

The title 'Activity Report 2024' is centered on the page. 'Activity Report' is in a large, bold, blue sans-serif font, and '2024' is in a smaller, white sans-serif font below it. The background is a hazy city street scene with traffic lights and cars.



Summary



About us p.04

1

- > The association – Our mission & key figures
- > Financial overview
- > Governance & teams
- > CSR policy

Citepa's expertise and solutions p.13

2

- Data production & expertise in France <
- Support & capacity building <
- for countries abroad
- Solutions for businesses <
- New training programmes <



Air & Climate Data p.24

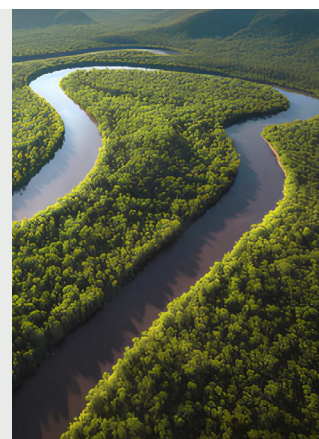
3

- > Official data published annually by Citepa
- > Other emission reporting formats

News and analysis p.30

- Highlights of Air & Climate news in 2024 <
- Key events recap – 2024 <
- Scientific publications and communications <

4



President's Statement

Activity report for 2024

Jean-Guy BARTAIRE
Citepa President



Air quality across the European Union continued to improve significantly in 2024, thanks to ambitious policies and their effective implementation by national administrations. However, despite these advances, some exceedances of EU limit values still persist — particularly for ozone, fine particulate matter and nitrogen oxides.

Outside the EU, air quality remains a major and ongoing concern for national authorities. Citepa has strengthened its international presence, driven by the relaunch of major air pollution projects such as ASEAN (Asia region) and ROTATE (quarry emissions).

The Task Force on Techno-Economic Issues (TFTEI), organised under the UNECE Convention on Long-range Transboundary Air Pollution, is a clear example of this commitment. TFTEI supports non-EU countries by providing key data on emission reduction technologies, including their costs and environmental performance. In close partnership with Italy's ENEA, Citepa plays a dual role in the task force — acting as both technical secretariat and co-chair.

Our international efforts are backed by the technical and financial support of key partners, including Expertise France, AFD, GIZ, GHGMI, UNDP, the European Environment Agency and the World Bank. Their contributions to our projects on greenhouse gases and air pollution — across the Balkans, Central and Southeast Asia, and Africa — are deeply appreciated.

The expansion of our international footprint reflects the tireless efforts of our teams to promote Citepa's work beyond France. It also highlights their high standards, recognised technical expertise, and the success of our diversification strategy.

In early 2024, we launched our new website — now a key tool in sharing data on air emissions and supporting climate change adaptation. With improved performance and interactivity, the site facilitates access to public inventory data, highlights our core missions, and delivers timely updates on regulatory and technical developments. As a result, site traffic has grown significantly.

From a management perspective, our 2024 financial performance was especially strong and aligned with our medium-term strategy. These results reflect our responsible financial management and the alignment of our work with today's major environmental challenges.

True to our strategic vision, Citepa's multidisciplinary and committed team remains the driving force behind our climate and air initiatives. I would like to express my sincere thanks to all our staff for their outstanding professionalism and work ethic.

Finally, let us underline the importance of Citepa's core mission: producing France's official emissions inventory on behalf of the public authorities. Each year, this inventory is strengthened through the subsidy granted by the Ministry for Ecological Transition — under the General Economic Interest Service (SGEI) framework — and through ongoing collaboration with sectoral experts.

I close by warmly thanking our institutional partners (MTE, MASA, MEAE, HCC, ADEME, IGN and other expert bodies), without whom our 2024 achievements would not have been possible.

Overview



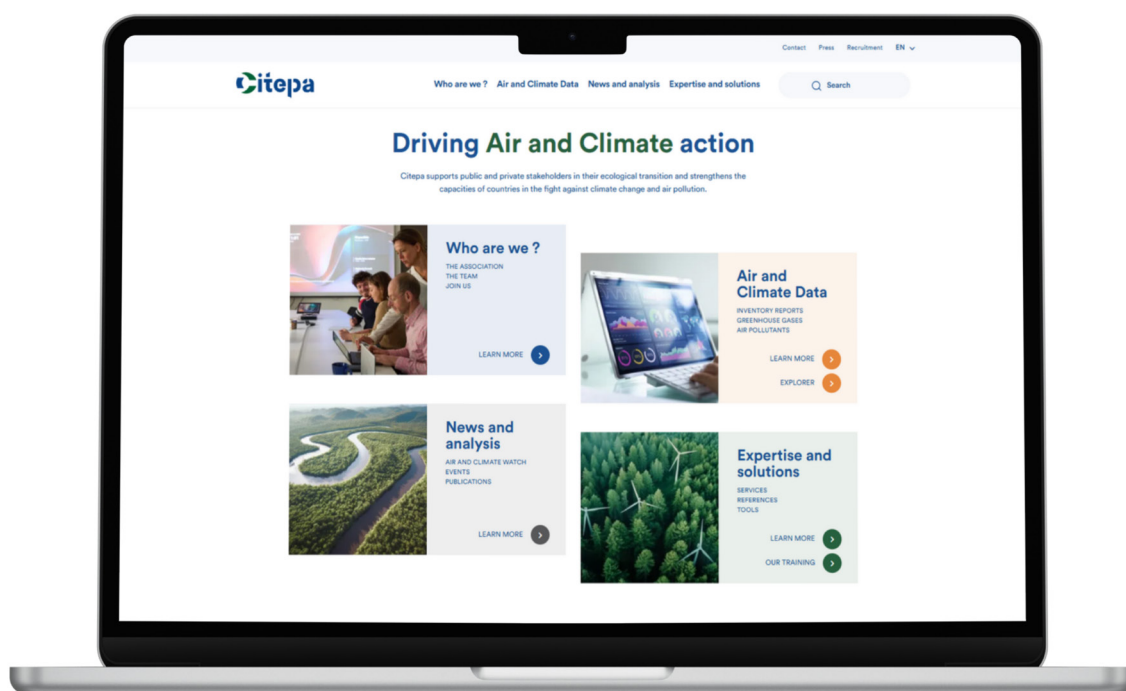
For this 2025 activity report, we drew inspiration from our [new website](#), marking the final stage in redesigning Citepa's identity. Beyond updating the visual charter, this new website reflects our commitment to making access to information and data simpler and clearer — at the core of our association's mission.

The 2024 activity report follows the same structure as our website, organized into four main sections:

- **About us** — an overview of our governance, teams, financial results, and CSR actions carried out in 2024;

- **Expertise & Solutions** — a selection of 2024 projects showcasing Citepa's solutions;
- **Air & Climate Data** — a summary of key data and publications provided by Citepa;
- **News & Analysis** — a recap of major air and climate events in 2024, based on about a hundred articles published by Citepa and highlights from our events.

New website design



Disponible

(01) 44 77 77 77

Natalia Silva-Lobato

(01) 44 77 77 77

Our Purpose

Committed and independent, our association guides players in the ecological transition in France and around the world.

We assess the impact of human activities on climate and air pollution.

We produce reference data and develop solutions to encourage emission reductions, improve air quality, and adapt to climate change.

Our multidisciplinary team contributes to building a sustainable world.





About us

Our mission

Citepa is a nonprofit association committed to ecological transition. Its purpose was officially stated in Article 2 of its revised statutes filed in October 2023. Since 2023, the French Ministry of Ecological Transition has recognized Citepa as providing a Service of Economic and General Interest (SIEG) through its annual inventories of greenhouse gas and air pollutant emissions.

Citepa's role is to produce and share reliable knowledge on air pollutants and greenhouse gases, support public and private decision-makers, and strengthen countries' capacities to combat climate change and air pollution.

Through reporting, objective diagnostics, and rigorous recommendations, Citepa contributes to public and private decision-making for a transition to a sustainable world that integrates air, climate, and energy concerns.

Citepa transparently shares environmental information, sector-specific data, methodologies, and tools for monitoring emissions and implementing mitigation and climate adaptation measures.

Citepa empowers public and private actors to face ecological challenges both in France and internationally — at the country, regional, city, sector, and company levels. It provides specific support to third countries in implementing the Paris Agreement and the Convention on Long-range Transboundary Air Pollution, helping them become autonomous in emission assessment and ecological transition.

Key figures

Citepa at a glance



2024

47

Employees

5,81 M€

Turnover

35



COUNTRIES SUPPORTED

102

Qualopi
processus certifié

COMPANIES TRAINED

94

Members



696

PARTICIPANTS

in the 7 Citepa's breakfasts

x4

Number of visits to the website in
the first half of 2025

62

Articles and analyses published

67 LINKEDIN
POSTS

Financial report

Laurence BRAILLON

Head of Administrative and Financial Department



The year 2024 confirmed Citepa's growth momentum, both in revenue and headcount. Results align with the projections of the 2024-2028 medium-term plan.

REVENUE

In 2024, turnover reached €5.81 million, a strong increase of +18.8% compared to 2023, representing a €920K rise.

This growth is mainly driven by:

- Contracts and grants in France and internationally;
- A high and improving VA/FTE productivity indicator (value added per full-time equivalent).

For the first time in 2024, international project revenues surpassed French government subsidies.

EXPENSES

In 2024, expenses totaled €5.73 million, up 18% from 2023, slightly below revenue growth, mainly due to recruitment.

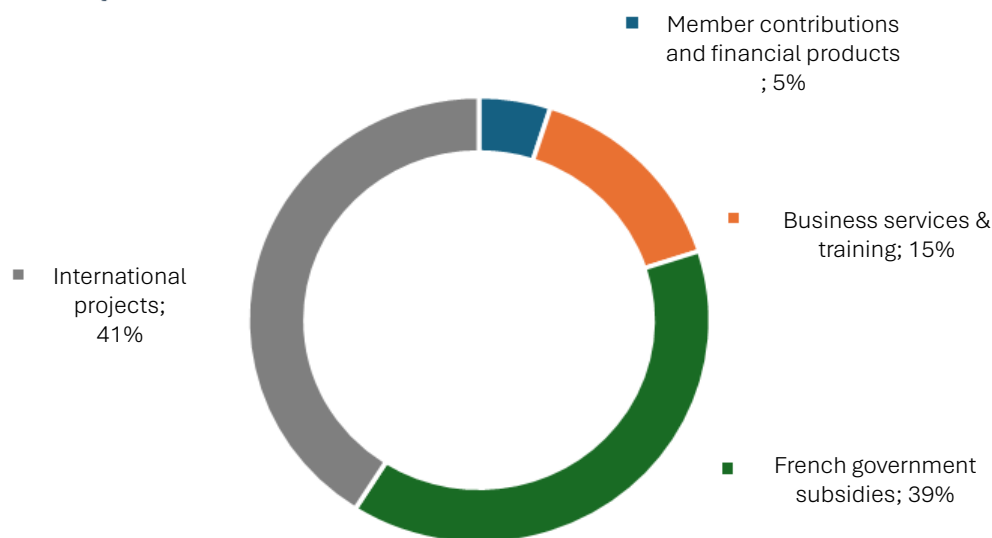
Staff numbers grew from 37.1 to 43.1 full-time equivalents over the year, reflecting expanding activities.

NET RESULT

The 2024 net profit was €83,587 after employee profit-sharing, allocated to cash reserves.

The 2024 fiscal year fully meets the medium-term plan expectations, confirming Citepa's solid financial health through strong revenue growth, profitable results, and controlled expenses. The association remains well-positioned to respond to calls for tenders and continue its missions.

2024 Revenue by sector



Revenue evolution by sector between 2023 et 2024

	Turnover growth between 2023 and 2024
French government subsidies	-3,8%
International projects	+50,5%
Services to French companies including training	+22,8%
Membership fees and association activities	+15,4%

Governance



In 2024, Citepa's Board of Directors included 23 members representing associations, professional federations, industry players, and research centers. The board is chaired by Jean-Guy Bartaire, with Marc Larzilière serving as Honorary President.

