



Climate & Biodiversity Risks for Real Estate globally

A simple solution for a complex problem

What is physical climate risk?

And why your assets are probably not safe

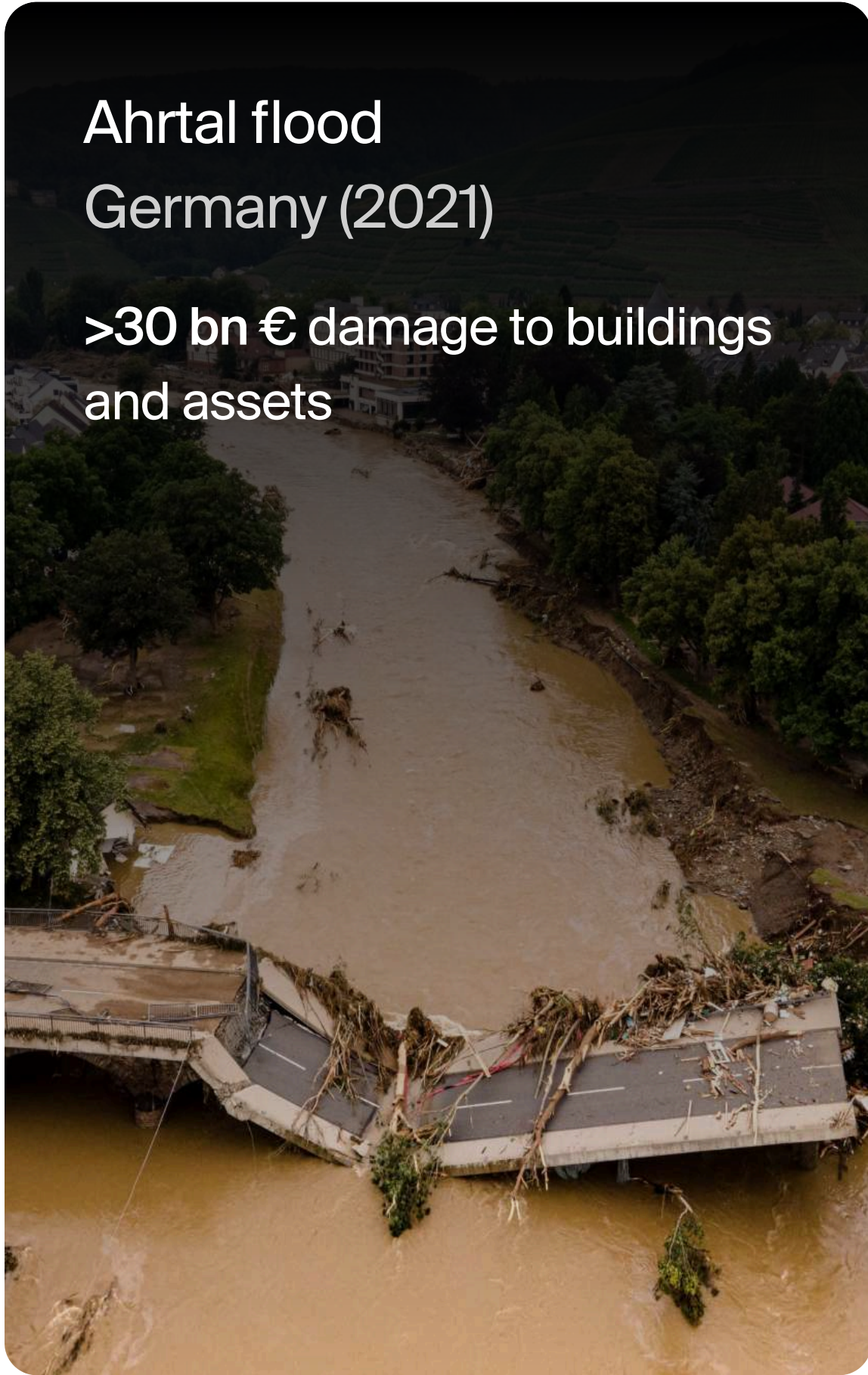
Hurricane Harvey
US (2017)

