Environmental accounts. Atmospheric Emission Accounts.
Base 2010. Accounting series 2010-2013

In 2013, the Spanish economy emits 316.9 million tonnes of greenhouse effect gases, 7.8% less than in 2012

In the 2010-2013 period, emissions have been reduced by 9.7%
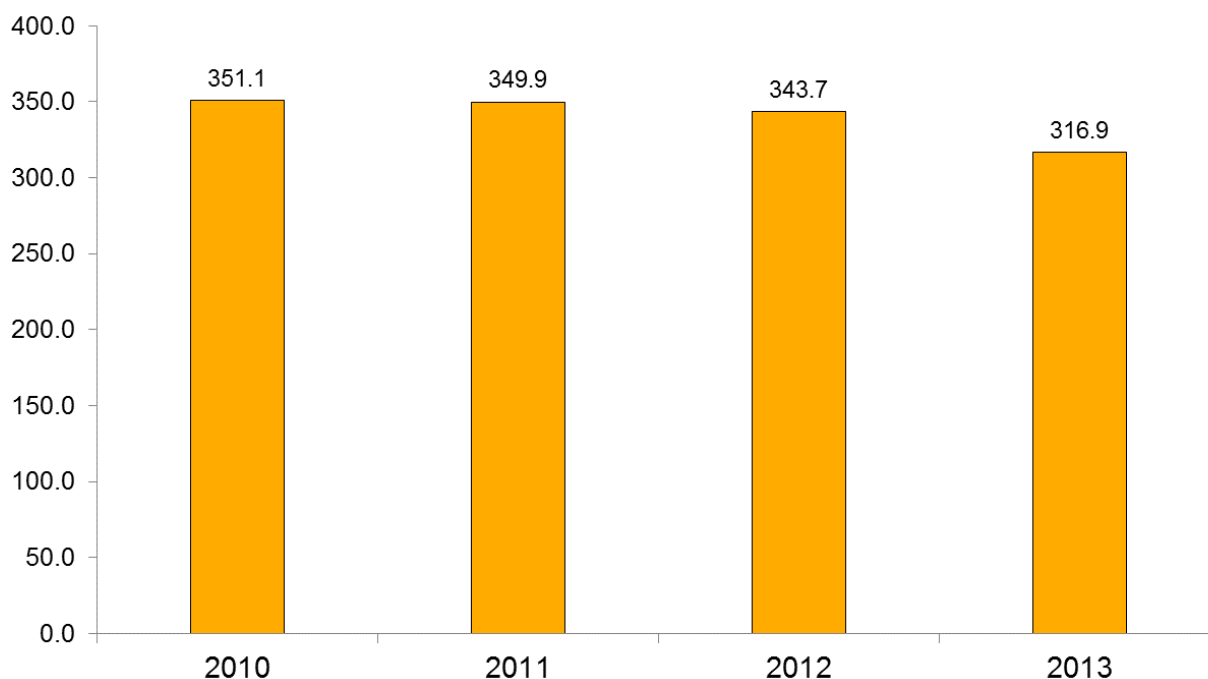
Greenhouse effect gas (GHG) emissions into the atmosphere decreased by 7.8% in 2013, as compared with the previous year, reaching 316.9 million tonnes of equivalent CO_2 (tCO_2e)*.

In the last four years, emissions were reduced by 9.7%.

Greenhouse effect gases
Total emissions
Unit: millions of tonnes of equivalent CO_2 (tCO_2e)

*In order to compare the atmospheric emissions, greenhouse effect gases other than carbon dioxide are transformed into their equivalent value of carbon dioxide (CO_2e) multiplying the mass of the gas in question by its global warning potential.

Results by branches of activity and households

The sectors that reduced their emissions the most in 2013 were *Electricity, gas, steam, air conditioning, and water supply* (–20.7%), *Mining and quarrying* (–7.5%), and *Manufacturing industry* (–7.0%). Households, as final consumers, decreased their emissions by 0.4%.

