

— 2014 —

TAIWAN'S

Greenhouse Gas
Inventory

1990 — 2012

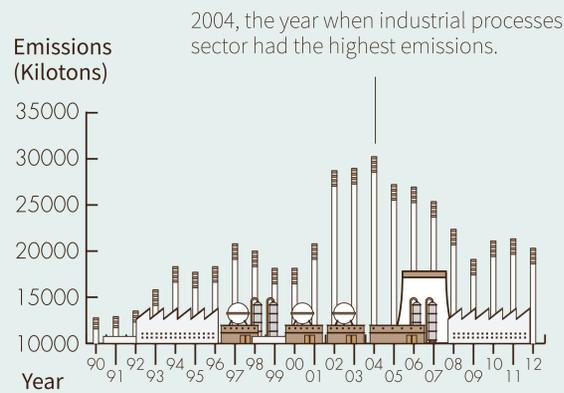


Overview of Emission Sources & Removal Sinks

The sources of greenhouse gas emissions in Taiwan can be divided into five sectors according to gas type: energy, industrial processes, agriculture, land use change and forestry and waste.

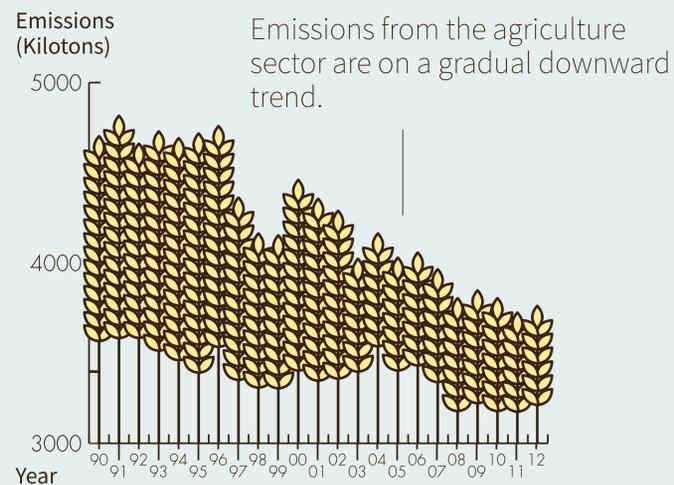
2 Industrial Processes

This sector had the highest emission amount at 11%. Gradual drops have occurred since 2005.



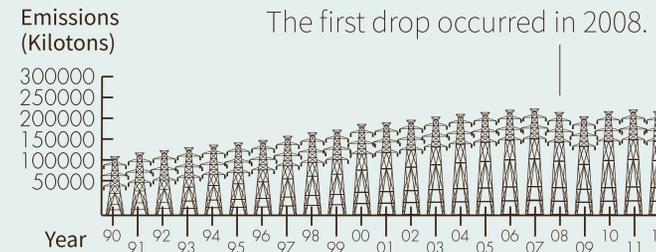
3 Agriculture

This sector shows a gradually decrease in emissions. Compared with 1990, there's been a decrease of 20.5%.



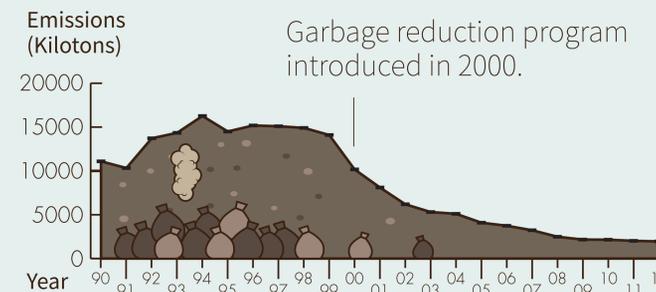
1 Energy

Energy sector contributes the highest emission amount at over 90%. Over the past years the trend has been mostly rising. The first drop occurred in 2008, and another drop occurred in 2012.