25% of US refining
disrupted, leading to a
>10% increase in gas prices



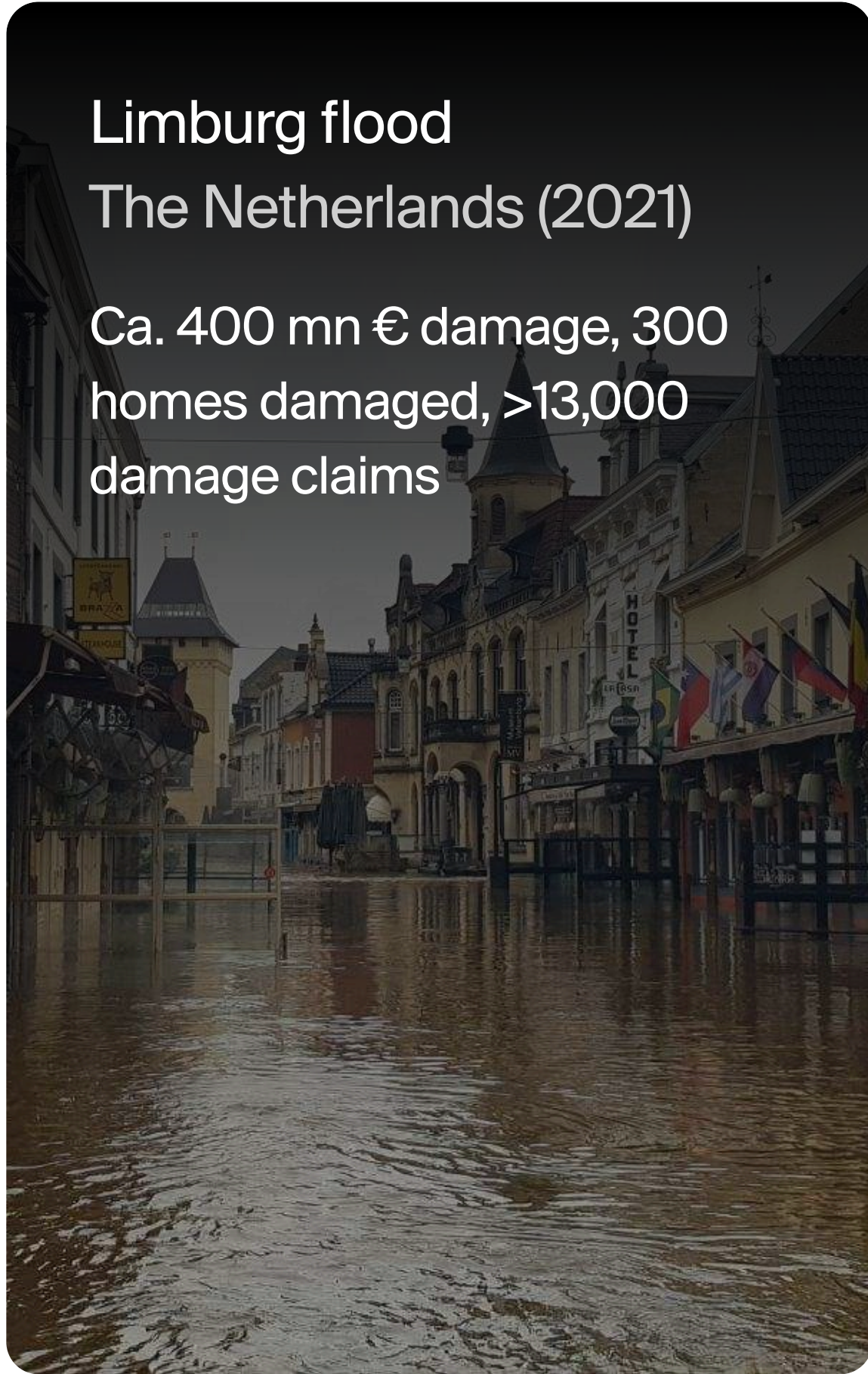
Ahrtal flood
Germany (2021)