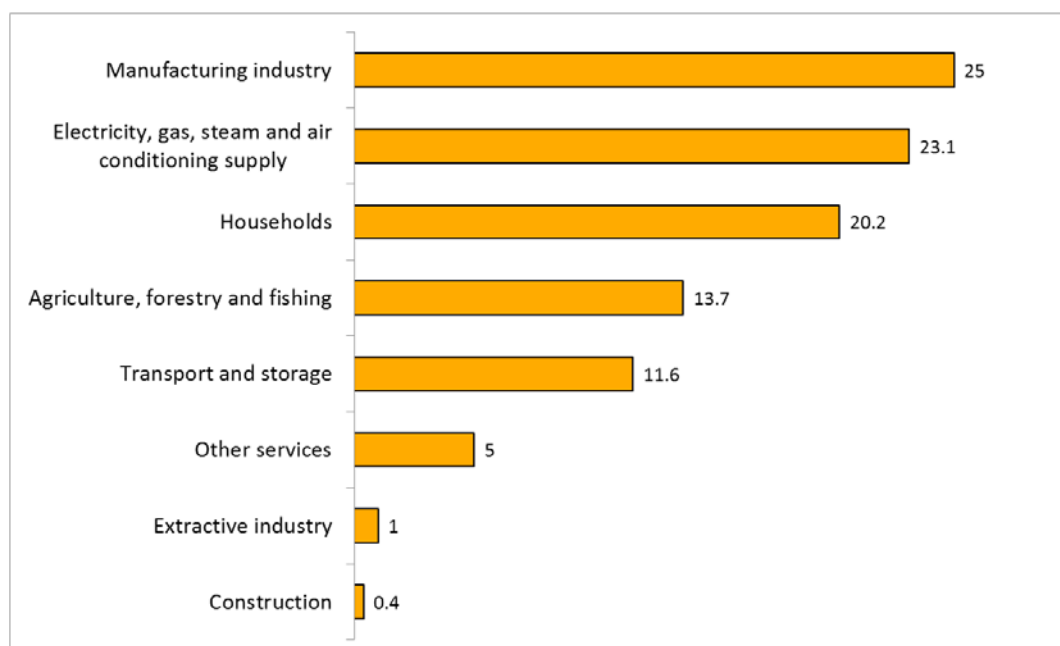### Greenhouse effect gas emissions by branches of economic activity and households
Unit: thousands of tonnes of equivalent CO_2

	2013	% over the total	% interannual variation
Agriculture, forestry and fishing	43,437.5	13.70	2.3
Mining and quarrying	3,068.2	1.00	-7.5
Manufacturing industry	79,220.2	25.00	-7.0
Electricity, gas, steam, air conditioning, and water supply	73,127.0	23.10	-20.7
Construction	1,376.1	0.40	-4.4
Transport and storage	36,788.8	11.60	-4.4
Other services	15,972.1	5.00	-2.5
Households	63,919.2	20.20	-0.4
TOTAL	316,909.2	100	-7.8

Greenhouse effect gas emissions were mainly due to *Manufacturing industry*, which concentrated 25.0% of the total number of emissions in 2013. In turn, *Electricity, gas, steam, air conditioning, and water supply* emitted 23.1% of the total, and households did so by 20.2%.

Greenhouse effect gas emissions
Percentage structure in 2013

Emissions by type of gas

There are different types of greenhouse effect gases. By level of emission, the main greenhouse effect gases are carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O).

CO_2 atmospheric emissions decreased by 9.5% in 2013, as compared with 2012. Within the 2010-2013 period, those emissions were reduced by 10.9%.

In 2013, CH_4 emissions decreased by 1.2%. Within the 2010-2013 period, those emissions were reduced by 2.8%.

In turn, N_2O emissions increased by 2.8% in 2013 and decreased by 6.7% within the 2010-2013 period.

Greenhouse effect gas emissions by type of gas
Unit: thousands of tonnes of equivalent CO_2

	2013	% over the total	% interannual variation	% variation of 2010
CO_2 - Carbon dioxide	257,224.3	81.2	-9.5	-10.9
CH_4 - Methane	32,088.6	10.1	-1.2	-2.8
N_2O - Nitrous oxide	17,930.3	5.7	2.8	-6.7
Other GHG	9,666.0	3.0	-0.3	-3.4
TOTAL	316,909.2	100.0	-7.8	-9.7

