

NATIONAL REPORT BY FRANCE

NOVEMBER 2020

Enhanced Black Carbon and Methane
Emissions Reductions

Arctic Council Framework for Action



**Ministry of Foreign Affairs and International
Development**

Legal Affairs Directorate

*Sub-Directorate for the Law of the Sea, River
Law and polar affairs*

Ministry for the Ecological Transition

General Directorate for Energy and Climate

Greenhouse gas Unit

**French national report on Black Carbon and Methane emissions
to the Arctic Council Secretariat**



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Foreword

Effects of climate change are particularly sensitive in the Arctic region and it becomes urgent to take action. Reduction of global Black Carbon and Methane emissions is of critical importance in that perspective. In this regard, France welcomes and supports the Arctic Councils' initiatives on Black Carbon and Methane Emissions Reductions, and as an Observer State wishes to engage with Arctic States on this important issue. Indeed, Carbon and Methane emissions away from the Arctic are also considered as short live climate forcers which have an influence on the Arctic. In the perspective of an ambitious implementation of the Paris Agreement, France believes that it is a shared responsibility of Arctic Council Observers to reduce their emissions in order to reduce the effects of Climate change all over the world, and especially in the Arctic. Thus, France is pleased to share its data with the Arctic Council through this submission to the Secretariat.

The following report is submitted by the French Ministry of Foreign Affairs and International Development and has been drafted with the contribution of the French Ministry for the Ecological Transition.

1. Summary of current black carbon emissions to CLRTAP, where appropriate, and if available, future projections

The emissions of black carbon (BC) are calculated annually by the CITEPA (financed by French Ministry for an Ecological Transition) since 2012 and are submitted voluntarily in the framework of the Convention on Long-Range Transboundary Air Pollution (CLRTAP) adopted under the auspices of the Economic Commission for Europe of the United Nations (UNECE). The definition of the methods and the QA/QC of the calculation are part of a national system for inventories called SNIEBA, (see NIR 2020, <https://unfccc.int/documents/226401>). To find explanations on the methodology used for black carbon calculation, see the report sent to UNECE: <https://www.citepa.org/fr/ceenu/>.

The figure 1 represents Black carbon emissions since 1990. We can see that the emissions of black carbon decreased by 48% since 1990.

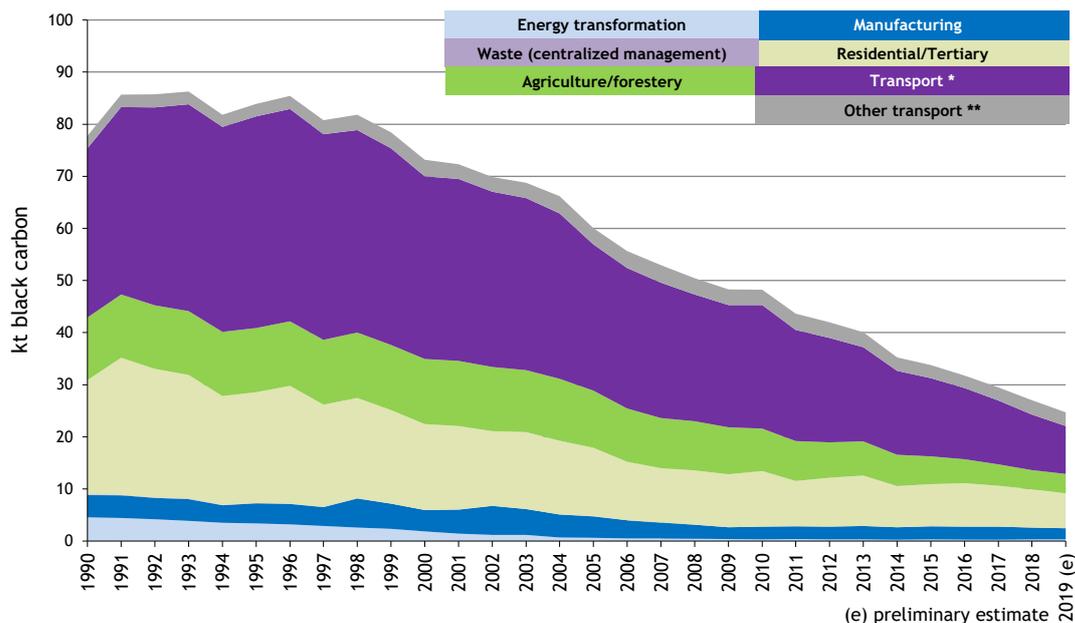


Figure 1 : Emissions of black carbon since 1990 in kt per year for metropolitan area in France

(*)perimeter of UNECE - emissions outside national totals are: international maritime emissions, emissions of the cruise phase (≥ 1000 m) of domestic and international air traffic, and emissions of biotic sources of agriculture and forestry and emissions non-anthropogenic sources.