>30 bn € damage to buildings
and assets



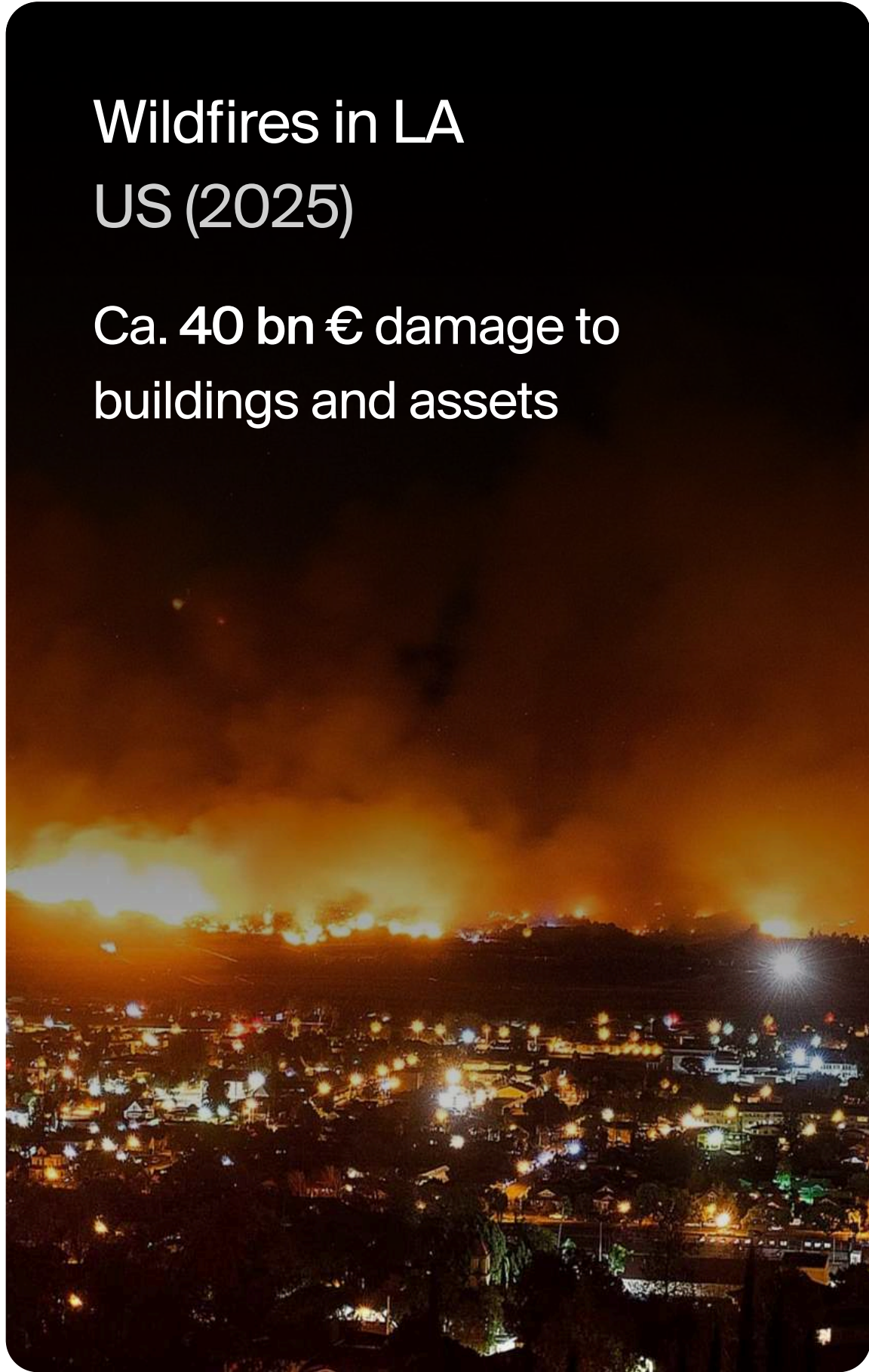
Limburg flood
The Netherlands (2021)

Ca. 400 mn € damage, 300
homes damaged, >13,000
damage claims



Wildfires in LA
US (2025)

Ca. 40 bn € damage to
buildings and assets



What is Biodiversity risk?

