



Workstream “Scenario Design and Analysis”

Mandate - April 2022 / April 2024

Chair of the workstream: Livio Stracca (European Central Bank) - since September 2023

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A. Objective

The objective of the workstream is to help NGFS members in their journey to ***undertake climate scenario analysis and promote its use within the financial system more broadly***. Indeed, the forward-looking nature of climate related risks and the inherent uncertainty about future events make it difficult to assess them using standard risk modelling methodologies. Climate scenario analysis then offers a flexible ‘what-if’ methodological framework better suited to exploring risks that could crystallise in different possible futures.

B. Relevance to the work of the NGFS

The workstream will contribute toward addressing the NGFS’ recommendations set out in its [First Comprehensive report](#) published in April 2019. The first iteration of the NGFS climate scenarios, published in June 2020, was the first set of climate scenarios that included both physical and transition risks that were modelled over an extended time horizon. The [second iteration of the NGFS climate scenarios](#) followed a year later, in June 2021, in which the underlying data were updated, the modelling was refined, country-level data (rather than just regional) was made available, a dedicated macroeconomic model was included to produce more detailed macroeconomic projections, and a separate database was launched containing granular physical risk data. The NGFS made all these data publicly and freely available through a [bespoke website](#). The NGFS climate scenarios have come a long way in a short time, taken up by various regulators for prudential analysis and used by third parties to model financial risks from climate change. In its [Glasgow Declaration](#), the NGFS committed to further enhance and enrich its climate scenarios, thus providing on a regular basis an important public good for a broad range of stakeholders, both public and private.

C. Tasks

1. Improve the NGFS climate scenarios

The workstream will seek to improve the NGFS climate scenarios in four ways:

- i. improve the ***modelling of acute and chronic physical risks*** across geographies within the scenarios;
- ii. improve their ***macroeconomic modelling*** (fiscal and monetary policies, business cycle, etc) and sectoral dynamics;
- iii. improve the usability of the NGFS climate scenarios by enhancing the ***granularity of the scenarios*** (e.g. expand the number of represented sectors and geographies), ***adding more key variables*** that are needed for analysis (e.g. more granular financial variables), and providing detailed ***technical documentation***; and
- iv. develop additional ***short-term adverse scenarios*** for stress testing purposes.

These improvements will seek to ensure that the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report representative scenario pathways have a corresponding NGFS climate macro-financial scenario; promote greater usability of the NGFS climate scenarios for Emerging Market Economies (EMEs), and more generally expand the user base. This work will also support, when appropriate, other NGFS workstreams' mandates.

2. Update the NGFS climate scenarios on a regular basis

To keep the NGFS climate scenarios up to date, the workstream will regularly update input data. This includes (but is not limited to): updates in governments' ambitions and policies, evolution of the economic environment, new technologies, incorporation of model improvements, assistance to the users (see [FAQ section](#)), update of the NGFS Portal, etc.

3. Provide methodological guidance on scenario-based climate risk analysis for macroeconomic and financial stability surveillance

The workstream will :

- i. share ***methodological guidance*** on climate scenario analysis and use of the NGFS climate scenarios, complementing the June 2020 [Guide to climate scenario analysis for central banks and supervisors](#);
- ii. cover ***methodological approaches*** for climate stress testing while bearing in mind the various constraints faced and promoting the sharing of experiences around climate scenario analysis primarily for NGFS members (building on the [Scenarios in Action](#) report)¹ ; and
- iii. contribute to the NGFS/FSB joint report synthesizing outputs of analysis by jurisdictions on the ***implications of possible future climate scenarios for the financial system***;

¹ In order to increase the applicability of the NGFS scenarios by members in EMEs, the workstream will liaise, through technical discussions, with regional and international organisations that support central banks and supervisors in the development of these exercises.

4. Promote the use of the NGFS climate scenarios within the financial system

The workstream will:

- i. consider the suitability of the NGFS climate scenarios for financial institutions' **disclosure purposes** and will consider the need for changes and standardisation to the scenarios, and/or a guidance, that would help those interested in using the scenarios for this purpose²;
- ii. seek to understand how the NGFS climate scenarios **relate to other reference scenarios** such as the sectoral pathways examined by the Glasgow Financial Alliance for Net Zero (GFANZ) and the International Energy Agency (IEA) scenarios and will provide guidance on that to users, as appropriate; and
- iii. conduct an active **outreach programme** to ensure that the NGFS scenarios are used widely and appropriately, especially as a standard tool for risk assessment and management by financial institutions.

² The NGFS scenarios work could usefully feed into other regulatory and non-regulatory initiatives, including the International Sustainability Standards Board (ISSB) and the Task Force on Climate-Related Financial Disclosures (TCFD).