

A decorative border in a dark olive green color frames the text. It features large, stylized floral motifs at the top and bottom corners, with elegant, flowing lines and smaller curls connecting them. The background is a light beige color.

France & Paris

Context, Energy, Sustainability
Wren Bandrowski & Jasmine Cassidy



01

FRANCE'S
CONTEXT

ENERGY

02

03

PARIS
CASE STUDY

KEY
TAKEAWAYS

04



01

FRANCE'S
CONTEXT

France's Context

**Density of
283 people
/sq mi**

78.8%

Of people live in an
urban context



66 Million

People live in France

**Moderate
Weather**



\$4.73 Trillion

The 9th-largest
economy

Machinery

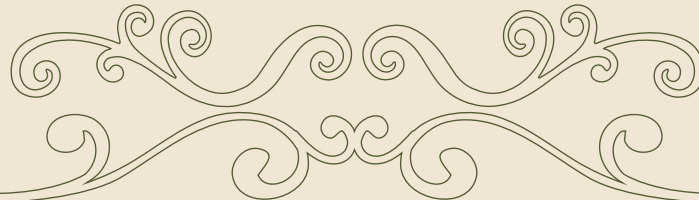
Is France's largest
export - \$82.8 billion

Historical Context

01

THE PARIS AGREEMENT

- France hosted the UN COP21 climate conference in Paris in December 2015
- The agreement set the landmark goal of limiting global warming to 1.5–2°C
- France's role as host and negotiator gave it significant soft power and moral authority on climate issues



02 France & Current Politics

Is France about to go the way of the U.S., Italy, and Argentina... electing a far-right government?

- France is politically fragmented
- But the far-right hasn't broken through in the biggest cities yet
- Paris is a center for “Green Politics”
- **Globally, there's a pattern right now where climate concern tends to be deprioritized when people feel economically insecure**



Supporters of Benoît Payan, the incumbent mayor of Marseille, at a rally this month.

How is Climate Change Impacting France?