And why it's not just deforestation

Droughts

NSW (2017-1019)

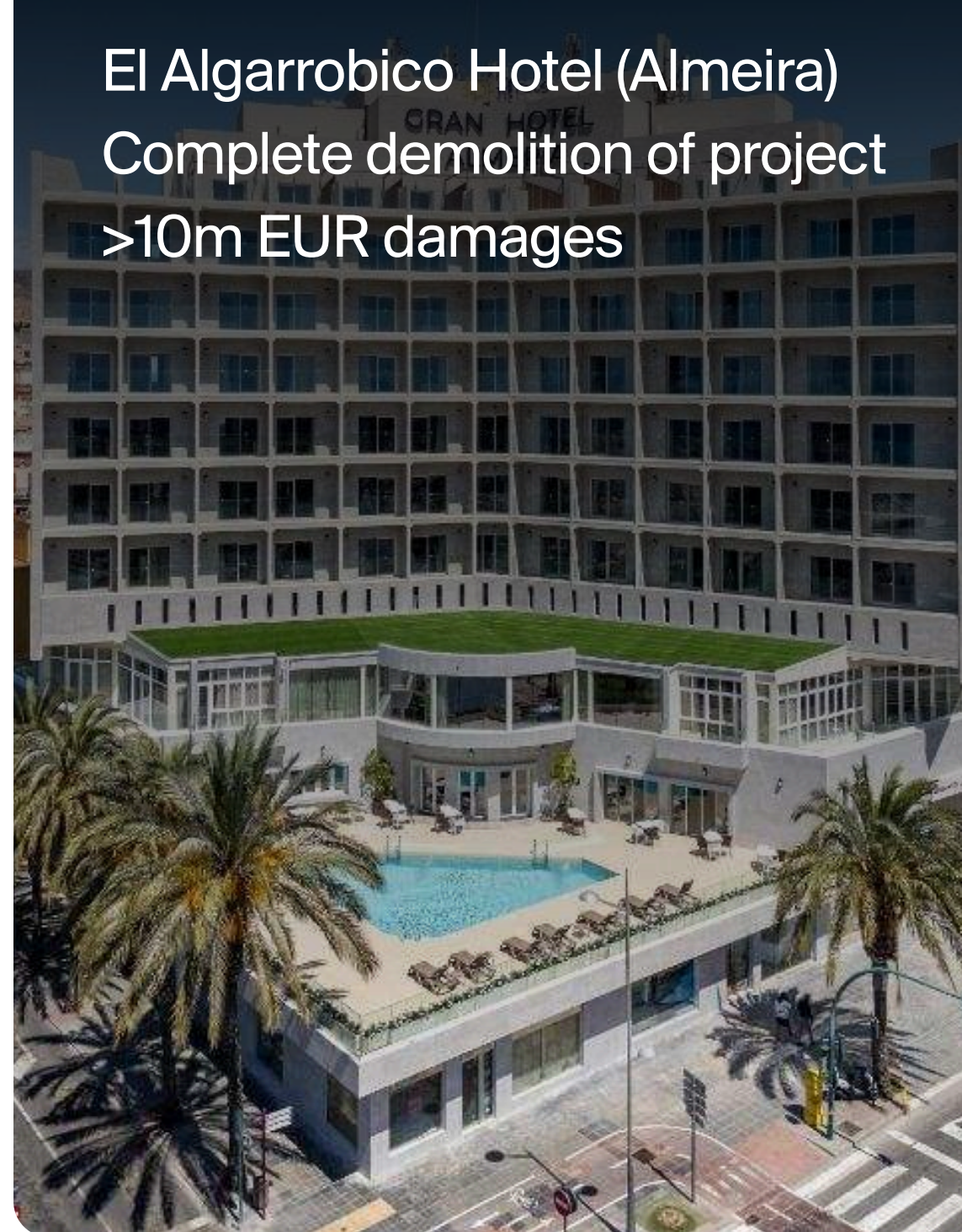
12% reduction in farm
productivity
>AUD 53 bn related losses



