Instituto Nacional de Estadística

Press Release

**12 November 2020**

**Environmental accounts. Air Emission Accounts**
Preview 2019 and year 2018

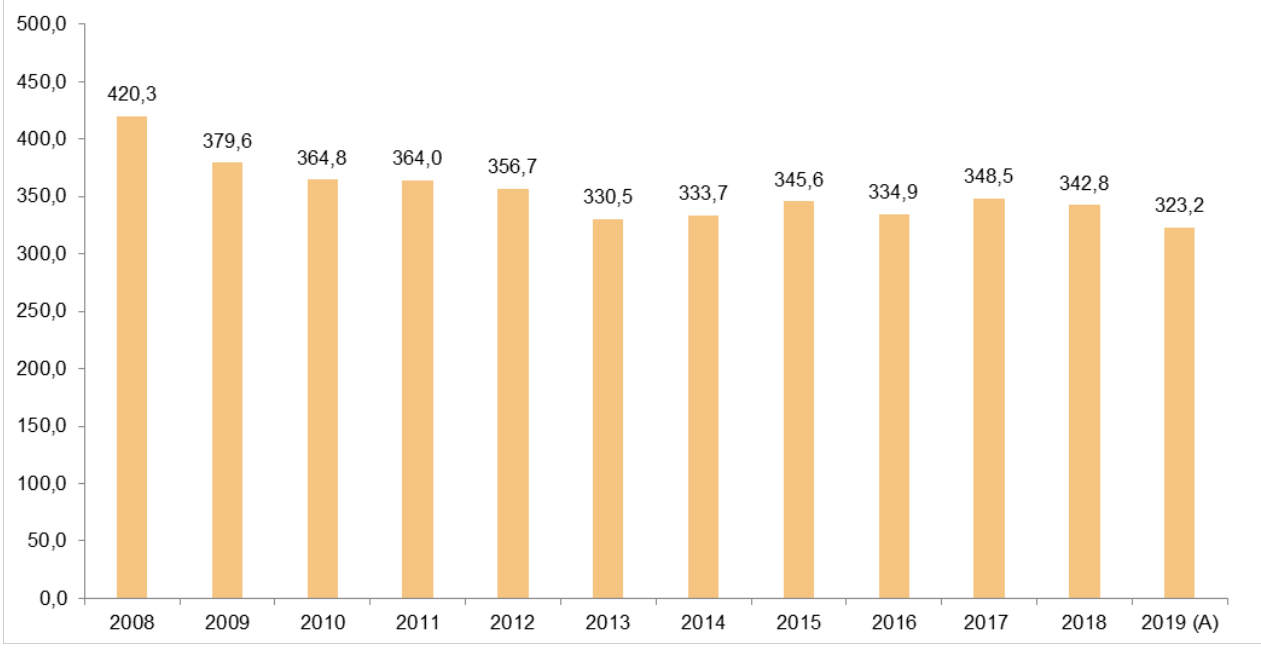
# The Spanish economy emitted 323.2 million tonnes of greenhouse gases in 2019, 5.7% less than in 2018.

## 21.2% of emissions corresponded to households

The Air Emission Accounts record the emissions made by resident economic units, both within and outside the economic territory.

In 2019, Greenhouse Gas (GHG) emissions decreased by 5.7%, standing at 323.2 million tons of Carbon Dioxide ($CO_2$) equivalent ($tCO_2e$)[1].

**Greenhouse Gas Emissions**
Unit: million tonnes of Carbon Dioxide equivalent ($tCO_2e$)




There are different types of Greenhouse Gases. The main ones, due to their level of emissions, are Carbon Dioxide ($CO_2$), Methane ($CH_4$) and Nitrous Oxide ($N_2O$).

[1] In order to make a comparison of atmospheric emissions of greenhouse gases other than carbon dioxide, all are converted to their carbon dioxide equivalent ($CO_2e$) value by multiplying the mass of the gas in question by its global warming potential.

In 2019, emissions of Carbon Dioxide were reduced by 6.7% and those of Nitrous Oxide by 3.0%. On the contrary, those of Methane increased by 0.2%.

**Greenhouse gas emissions by type of gas. Year 2019**
Unit: thousand tonnes of Carbon Dioxide equivalent ($tCO_2e$)

| | Total | % of the total | % annual variation | impact |
|---|---|---|---|---|
| $CO_2$ – Carbon dioxide | 259,988.3 | 80.4 | -6.7 | -5.449 |
| $CH_4$ – Methane | 39,811.4 | 12.3 | 0.2 | 0.025 |
| $N_2O$ – Nitrous oxide | 17,385.0 | 5.4 | -3.0 | -0.154 |
| Other GHG | 6,036.2 | 1.9 | -6.6 | -0.125 |
| TOTAL | 323,220.9 | 100.0 | -5.7 | |

The branch of activity where GHG emissions decreased the most in 2019 was the*Electricity, gas, steam and air conditioning supply* (–19.4%). On the other hand, they increased the most in *Transportation and storage* (2.1%).

