

Climate scenario modelling: jargon buster

Please see below for a short explanation of some of the different terms used within the climate scenario modelling podcast.

Climate tipping points

Climate tipping points are certain aspects of the Earth's system whereby a small change to those aspects can begin a process that loops or cycles, compounding itself and resulting in that aspect of the Earth's system (or sometimes a system in and of itself) being 'tipped' into a completely different state. For instance, the thawing of permafrost as a result of climate change (driven by greenhouse gas emissions) would then release methane into the atmosphere in significant quantities, thereby further driving this deterioration.

Carbon budgets

Carbon budgets are used as an illustration of the amount of greenhouse gases (typically talked about in terms of carbon dioxide equivalent, or CO₂e), on average, that may be released to limit global temperature increase to 1.5 degrees or less, in line with the Paris Agreement.

Damage function

The damage function refers to the relationship between the quantity of emissions and the damage caused by emissions.

Interconnectedness (of risks)

When speaking about climate-related risks, in particular, interconnectedness recognises how the risks around climate change are very much linked, or connected, to one another. This also ties in with the climate tipping points above, whereby one risk event occurring may actually compound further risks as an impact and make them more likely.

Linear change, non-linear change and non-linearities

Linear change means a constant rate of change; non-linear change therefore means an accelerating or decelerating rate of change. By taking into account non-linearities, models may be able to better reflect the concepts outlined under the 'climate tipping points' and 'interconnectedness' terms, whereby one climate tipping point being reached or one climate risk event occurring may actually accelerate or compound further climate-related risks or impacts.

NGFS

The Network of Central Banks and Supervisors for Greening the Financial System (NGFS). They have produced a [number of different 'climate scenarios'](#) which outline different ways in which the world may respond (or not) to climate change.

Tail events

Tail risks include low-probability events (also known as 'tail events') which are events that arising at both ends of a normal distribution curve, hence the probability of them occurring is very low.