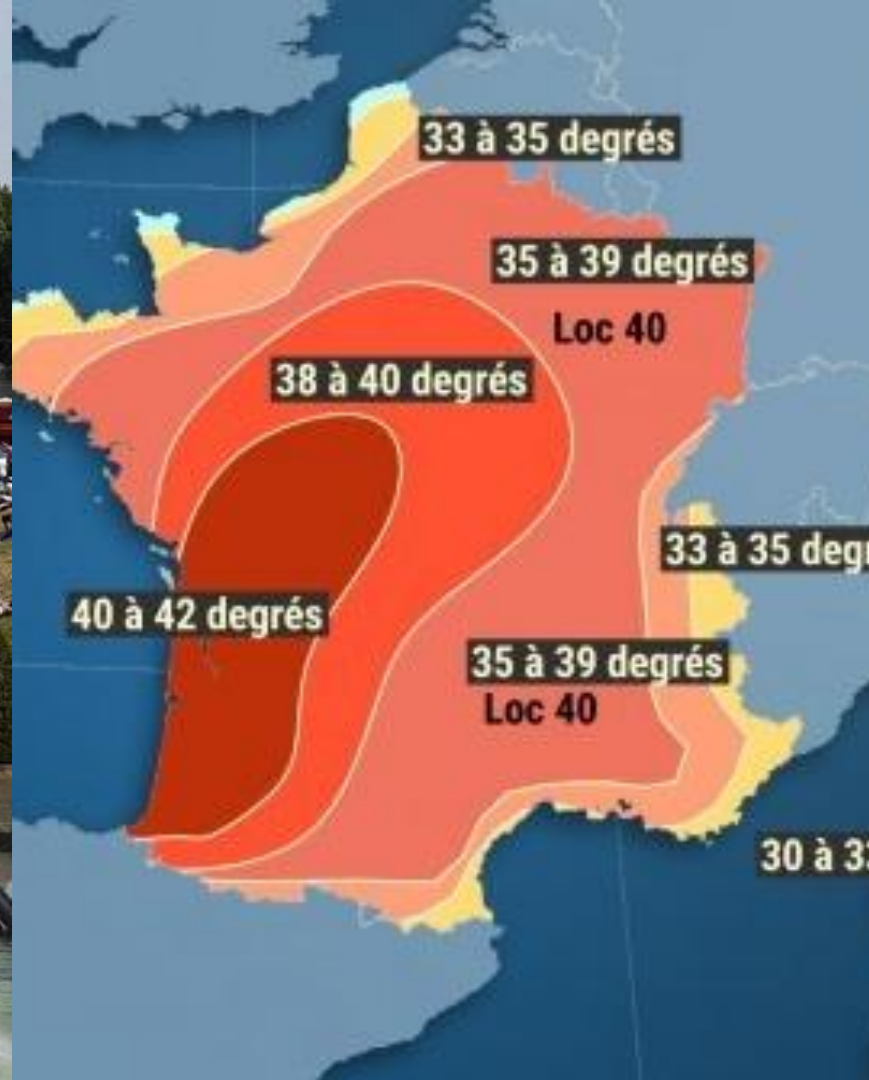




Heatwaves



<https://www.climaterealityproject.org/blog/how-climate-change-impacting-france>





Sea Level Rise

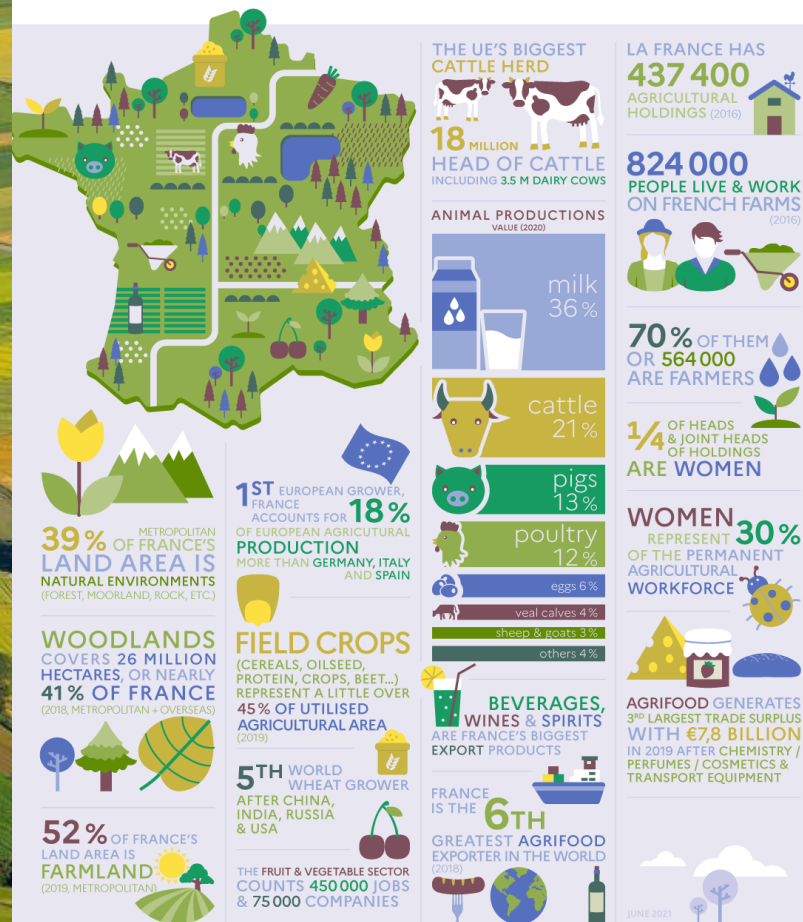


- Since 1975, sea levels have risen by 10–15 cm
- Xynthia storm in 2010
- **Projections show a further 15–25 cm rise by 2050, and up to one meter by 2100 if global emissions remain high.”**

Agriculture

Agriculture is a vital sector of the French economy, but like so much else, it is highly sensitive to climate change.