**Greenhouse Gas Emissions by industry and households. Year 2019**
Unit: thousand tonnes of Carbon Dioxide equivalent ($tCO_2e$)

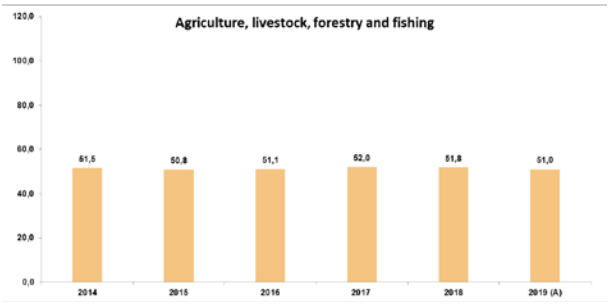
| | TOTAL GHG | % annual variation | Carbon Dioxide ($CO_2$) | Methane ($CH_4$) | Nitrous Oxide ($N_2O$) | Other GHG |
|---|---|---|---|---|---|---|
| Manufacturing industry | 80,785.3 | -5.8 | 74,961.8 | 2,407.2 | 619.3 | 2,797.0 |
| Electricity, gas, steam, air conditioning and water supply | 58,215.9 | -19.4 | 45,384.4 | 10,862.8 | 1,566.8 | 401.9 |
| Agriculture, livestock, forestry and fishing | 50,971.0 | -1.6 | 12,080.6 | 25,306.7 | 13,562.5 | 21.2 |
| Transport and storage | 45,261.0 | 2.1 | 44,580.4 | 39.9 | 525.6 | 115.1 |
| Other industries | 19,554.0 | -2.5 | 17,378.3 | 294.9 | 483.3 | 1,397.5 |
| Households | 68,433.7 | -0.2 | 65,602.8 | 899.9 | 627.5 | 1,303.5 |
| TOTAL | 323,220.9 | -5.7 | 259,988.3 | 39,811.4 | 17,385.0 | 6,036.2 |

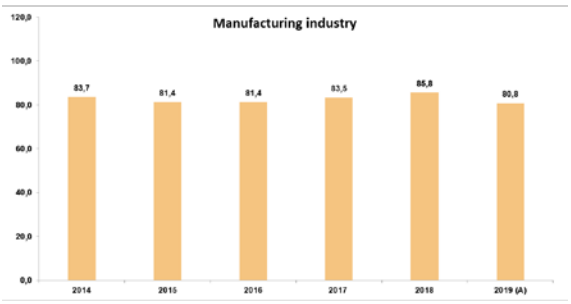
In 2019, 25.0% of the total greenhouse gas emissions were concentrated in *Manufacturing*. *Households* emitted 21.2% of the total, while *Electricity, gas, steam and air conditioning supply* was responsible for 18.0%.

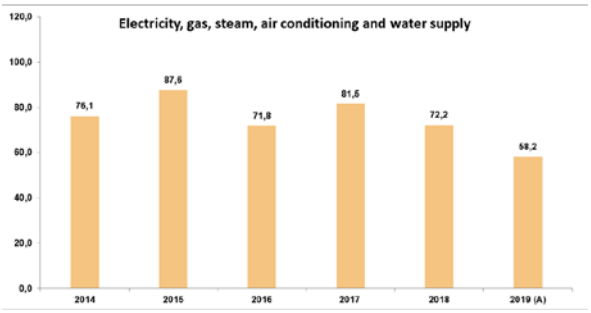
The highest amounts of Carbon Dioxide emissions corresponded to the *Manufacturing Industry* (75.0 million tonnes), *Households* (65.6 million) and *Electricity, gas, steam and air conditioning supply* (45.4 million). Together, these three sectors accounted for 71.5% of total carbon dioxide emissions into the atmosphere.

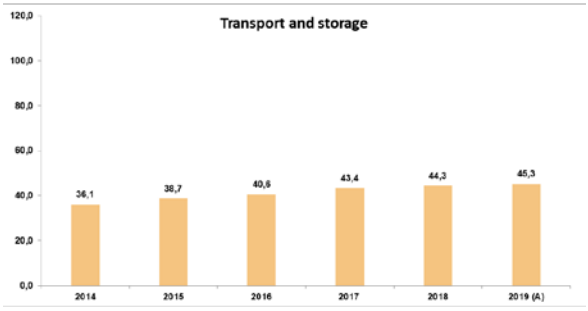
Meanwhile, *Agriculture, livestock, forestry and fishing* emitted the largest quantities of Methane and Nitrous Oxide. Specifically, 63.6% of the total Carbon Dioxide equivalent of methane and 78.0% of Nitrous Oxide.