Key sectors emitting greenhouse gases and air pollutants are represented, including cement industry, construction

and public works, energy industry, agriculture, and transport.

Also present are representatives from major associations focused on air pollution prevention, environmental groups, and qualified researchers in the Air & Climate fields.


CITEPA
Jean-Guy BARTAIRE
Board Member - President

APPA
Denis CHARPIN




ATEE
Nicolas FONDRAZ



CLIMATE CHANGE
Vaia TUUHIA





COPACEL
Bénédicte OUDART






EDF
Rémi BUSSAC
Board Member - First Vice-President

EEB
Christian SCHAIBLE




ENGIE
Elsa FAVROT
Board Member - Vice-President

ENPC
Patrick MASSIN




FCSIV
Jacques BORDAT




FEDENE
Marion LETTRY




FRANCE CHIMIE
Céline CAROLY




FRANCE CIMENT
Mélisande COUESPEL




GAZEL ENERGIE GÉNÉRATION
Marie-Pierre CRAVERO




LAET
Yves CROZET






MEDEF
Laurence ROUGER de GRIVEL




OIEAU
Eric TARDIEU




PFA
Nicolas LE BIGOT
Board Member - Vice-President

RNSA
Nicolas VISEZ




UFIPEM
Muriel PIGNON






UNICLIMA
Hugues HAENTJENS




UNIFA
Florence NYS




VEOLIA
Alice PEYRARD
Board Member - Treasurer


Teams

Citepa is made up of dedicated, honest, and rigorous experts passionate about environmental protection. Open internationally, they strive to improve and share reliable knowledge and objective analyses. Our experts provide support and decision-making aid at multiple levels — regions, countries, territories, and companies — in France and worldwide, especially in developing countries. Citepa is organized into six departments, each containing several specialized teams :

INTERNATIONAL MITIGATION AND ADAPTATION DEPARTMENT

This department covers Air & Climate mitigation and adaptation. It supports the requirements of major international protocols like the Paris Agreement and the Long-range Transboundary Air Pollution Convention in over 25 countries annually.

On climate, focus lies on transparency frameworks and adaptation market mechanisms. For air pollution, solutions serve businesses, cities, regions, and countries.

INDUSTRIES AND FOOTPRINTS DEPARTMENT

Handles carbon footprint, emissions trading schemes (ETS), and training activities. Offers diverse solutions for indirect emissions, reporting, verification, compliance with carbon market regulations, CSRD, MACF, and supports SDES with Namea inventory. Also works on individual footprint estimation and optimizing reduction pathways.

COMMUNICATION, IT, AND SUSTAINABLE DEVELOPMENT DEPARTMENT

Supports Citepa’s communication and IT needs, ensuring Air & Climate information dissemination. Manages publications like the Secten report and emissions barometer. Oversees member relations and Citepa’s CSR policy. Many team members also serve as technical experts involved in projects in France and abroad, especially on fluorinated gases.

TRANSPORT AND MOBILITY DEPARTMENT

Experts here work on transport sector projects, tenders, and contracts, managing French and international inventories and developing predictive tools like Predict’Air. Daily tasks include geolocation, data analysis, and modeling.

AFOLU DEPARTMENT (AGRICULTURE, FORESTRY, AND OTHER LAND USE)

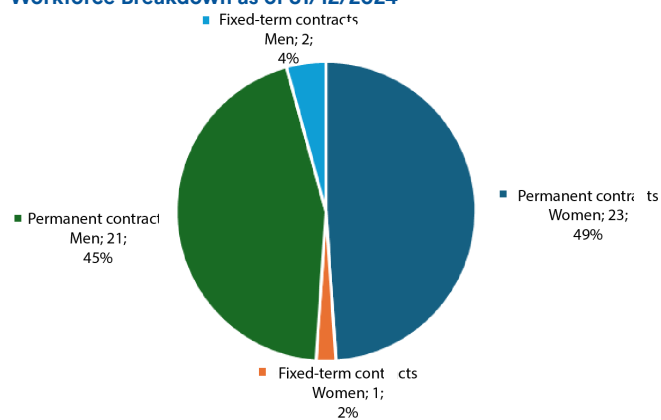
Focuses on agriculture, livestock, and UTCATF activities. Beyond national inventory duties, this department innovates with spatial data, satellite use, and sector-wide perspectives. It leads working groups on agriculture, livestock, and forests, followed by sector experts.

ADMINISTRATION, MANAGEMENT, FINANCE, AND HR DEPARTMENT

This essential support team handles administrative tasks, tender responses, analytical accounting, and reporting to authorities. It manages internal communication about rights, obligations, and admin duties, especially for international travel. It also oversees functional facilities promoting both individual work and collaboration.

In 2024, 14 new employees joined Citepa while 7 left, resulting in a turnover rate of 15.38%, well below the industry average of 25%. Citepa had 47 employees as of December 31, 2024.

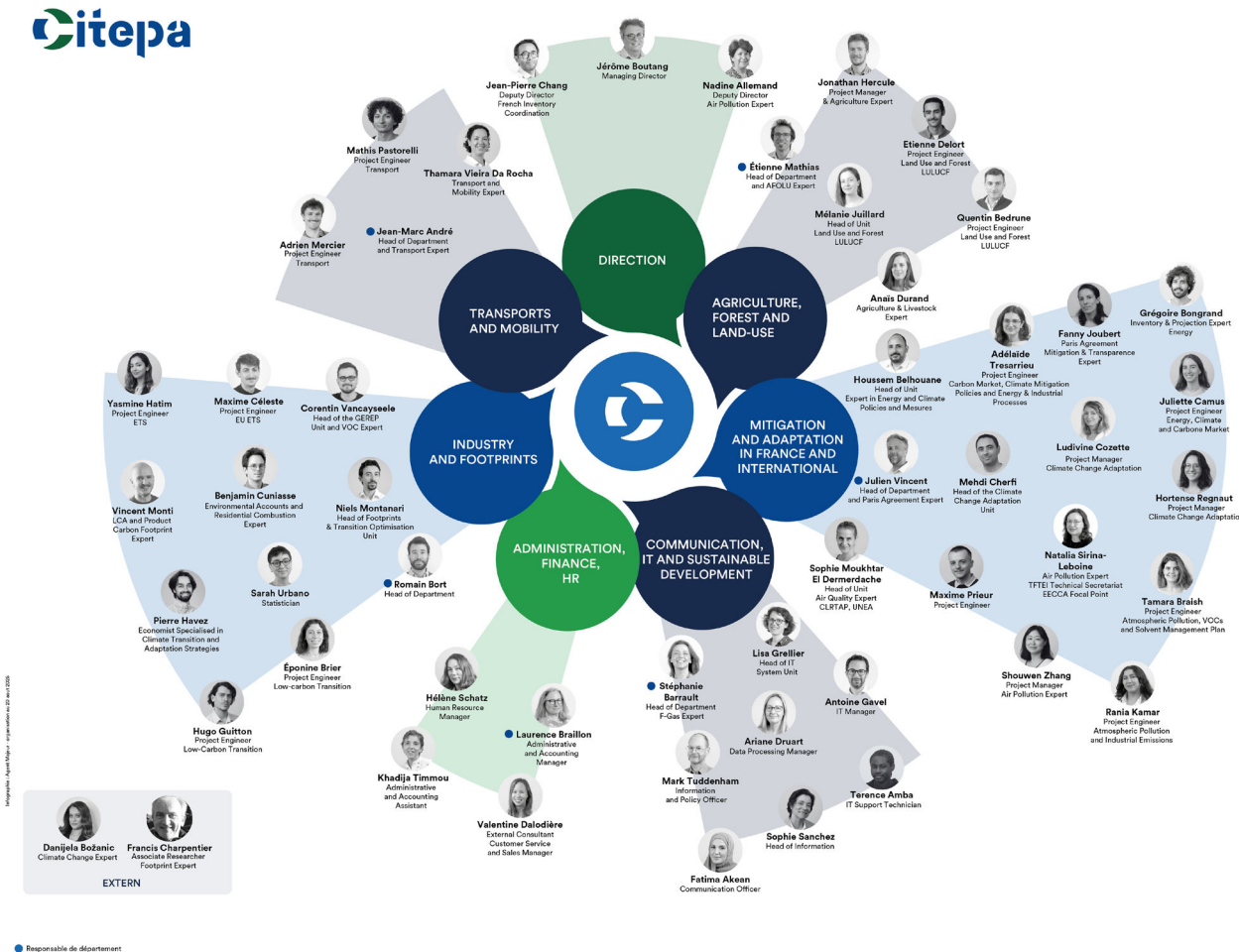
Workforce Breakdown as of 31/12/2024



Gender parity is respected, with 24 women and 23 men. Temporary contracts (CDD) are slightly less frequent among women. The team also reflects cultural diversity, with seven nationalities and eight different native languages represented.

The average age as of December 31, 2024, was 37.5 years, up from 35.3 the previous year, due to recruiting more senior experts.

Organisational chart as of 01/06/25



In 2024, 13 new members joined Citepa



List of Citepa Members as of 31/12/2024

A3M (Alliance des Minerais, matériaux et métaux)	ENPC - École nationale des Ponts et Chaussées (CEREA - Centre d'enseignement et de recherche en environnement atmosphérique)
ABC – Association pour la transition Bas Carbone	EpE – Entreprises pour l'Environnement
Aéroport de Paris	Eramet SA
Afite - réseau d'experts pour l'environnement	ESTP – École spéciale des Travaux publics, du bâtiment et de l'industrie
Airbus	Fedene - fédération des services Énergie Environnement
Aluminium France	Fédération des chambres de l'industrie du verre
Amorce	FIPEC
APPA - association pour la prévention de la pollution atmosphérique	Fives Pillard
APRR (Autoroutes Paris Rhin Rhône)	FNADE - Fédération nationale des activités de la dépollution et de l'environnement
Arkema France	FNTF - Fédération nationale des Travaux publics
ARTB - Association de recherche technique betteravière	France Chimie
Arvalis – Institut du végétal	France Ciment
Ascoval	France Ville durable
ASTEE - Association scientifique et technique pour l'Eau et l'Environnement	Gazel Énergie génération
ATEE - association technique énergie environnement	Groupe Roullier
ATMO Auvergne-Rhône-Alpes	Henri SaissetT
ATMO Grand-Est	Hermes international
ATMO Hauts-de-France	Horizon Réunion
ATMO Sud	IFP Énergies Nouvelles
Axens	Ineris
Butachimie	Janssen
CDA - Chambre départementale d'agriculture	La coopération agricole - Luzerne de France
Chomarat	LAET Université Lyon 2 - laboratoire aménagement, économie, transports
CIBE - Comité interprofessionnel du Bois Énergie	Lafarge Ciments
Climate Chance	LCL – Le Crédit Lyonnais
CMTV - Chartres Métropole Traitement et Valorisation	Malakoff-Humanis
Copacel - Confédération française de l'industrie des papiers, cartons et celluloses	Mc Cain
École des Mines de Nancy	Medef
EDF	Michelin
EEB - European Environmental Bureau	Monaco (Direction de l'Environnement)
Egis Structures et Environnement	Mousquetaires
Eiffage	NLMK - acier
Engie	Nyrstar France
ENVEA	OIEau – Office International de l'Eau

Pacte PME
PFA – la plateforme automobile
Poujoulat
RNSA - réseau national des stations d'épuration
RTE
Saint-Gobain conceptions verrières
Saria Industries
Sciences & Avenir
Siorat
Suez
Syndicat des énergies renouvelables (SER)
Syndicat NL Fabricants sucre
Sypred
TC Concept

Tereos
Tilt
TotalEnergies SE
Trimet
Ufip Énergies et Mobilités
Uniclina
UNIFA - Union des industries de la fertilisation
Union routière de France
UNPG - Union nationale des Producteurs de granulats
USIRF/Routes de France
Veolia
Weychelm

CSR Policy

Stéphanie BARRAULT

Head of Department & Fluorinated Gases Expert



This year, Citepa is strengthening its sustainable development policy by adding two new concrete measures. The first aims to formalize a long-established practice at Citepa: from now on, business travel within France will be exclusively by train. This means that, except in exceptional cases, air travel is no longer allowed.

