

Diagram 6a: Illustrative map of scenario archetypes

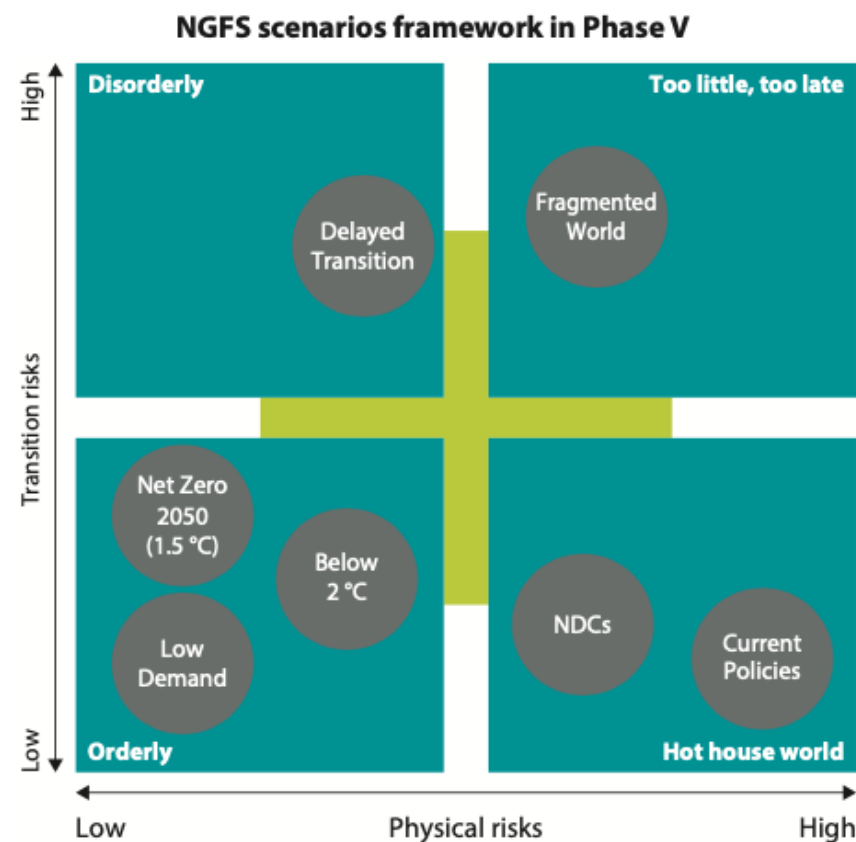
The NGFS scenarios explore the impacts of climate change and the transition with the aim of providing a common reference framework.

The NGFS scenarios explore a set of **seven scenarios** which are consistent with the NGFS framework published in the [First NGFS Comprehensive Report](#) covering the following dimensions:

- **Orderly** scenarios assume climate policies are introduced early and become gradually more stringent. Both physical and transition risks are relatively subdued.
- **Disorderly** scenarios explore higher transition risks due to policies being delayed or divergent across countries and sectors. For example, (shadow) carbon prices* are typically higher for a given temperature outcome.
- **Hot house world** scenarios assume that some climate policies are implemented in some jurisdictions, but globally efforts are insufficient to halt significant global warming. The scenarios result in severe physical risk including irreversible impacts.
- **Too-little-too-late** scenarios assume that a late and uncoordinated transition fails to limit physical risks.

(*) Shadow carbon prices are defined as the marginal abatement cost of an incremental ton of greenhouse gas emissions. Prices are influenced by the stringency of policy as well as how technology costs will evolve.

Source: NGFS



Positioning of scenarios is approximate, based on an assessment of physical and transition risks out to 2100.

Diagram 6b: Underlying drivers of scenario outcomes

Scenarios are characterised by their overall level of physical and transition risk. This is driven by the level of policy ambition, policy timing, coordination and technology levers.

Quadrant	Scenario	Physical risk	Transition risk			
		End of century (peak) warming (model averages)	Policy reaction	Technology change	Carbon dioxide removal ⁻	Regional policy variation ⁺
Orderly	Low Demand	1.1 °C (1.6 °C)	Immediate	Fast change	Medium use	Medium variation
	Net Zero 2050	1.4 °C (1.7 °C)	Immediate	Fast change	Medium-high use	Medium variation
	Below 2 °C	1.8 °C (1.8 °C)	Immediate and smooth	Moderate change	Medium use	Low variation
Disorderly	Delayed Transition	1.7 °C (1.8 °C)	Delayed	Slow/Fast change	Medium use	High variation
Hot house world	Nationally Determined Contributions (NDCs)	2.3 °C (2.3 °C)	NDCs	Slow change	Low use	Medium variation
	Current Policies	3.0 °C (3.0 °C)	None – current policies	Slow change	Low use	Low variation
Too-little-too-late	Fragmented World	2.4 °C (2.4 °C)	Delayed and Fragmented	Slow/Fragmented change	Low-medium use	High variation

Colour coding indicates whether the characteristic makes the scenario more or less severe from a macro-financial risk perspective [^]

- Lower risk
- Moderate risk
- Higher risk

Source: NGFS

- The impact of CDR on transition risk is twofold: on the one hand, low levels of CDR imply an increase in transition costs, as reductions in gross emissions should be obtained in a different way; on the other hand, high reliance on CDR is also a risk if the technology does not become more widely available in the coming years.

+ Risks will be higher in the countries and regions that have stronger policy. For example, in Net Zero 2050, various countries and regions reach net zero GHG by 2050, while many others have emission of several Gt of CO₂eq.

[^] This assessment is based on expert judgment based on how changing this assumption affects key drivers of physical and transition risk. For example, higher temperatures are correlated with higher impacts on physical assets and the economy. On the transition side economic and financial impacts increase with a) strong, sudden and/or divergent policy, b) fast technological change even if shadow carbon price changes are modest, c) limited availability of carbon dioxide removal meaning the transition must be more abrupt in other parts of the economy, and d) stronger policy in those countries and/or regions.