(**) Emissions from exhaust and wears

France has not yet performed any projection for Black Carbon emissions.

2. Summary of current methane emissions to UNFCCC and, if available, future projections

Emissions of CH₄:

Emissions of methane are calculated annually for the climate change convention. Methodologies are presented in the NIR submitted each year to UNFCCC:

<https://unfccc.int/ghg-inventories-annex-i-parties/2020>) and in the national report on methodology OMINEA which can be found here: <https://www.citepa.org/fr/ominea/>.

CH₄ emissions trend is presented here in the Figure 2 for metropolitan area. We can see that the emissions decreased by 21% since 1990.

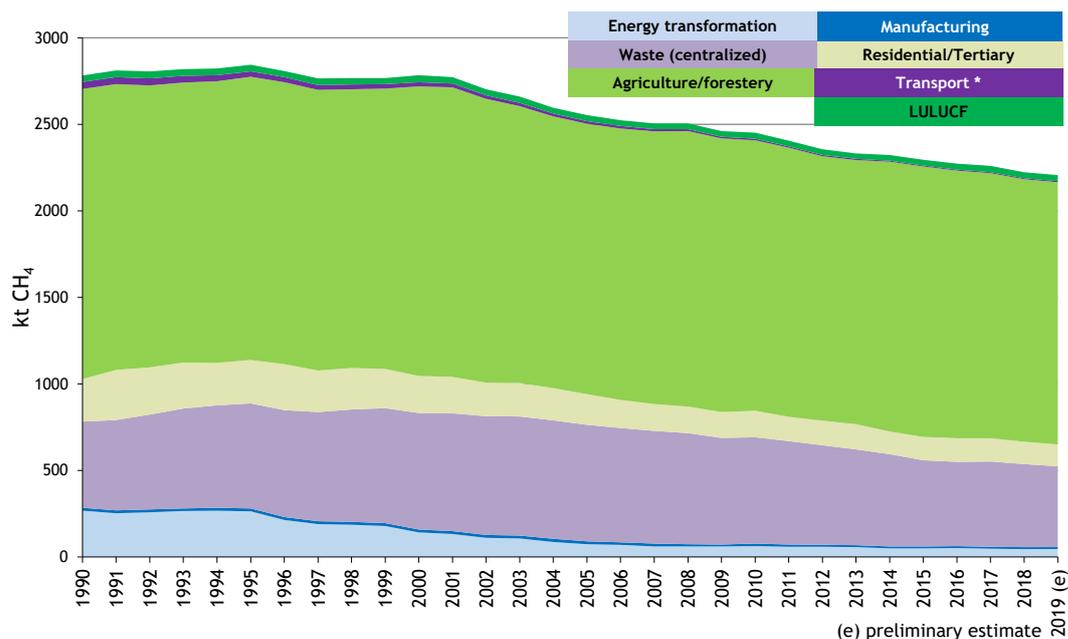


Figure 2: CH₄ emissions in kt for metropolitan area in France

(*) according to rules of UNFCCC - international maritime and aviation emissions, and emissions from biogenic sources are not included in this total.

CH₄ emissions projections

Projections are calculated every two years for the European Union and the UNFCCC. The latest set of projections is available

- in chapter 5 of the 7th national communication: <https://unfccc.int/NC7> ;
- and also in the fourth biennial report: <https://unfccc.int/BRs>.

Between April 2017 and October 2018, France carried out a scenario-based forecasting exercise for the period up to 2050. The previous forecasting exercise only considered the period up to 2035.

A “with existing measures” or WEM scenario, taking into account all policies and measures adopted and implemented before the 1st of July 2017, was constructed.