The second measure concerns international projects. Citepa now encourages its partners to limit the carbon impact of missions requiring air travel. To that end, a paragraph will be added to proposals to remind clients that Citepa is equipped with videoconferencing tools that allow meetings and training sessions to be carried out remotely under excellent conditions.

To ensure the quality of our remote services, Citepa employees will have access to dedicated training in hosting virtual meetings and trainings. Finally, when relevant, project managers may include two scenarios in response to tenders: one that follows the travel schedule as described in the specifications, and another with fewer trips, prioritizing remote formats.

Citepa's CSR policy places particular emphasis on employee well-being. Teleworking is organized flexibly and adaptively: each employee who wishes to do so can benefit from 2 to 3 telework days per week, with the possibility of extended periods in summer or under specific personal circumstances.

Break times are also planned during periods of intense activity. Citepa also organizes social events, such as its annual party open to families, or a special off-site team-building day. In June 2024, this day gave employees the chance to try out kayaking, rowing, and laser-run in a fun, Olympic-inspired atmosphere.

Sports day in Joinville-le-Pont, June 2024



Project directory

CONTINUOUS IMPROVEMENT OF GREENHOUSE GAS EMISSIONS ASSESSMENT WITHIN THE NATIONAL INVENTORY

France – 2024



SUPPORT FOR RWANDA – FOCUS ON THE FLUORINATED GASES WORKSHOP

Rwanda – 2023 - 2025



IMPROVEMENT OF CH4 EMISSIONS ESTIMATION FROM DAIRY COWS

France – 2024



CLIMATE CHANGE ADAPTATION IN IVORY COAST

Ivory Coast – 2023 - 2025



IMPROVEMENT OF THE MARITIME TRANSPORT EMISSIONS INVENTORY FOR FRANCE

France – 2024



STRENGTHENING MOROCCAN CAPACITIES IN GREENHOUSE GAS EMISSIONS BALANCE VERIFICATION

Morocco – 2024



GUIDING PUBLIC DECISION-MAKERS ON THE IMPACT OF TELEWORKING ON EMISSIONS

France – 2024



STATE OF DECARBONIZATION STRATEGIES OF LARGE FRENCH COMPANIES THROUGH ACT-ACCELERATE CLIMATE TRANSITION

France – 2024



SUPPORTING ASEAN COUNTRIES IN FIGHTING AIR POLLUTION

Thailand – 2023 - 2024



WHITE PAPER ON CARBON OFFSETTING AND THE CONTRIBUTION OF ORGANIZATIONS TO CARBON-CLIMATE ISSUES

France – 2024



PARTNERSHIP WITH EXPERTISE FRANCE (EF) TO ASSIST DEVELOPING COUNTRIES IN IMPLEMENTING THE PARIS AGREEMENT

Uzbekistan – 2023 - 2026



TRAINING TRANSITION ACTORS ON AIR AND CLIMATE REGULATIONS

France – 2024



2

Citepa Expertise & Solutions

Data Production & Expertise in France

Citepa carries out the national inventories of greenhouse gas emissions and air pollutants for the Ministry for Ecological Transition. Citepa also provides support and expertise to other French administrations on various aspects of the ecological transition: mitigation, resilience measurement, sectoral reduction techniques, policies & measures, associated emission projections, and carbon footprints.

France Inventory

Continuous Improvement of Greenhouse Gas Emissions Assessment within the National Inventory

France



Jean-Pierre CHANG

Deputy Director – Coordination of French Inventories



Citepa assesses each year the impact of human activities on climate and air pollution through France's national inventories of GHG and pollutant emissions.

The year 2024 is particularly marked by the start of the Paris Agreement regime, with the first GHG inventory and Biennial Transparency Report (BTR) under this new framework.

As part of the Continuous Improvement of Emissions Assessment within the National Inventory, several specific methodological developments are worth noting in 2024 :

- Further refinement of the spatially explicit LULUCF inventory;
- Strengthened methodological accuracy for key carbon pools in the LULUCF sector, in compliance with the latest EU LULUCF regulation;
- Improvements in methodologies for other sectors as well: better accounting of agricultural and forest fires, more accurate distinction between domestic and international maritime emissions, improved estimation of methane emissions from dairy cows, etc.

Within the framework of the work carried out by the PCIT (Territorial Inventories Coordination Hub), progress is also worth highlighting. A three-year update of version 3 of the PCIT guide has been launched. In 2024, the focus is on the transport and residential/tertiary sectors.

Furthermore, the decision was made to extend the PCIT guide to the full monitoring of territorial GHG emissions,

as part of the topic “convergence of GHG methodologies at the territorial level.” In 2024, RARE joined the group's work, alongside the three historical coordinators of the PCIT: LSCQA, Atmo France, and Citepa.

Audits of the French inventories also provide an opportunity to implement improvements.

- At the EU level, the French GHG inventory was reviewed. No challenges were made to France's GHG inventory figures, though some improvements were recommended. The 2024 EU review under the NECD directive for pollutants did not identify any issues calling into question France's pollutant inventory data.
- At the United Nations level, there was no UNFCCC 2024 GHG review this year due to the delay in reporting from April 15 to the end of 2024. The 2024 CLRTAP pollutant review focused on NMVOC from solvent use, without questioning the French inventory, but identifying a few areas for improvement.

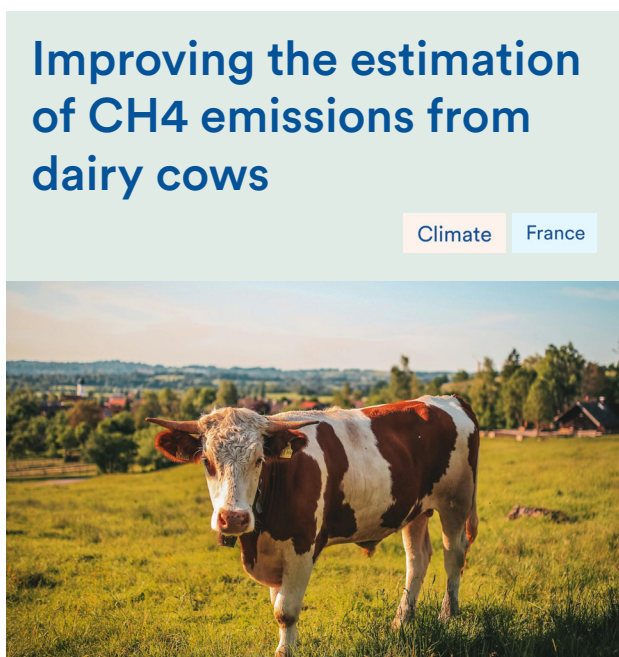
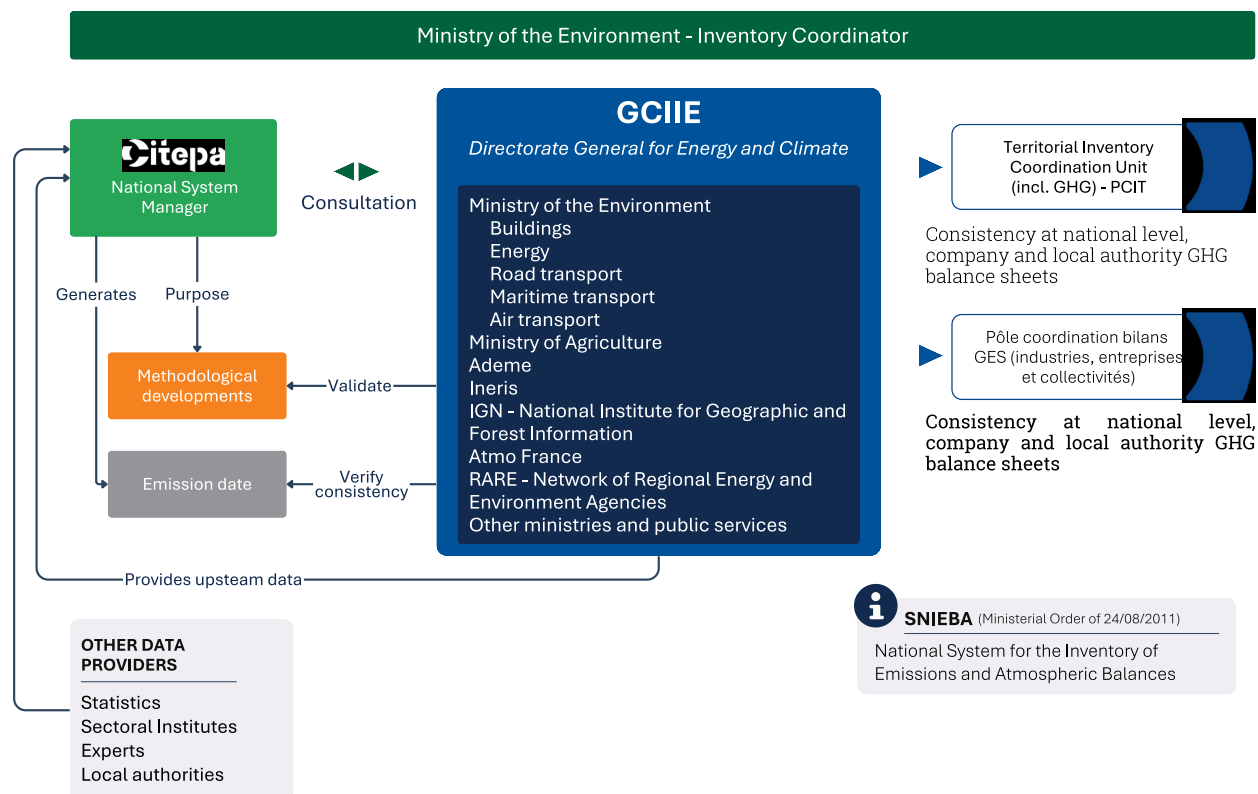
Some improvements to the inventory are undertaken through additional self-financing by Citepa. In 2024, Citepa's self-financing enabled :

- the improvement, communication, and deepening of the analysis of the monthly emissions barometer results;
- the drafting of the Secten inventory report, as has been done annually since 2015;
- work on a new methodology to develop a forward-looking monthly barometer in collaboration with Insee.

The most recent national emissions inventories published in 2024 are:

- The GHG inventory, series 1990-2022, reported to the EU in March 2024 in accordance with EU Regulation 2018/1999 on energy/climate governance;
- The pollutant inventory, series up to 2022, reported in 2024 to the EU and the CLRTAP Convention, in line with the obligations of the Gothenburg Protocol and the NECD directive, for monitoring the 2020-2030 reduction targets.

Ministry of the Environment - Inventory Manager



Anaïs DURAND
Agriculture & Livestock Expert



Dairy cows contribute significantly to agricultural CH₄ emissions, accounting for approximately 35% in 2023 (Secten, 2025). In 2024, the Agriculture team worked on improving the estimation of these emissions, which had previously been expressed mainly according to milk yield using equations established by Inrae during the Mondferent project.

This update, initiated several years ago, responded to recurring requests to better link emissions to animal feeding. The new method now allows CH₄ emissions to be estimated, still using Inrae's equations (Eugène et al., 2019), but directly based on animal requirements and known feed ration data at the subnational level. During this work, Citepa was supported by Inrae, which monitored the implementation of this improvement through several meetings and addressed Citepa's questions on this complex topic.