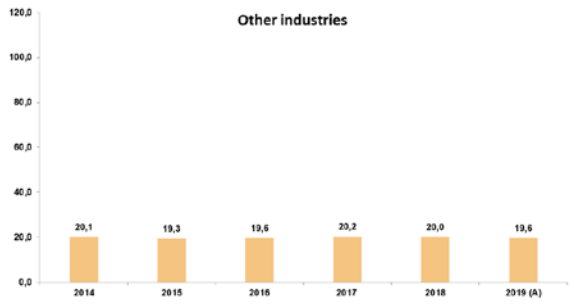
**Greenhouse Gas Emissions by branches of activity and households. Year 2019**
Unit: million tonnes of Carbon Dioxide equivalent ($tCO_2e$)

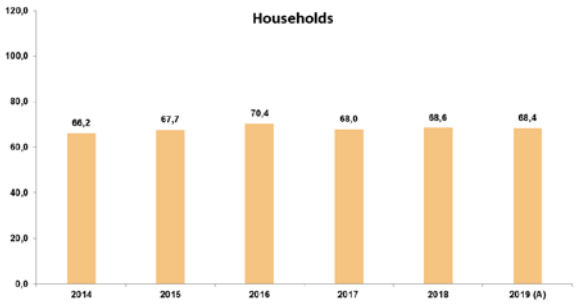


## Other atmospheric emissions. Year 2018

Nitrogen Oxides ($NO_x$) include both Nitrogen Monoxide (NO) and Nitrogen Dioxide ($NO_2$). In 2018, Nitrogen Oxide emissions reached 820.4 thousand tonnes of Nitrogen Dioxide equivalent ($tNO_2e$), 5.3% less than in 2017.

The highest emissions corresponded to *Agriculture, forestry and fishing* (201.2 thousand tonnes of $NO_2e$), *Transportation and storage* (200.4) and *Households* (157.1).

**Emissions of Nitrogen Oxides ($NO_x$) by industry and households. Year 2018**
Unit: thousand tonnes of Carbon Dioxide equivalent ($tNO_2e$).

| | Total | % of the total | % annual variation |
|---|---|---|---|
| Agriculture, livestock, forestry and fishing | 201.2 | 24.5 | -3.1% |
| Transport and storage | 200.4 | 24.4 | -3.7% |
| Manufacturing industry | 131.5 | 16.1 | 3.0% |
| Electricity, gas, steam, air conditioning and water supply | 97.4 | 11.9 | -23.3% |
| Other industries | 32.8 | 4.0 | -5.5% |
| Households | 157.1 | 19.1 | -2.8% |
| TOTAL | 820.4 | 100.0 | -5.3% |

Emissions of particles with an aerodynamic diameter of less than 10 microns ($PM_{10}$) fell by 0.2% in 2018, standing at 201.6 thousand tonnes. The largest quantities corresponded to *Agriculture, forestry and fishing* (92.1 thousand tons) and to Households (65.8).

**Emissions of $PM_{10}$ particles by industry and households. Year 2018**
Unit: thousands of tonnes

| | Total | % of the total | % annual variation |
|---|---|---|---|
| Agriculture, livestock, forestry and fishing | 92.1 | 45.7% | 0.3% |
| Manufacturing industry | 16.4 | 8.1% | 2.5% |
| Other industries | 15.0 | 7.5% | 0.6% |
| Transport and storage | 7.0 | 3.5% | -1.1% |
| Electricity, gas, steam, air conditioning and water supply | 5.3 | 2.6% | -16.7% |
| Households | 65.8 | 32.6% | 0.1% |
| TOTAL | 201.6 | 100.0 | -0.2% |

## Data Review and Update

The data published today is provisional and will be revised when next year's data is released.

# Methodological note

The objective of the Environmental Accounts (EA) is to integrate the environmental information in a coherent way in the central system of National Accounts. They include a set of satellite accounts, with annual transmission, compiled using the accounting formats applicable to the different sectoral and territorial areas, with a strong presence of physical data. They show the interaction between the economy, households and environmental factors.

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

The estimations of the Air Emission Accounts are made using the National Inventories of Air Emissions, prepared by the Ministry for the Ecological Transition, which use the IPCC and EMEP/EEA methodology, with the NFR/CRF nomenclature (Nomenclature for Reporting/Common Reporting Format), which groups emissions into sectors, categories and subcategories.

For more information the methodology can be accessed at:

https://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736176941&menu=metodologia&idp=1254735976603

The standardized methodological report is at:

https://www.ine.es/dynt3/metadatos/en/RespuestaDatos.html?oe=30084

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