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## NGFS publishes the third vintage of climate scenarios for forward looking climate risks assessment

Today, the NGFS published the third vintage of the climate scenarios along with two accompanying documents, aimed at fostering the integration of climate-related risks into the work of central banks and supervisors, and beyond.

- An updated [Set of climate scenarios](#): In this third vintage, the NGFS scenarios have been brought up to date, including the most recent country-level climate commitments made at the COP26 in 2021, and the latest GDP and population pathways. For the first time, the NGFS scenarios include projections of the potential losses from extreme weather events (floods and tropical cyclones), in addition to the specific impacts of chronic climate changes on the macroeconomy. The NGFS scenarios are also consistent with the scenarios assessed in the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Owing to the lead time required for their completion, the NGFS scenarios could not account for the consequences of the war in Ukraine and the current energy crisis. Yet, they remain informative about the current situation, illustrating the challenges as well as the feasibility and benefits from carrying on with the net zero transition.
- A technical analytical document on the [“Climate Scenarios Sensitivity Analysis to Macroeconomic Policy Assumptions”](#): This document explores the policy conditionality of the third vintage of the NGFS scenarios, and assesses the sensitivity of the results to assumptions related to fiscal and monetary policy.
- A guidance note summarizing [“Practical Lessons for the Development of Climate Scenarios with Extreme Weather Events from Emerging Markets and Developing Economies”](#): This note aims to complement existing climate risk assessment literature by providing central banks and prudential supervisory authorities with a practical framework for assessing physical climate risks with extreme weather events.

Ravi Menon, Chair of the NGFS and Managing Director of the Monetary Authority of Singapore: *“The latest iteration of the NGFS scenarios could not have been more timely. Recent events have underscored that both climate change and energy transition are already happening. The droughts in Europe and China and the floods in Pakistan and India are tangible demonstrations of the devastating effects of climate change. The spike in fossil energy prices arising from the war in Ukraine is an early indication of what a disorderly energy transition might look like. The latest NGFS scenarios include projections of the potential losses from extreme weather events like floods to complement the specific impacts of chronic climate changes on the macroeconomy in the previous iteration. They also shed light on the potential disruptive impact of the current sharp rise in global energy prices, and the importance of securing an orderly energy transition to net zero. The NGFS will continue*

*to fine-tune the climate scenarios to allow for more comprehensive and relevant applications, support more comparable climate related disclosures, and enable climate-resilient business and risk decisions.”*

The NGFS scenarios provide a framework to assess and manage climate-related risks, by exploring the transition and physical impacts of climate change, over a long time horizon and under varying assumptions. They illustrate that reaching net zero CO<sub>2</sub> emissions by 2050 on a global basis (a necessary condition to limit global warming to 1.5°C relative to pre-industrial levels) will require an ambitious transition across all sectors of the economy. In particular, significant investment flows would need to be directed towards clean energy, so that by 2050, renewables and biomass deliver 70% of global primary energy needs. At the same time, the NGFS scenarios show that the macroeconomic impact in case of no policy action to mitigate climate change would be extremely harmful, especially in the medium-to-long run: at the global level, this could lead to a decrease of GDP of approximately 20% in 2100. This figure is likely showing the lower bound of possible GDP decline due to the limited hazards and transmission channels considered when assessing the impact of physical risk.

Cornelia Holthausen, Chair of the NGFS workstream “Scenario Design and Analysis” and Director General for Macroprudential Policy and Financial Stability at the European Central Bank: *“The NGFS climate scenarios are a unique tool to help us improve our understanding of climate-related risks and their impact on global economies over the years ahead. With their third vintage they clearly show the urgent need to invest more heavily in both climate adaptation and mitigation.”*

Sarah Breeden, Chair of the NGFS workstream “Macrofinancial” (until April 2022) and Executive Director at the Bank of England: *“The NGFS scenarios, as a set of freely accessible and comprehensive pathways, have a substantial role to play in guiding a better understanding of climate-related risks. This new iteration is both broader and deeper than its predecessors, and will enable a new generation of users to begin sizing the risks from climate change. I see these scenarios as a true public asset that will evolve with this most important of topics over time.”*

The NGFS scenarios were developed in partnership with an academic consortium including the Potsdam Institute for Climate Impact Research (PIK), the International Institute for Applied Systems Analysis (IIASA), the Center for Global Sustainability at the University of Maryland (UMD), Climate Analytics (CA), and the National Institute of Economic and Social Research (NIESR)<sup>1</sup>.

Looking forward, the NGFS will continue to develop and enrich its scenarios to make them more comprehensive, including by adding further sectoral granularity, improving the representation of physical risk and the integration of the suite of models, with the aim to be as relevant as possible for economic and financial analyses (see [mandate of the workstream “Scenario Design and Analysis”](#)). On additional sectoral granularity, the NGFS has completed a pilot program with the G-CUBED model, with findings available [on the NGFS website](#), as part of the NGFS Occasional Paper series. Importantly, the NGFS will seek to develop additional short-term adverse scenarios for stress testing purposes. The NGFS will also intensify its collaboration with the industry to ensure the scenarios are suitable for wider use.

## **About the NGFS**

The NGFS, launched at the Paris One Planet Summit on 12 December 2017, is a group of central banks and supervisors, which on a voluntary basis are willing to share best practices and contribute to the development of environment and climate risk management in the financial sector, and to mobilize mainstream finance to

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support the transition toward a sustainable economy. The NGFS brings together 116 central banks and supervisors and 19 observers. Together, they represent five continents and more than 85% of global greenhouse gas emissions, and are responsible for the supervision of all of the global systemically important banks and 80% of the internationally active insurance groups. The NGFS is chaired by Mr Ravi Menon, Managing Director of the Monetary Authority of Singapore. The Secretariat, headed by Mr Jean Boissinot, is provided by Banque de France.

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**For more details, visit the [NGFS website](#) and [Twitter account](#) or contact the NGFS Secretariat at Banque de France [sec.ngfs@banque-france.fr](mailto:sec.ngfs@banque-france.fr)**

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