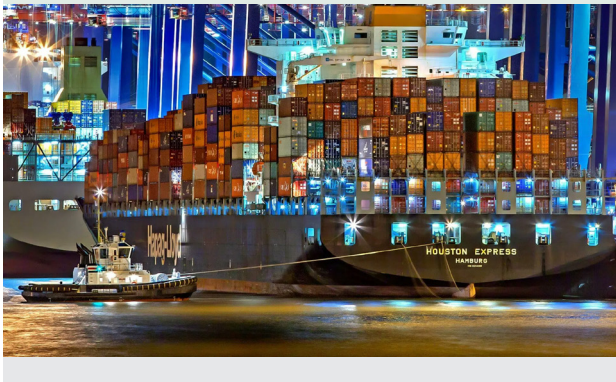
This new method improves the accuracy of estimates by allowing them to react to changes in animal feeding and, in the future, integrate certain mitigation levers. This update led to an upward revision of the enteric CH₄ emission factor—produced by ruminant digestive fermentation—as well as carbon excretion—the portion of ingested carbon expelled in animal waste.

These increases are mainly explained by the revision of maintenance requirements (Inrae, 2018), corresponding to the energy needed to keep the animal alive in the absence of any production.

This work will continue in 2025 to align nitrogen excretion with this new method.

Improving the maritime emissions inventory for France

Climate World



Jean-Marc ANDRE
Department Head & Transport Expert

Inventory reviews sometimes lead to recommendations to improve and refine each country's inventory. The calculation of maritime transport emissions is an example this year. Maritime transport emissions must be reported under two different scopes: domestic transport emissions, i.e., occurring between two French ports without stopping in a foreign country, and international transport emissions between a French port and a foreign port. Only domestic traffic emissions are included in the national total. International traffic emissions are provided for information.

Following a recommendation from the United Nations Framework Convention on Climate Change (UNFCCC) during a review of the French inventory in 2016, Citepa updated the ratio of marine fuel sales for domestic traffic. This ratio separates marine fuel sales for domestic traffic from those for international traffic. Until now, the ratio was based on an internal Citepa study using data from 2005. The UNFCCC recommendation was to update this ratio regularly.

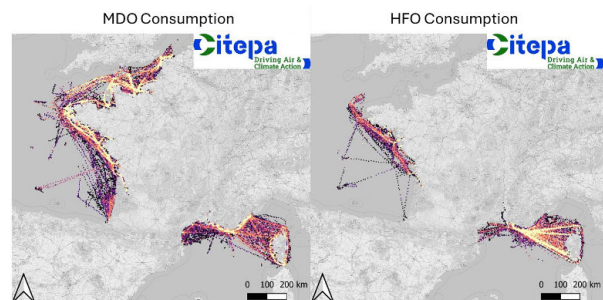
To do this, Citepa was authorized by the Directorate General for Maritime Affairs, Fisheries, and Aquaculture (DGAMPA) to use AIS data (positioning data regularly transmitted to avoid collisions) from ships calling at a French port in 2018 to extract domestic traffic routes.

These data were processed by Cerema, which reconstructed trajectories for ships with missing AIS data over relatively long periods. They were complemented with technical characteristics of the ships (flag, type, engine, power, etc.).

From these datasets, it then became possible to calculate, for each position of each ship, fuel consumption by fuel type and by flag (figure). The resulting consump-

tions were summed for the entire year and compared to marine fuel sales (heavy fuel oil and Marine Gas Oil) to update the “domestic ratio” of sales. This method also allowed for the calculation of ratios by year to account for different regulations regarding fuel use by ships over time (sulfur emission control areas in the English Channel–North Sea, and the use of lower-sulfur fuels in emission control areas in the English Channel–North Sea, and in ports for ships staying more than 2 hours at berth..

Consumption of MGO (Marine Gas Oil) and heavy fuel oil on domestic routes in 2018



This update has thus improved the accuracy of GHG and air pollutant emissions from maritime transport by taking into account in great detail the ships engaged in domestic traffic.

Guiding public decision-makers on the impact of remote work on emissions

Climate France



Jean Marc ANDRE
Department Head & Transport Expert

The TELELOCEM project, funded by ADEME under the “Economic and Social Ecological Transitions” (APR TEES) research call, was initiated after the Covid-19 pandemic by pooling the respective expertise of Théma, LAET, and Citepa.

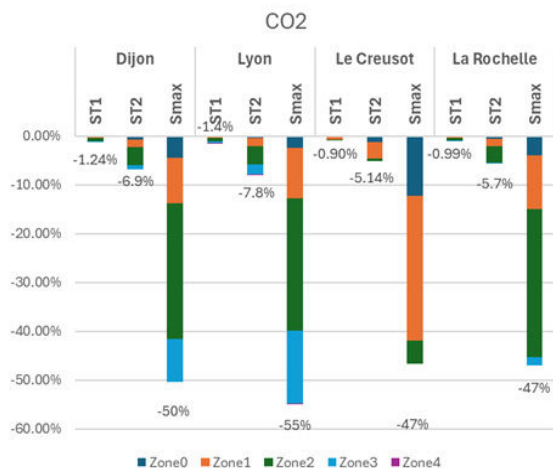
It examines the impact of remote work on commuting—daily trips between home and the workplace or school—and CO₂ emissions, which account for 25% of passenger car emissions in France. The study aims to assess to what extent remote work could reduce these emissions

while also considering other pollutants (PM₁₀, NO_x, CO, VOCs) that mainly affect urban areas.

Four urban areas (Lyon, Dijon, La Rochelle, Le Creusot) were studied, each with different characteristics (size, modal shares, employment, etc.). The results show 100% of remote workable jobs decrease by 50%, as other trips remain necessary. Reductions are more pronounced in peripheral areas and cities with a high proportion of executives, such as Lyon.

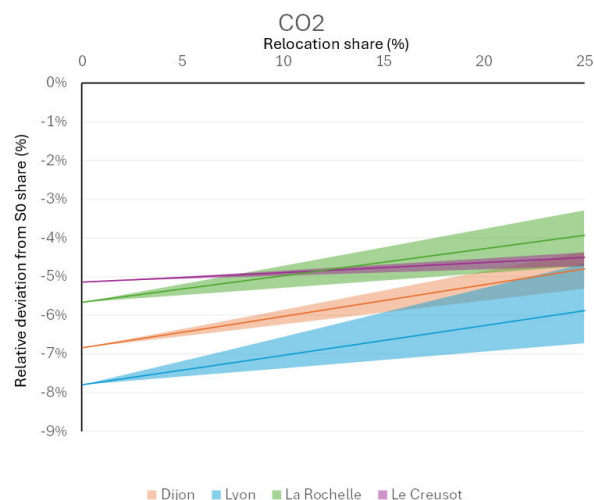
However, relocations of remote workers that increase

Even with widespread remote work, distances traveled by car would only decrease by 50%.



home-to-work distances could offset these reductions. At the national level, a 5% decrease in commuting would reduce emissions by 0.85 Mt of CO₂, well below the 3 Mt expected by the National Low-Carbon Strategy (SNBC). Remote work can also encourage longer-distance relocations or travel by plane, amplifying rebound effects and thus reducing the potential impact.

Relocations of remote workers could offset emissions reductions



Support & capacity building for countries internationally

Citepa supports national administrations in developing countries in implementing the Paris Agreement, developing their national inventory systems, and implementing national plans to reduce GHG or pollutant emissions. The RISQ platform, inspired by the French model, is adapted to countries' needs to manage their inventory system transparently and independently. Citepa's sectoral experts ensure capacity building for local teams on various topics.

Supporting Thailand in combating air pollution

Air World



Sophie MOUKHTAR
Unit Head & Air Pollution Expert



As part of the Air Quality Improvement Program (AQIP), funded by AFD, Thailand receives support to strengthen its air quality management system, develop local capacities, raise public awareness, and prepare policies and projects aimed at reducing air pollution.

Led by Egis, this project involved Citepa, the Asian Institute of Technology (AIT), and Airparif. Citepa's main tasks included building a spatialized emissions inventory, auditing existing inventories, capacity-building activities on emission inventories and regulations (transport and industry), and supporting national authorities in defining transport policies.

An integrated inventory of air pollutant and greenhouse gas emissions was developed for Chiang Mai province in northern Thailand. This is the first inventory of its kind in the region, coherently covering a set of air pollutants and GHGs for 2022. The inventory is based on the best available methodologies and incorporates data from traffic

surveys, modeling, and local expertise. It enables precise mapping of emissions by intensity and location.

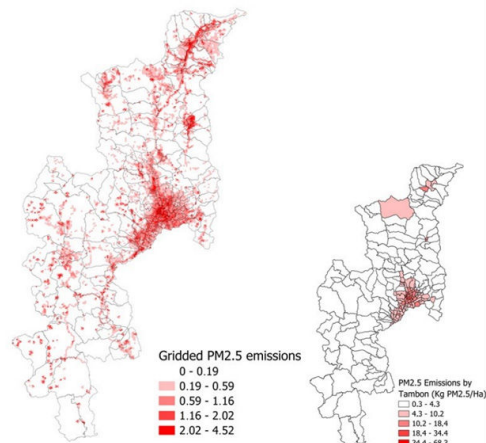
Key identified sources include open biomass burning, road transport, residential and commercial sectors, and certain agricultural activities. Road transport, in particular, emerges as a major source of fine particles and their precursors (NO_x, SO₂, NH₃), highlighting the need for targeted measures to modernize fleets, promote soft mobility, and accelerate the transition to electric mobility.

This inventory is an essential tool for evidence-based policymaking, monitoring emission reduction efforts, and evaluating the effectiveness of implemented measures.

The two reports produced, along with a summary note, are available on the Citepa website : [Air Quality Improvement Programme in Thailand : Sources of Air Pollution in Chiang Mai - Citepa](#).

- AQIP Thailand AFD - Comprehensive Inventory Methodology Report for Chiang Mai Province, Thailand (2022) – Citepa, Egis, AIT.
- AQIP Thailand AFD - Roadmap Emission Sources and Policies Report - Sources of Air Pollution in Chiang Mai in 2022: Main Sources and Measures to Mitigate Air Pollution - Citepa, Egis, AIT..

Spatial distribution of total particulate matter (PM_{2.5}) emissions in Chiang Mai



Partnership with Expertise France (EF) to assist developing countries in implementing the Paris Agreement

Climate World



Country



City



Territory

Julien VINCENT

Department Head & Paris Agreement Expert



Expertise France and Citepa support in Uzbekistan began at the end of 2022 regarding the implementation of the Paris Agreement's Enhanced Transparency Framework. This project focuses on developing the RISQ web transparency platform covering three pillars of Transparency: compiling the GHG emissions inventory, monitoring the NDC (including tracking the impact of mitigation policies and measures), and adaptation monitoring & evaluation. National expert teams were trained on various aspects before developing the methods that will populate the platforms with all data required for the Biennial Transparency Report (BTR). The next BTR is due in December 2026.

(1) NDC – nationally determined contribution – climate commitment defined by states under the Paris Agreement

Supporting Rwanda – Focus on Fluorinated Gas Workshop

Climate World



Stéphanie BARRAULT

Department Head & Fluorinated Gas Expert



Expertise France supports REMA (Rwanda Environment Management Authority) in monitoring its 2021 NDC. Citepa assists REMA through training, workshops, and development of specific methodologies to strengthen NDC tracking. Additionally, Rwanda's NDC 3.0 update is in progress, with publication planned for September 2025.

In this context, Citepa supported REMA teams on the complex topic of fluorinated gases. The training aimed to strengthen knowledge of these gases, their environmental impact, the international regulatory framework, and GHG emission calculation methods recommended by the IPCC.

The training laid the groundwork for creating a fluorinated gas inventory for the cooling and refrigeration sectors, focusing on data collection, available tools, and Rwanda-specific considerations.

The training included a visit to ACES (Africa Centre of Excellence for Sustainable Cooling and Cold Chain), both a training and applied research center. Participants explored innovative refrigeration systems under development, using ammonia, solar energy, or phase-change materials suitable for agricultural storage. The center also trains technicians, emphasizing leak reduction, operator safety, and the growing use of flammable refrigerants.

On the way to ACES!



