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NGFS short-term climate scenarios: takeaways for France

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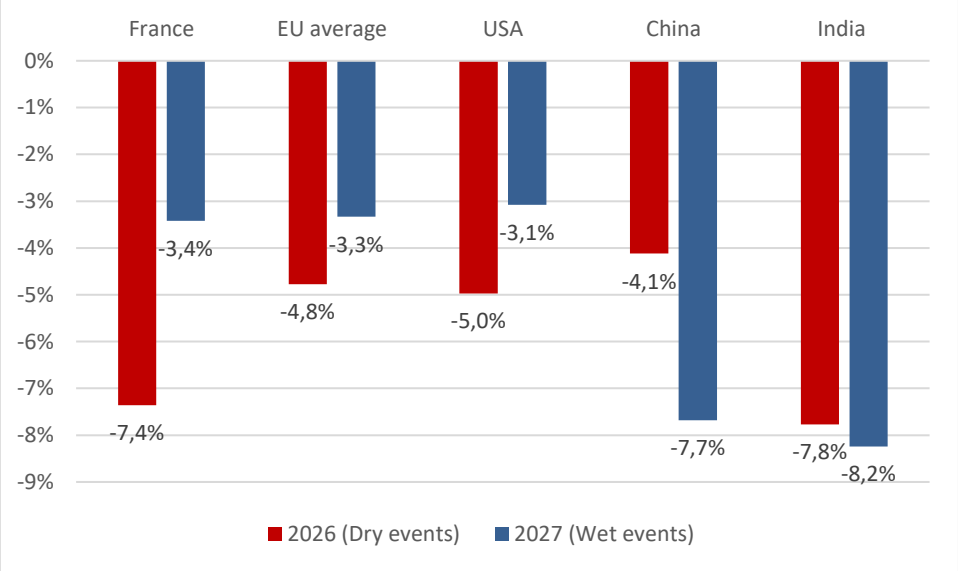
In May 2025, the NGFS published its first short-term climate scenarios. If Europe were to experience a combination of particularly severe weather events, France could lose 7.4% of its GDP. The French economy would benefit from a gradual and efficient low-carbon transition, but would be negatively affected if the transition was delayed and disorderly.

Chart 1: GDP losses for different geographical regions affected by natural disasters under the "Disasters and Policy Stagnation" scenario

Deviations expressed as a percentage relative to the NGFS short-term baseline scenario



Source: NGFS (2025), GEM-E3 model.

Note: For each region represented, the scenario assumes simultaneous heatwaves, droughts and wildfires in 2026, followed by a combination of floods and storms in 2027 at the level of the continent of the regions in question. The bars for 2027 reflect both the effects of the weather events in 2027 and the persistence of the events in 2026.

In addition to its long-term climate scenarios, the Network for Greening the Financial System (NGFS) has developed short-term scenarios to enable financial actors to anticipate the macro-financial consequences of climate-related physical risks (climate events) and transition risks (implementation of low-carbon transition policies) that are likely to materialise in the coming years. These are not

projections but plausible future pathways that are useful for managing risk. This blog post presents the main takeaways for France. In another blog post, Jourde et al. (2026, forthcoming) assess the consequences of two scenarios for the French financial system.

Short-term climate scenarios: four "storylines" to assess the resilience of the global economy and the financial system

The NGFS first developed a baseline scenario, incorporating legislated climate policies only, and then four further scenarios representing different combinations of risks. The first two scenarios focus on the effects of transition risks, the third is a physical risk only scenario, and the fourth considers a combination of both transition and physical risks in different geographical regions:

- The "Highway to Paris" scenario explores an orderly and gradual low-carbon transition, consistent with the target of net-zero emissions in 2050, worldwide. A carbon tax is thus added to the climate policies already integrated into the baseline scenario, and technological dynamics are assumed to be favourable.
- The "Sudden Wake-Up Call" scenario reflects a delayed and disorderly transition with no additional climate policies introduced globally before 2027, after which there is a sudden acceleration in transition policies in order to meet carbon neutrality targets. The assumptions with regard to technological progress are less favourable, as a result of economic players' lack of foresight.
- The "Disasters and Policy Stagnation" scenario assumes that a region of the world is hit by a succession of extreme weather events. There are five variants of this scenario, each corresponding to a different region affected by "dry events" (drought, heatwaves and wildfires) in 2026 and then "wet events" (storms and floods) in 2027. This scenario focuses on physical risk and assumes that no additional transition policies are put in place.
- The "Diverging Realities" scenario assumes that only developed economies implement a transition similar to that described in the Highway to Paris scenario, whilst extreme events hit several continents (Africa, Asia and South America) that fail to implement transition policies. These extreme events lead to interruptions in the supply of materials critical to climate transition, thereby disrupting the ecological pivot of developed economies.