	2010	2015	2020	2025	2030	2050
CH ₄ (kt)	2405,4	2249,0	2158,4	2105,9	2071,9	1796,9

Table 1: CH₄ emissions projections for scenario WEM 2018 for metropolitan area

A “with additional measures” (WAM) scenario was also constructed. This scenario represents a way to achieve France’s energy and climate objective, in particular climate neutrality in France by 2050. The WAM scenario is the scenario underpinning the French energy and climate strategy (see the long term Strategy, https://ec.europa.eu/info/energy-climate-change-environment/overall-targets/long-term-strategies_en#strategies and the National Energy and Climate Plan, https://ec.europa.eu/info/energy-climate-change-environment/overall-targets/national-energy-and-climate-plans-necps_en).

	2010	2015	2020	2025	2030	2050
CH ₄ (kt)	2405,4	2249,0	2049,53	1869,0	1733,0	1257,1

Table 2: CH₄ emissions projections for scenario WAM 2018 for metropolitan area

3. Summary of National actions, National actions plans, or mitigation strategies by sector

4.1. for Black Carbon

A first report with emissions reduction action was submitted under the Economic Commission for Europe of the United Nations in 2001. This plan did not take into account black carbon, which was not accounted for 14 years ago.

A new action plan called PREPA was published in 2017 (<https://www.ecologie.gouv.fr/politiques-publiques-reduire-pollution-lair#e4>). This plan was implemented to reduce emissions from most anthropological sources of several pollutants in France, including particles. For the latter, the goal for the 2020 to 2024 is a 27% reduction of emissions (compared to 2005 emissions). Even though the plan does not include any specific target for black carbon emissions reduction, many measures in various sector impact its emissions, such as regulations on biomass burning, wood heating improvement, financial support to buy low emission cars...

The PREPA will be revised in 2020/2021 to implement or reinforce measures in order to meet the goals of pollution reduction.

4.2. for CH₄

The description of the policies and measures for CH₄ emissions reduction are reported every two years to the European Commission and to the secretariat of the United Nations Framework for Convention on Climate Change. The last reports available are

- in chapter 4 of the 7th national communication: <https://unfccc.int/NC7>;
- and also in the fourth biennial report submitted in December 2019 by France: <https://unfccc.int/BRs>.

4. Highlights of best practices or lessons learned for key sectors

In the aforementioned French national communication and in the French biennial report, the policies and measures are classified by sector and we can find best practices and lessons learned by sector.

5. Projects relevant for the Arctic

Since January 1992, the French Polar institute (IPEV) has been an essential player in the sphere of polar research in France, by providing funding to implement research projects in Polar Regions. Along with the Alfred Wegener Institute, the IPEV manages the AWIPEV French-German Station in Ny-Ålesund, Svalbard.

The IPEV allocates 25% of its funds to the Arctic, which amounts to €1.3 million per year. Of these programs, 23 involved earth sciences, 13 life sciences and 9 human and social sciences. In 2013/2014, IPEV funded fieldwork for 94 persons representing a total of 2.466 days of *in situ* research.

IPEV operates the GRAAM Project. Since 2007, a continuous atmospheric monitoring station has been set up in Ivittuut, Greenland, to monitor carbon dioxide, methane, oxygen and water vapor isotopic composition. The station acquires unique data sets regarding air masses origin and regional carbon balance.

The AWIPEV Station is used as a scientific infrastructure by many European projects: Global Earth Observation and Monitoring (GEOMON), Climate impacts of short-lived pollutants in the Polar Regions (CLIMSLIP) which, among others, contributed to the EUROPOLAR ERANET consortium. The European Project on Ocean Acidification (EPOCA) should also be mentioned. The IPEV is involved in the Svalbard Integrated Earth Observing System (SIOS) project, which intends to join the Sustainable Arctic Observation Network (SAON), made up of representatives from the Arctic Council.

The CNRS (the national Center for Scientific Research) is widely involved in the publications, generally in partnership with universities and other French research bodies. The French scientific community working on the Arctic is composed of around 500 scientists whose work is either fully or partly related to Arctic research.

The ocean, the climate, sea ice, ecology and anthropology are the fields in which the French scientific community is particularly active. More recently, studies have been conducted on the continental surfaces, in particular permafrost and peatlands. Remote sensing and modelling are the preferred means of observation and analysis.

The French scientific community has joined together under the French Arctic Initiative, which was established by the Ministry of Higher Education and Research. The aim of the French Arctic Initiative is to coordinate and structure Arctic research in order to make it clearer and raise its profile internationally.