Climate change adaptation in Ivory Coast

Climate World



Ludivine COZETTE
Adaptation Project Manager



As part of the Low-Carbon Transition project led by the Ministry of Environment, Sustainable Development, and Ecological Transition (MINEDDTE) of Ivory Coast and Expertise France, Citepa supported the Ivorian government in implementing and monitoring its climate commitments, covering both mitigation and adaptation through a participatory and inclusive approach. Citepa's team was responsible for strengthening institutional coordination around adaptation and promoting the development of a unified monitoring and evaluation (M&E) system for adaptation in Ivory Coast.

To achieve this, three field missions were conducted. The first scoping mission took place in October 2023 to assess existing adaptation M&E initiatives in Ivory Coast and map relevant stakeholders in this field.

On this occasion, the need to propose a simplified set of indicators to facilitate the establishment of a transparency system for adaptation in Ivory Coast was highlighted.

Presentation of the monitoring process – adaptation

Monitoring

Monitoring refers to the regular tracking of project resources, activities and results, and the analysis of information to guide project implementation.



Evaluation

Evaluation refers to the periodic assessment or analysis of an ongoing or completed project in terms of effectiveness.

Learning

Learning is the process by which information generated through monitoring and evaluation is reviewed and used intentionally to continuously improve a project's ability to achieve results.

Indeed, although the country had successfully completed its National Adaptation Plan (NAP) process, over 400 indicators had been developed to monitor this plan. Given the significant resources required to track and report these indicators, it was essential to propose an approach that would simplify international adaptation reporting while maintaining national monitoring frameworks and the precision needed at this scale.

Based on these findings, a second mission was conducted in February 2024 in Abidjan to train new sectoral actors on adaptation frameworks and raise awareness on adaptation monitoring and evaluation through the implementation of transparency systems and development of indicators.

In June 2024, a final mission was carried out to lead three days of workshops on adaptation M&E indicators for sectoral actors. A dynamic approach was adopted, combining theory, presentations of international frameworks and the methodological adaptation framework and M&E indicators, along with practical exercises applied to the Ivorian context. Participants worked on NAP indicators as well as those of the nationally determined contribution (NDC).

Adaptation Capacity-Building Workshop – Grand Bassam – June 2024



Following these three field missions, Citepa’s adaptation team worked on drafting a special publication presenting Ivory Coast’s commitments under the Global Goal on Adaptation (GGA) outlined in Article 7 of the Paris Agreement. A methodology was developed based on the latest scientific work to propose a simplified set of indicators to facilitate international reporting and transparency of Ivorian adaptation commitments across all priority sectors.

A total of 90 indicators were proposed, including 12 cross-cutting indicators, 16 for the Agriculture sector, 14 for Forests and Land Use, 20 for Water Resources, 12 for Health, and 16 for Coastal Areas. These indicators were officially validated by MINEDDTE teams and integrated into the NAP process.

Strengthening Moroccan capacities in GHG inventory verification

Climate World



Housseem BELHOUANE

Unit Head & P&M, Energy-Climate Expert
Article 6 & CBAM



As part of its international cooperation and technical assistance mission, Citepa hosted a delegation from the Moroccan Institute for Standardization (Imanor) on October 3–4, 2024, for a study visit organized with the support of the European Commission’s TAIEX (Technical Assistance and Information Exchange) office.

This initiative takes place in a strategic context for Morocco, a rapidly growing industrial country, following the implementation of the Carbon Border Adjustment Mechanism (CBAM) in October 2023, which marked a decisive turning point for global industries by imposing strict requirements for emissions monitoring and decarbonization of manufacturing processes. To meet the growing demand from local companies for environmental compliance, Imanor plans to establish a national system for verification and validation of greenhouse gas (GHG) inventories, based on ISO standards 14064-1, 14064-3, and 14065.

In this context, the EU TAIEX office, in collaboration with the EU delegation in Morocco, organized a two-day study visit to Citepa, a French organization recognized for its expertise in GHG monitoring, reporting, and verification.

The study visit had a dual objective: to draw inspiration from the French experience in monitoring, reporting, and verifying emissions, and to lay the foundations for an institutional and technical framework recognized by the EU under CBAM.

During the two days, the Moroccan delegation benefited from the experience of various French stakeholders – Citepa, Association for Low-Carbon Transition (ABC), Cofrac, Afnor Certification, Ministry of Ecological Transition (BMC), SGS France, among others – covering topics such as the EU ETS, French corporate GHG reporting regulations, challenges and methods for evaluating Bilans Carbone®, CBAM functioning, the French system for accrediting GHG verifiers, EU ETS verification procedures and standards, and voluntary corporate/product carbon footprint verification.

The study visit was successful, allowing Moroccan authorities to benefit from French expertise in monitoring, reporting, and verifying emissions and GHG inventories. This strengthened cooperation between Morocco and the EU aims to support the ecological transition and enhance national capacities for environmental compliance.

Citepa remains committed to this international cooperation and will continue to provide its expertise to support partner countries in their decarbonization and ecological transition efforts.

Solution for companies

Overview of decarbonization strategies of large French companies thanks to Accelerate Climate Transition

Climate France



Vincent MONTI
LCA & Product Carbon Footprint Expert



As part of the ACT initiative, led by ADEME in partnership with CDP (formerly Carbon Disclosure Project), Citepa conducted in 2024 an assessment of the climate strategies of nine large French industrial companies. This approach aims to measure the maturity and credibility of decarbonization plans ahead of the implementation of the CSRD (Corporate Sustainability Reporting Directive).

The results show a real but still insufficient awareness of climate issues. The average score for the industrial sector is 8.9/20, with scores ranging from 6.3 to 11. Most organizations receive a narrative “C” rating – a scale from A to E, reflecting real strategic development efforts with room for improvement in implementation. The study highlights several advances: most companies have set short- and long-term emission reduction targets and are making progress on scope 1 & 2 emissions. However, several areas for improvement are identified: the need for more accurate data on indirect emissions, greater transparency of monitoring methodologies, and more quantified information on the real impact of decarbonization levers. To strengthen the effectiveness of their strategies, industrial companies need to further structure their transition plans: refine emission management using quantitative indicators and engage all stakeholders (upstream and downstream) toward trajectories aligned with carbon neutrality.

To conclude the study, Citepa delivered a report summarizing the key lessons by industrial sector from this series of assessments. The results were publicly presented in January 2025, following an initial phase covering three

sectors: industry, transport, and real estate.

Building on this successful experience, Citepa will assess the strategies of 30 new companies in 2025 as part of a renewal of this project by ADEME.

Learn more

Interactive assessment results : <https://actinitiative.org/fr/resultats-evaluation/>

Sector report : https://actinitiative.org/wp-content/uploads/pdf/act_evaluation_industrie_rapport.pdf

White Book on Carbon Offsetting and the Contribution of Organizations to Carbon-Climate Challenges

Climate France



Niels MONTANARI
Head of Footprints & Transition Optimization Unit



Citepa prepared a white paper for Malakoff Humanis on carbon offsetting and the contribution of organizations to carbon-climate challenges, topics that are complex, rapidly evolving, and often subject to confusion, misunderstandings, and poor practices by organizations. It aims to provide an overview, with keys for understanding and Citepa’s insights, on the levers for contributing to carbon-climate issues, project carbon certification, the relevance of offsetting and contribution approaches, and the practical implementation of an offsetting or contribution policy.

The perspective is that of an organization seeking to claim a state of carbon neutrality or to provide financing solutions contributing to carbon-climate challenges, rather than that of a developer or project promoter seeking funding.

Through this white book, Citepa provided insights on various issues :

- The concept of global carbon neutrality and the levers organizations can use to contribute to this global carbon neutrality and to climate change challenges;
- The carbon certification process for an emission reduction or sequestration enhancement project, and the criteria for evaluating their quality;
- The concepts of carbon compensation and carbon

neutrality at the organizational level, the limits of carbon offsetting approaches with carbon neutrality claims, and why a contribution approach may be preferable.

- Defining a contribution policy and establishing a contribution fund.

Because carbon compensation and organizational contributions to carbon-climate issues are broad and rapidly evolving, particularly methodologically and regulatory-wise, this white paper is intended to be regularly updated and can be tailored to the needs and specifics of the beneficiary organization.

New trainings

Training Transition Stakeholders on Air and Climate Regulations

Air Climate France EU World



Coralie JEANNOT
Head of Training at Citepa



The year 2024 saw the launch of three new training courses offered by Citepa, with a fourth prepared for 2025.

Within the European legislative package “Fit for 55,” the EU Emissions Trading System (EU ETS) evolved. In May 2024, installations subject to EU ETS submitted their requests for free allowances for the [2026–2030] allocation period, taking into account new calculation rules. The DGSi team (GEREP Declaration and Industrial EU ETS) at Citepa analyzed these changes and created a dedicated training course, delivered between March and late April 2024, over 11 sessions for more than 150 participants.

At the same time, the Carbon Border Adjustment Mechanism (CBAM), designed to more broadly prevent carbon leakage, has been gradually implemented since late 2023. The IMPACTE team (Instruments & Carbon Markets, Climate Mitigation Policies, and Energy Transition) developed a training course for European importers on requirements for determining, monitoring, and reporting the embedded emissions of imported goods.

Additionally, the Footprints and Transition Optimization, and Climate Adaptation teams developed training on the Corporate Sustainability Reporting Directive (CSRD), intended for obligated companies, in partnership with DS Avocats.

At the end of 2024, a new training course was prepared on the implementation of EU ETS 2, targeting regulated entities supplying fuels to the road transport, building, and other industries not already covered by EU ETS.

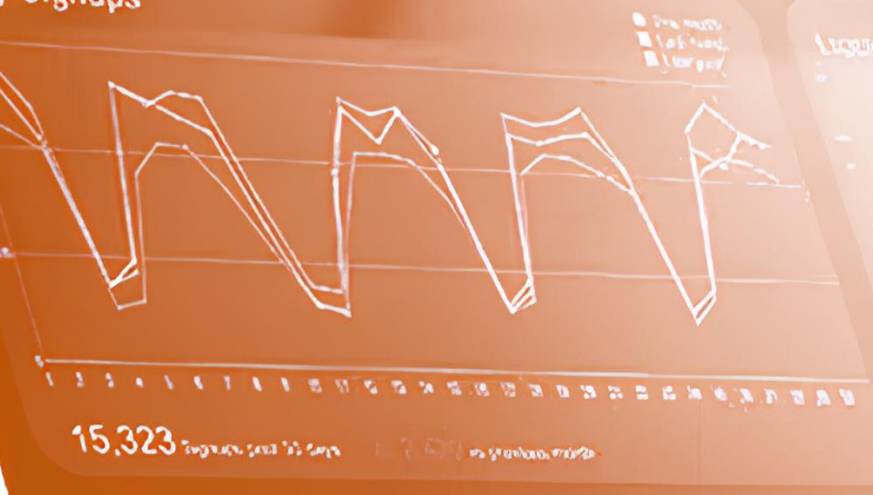
Other courses (GEREP, Combustion, PGS) continue to be popular with regulated entities and competent authorities.

Citepa teams are expanding their skills and expertise in Air & Climate regulation and continue to train and raise awareness among an increasing number of stakeholders about related requirements and obligations.

Finally, Citepa received renewal of its Qualiopi certification for training activities in 2024.