The NGFS relies on a suite of models developed by academic partners to translate these narratives into economic and financial impacts. Documentation on those models is available here.

Physical risks: overall, France is more vulnerable than the other developed economies

France would appear to be more vulnerable than several other western economies under the "Disasters and Policy Stagnation" scenario (**Chart 1**): French GDP would fall by 7.4% in 2026, compared with a European Union (EU) average of 4.8%, and would remain 3.4% lower in 2027 (compared with 3.3% for the EU), relative to the baseline scenario. These differences indicate a particular vulnerability to the "dry events" projected to occur in 2026. However, France is relatively less vulnerable than countries such as China or India to both "dry" and "wet" events. The different weather events incorporated into the scenarios are rare but not unprecedented: they have an annual probability of 2% on a continental scale (the heatwave modelled for France, for example, is

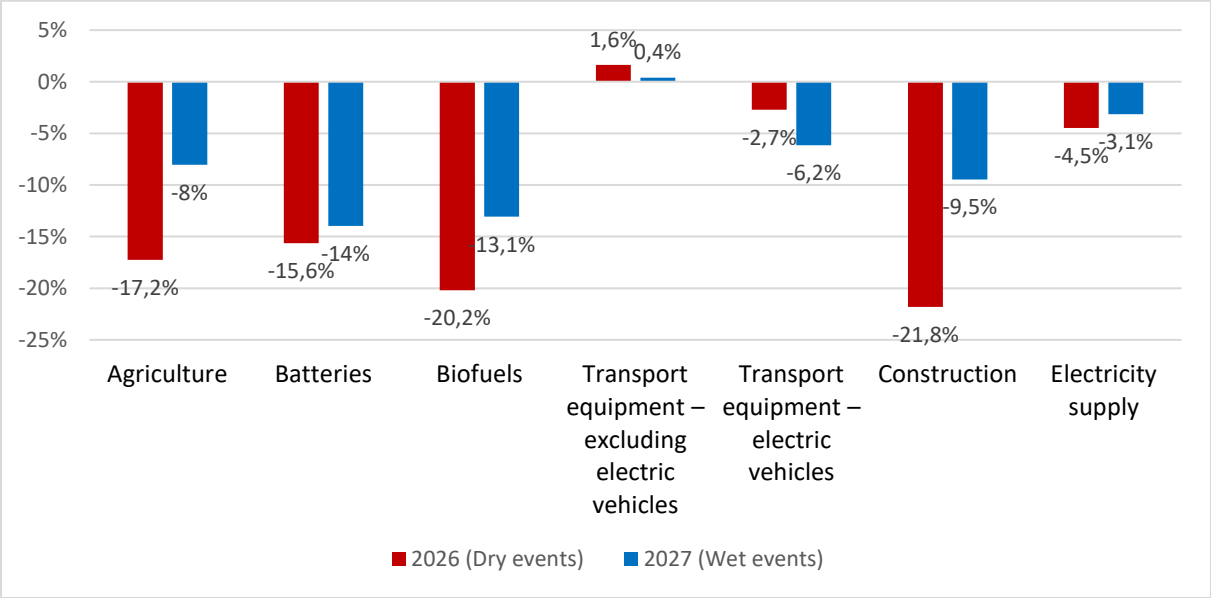
statistically less severe than the actual heatwave of 2003), and their correlations mean they are likely to occur in combination (see, for example, Zscheischler et al., 2018).