<https://www.climaterealityproject.org/blog/how-climate-change-impacting-france>

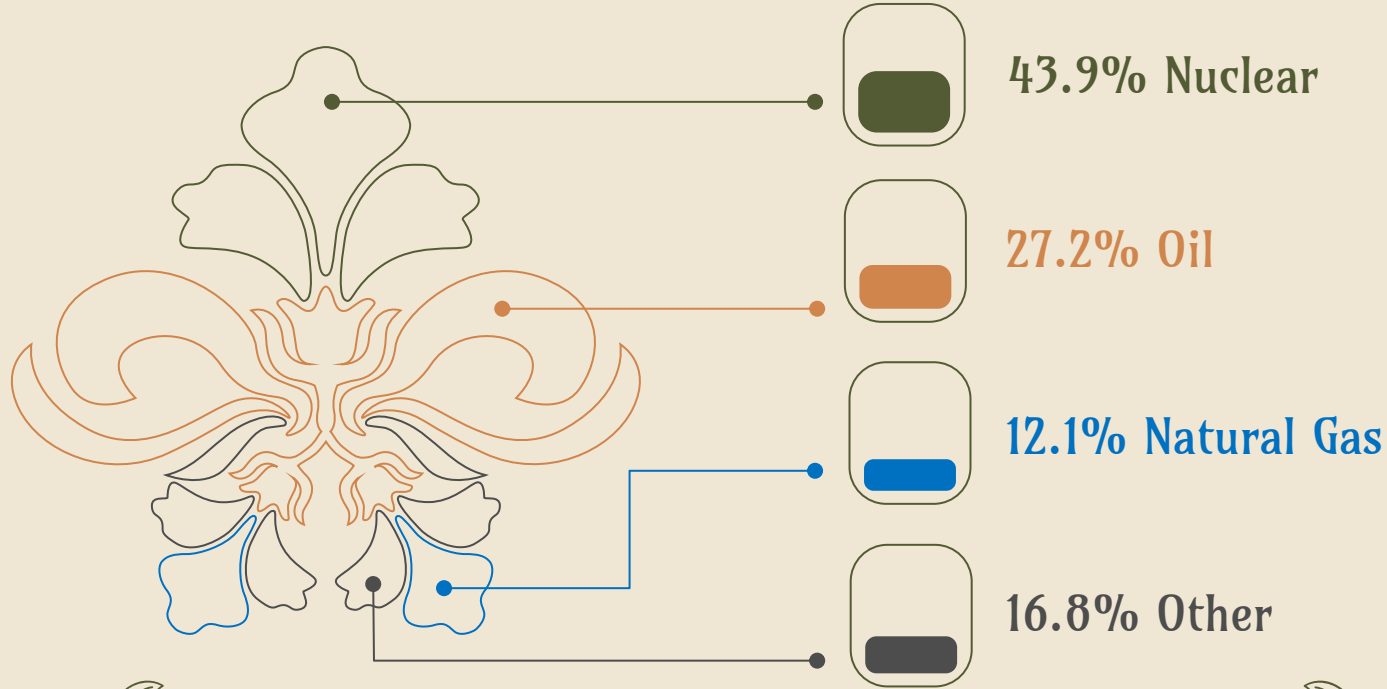




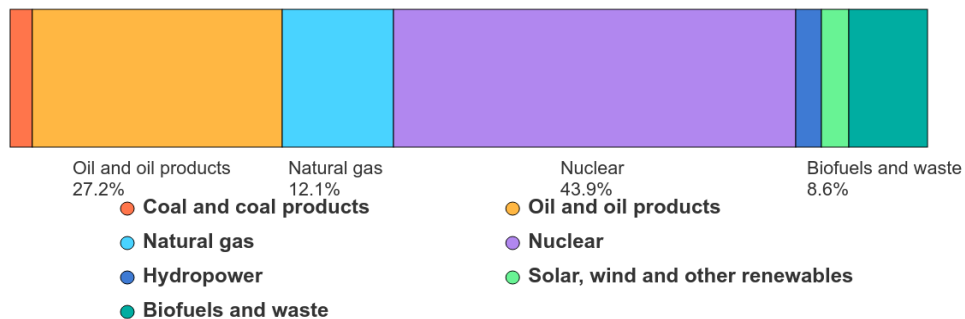
02

ENERGY

France's Energy Mix



Total energy supply, France, 2024



Source: International Energy Agency. Licence: CC BY 4.0

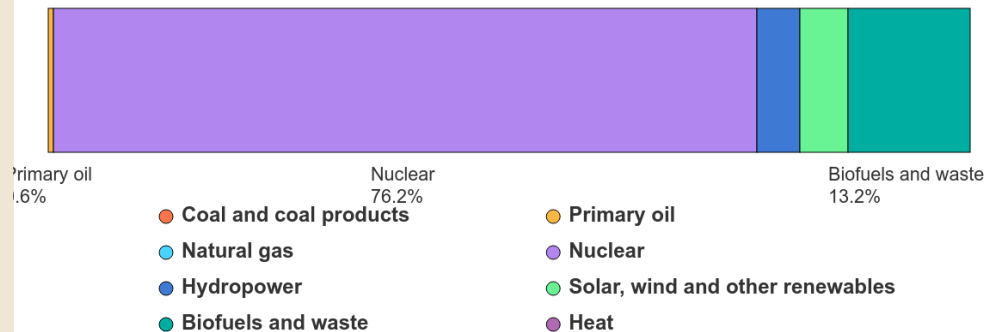
DOMESTIC ENERGY PRODUCTION

- **76.2% nuclear power**
- **13.2% biofuels**
- **~5% renewables (solar and wind)**
- **Exports electricity to Germany, Italy, and the UK**

TOTAL ENERGY SUPPLY

- **43.9% nuclear power**
- **27.2% oil**
- **12.1% natural gas**
- **~3% renewables (solar and wind)**

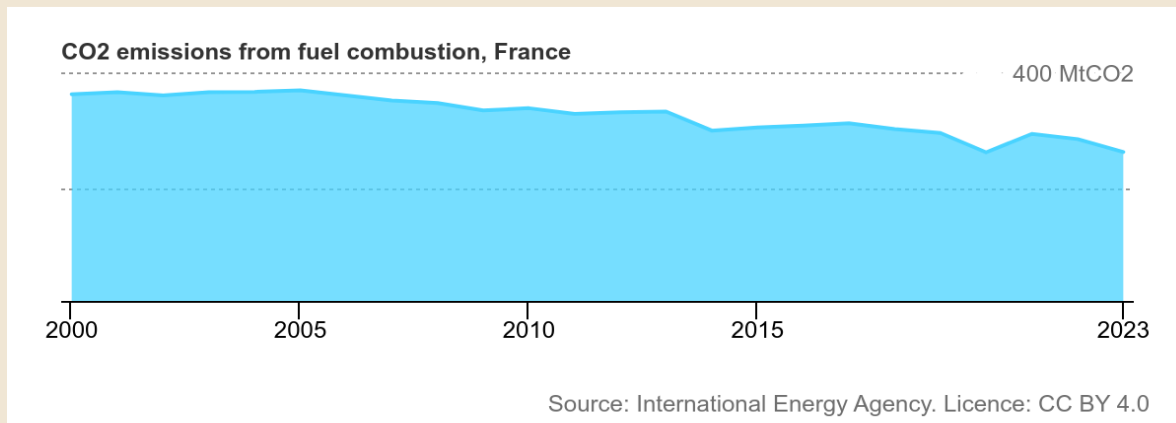
Domestic energy production, France, 2024



Source: International Energy Agency. Licence: CC BY 4.0

CO2 EMISSIONS

- 2023 emissions: **262 MtCO₂**
- 5th in Europe, 20th globally
- **28% decrease** in CO₂ emissions since 2000
- Per capita rankings: 33rd in Europe, 62nd globally



CO2 EMISSIONS BY SECTOR

- Largest sector: **transportation**, 46% of total
- Residential and electricity and heat emissions have decreased ~50% since 2000

CO₂ emissions by sector, France, 2023



Nuclear History & Future Targets

HISTORY

- Country with the **largest share of electricity generated from nuclear in the world**
- Established CEA in 1948, first nuclear power plant opened in 1956
- **Messmer Plan** during the oil crisis in the 1970s, target of constructing 13 reactors/year
- **57 operating reactors today**, managed by EDF

FUTURE TARGETS

- **France carbon neutral by 2050**
 - Reduce GHG emissions by 55% compared to France's 1990 levels
- Reach 35% of electricity from renewables by 2030



Cattenom Site (4 nuclear reactors)

Sustainable Energy Projects



- **57 operating nuclear reactors** across 19 sites
- Plans to **construct 6 new reactors**
- Recent issues with repairs and old reactors reaching the end of their lifespan
- Planning to build **10 new offshore wind farms**
- Goal to reach **45 GW of wind by 2050**, ~20% of national electricity
- Both seabed turbines and floating turbines

A decorative border in a dark green, Art Nouveau style, featuring swirling lines and stylized lily-like flowers with white petals and orange centers. The border frames the central text on the left and right sides.