Training program details are available online: <https://www.citepa.org/nos-formations/>

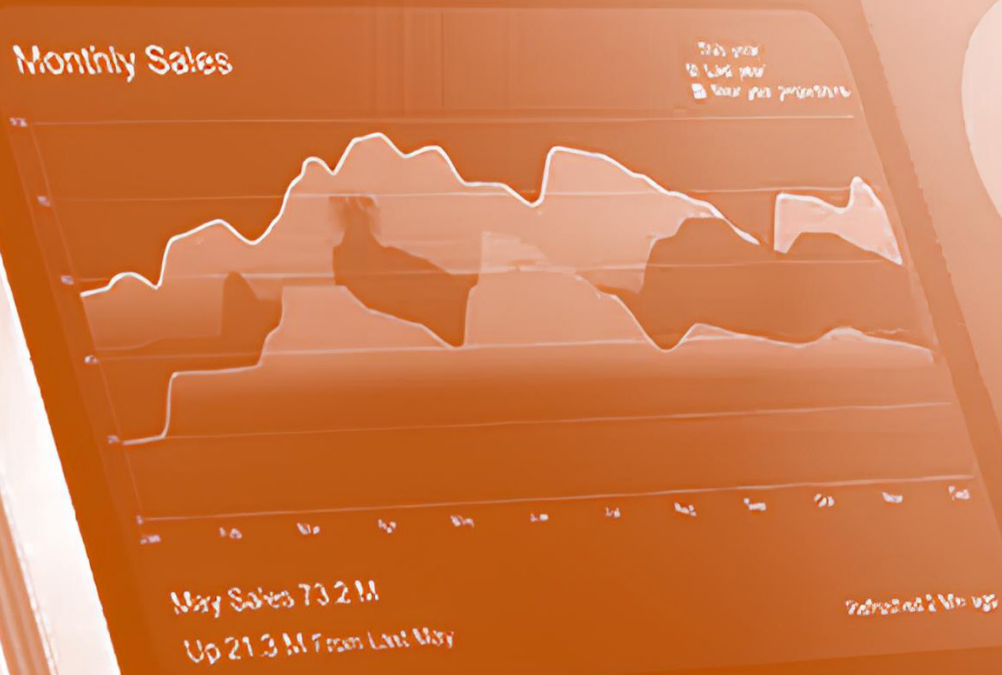
Signups



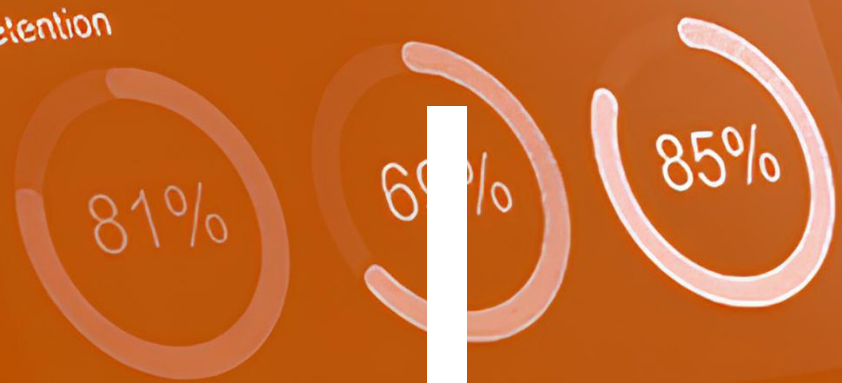
Revenue



Monthly Sales



Retention



Profit and Loss summary



3

Air & Climate data

Data reference for France

Every year, Citepa provides the official data on greenhouse gas and air pollutant emissions, which serve as the national references used in France's international reporting. Data sharing is at the heart of its mission: to provide rigorous, high-quality, and accessible information on air & climate issues.

With the launch of its new website, Citepa strengthens this goal by making access to more detailed, more readable, and fully downloadable data easier. This effort continues with a new objective: obtaining Insee certification for its datasets, providing an additional guarantee of reliability and recognition.

Official data published by Citepa every year

Air Climate France



Ariane DRUART
Head of Data Processing



Citepa produces data in different formats depending on France's needs, whether national or international. France is subject to several obligations to report its air emissions according to various criteria: type of substance (greenhouse gases (GHG) or air pollutants (AP)), geographic scope (Metropolitan France, with or without Overseas Territories), or the residency principle.

In addition to these official reports, Citepa also produces so-called non-official and voluntary inventories, such as Secten and the Barometer, which offer a more accessible view for professionals and the general public. They particularly allow monitoring progress under France's National Low-Carbon Strategy (SNBC).

Citepa also produces other more specific inventories such as IGT, the spatialized GHG inventory, or Floreal, dedicated to agricultural sectors.

FORMATS DEFINED BY INTERNATIONAL FRAMEWORKS

Inventory formats are governed by international conventions. National inventory formats developed by Citepa, such as Secten and the Barometer, rely on the same definitions from international bodies as those of UNECE and UNFCCC. This ensures data comparability while allowing a different organization of emissions for easier reading and understanding by national stakeholders.

- **UNECE – NFR tables, IIR report : reporting of air pollutants (AP)** under the Convention on Long-Range Transboundary Air Pollution (CLRTAP) and the European National Emission Ceilings (NEC) directive. (citepa.org/donnees-air-climat/polluants-atmospheriques/iir-dans-le-cadre-de-la-cee-nu/)
- **UNFCCC – CRT tables, NIR report (NID since 2025) : reporting of greenhouse gases (GHG) nationwide**

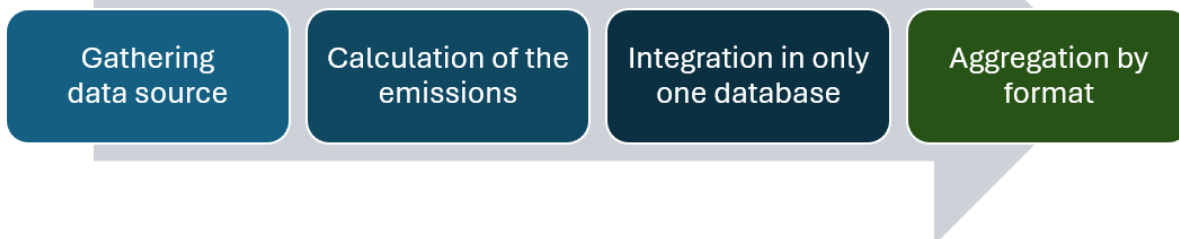
under the United Nations Framework Convention on Climate Change. This format also includes indirect GHG emissions (SO₂, NO_x, CO, NMVOCs). (citepa.org/donnees-air-climat/donnees-gaz-a-effet-de-serre/nid-dans-le-cadre-de-la-ccnuc/)

- **GIC : French inventory report of pollutants (SO₂, NO_x, and TSP)** under EU Directive 2001/80/EC on large combustion plants and Directive 2010/75/EU on industrial emissions (IED).
- **Namea/AEA : reporting of air pollutant emissions (AP and GHG)** by economic agent according to NAMEA (National Accounting Matrix with Environmental Accounts) or AEA (Air Emissions Accounts). (citepa.org/donnees-air-climat/donnees-gaz-a-effet-de-serre/namea/)
- **Overseas Territories : inventory of AP and GHG emissions by territory** according to the Secten format. (citepa.org/donnees-air-climat/donnees-gaz-a-effet-de-serre/outre-mer/)
- **Secten : national inventory report and tables** by economic sectors and energy, covering AP and GHG emissions according to its own nomenclature. It focuses particularly on monitoring France's emission reduction commitments. The inventory is divided into eight major sectors (energy industry, manufacturing and construction, centralized waste treatment, agriculture/forestry, transport, LULUCF (Land Use, Land-Use Change, and Forestry), and natural emissions (excluding national total)), further broken down into sub-sectors for finer analysis. (citepa.org/donnees-air-climat/donnees-gaz-a-effet-de-serre/secten/)
- **Baromètre : estimates of France's monthly emissions (AP and GHG)** in the same format as the Secten inventory with only a three-month lag on the current year. (PA et GES) selon le même format que l'inventaire Secten avec seulement trois mois de décalage sur l'année en cours. (citepa.org/donnees-air-climat/donnees-gaz-a-effet-de-serre/barometre-des-emissions-mensuelles/)

The Ominea report describes the methodology used to calculate France's emissions (citepa.org/donnees-air-climat/methodologie-de-linventaire-ominea/), and its database serves as a reference, particularly for territorial inventories.

A single database is used to generate all formats, with occasional data supplements (residency principles, imports/exports...) depending on the desired format.

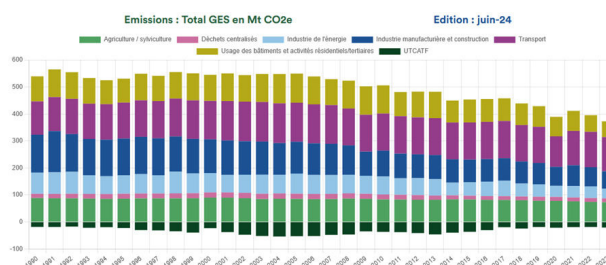
Inventory general method



DOWNLOADABLE AND VIEWABLE DATA

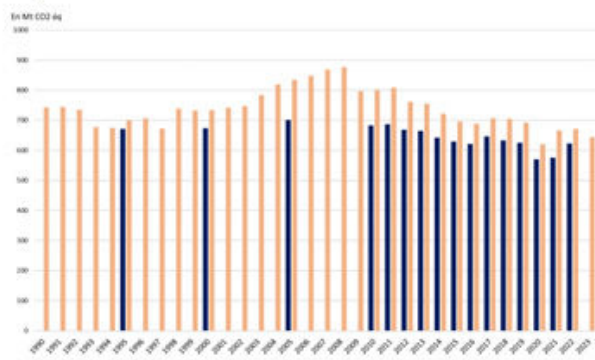
On its new website, Citepa provides all reports and result files by inventory format, directly downloadable from the pages dedicated to each GHG or AP inventory format. An [interactive data explorer](#) also allows users to visualize the results of most inventories, with the ability to filter data by pollutant or economic sector, making analysis easier. ou de PA.

Visualisation of Secten data in Explorer



Other Emissions Reporting Formats

Air Climate France



Ariane DRUART
Data Processing Manager



Jérôme BOUTANG
General Director



Citepa developed an approach to create a monthly emissions barometer during the Covid-19 crisis in 2020. The goal was to quickly assess the impact of such an event on emissions.

This approach now allows for the estimation of greenhouse gas (GHG) and air pollutant emissions with only a three-month lag for the current year—compared to one to two years for traditional inventories.

Based on annual Secten results (proxy year), the method relies on monthly indicators such as energy consumption, industrial production, or forest fire areas.

The barometer thus allows for faster monitoring of France's GHG and air pollutant emissions, particularly in relation to its climate targets. However, these estimates carry some uncertainty, mainly related to the reliability of the indicators. Methodological changes in the "annual" inventories also have an impact, as the barometer is based on an earlier version of the annual inventory (three editions difference compared to consolidated results). Another factor is that certain sectors are not covered due to unavailable data, notably waste, agriculture (being improved for 2025), and LULUCF except for forest fires.

Differences in GHG results between the «Barometer» / Secten / International Inventory

	March-24	June-24	June-25
	Estimation Barometer	Estimation Secten	Real Inventory
GHG in Mt CO ₂ e	385	373	377
Emissions 2023	-4,8%	-5,8%	-6,7%
Edition inventaire	2023	2024	2025

Barometer of monthly emissions general method



Starting in 2025, a methodological evolution will allow Citepa to publish a Forecast Barometer providing quarterly projections of France’s GHG emissions for the current year according to the Secten format.

Citepa is also involved in carbon footprint issues, producing articles and studies on the topic. It contributes to the national footprint calculated by SDES (Service des Données et Études Statistiques) and Insee by providing the territorial inventory in the NAMEA format and, where applicable, by validating certain carbon contents of imported emissions. Furthermore, since 2023, Citepa has developed with ABC (Association for the Low Carbon Transition) an original methodology based on a quota-based survey method and an individual questionnaire linked to a calculator to assess the footprint of French

people by individual, by group, or by criterion. This tool is made available to experts and public authorities to identify transition levers. This exercise is funded by ADEME, the Ministry of Ecological Transition, ABC, and Citepa.