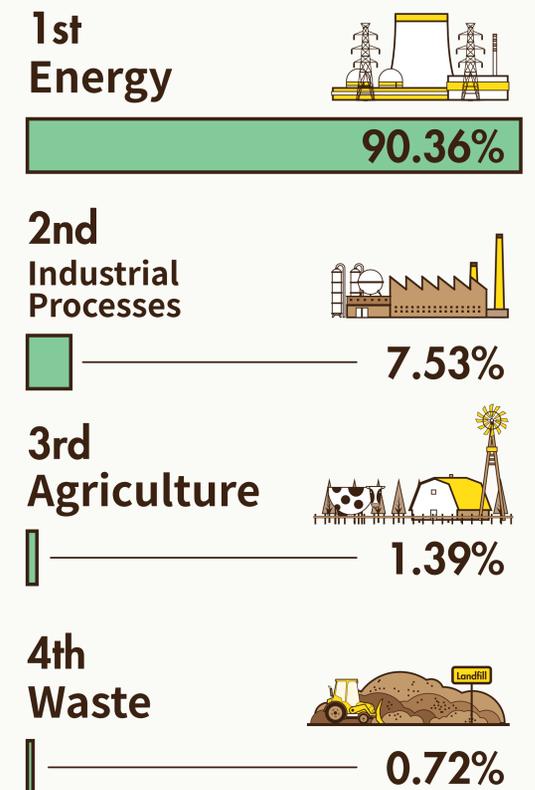


4 Waste

This sector has shown a sharp drop in emissions since 2000, due mainly to the garbage reduction program, decommissioning more and more landfills.

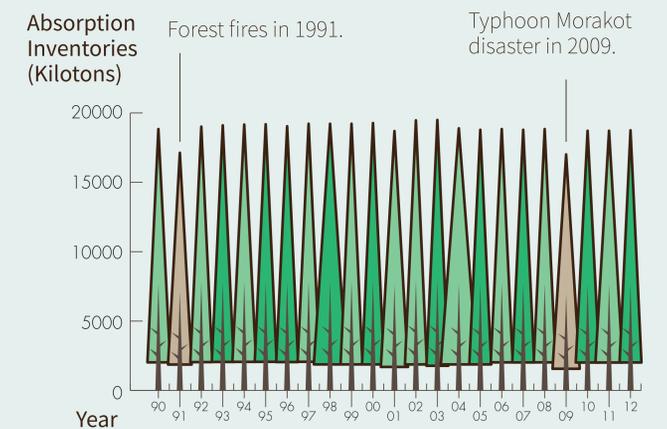


Proportions of Emission Sources in 2012



5 Land Use and Forestry

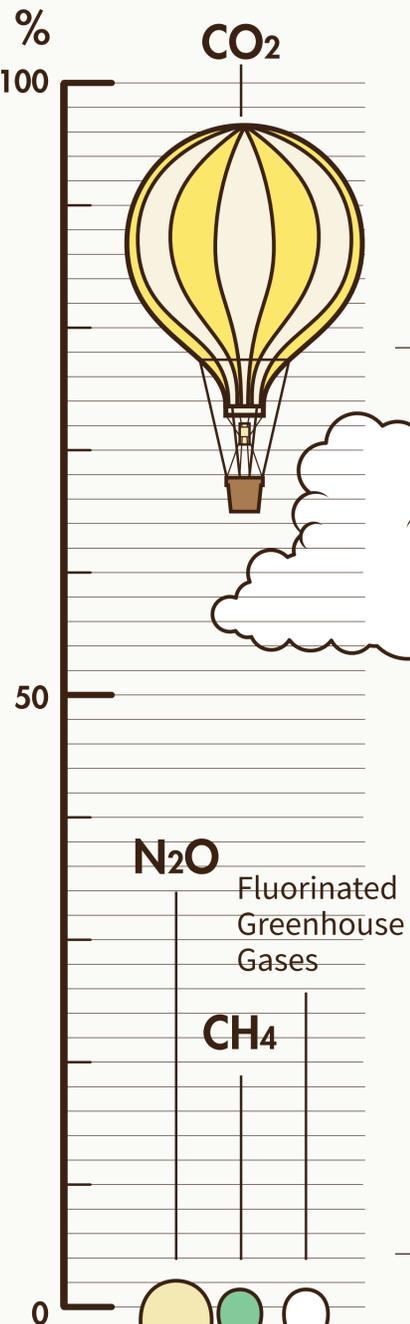
Absorption inventories in the past years show a slight fluctuating trend. There's little change in the carbon amount from year to year, as carbon comes mainly from the yearly expansion of forestry.



