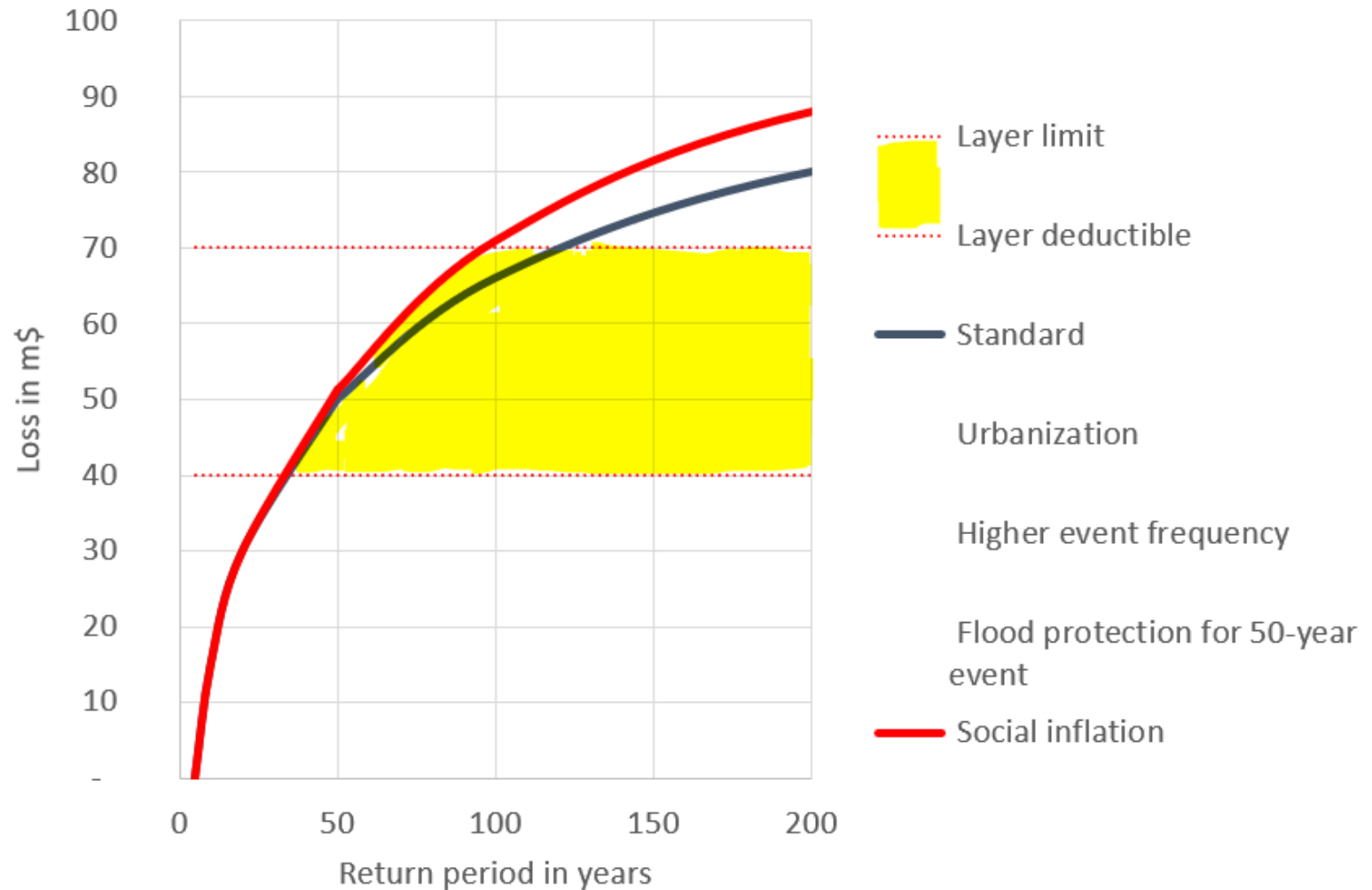# The loss-probability distribution

.. for each client

.. is the most important tool / basis to take risk

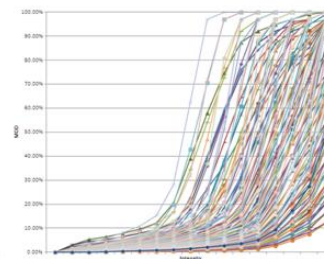We use it >1000 a day, using ~200 scenarios, for 50'000'000 simulated insured items a day.

Cat models in 4 boxes

**Import and geocode any exposure (portfolio from client)**

Encode to grid & assign vulnerability (incl. ~100 loss uncertainty samples)

Probabilistic event & hazard (~1 million years simulation)

Loss simulation & financial module (uncertainties, correlation, re/in. structure)

Loss

Return period

Underwriting knows client best (growth, trends, shifts, conditions, ..) and transition risk.

We learn from claims / experts, employ engineers & use our data.
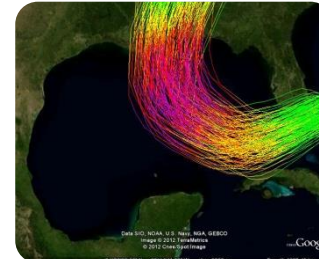
We employ natural scientists & collaborate to understand (changes in) physical risk.
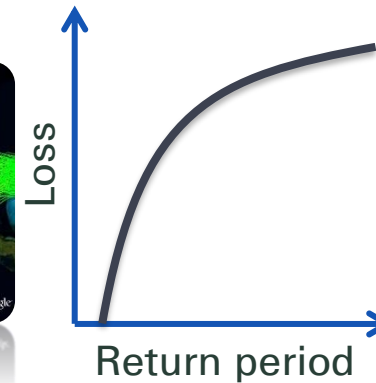
We develop in-house and collaborate on open-source algorithms (Oasis LMF)

Swiss Re

We simulate

.. for each peril, often multiple sub-perils ..

Climada and Oasis are great open-source frameworks. Video on the right from climada: Cyclone Sidr (2007) hitting Bangladesh on Vimeo

.. for each (1) portfolio, at all locations
.. 1 million years of events
.. 100 hazard / loss uncertainty samples