- National footprint: Calculation of France’s carbon footprint (GHG) (<https://www.citepa.org/le-sdes-publique-ledition-2024-de-lempreinte-carbone-de-la-france-avec-une-mise-a-jour-methodologique/>)
- Individual footprint: Calculation of the carbon footprint per person (GHG) (<https://www.citepa.org/repartition-de-lempreinte-carbone-des-francais-nouvelle-etude-du-citepa-et-de-labc/>)

Characteristics of inventories produced by Citepa

INVENTORY	UNECE	UNFCCC	LPG	NAMEA/AEA	OVERSEAS TERRITORIES	SECTEN	BAROMETER	PROJECTED BAROMETER	NATIONAL FOOTPRINT	INDIVIDUAL FOOTPRINT
TIMELINE	Annual	Annual	Annual	Annual	Annual	Annual	Monthly	Quarterly	Annual	Annual
GHG		✓		✓	✓	✓	✓	✓	✓	✓
ATMOSPHERIC POLLUTANTS	✓		✓	✓	✓	✓				
MAINLAND FRANCE	✓	✓	✓	✓		✓	✓	✓		
EU OVERSEAS		✓		✓	✓	✓	✓			
NON-EU OVERSEAS		✓			✓					
LEGAL FRAMEWORK	Compulsory UNECE	Compulsory UNFCCC	Compulsory EU	Compulsory EUROSTAT	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary
PUBLICATION	Mach N+2	April N+2	September N+2	September N+2	September N+2	June N+2	M+3	June M-6	June N+2	May N+1
PROXY ⁽¹⁾				✓ (N+1)		✓ (N+1)				
TERRITORY ⁽²⁾	✓	✓	✓		✓	✓	✓	✓		
RESIDENCE ⁽³⁾				✓					✓ (+imports ; -exports)	✓ (+imports ; - exports)

(1) Pre-estimation

(2) Geographic territory of emission sources. Example: road transport emissions resulting from fuel deliveries at pumps within French territory

(3) Residence principle: emissions of residents only (legal entities or individuals) of French nationality on any territory

Note 1 : EMEP inventory (spatialized air pollutant inventory within a 0.1°x0.1° grid), mandatory EU legal framework, published in March of year N+2 (every 4 years) for a given year, air pollutants only

Note 2 : N is the year and M is the month for which the inventory is conducted





4

News & analysis

Overview of 2024 Air & Climate News

Disseminating Air & Climate information is one of the core missions of the association. Citepa carries out political, regulatory, and scientific monitoring, and publishes articles, analyses, and in-depth breakdowns of news related to the fight against climate change and air pollution — in France, across the European Union, and internationally.

In addition, Citepa organizes an annual study day on a specific Air & Climate topic. This is an opportunity to explore a technical issue in depth, and to foster dialogue between members, Citepa teams, and public authorities.

Fight against climate change

International

Climate World



United Nations
Climate Change

Mark TUDDENHAM

Head of International Climate Monitoring & Information



Nine years after the adoption of the Paris Agreement and six years before 2030, COP29 in Baku (Azerbaijan) was a pivotal COP for the topic that remains the «core issue» in climate negotiations under the UNFCCC: climate finance. The key decisions of this COP were :

- The [decision by CMA-6, the sixth meeting of the Parties to the Paris Agreement, on the new post-2025 collective quantified goal for climate finance](#), which invites all actors to work together to increase climate financing for developing countries to reach at least \$1.3 trillion per year by 2035;
- The [CMA-6 decision establishing CMA recommendations on the mechanism set out in Article 6.4](#)
- [\(emission crediting mechanism\), as well as another one establishing additional recommendations](#)
- The [CMA-6 decision on cooperative approaches established under Article 6.2](#);
- The [CMA-6 decision on the global goal on adaptation](#).

In the United States, the return to power of Donald Trump on January 20, 2025, marked a complete U-turn in national and international climate policy led by the federal administration — though not necessarily at the level of all federal states, cities, or certain private companies. For example, the presidential executive order of January 20, 2025 — «Unleashing American Energy» — plans to dismantle the New Green Deal and the Inflation Reduction Act, which had been championed by the Biden administration (notably in the development of renewable energy and the financial support given to it).



10 AU 22 NOVEMBRE

LE JOURNAL DE LA COP29 DE MARK T.

LE SUIVI QUOTIDIEN, PAR LE CITEPA, DES AVANCÉES DES NÉGOCIATIONS CLIMAT.



ARTICLE

08 NOVEMBRE 2024

Guide du Citepa des enjeux de la COP-29 : l'essentiel pour comprendre le contexte des négociations

Climat Monde

ARTICLE

06 MARS 2025

COP-29 : bilan total très mitigé surtout sur le nouvel objectif de financement et les suites du Bilan mondial

Monde



European Union

Climate EU



Mark TUDDENHAM

Head of International Climate Monitoring & Information



On October 31, 2024, the European Environment Agency (EEA) published its [annual report on trends and projections in greenhouse gas \(GHG\) emissions in the European Union \(EU\)](#), while the European Commission (EC) released its own [progress report on EU climate action](#) the same day.

Both documents revealed that in 2023, total GHG emissions in the EU fell by 8% compared to 2022, representing “the largest year-over-year emissions reduction recorded in several decades,” as emphasized by the EEA (excluding 2020, which is considered exceptional). The



pace of GHG emissions reductions has accelerated in recent years. The annual reduction observed in 2023 was over three times greater than the average rate recorded since 2005.

Moreover, the European Union is on track to cut its net GHG emissions by around 54% by 2030, nearing its official target of -55% compared to 1990 levels—provided that Member States fully implement the existing and planned national and EU-level measures. On 28 May 2025, the European Commission released its [assessment of the updated National Energy and Climate Plans \(NECPs\)](#)—a key strategic planning tool. The Commission concluded that «EU Member States have significantly improved these plans and closed the gap toward the 2030 energy and climate targets. As a result, the EU is now collectively approaching a 55% reduction in GHG emissions, in line with [its commitment under the European Climate Law](#), and reaching a renewable energy share of at least 42.5%.»

The Effort Sharing Regulation (EU Regulation 2023/857) is proving effective: GHG emissions from sectors covered by the ESR are expected to fall by around 38% by 2030 compared to 2005, just 2 percentage points short of the EU’s 40% target.

However, carbon sinks remain a major weak point, with a gap of about 45 to 60 MtCO₂e—equivalent to roughly 100–140% of the additional absorption target—still persisting for 2030.

The plan outlines «about 50 measures and 200 concrete actions to prepare all sectors of activity in France for life under a changing climate.»

The document reiterates that while the Paris Agreement remains the benchmark for limiting global warming, «given the risk of exceeding those targets, we must also prepare for a +4°C temperature rise in France by 2100.»

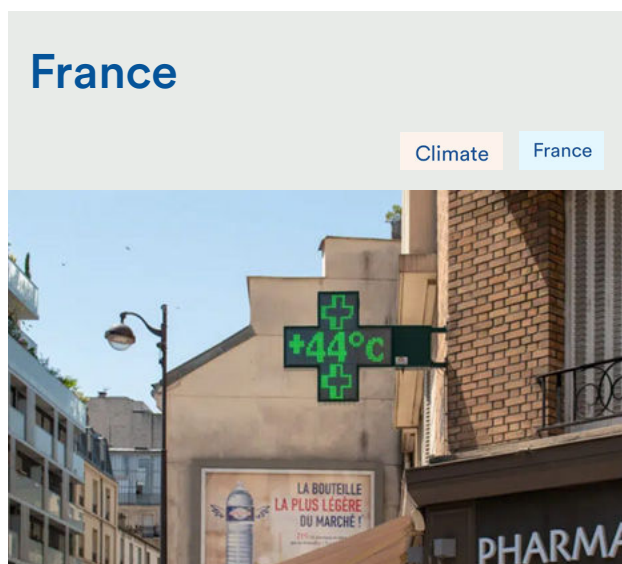
This represents a “significant challenge” requiring “strong, immediate action by public authorities and across society,” particularly since a global warming of +3°C translates to +4°C in France.

For France specifically, the report warns that without action, climate change could lead to a potential GDP loss of 10 percentage points by 2100, with an estimated annual cost of around €1 billion for the agricultural sector by 2050, and up to 500,000 homes at risk from coastal erosion by the end of the century.

While welcoming PNACC 3 as «a key document,» the High Council on Climate also criticized the insufficient financial backing: «The funding allocated for adaptation under PNACC 3 remains very inadequate,» calling for “a comprehensive financing plan (State/local/private) [...] and transparent tracking of funds allocated to each measure.”

The update of France’s Energy and Climate Strategy, which will consolidate key national climate policy texts such as the third National Low Carbon Strategy (SNBC-3) and the third Multiannual Energy Program (PPE-3), is still pending.

(1) United Nations Framework Convention on Climate Change (UNFCCC)



France

Climate France

Mark TUDDENHAM

Head of International Climate Monitoring & Information



After a public consultation phase in which Citepa participated, Agnès Pannier-Runacher, Minister for Ecological Transition, presented the final version of the third National Climate Change Adaptation Plan (PNACC 3) on 10 March 2025.

Air Pollution

International

Air World



Sophie SANCHEZ
Head of information



As part of the Convention on Long-Range Transboundary Air Pollution (CLRTAP), the revision of the Gothenburg Protocol, last amended in 2012, is expected to be finalized by December 2027. This revision process includes new emission reduction commitments for currently covered pollutants and aims to further cut black carbon emissions, a short-lived climate pollutant and powerful climate forcer.

cleaner and healthier air. For the two pollutants with the greatest documented impact on human health—PM_{2.5} and NO₂—the annual limit values will be cut by more than half, dropping from 25 µg/m³ to 10 µg/m³ for PM_{2.5} and from 40 µg/m³ to 20 µg/m³ for NO₂. The directive also updates air quality standards for a total of 12 regulated pollutants in ambient air: Sulphur dioxide (SO₂), Nitrogen dioxide/Nitrogen oxides (NO₂/NO_x), Particulate matter (PM₁₀, PM_{2.5}), Ozone (O₃), Benzene, Lead, Carbon monoxide (CO), Arsenic, Cadmium, Nickel, Benzo(a)pyrene

At the same time, the new Industrial Emissions Directive (IED) 2010/75/EU, revising the original 2010 version, entered into force on August 4, 2024. This directive focuses on minimizing the health and environmental impacts of pollution from industrial activities and intensive livestock farming across the EU by cutting harmful emissions.

At the EU level, the revised directive on ambient air quality and cleaner air for Europe—Directive (EU) 2024/2881—came into force on December 10, 2024.

European Union

Air EU



Sophie SANCHEZ
Head of information



The revised text also brings EU air quality standards more in line with WHO guideline values. It introduces a series of new and stricter limits designed to give Europeans

France

Air France



Sophie SANCHEZ
Head of information



At the national level (France), the ministerial decree of December 8, 2022, updated the National Air Pollutant Emission Reduction Plan (PREPA) for the 2022–2025 period. However, the emission targets set in the 2017 decree remain unchanged. The updated decree outlines 49 measures to cut emissions of the five targeted pollutants (SO₂, NO_x, NH₃, NMVOCs, and PM_{2.5}) across all sectors. A new PREPA plan will be adopted for 2026–2029.

The situation remains marked by a contrast between, on one hand, declining pollutant emissions (with reduc-

tion targets met and an overall improvement in air quality), and on the other hand, significant peaks in ozone concentration and exceedances of regulatory air quality thresholds, notably for NO₂.

However, [in a ruling issued on Friday, April 25, 2025, regarding the lawsuit opened on July 12, 2017, about air pollution](#) against the French government, the Council of State declared that “its decision [of justice] has been fully enforced” and that there is no reason to impose a new financial penalty against the French State. The High Court specified that “after having imposed several penalties, the Council of State now judges that the State has taken the necessary actions to improve air quality in France and has fully executed its 2017 court ruling. No area exceeds the fine particulate matter (PM₁₀) pollution thresholds, and the nitrogen dioxide (NO₂) pollution limit is almost respected in Lyon and close to being so in Paris.”

However, new efforts will need to be made to comply with the new limit values for ambient air concentration that will apply from 2030, according to Directive (EU) 2024/2881 on air quality. Indeed, if the limit values defined by this European directive for 2030 were applied to the current situation, the number of urban areas exceeding limits in mainland France would increase, according to the Central Laboratory for Air Quality Monitoring (LCSQA) :

- from 3 in 2023 to 38 in 2030 for NO₂,
- from 2 in 2023 to 19 in 2030 for PM₁₀,
- and from 0 in 2023 to 18 in 2030 for PM_{2.5}.