Greenhouse Gas Emission Trends

2012

Proportions of greenhouse gases in total emissions in 2012

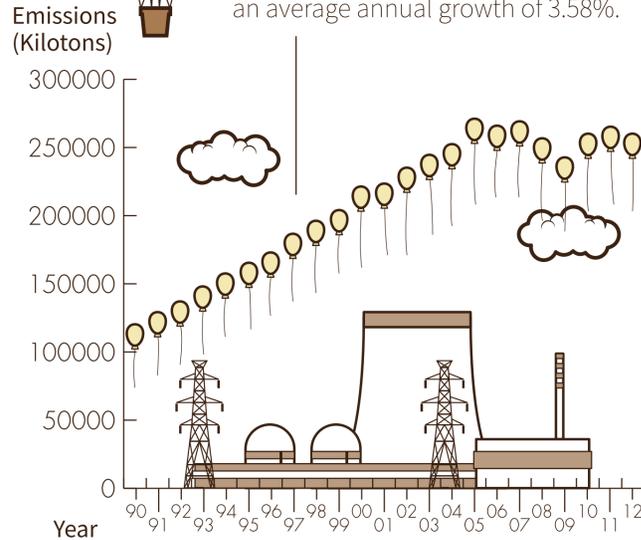


- 1st**
Carbon Dioxide
96.21%
- 2nd**
Nitrous Oxide
1.52%
- 3rd**
Methane
1.08%
- Fluorinated Greenhouse Gases
1.19%

Carbon Dioxide



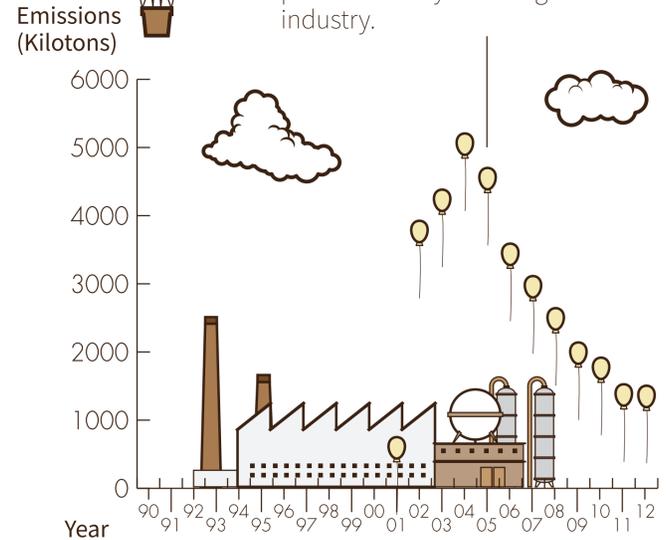
In the past 23 years, the emissions of CO₂ have increased by 116.65%, with an average annual growth of 3.58%.