In the same scenario, economic impacts vary across sectors, depending on their direct exposure to different types of natural disasters (agriculture is vulnerable to drought, for example) but also depending on indirect effects related to sectoral and geographical interdependencies. The sectors with production most exposed to "dry events" (**Chart 2**) are agriculture, construction and biofuels, whose output would fall by 17.2%, 21.8% and 20.2%, respectively. While a large majority of French sectors would be negatively impacted, a few sectors such as transport equipment (excluding electric vehicles) could, on a one-off basis, benefit from the effects of a reallocation of consumption.

As regards price levels, the drops in production are expected to trigger temporary and limited inflation (an increase of up to 0.7 percentage point at European level), which would pose a dilemma for the European Central Bank (ECB): raising interest rates would combat inflation but would risk weakening economic recovery. In this NGFS simulation, the ECB would temporarily cut its key interest rates to facilitate the economy's return to its production potential, then gradually raise them to bring inflation back towards its 2% target.

Chart 2: Sectoral production losses under the "Disasters and Policy Stagnation" scenario for a selection of French sectors

Deviations expressed as a percentage relative to the NGFS short-term baseline scenario



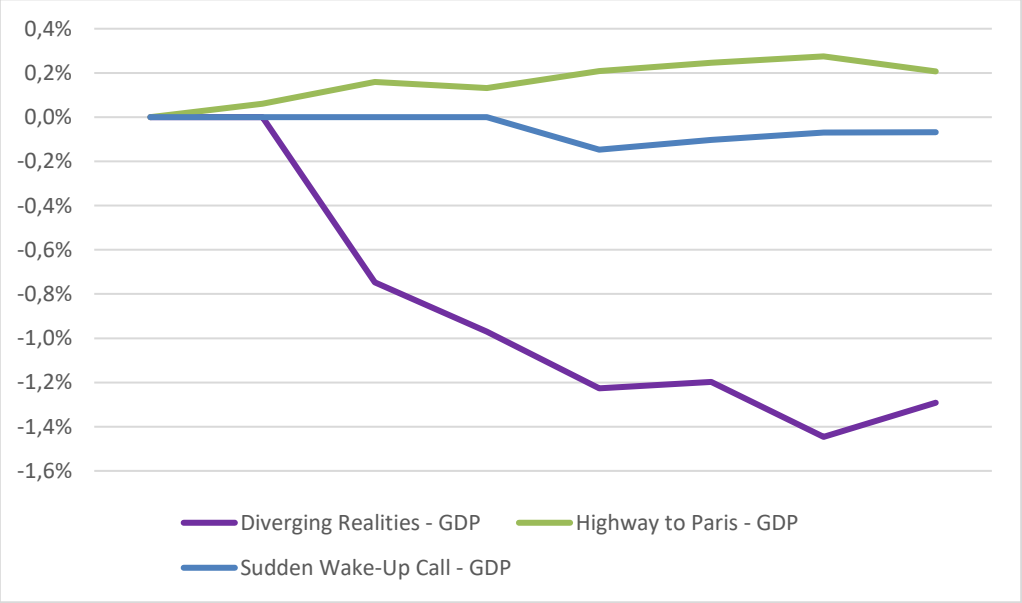
Source: NGFS (2025), GEM-E3 model.

Transition risks: a limited macroeconomic impact, but significant sectoral disparities

The NGFS' short-term scenarios indicate that the impact on GDP and unemployment in France of policies to mitigate climate change would be limited. The most pronounced impact is projected under the "Diverging Realities" scenario, with a GDP loss of up to 1.5% relative to the baseline scenario in 2029 (**Chart 3**). The carbon price follows the same trajectory as in the "Highway to Paris" scenario – rising gradually from USD 100 (at 2017 constant prices) per tonne of CO_2 equivalent in 2024 to USD 250 in 2030. However, disruptions to value chains hold back economic activity and the climate transition by limiting the availability of essential inputs such as batteries and critical minerals. The unemployment rate rises by as much as a further 1.1 percentage points in 2029 under the "Diverging Realities" scenario, but remains stable in the other transition scenarios. It is important to note that the baseline scenario already assumes that the targets of the EU's Fit-for-55 package – reducing European greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels – are met: the additional effort required to achieve carbon neutrality by 2050 is therefore limited compared to countries that do not have such ambitious climate legislation.

Chart 3: Changes in French GDP under the scenarios that incorporate transition risk

Deviations expressed as a percentage relative to the NGFS short-term baseline scenario



Source: NGFS (2025), GEM-E3 model.