Overall, aggregating these three pollutants, the number of urban areas exceeding limits would rise from 5 in 2023 to 56 in 2030, based on current measured concentrations — in other words, without factoring in the effects of emission reduction policies that may be implemented before then.

In 2023 and 2024, announcements and a special report were published on Low Emission Zones (LEZs), but despite the “call for renewed commitment” by the Ministry of Ecological Transition during the Roquelaure Air Quality Summit on May 12, 2025, these zones were completely repealed by a vote in the National Assembly on May 29, 2025 — a measure that could still be subject to review by the Constitutional Council.

The Ministry of Ecological Transition called for renewed commitment on air pollution by organizing the Roquelaure Air Quality Summit on May 12, 2025.



2024 Event Recap

Every year, Citepa hosts a conference on an Air & Climate theme for its members. The 2024 study day focused on carbon accounting and the various frameworks for calculating and reporting GHG emissions for states, territories, sectors, and companies. It highlighted the growing complexity of these obligations, especially under the Paris Agreement and climate transparency (Article 13). States must now provide regular, verifiable inventories, notably through Biennial Transparency Reports (BTR) starting in 2024.

At the same time, companies and local authorities face stricter requirements, such as the GHG Emissions Balance Sheet (BEGES) and the new CSRD directive, which mandates reporting across all three scopes. The Carbon Border Adjustment Mechanism (CBAM) and the European Emissions Trading System (ETS) were also discussed as key decarbonization tools.

The day emphasized the increasing importance of Scope 3 emissions and traceability throughout the entire value chain.

The study day serves as both a deep dive into a technical topic and a networking opportunity between members, Citepa teams, and public authorities. It also showcases partnerships like the one with AREP, which hosted this edition.

Citepa «Breakfasts»

Citepa events also include breakfast sessions spread throughout the year. In 2024, over seven breakfasts, we had the pleasure of welcoming Christian de Perthuis from the Climate Economics Chair, Tania Martha Thomas from Climate Chance, Yves Crozet from the Laboratory of Planning, Economics, and Transport (LAET-CNRS), and of course Mark Tuddenham, Citepa's international climate news specialist, who closed with a recap of COP29 after regular coverage through the COP journal.

2024 Study Day – Carbon Accounting: Frameworks and Methods Supporting the Ecological Transition



Scientific publications and communications

- *A Distributed Computational Model for Estimating the Carbon Footprints of Companies*, associate researcher at Citepa, and François Meunier, Sustainability 2024, 16(13), 5786; <https://doi.org/10.3390/su16135786>
- *Sur l’empreinte carbone des Français. Une première enquête sur leurs comportements*, Jérôme Boutang, February 26, 2024, Futuribles. <https://www.futuribles.com/sur-lempreinte-carbone-des-francais/>
- *Evolution of Policies and Measures Related to Air Pollution in the EU*. Nadine Allemand. Presentation at LETI Innovations Days - Electronics and Sustainability - June 26, 2024 – Grenoble, France
- *Best Available Techniques in Industrial Plants, Experience in the EU*. Nadine Allemand. Presentation at the Third Central Asian AQCA Conference – September 19-20, 2024 - Almaty, Kazakhstan.
- *The Technological Pathways Case Studies: Montenegro and Serbia*. Nadine Allemand. Presentation at the Regional Meeting on Collaborative Approaches to Environmental Pollution and One Health in the Western Balkans – UNEP - December 4-5, 2024 – Sarajevo, Bosnia and Herzegovina
- *Recovery, Recycling, and Regeneration of Refrigerants in Europe (EU27)*, Stéphanie Barrault, Presentation at AFCE Conference 19, September 2024
- *Inventory Study of Refrigerant Fluids 2023*, Presentation by Ariane Druart and Stéphanie Barrault, AFCE Conference, September 19, 2024

Article by Jérôme Boutang, General Director



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[Retour au sommaire](#)

Nous avons fait écho à de nombreuses reprises, dans nos colonnes, à différents scénarios de transition écologique ou énergétique, réalisés par des organismes français ou internationaux (Agence internationale de l'énergie, Agence de la transition écologique, Réseau de transport d'électricité, etc.). La plupart de ces exercices prospectifs mettaient en avant le fait que pour tenter de limiter le changement climatique à l'horizon de la fin du siècle, les évolutions techniques ne suffiraient pas, ou n'interviendraient pas assez tôt, et qu'il fallait résolument miser sur des changements de comportements, de modes de vie. En d'autres termes, inciter à la sobriété écologique, au plus vite, constitue un levier indispensable pour préserver les conditions de vie planétaire des générations futures. Pour ce faire, il est essentiel de pouvoir s'appuyer sur des indicateurs montrant où se situent les marges de manœuvre pour réduire les émissions de gaz à effet de serre.

C'est l'objectif de l'« empreinte carbone », qui mesure les émissions de tous les acteurs économiques, de manière assez précise. Dans cet article, Jérôme Boutang propose de regarder de manière plus détaillée l'empreinte carbone des Français telle qu'elle ressort d'une enquête qui les a interrogés sur leurs modes de vie et de consommation. Après avoir présenté la méthodologie et l'intérêt de cette enquête (qui part directement des comportements), il en détaille les grands enseignements : répartition de l'empreinte sur le territoire, par secteurs d'activité, caractéristiques socio-économiques (selon le niveau de revenu ou la profession), etc. Ce « profilage » détaillé permet ainsi de prendre conscience, à l'échelle individuelle, des gestes les plus émissifs et des actions possibles pour y remédier. Il permet également aux responsables politiques d'identifier les marges et leviers d'action pour développer des outils / incitations en faveur d'une plus grande sobriété collective.

#Analyse sociologique #Consommation #Indicateurs #Modes de vie #Pollution #Société et individu #Transition écologique

Environnement Société

Outlook



Ecological transition : the temptation to backslide

Jérôme BOUTANG
General Director of Citepa



In the first half of 2025, Europe faced an unprecedented combination of geopolitical crises and economic tensions. The protracted Russia-Ukraine conflict, the resurgence of rivalries between Washington, Beijing, and Moscow, and significant increases in defence budgets are profoundly reshaping the European strategic environment, particularly for France. States and businesses must deal with rising energy costs, tougher financing conditions, and disrupted supply chains.

This security deterioration diverts substantial financial resources away from low-carbon investments while exacerbating Europe's dependence on critical raw materials. In this context, several regulatory relaxations have been introduced, justified as necessary for competitiveness, administrative simplification, or urgent management. These include abandoning low-emission zones (LEZs), changes to the sustainable reporting timeline (CSRD) at the European level, and the suspension of the MaPrimeRénov programme. Additionally, the temporary reauthorization of a neonicotinoid pesticide and permission for drone spraying in specific cases add to difficult European and French trade-offs. The publication of SNBC 3 has been awaited since January 2024, and the EU postponed the communication of its National Determined Contribution (NDC) to September 2025.

While these measures are justified by immediate economic urgency, they could undermine Europe's environmental credibility, worsen social inequalities regarding

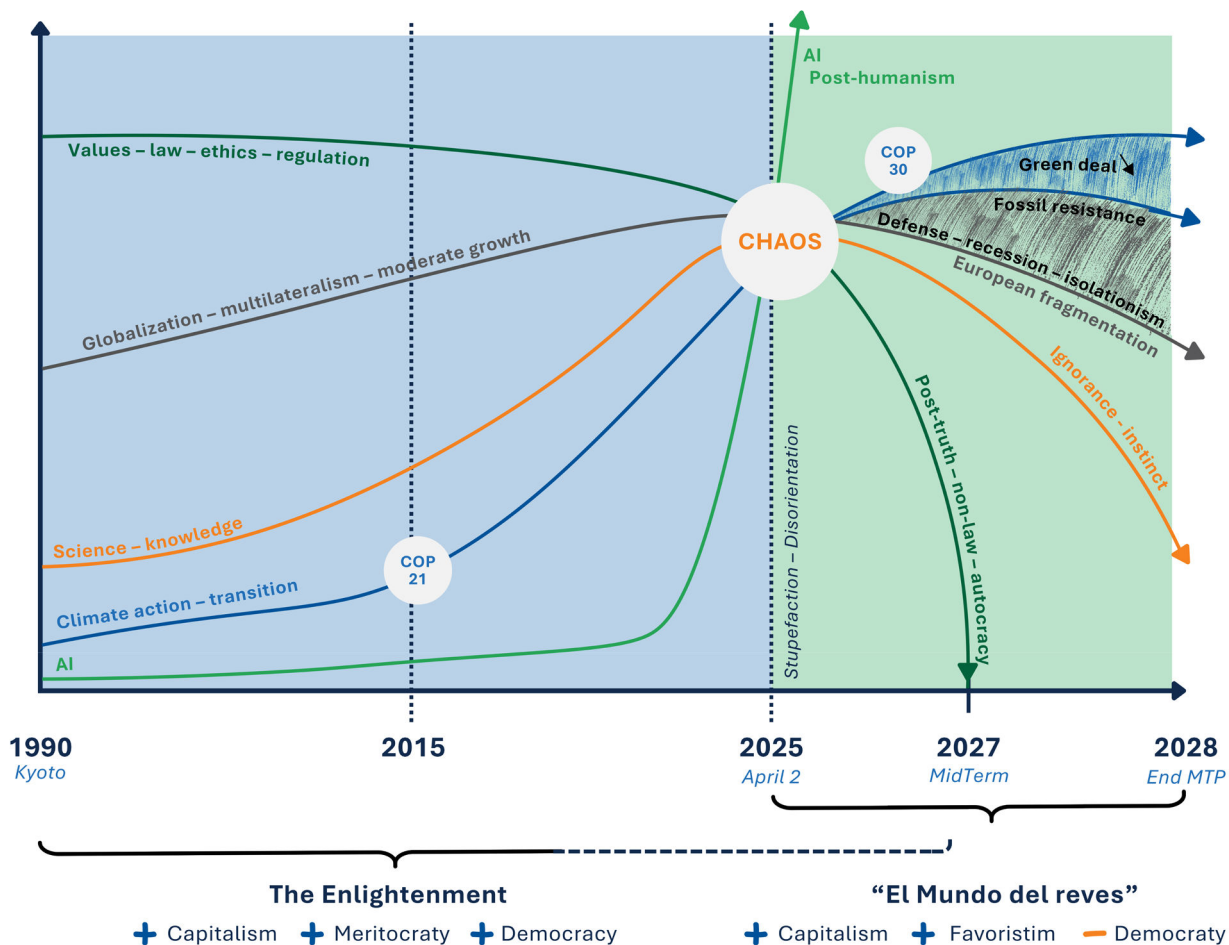
the carbon footprint, and delay necessary industrial adaptations to future global environmental standards. However, encouraging steps such as incentives for electric vehicles, the publication of PNACC-3, and an ambitious Biennial Update Report offer some hope for France and Europe. We thank the Ministry of Ecology for its renewed support in this context.

China, on the other hand, is firmly committed to decarbonization, justifying ongoing collaborations between Citepa and the country.

In light of these uncertainties, Citepa has implemented a forward-looking evaluation approach to assess the geopolitical effects on ecological and energy transition trajectories. This monitoring allows testing the robustness of public and private policies through various crisis scenarios. As early as April 9, a schematic illustrated a deeply regressive post-crisis world.

Thus, while Europe temporarily prioritizes competitiveness over climate ambition, the question arises: are we witnessing a mere tactical pause or the start of a strategic retreat? Anticipating these developments remains essential to ensure a future that is both safe and sustainable.

Illustration of New Geostrategic Risks Around April 2, 2025





Citepa is an association that guides players in the ecological transition in France and around the world.

It assesses the impact of human activities on climate and air pollution. It produces reference data and develops solutions to encourage action to reduce emissions, improve air quality and adapt to climate change.

Our multidisciplinary team contributes to building a sustainable world.

