Summary

About this report

Citepa officially estimates greenhouse gas and air pollutant emissions each year on behalf of the Ministry of the Environment. This inventory is carried out as part of France's international commitments, mainly under the United Nations Framework Convention on Climate Change (as well as the Kyoto Protocol and the Paris Agreement adopted thereunder) for greenhouse gases, and the United Nations Economic Commission for Europe for pollutants (LRTAP Convention).

Since 1999, Citepa has also published an inventory report intended for non-specialists presenting **France's** emissions, **their sources and their changes over time** in relation to the current **reduction targets.** This report, called Secten, presents emissions **of more than 31** substances and greenhouse **gases** by large economic sector and subsector, as well as by fuel, and provides many detailed indicators and explanations on associated environmental and health issues. It also provides an overview of the policy and regulatory context.

The 2020 edition of the Secten report presents emissions from 1990 (or even earlier for certain pollutants) until 2018, as well as provisional estimates for 2019. The perimeter for greenhouse gas emissions covered is mainland France with overseas territories included in the EU; for air pollutants, the perimeter is mainland France. These perimeters were chosen to be consistent with those of the associated regulatory targets.

Key results: greenhouse gas emissions

Emissions are falling again: -4% in 2018, -1% in 2019

In France, national GHG emissions (excluding LULUCF carbon sinks) were at an average level of 554 Mt CO_2e between 1990 and 2005.After a period of decline between 2005 and 2014 (2.2%/year on average), between 2014 and 2017, emissions rose again (up 0.7%/year on average) due to the energy, transport and heating sectors in particular. Since 2018, emissions have fallen again (-4% in 2018, -1% in 2019), a trend that is expected to continue in 2020, given the Covid-19 crisis. Emissions for 2018 (445 Mt CO_2e) and 2019 (441 Mt CO_2e) have reached the lowest levels recorded since 1990.

The major role of diesel vehicles, heating and livestock

In 2018, the transport sector was responsible for 31% of GHG emissions, agriculture 19%, residential-commercial sector 19%, manufacturing industry and construction 18%, energy industry 10%, and centralised waste treatment 3%. However, only six sub-sectors are responsible for half of GHG emissions: diesel passenger vehicles (11.7%), residential sector (heating..., 10.9%), commercial sector (heating, refrigeration, etc.). 7,8%); cattle farming (7.7%); diesel trucks (6.4%) and light-duty diesel vehicles (5.4%). The significant decreases between 2017 and 2019 are a result of lower emissions in the energy sector (-29% for electricity generation), residential-commercial sector (-9%), agriculture (-2%) and waste (-5%).

Emissions need to fall faster to meet future carbon budgets

France's National Low Carbon Strategy (SNBC) sets out France's climate targets and the desired path to reach them. For different periods, emissions, on average over the period, must not exceed a carbon budget. The first carbon budget (2015-2018) was not met. The carbon budget for 2019-2023, set in 2020 by the revised SNBC, amounts to 422 Mt CO_2e/year. The annual indicative budget for 2019 is 443 Mt CO_2e. The provisional 2019 emissions estimate is 441 Mt CO_2e. If this pre-estimate is confirmed by the 2019 consolidated inventory to be published in April 2021, the year 2019 would therefore meet the target set for that year. Emissions will have to fall further in subsequent years by almost -10 Mt CO_2e on average per year (or 2.3%/year) for the 2nd carbon budget to be met on average over the period.

Even if GHG emissions in the year 2020 are not yet estimated, the effects of the measures to combat Covid-19 could lead to a decrease of -5% or even -15% in 2020, even if at this stage, these are approximations.

Key results: air pollutant emissions

Most pollutant emissions have fallen sharply since 1990

In France, emissions of all air pollutants have been declining since 1990 (heavy metals, substances causing acidification and euthrophication, particulate matter, persistent organic pollutants). Emissions of certain pollutants have been greatly reduced or even virtually eliminated since 1990, for example lead (since the ban on leaded fuels in 2000), or hexachlorobenzene (HCB), dioxins and furanes (PCDD/F) and chromium, due in particular to reduction techniques implemented in the industry and waste sectors.

Some substances with less strong dynamics: the case of ammonia (NH_3)

Only three substances do not seen a significant decrease: ammonia (NH_3), copper, and selenium. NH_3 emissions, which have been stable since 2006, are mainly due to the management of livestock slurry. Nevertheless, the upward trend since 2013 appears to have slowed down in 2017, reaching the lowest level seen since 1980 in 2019: 592 kt. This level is still above the 2020 target (Gothenburg Protocol and NEC Directive (national emission ceilings)). Given the latest trends in livestock developments and nitrogen fertilizer deliveries, it is possible that the estimated provisional value for 2019 will be further reduced in the next edition of the inventory.

Reduction targets have been met

To date, France has met its emission reduction targets set under the various Protocols of the Convention on Long-Distance Transboundary Air Pollution (CLRTAP), for SOx, NMVOCs, NH_3, PAHs, dioxins and furanes, HCB and heavy metals (cadmium (Cd), mercury (Hg), lead (Pb)) within the timeframe allowed by these Protocols, with the exception of the NOx targets that were met a few years late (respectively two years and four years late with respect to the 2010 targets of the Gothenburg Protocol and the NEC Directive (national emission ceilings).

Despite recurring air quality problems, pollutant emissions are decreasing

The emissions of pollutants estimated by Citepa are the total quantities emitted over the whole year, all over France. Concentrations in ambient air, analysed by the Air Quality Monitoring Associations (AASQA), are measured daily and locally. Also, although the trend of national emissions is decreasing, this does not necessarily lead to the end of pollution episodes that can be seen at local level by associations measuring air quality. Thus, particulate pollution episodes occur regularly in winter and spring and ozone pollution episodes occur in summer . Due in part to the non-compliance with concentration limits of NO_2 and PM_{10}, the European Commission launched infringement proceedings against France, leading, in the case of NO_2, to a ruling by the EU Court of Justice.

Download data, inventory reports and methodology report

The data in Excel format can also be downloaded from the Citepa website at the following address:

https://www.citepa.org/en/activities/emission-inventories/secten

The "Ominea" methodological report can also be downloaded from our website. It describes in detail the source data, emission factors, calculation principles used to estimate the emissions of each emitting sector.

https://www.citepa.org/fr/activites/inventaires-des-emissions/ominea

The other inventory reports are also available on our website:

https://www.citepa.org/en/activities/emission-inventories