Sulfur Hexafluoride



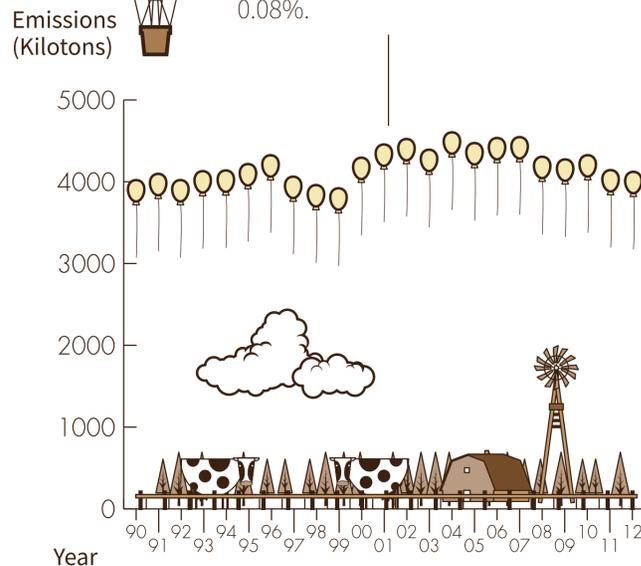
The emissions of SF₆ have been dropping every year since 2005, with reducing demand in the power industry and magnesium industry.



Nitrous Oxide



The total emissions of N₂O increased by 1.79% from 1990 through 2012, with an average annual growth of 0.08%.

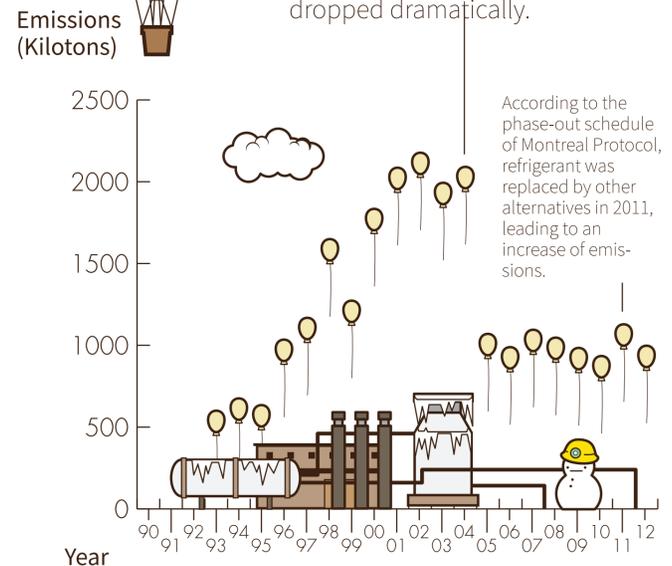


HFCs

Hydrofluorocarbons



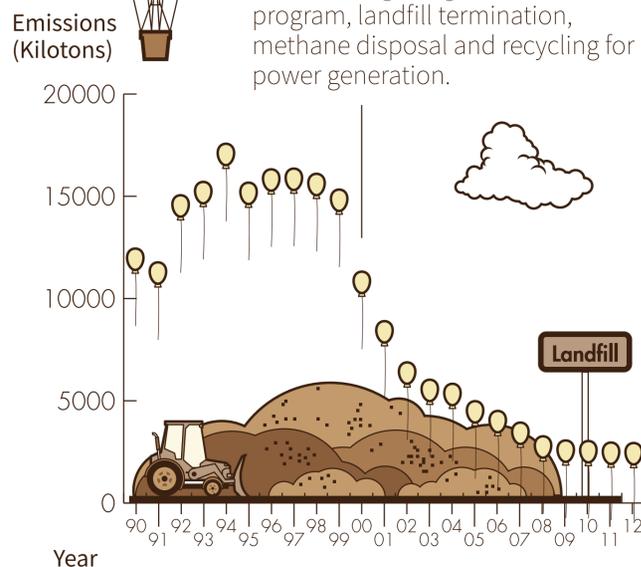
After the closing of the only producer of CFCs in Taiwan in 2004, the emissions of HFCs have dropped dramatically.



Methane



Its emissions have dropped sharply since 2000, due mainly to policies such as the garbage reduction program, landfill termination, methane disposal and recycling for power generation.



PFCs

Perfluorinated Hydrocarbon

Since 2004, the Taiwan Semiconductor Industry Association has started to cooperate with the government to promote voluntary reduction scheme, including the introduction of waste gas disposal by the semiconductor and optronical industries, and their process improvement. This has led to a gradual reduction of emissions.