Greenhouse effect gas emissions
Variation index. Reference year 2010 = 100
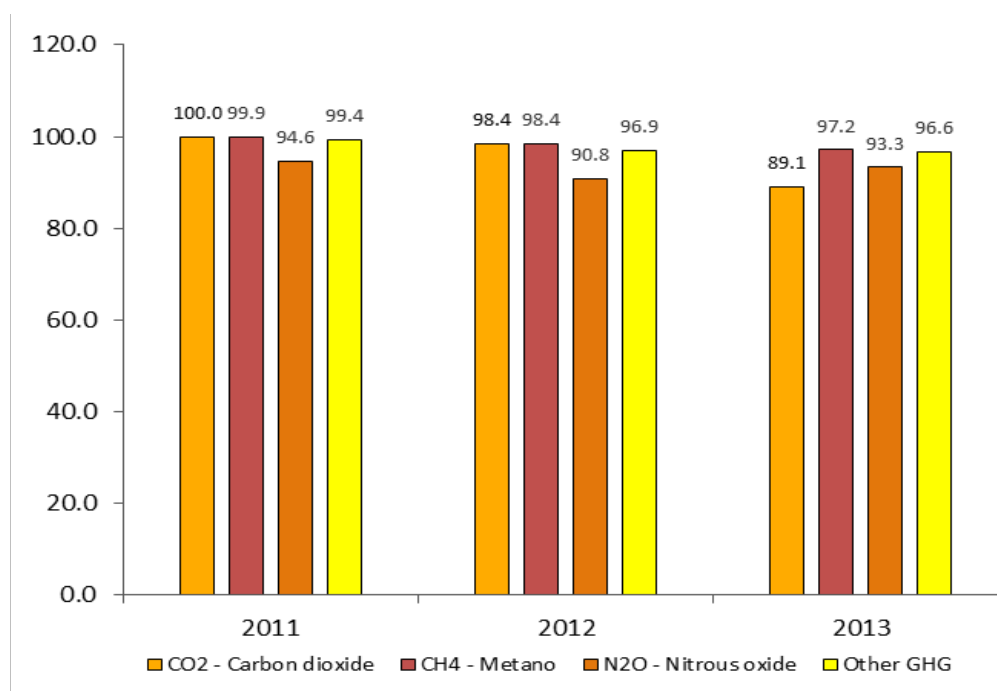
CO_2, CH_4 and N_2O emissions by branch of activity

In 2013, the greatest quantities of CO_2 emitted corresponded to *Manufacturing industry*, which emitted 73.6 million tonnes, *Supply of electrical energy, gas, steam, air conditioning and water*, which emitted 58.6 million tonnes of CO_2, and households, which emitted 59.9 million. As a whole, they represented 74.7% of the total of CO_2 atmospheric emissions.

Agriculture, cattle breeding, forestry and fishing emitted the highest quantities of CH_4 and N_2O in 2013. More specifically, it was 17.0 million tonnes of CO_2 of equivalent CH_4 (53.0% of the total) and 13.6 million of tCO2e of equivalent N_2O (75.7%).