03

PARIS
CASE STUDY

Paris Context

City
Population:
2.04 million

Metro
Population:
13.2 million

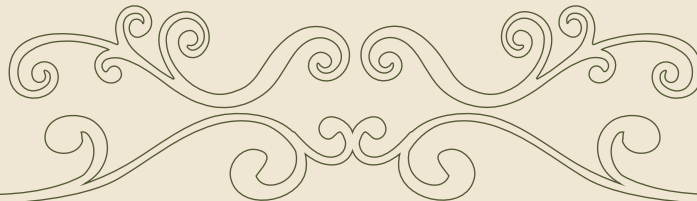
4th most populous
city in the EU



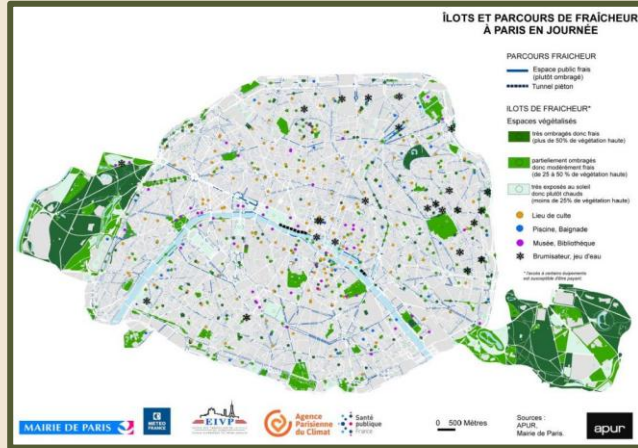
20 arrondissements
(districts)

Major transit
hub (rail,
car, air,
Metro)

**40 million
tourists/year**



Urban Sustainability & Waste



VILLE-JARDIN ("GARDEN CITY")

- Mitigate urban heat island effect
- Create **300 new hectares of green spaces by 2040**
- **1,400 cooling islands**

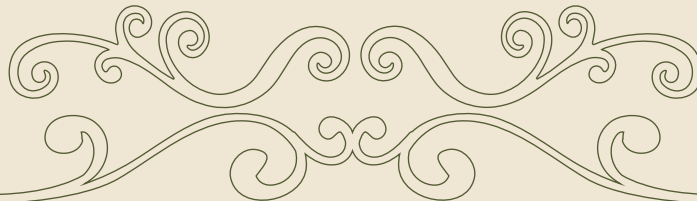
WASTE COLLECTION

- City collects **3,000 tons of household waste a day**
- Municipal and private services
- **4 colored bins** (green/gray, yellow, white, brown)

Urban Planning Legacy



- In the 1850s–1870s, Baron Haussmann redesigned Paris with density in mind
- Parisians naturally have much lower per-capita carbon footprints than residents of sprawling car-dependent cities
- Modern Paris has built on this foundation showing how historical urban form shapes what's possible today



Paris' Transportation

15 Minute City

- Anne Hidalgo's (current mayor of Paris) flagship urban concept
- The right side of the Seine, previously an urban highway carrying 40,000 cars every day was converted into a car-free linear park
- Reduces the need for cars

<https://www.wri.org/insights/paris-15-minute-city>



<https://www.planetizen.com/news/2025/12/136592-paris-opens-europes-longest-aerial-gondola-line>

Paris' Transportation

Paris Metro

- Paris has 16 metro lines and 300+ stations
- The Grand Paris Express is Europe's largest metro expansion: 200km of new track and 68 new stations for €36 billion
- Once complete, it's projected to remove the equivalent of 370,000 cars worth of CO2 from the region annually
- The project is partly financed through green bonds, framing it explicitly as climate infrastructure

https://en.wikipedia.org/wiki/Paris_Metro



A decorative frame composed of green scrollwork and floral motifs at the corners. Four orange curved arrows connect the scrollwork elements in a clockwise circular path, framing the central text.

04

Key Takeaways

Key Takeaways



France isn't immune to Political Uncertainty

Climate concerns tend to be deprioritized when people feel economically insecure



Historical Density

Gives France a leg up in their infrastructure improvement projects



Nuclear Sensitivities

France relies heavily on nuclear power so they're sensitive to reactors going offline

An aerial photograph of Paris, France, featuring the Eiffel Tower prominently in the center-right. The city's dense urban landscape, with numerous buildings and rooftops, is visible under a clear blue sky with soft, wispy clouds. The lighting suggests a late afternoon or early morning setting, with a warm, golden glow over the city.

**THANKS FOR
LISTENING!**

Any Questions?