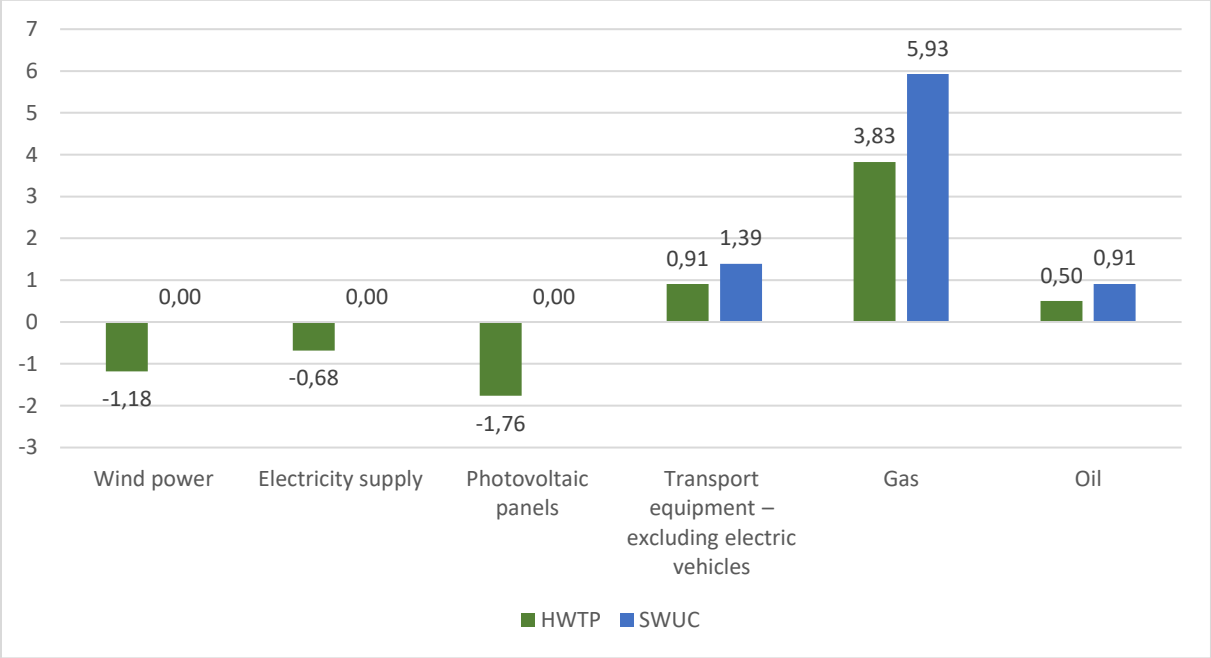
In the scenarios, higher carbon taxes drive up the costs of CO_2-emitting energy sources and polluting technologies, which has repercussions for the general price level. For example, under the "Sudden Wake-Up Call" scenario, European inflation would rise by 3.1 percentage points in 2027 relative to the baseline scenario due to the sharp hike in carbon taxes, which would increase from USD 120 in 2026 to nearly USD 200 in 2027. The gradual implementation of these measures in the "Highway to Paris" scenario means that the inflation differential relative to the baseline scenario can be limited to a 0.7 percentage point increase.

Confronted with these inflationary pressures, central banks tighten monetary policy: in the "Sudden Wake-Up Call" scenario, key interest rates could rise by a further 100 basis points in Europe in 2028, which hampers investment.

The sectoral repercussions vary (**Chart 4**): the financing costs of carbon-intensive companies increase and their risk indicators deteriorate as a result of the immediate rise in the cost of polluting activities and investors revising their expectations on the future profitability of these industries. By contrast, certain sectors that are key to the transition – mainly carbon-free energy production – may benefit from neutral or even positive impacts. In the "Highway to Paris" scenario in particular, carbon tax revenues are allocated to the development of clean energy sources through public investment in R&D (80%) and subsidies for private investment (20%), which encourages growth in these sectors.

Chart 4: Changes in the weighted average cost of capital in 2030 for a selection of French sectors

Deviations expressed in percentage points relative to the NGFS short-term baseline scenario



Source: NGFS (2025), CLIMACRED model, detailed on the NGFS website