Supply of electrical energy, gas, steam, air conditioning and water was responsible for the emission of 12.5 million of tCO$_2$e of equivalent CH_4 and 1.8 million of tCO$_2$e of equivalent N_2O, representing 38.9% and 10.3% of the total emissions of these gases, respectively.
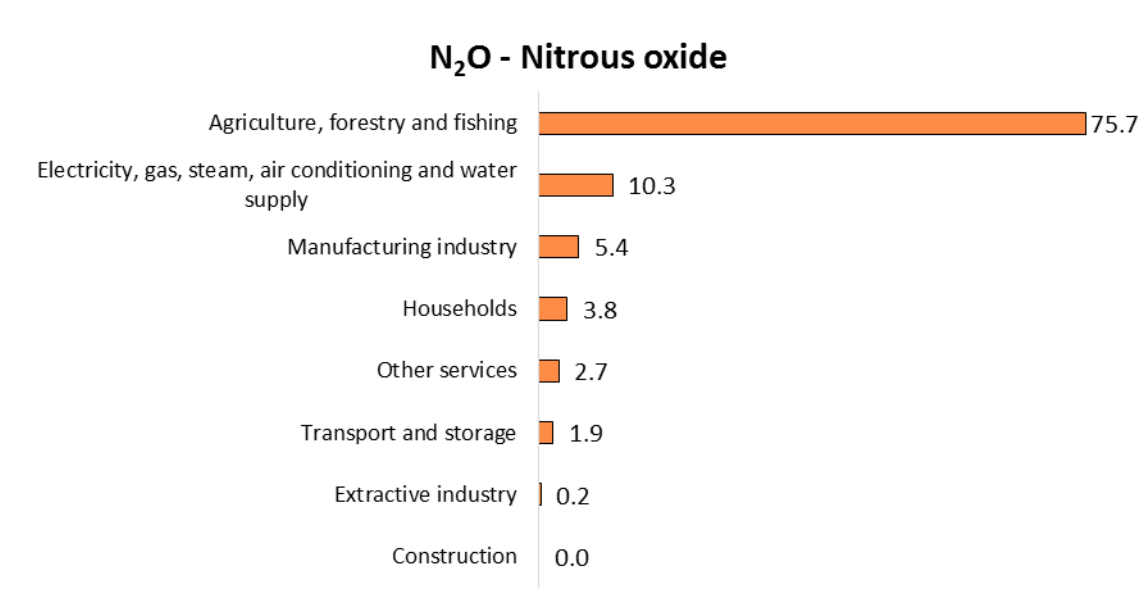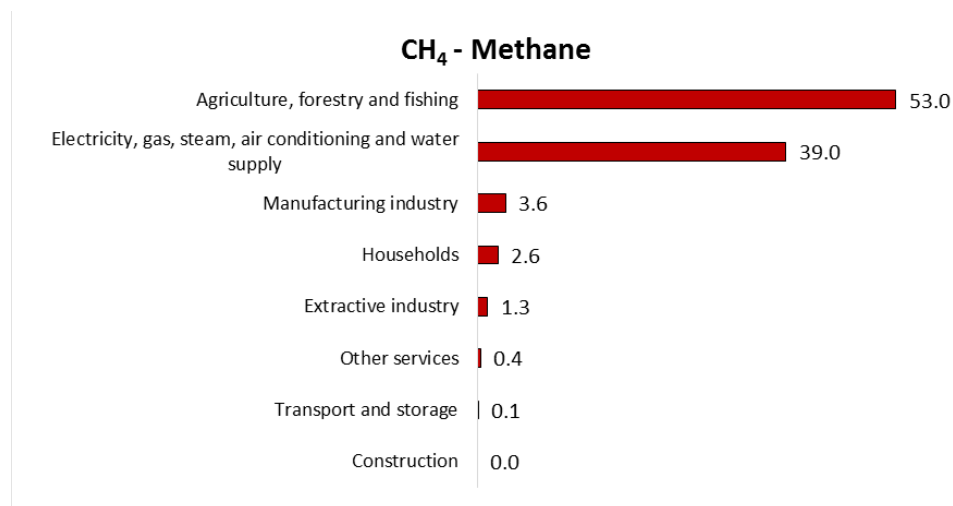
Emissions of CO_2, CH_4 N_2O
Total emissions. Year 2013
Unit: thousands of tonnes of equivalent CO_2

	Carbon dioxide	Methane	Nitrous oxide
Agriculture, forestry and fishing	12,656.00	17,022.60	13,579.40
Extractive industry	2,409.80	428	28.3
Manufacturing industry	73,603.80	1,157.80	968.4
Electricity, gas, steam, air conditioning and water supply	58,583.60	12,494.90	1,843.90
Construction	614.80	0.10	6.7
Transport and storage	36,163.70	32.90	338.9
Other services	13,293.00	134.40	482.5
Households	59,899.50	817.90	682.2
TOTAL	257,224.30	32,088.60	17,930.30

Emissions of CO_2, CH_4 N_2O
Percentage structure (year 2013)

CO_2 - Carbon dioxide

Manufacturing industry	28.6
Households	23.3
Electricity, gas, steam, air conditioning and water supply	22.8
Transport and storage	14.1
Other services	5.2
Agriculture, forestry and fishing	4.9
Extractive industry	0.9
Construction	0.2

CH_4 - Methane

Agriculture, forestry and fishing	53.0
Electricity, gas, steam, air conditioning and water supply	39.0
Manufacturing industry	3.6
Households	2.6
Extractive industry	1.3
Other services	0.4
Transport and storage	0.1
Construction	0.0

N_2O - Nitrous oxide

Agriculture, forestry and fishing	75.7
Electricity, gas, steam, air conditioning and water supply	10.3
Manufacturing industry	5.4
Households	3.8
Other services	2.7
Transport and storage	1.9
Extractive industry	0.2
Construction	0.0

Methodological note

The National Statistical Institute presents today the estimations corresponding to the period 2010-2013 of the Atmospheric Emission Accounts with the new 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 for the first time a module on this account, for annual transmission.

The Atmospheric 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 Atmospheric Emission Accounts are carried out using the National Atmospheric 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.

For further information see **INEbase-www.ine.es/en/** All press releases at: **www.ine.es/en/prensa/prensa_en.htm**

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