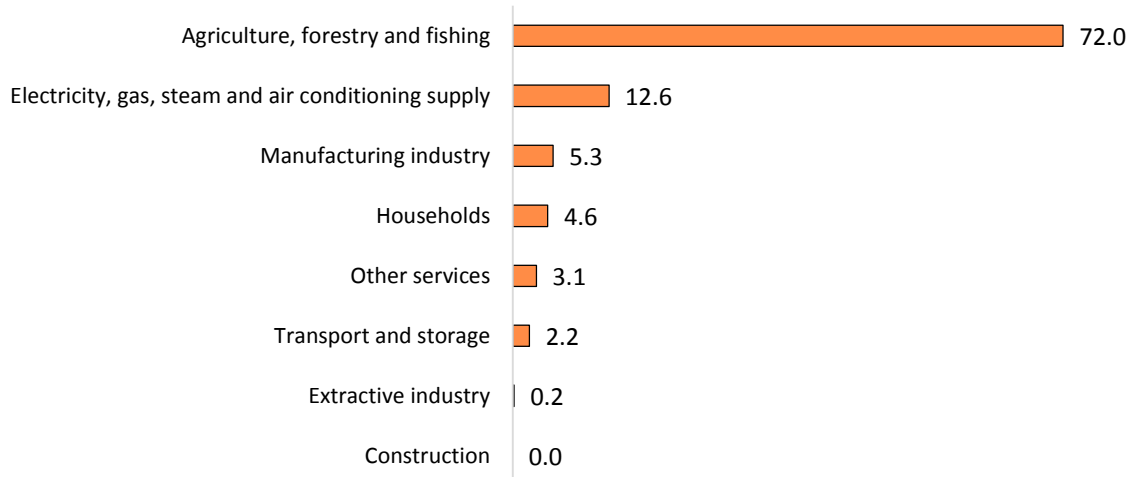
**CO<sub>2</sub> - Carbon dioxide**



**CH<sub>4</sub> - Methane**



**N<sub>2</sub>O - Nitrous oxide**



## Methodological note

The National Statistical Institute presents today the estimations corresponding to the period 2010-2014 of the Atmospheric Emission Accounts base 2010.

The **Environmental Accounts** (EA) are a synthesis statistical option with the general objective of integrating environmental information coherently in the central system of National Accounts, following the methodology of the United Nations' System of Integrated Environmental and Economic Accounting (UNSD), which constitutes the conceptual framework of the EA.

[Regulation \(EU\) No 691/2011 of the European Parliament and of the Council of 6 July 2011 on European environmental economic accounts](#), constitutes the reference framework of concepts, definitions, classifications, and common accounting regulations whose purpose is to draft Environmental accounts and incorporates a module on this account, for annual transmission.

**The Air Emission Accounts** present the data regarding the polluting emissions into the atmosphere, in a way that is compatible with the System of National Accounts, registering the emitting agents, broken down by branch of economic activity and Households as final consumers.

The estimates of the Air Emission Accounts are carried out using the National Air Emission Inventories, compiled by the Ministry of Agriculture, Food and the Environment, using the EMEP/CORINAIR methodology developed by the European Environmental Agency, with the SNAP nomenclature (Selected Nomenclature for Air Pollution), which groups emissions functionally, by process.

The Inventories present the emissions of all of the sources in the country, regardless of whether they are domestic economic activities (principle of residence) or not. Moreover, it includes the emissions of non-economic agents (nature) and the absorption of substances by nature (carbon by biomass). In order to prepare the estimates for the Emission Account, it is necessary to adapt the emissions to the principles of the System of National Accounts.

Regarding the distribution, by branch of activity and Households as final consumers, most of the inventory categories correspond to a single economic activity registered in a branch of activity, but in certain cases, the emissions must be divided into several branches (combustion plants, transport and other). Since atmospheric emissions are distributed by branch of economic activity in accordance with the rules of the National Accounts system, those resulting from secondary and auxiliary activities are grouped with those of the main activity of economic units. Households as final consumers considers the direct emissions corresponding to their own transport, heating and other emissions of a secondary nature.