Protected areas

Global problem

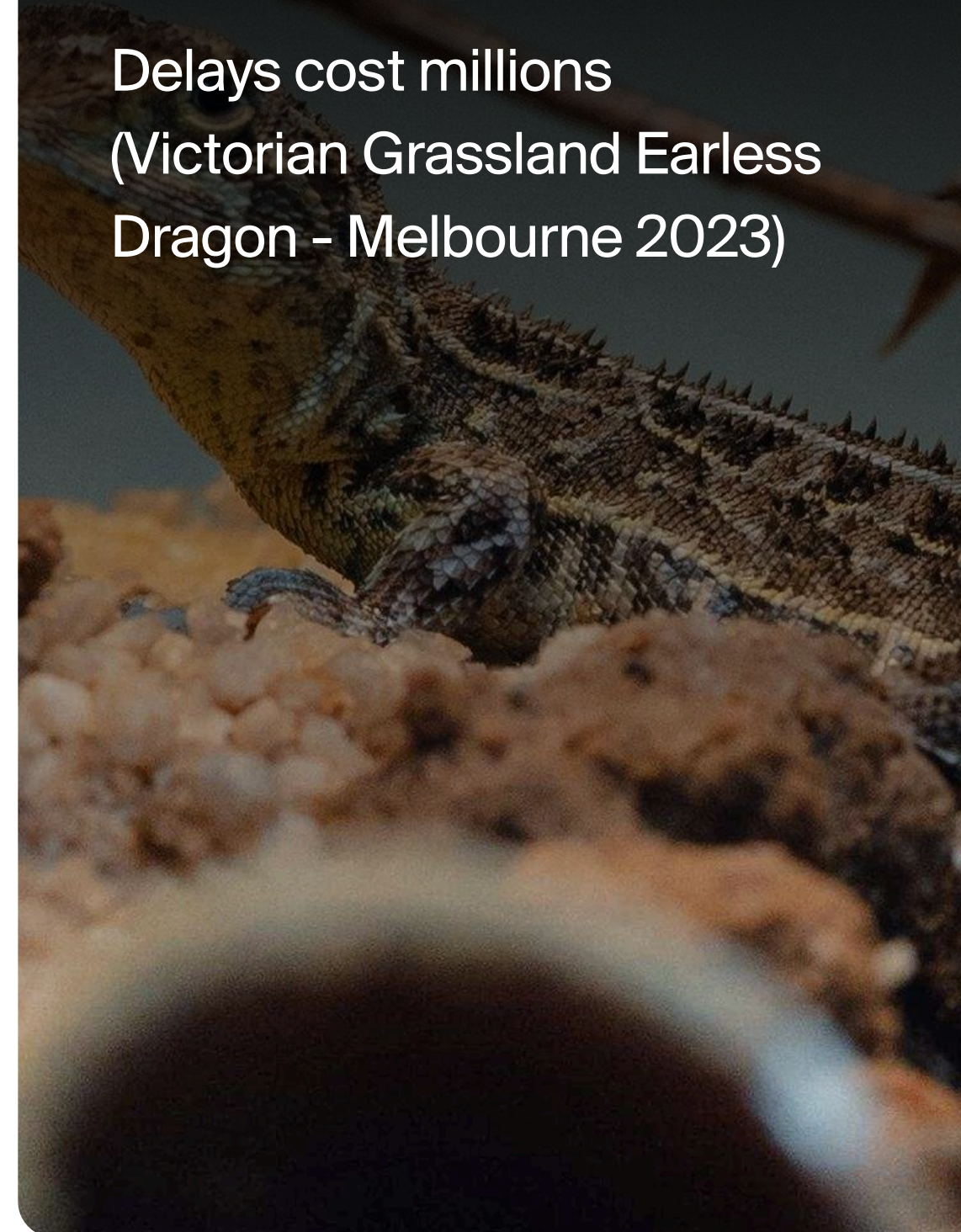
El Algarrobico Hotel (Almeira)
Complete demolition of project
>10m EUR damages



Endangered species

Global problem

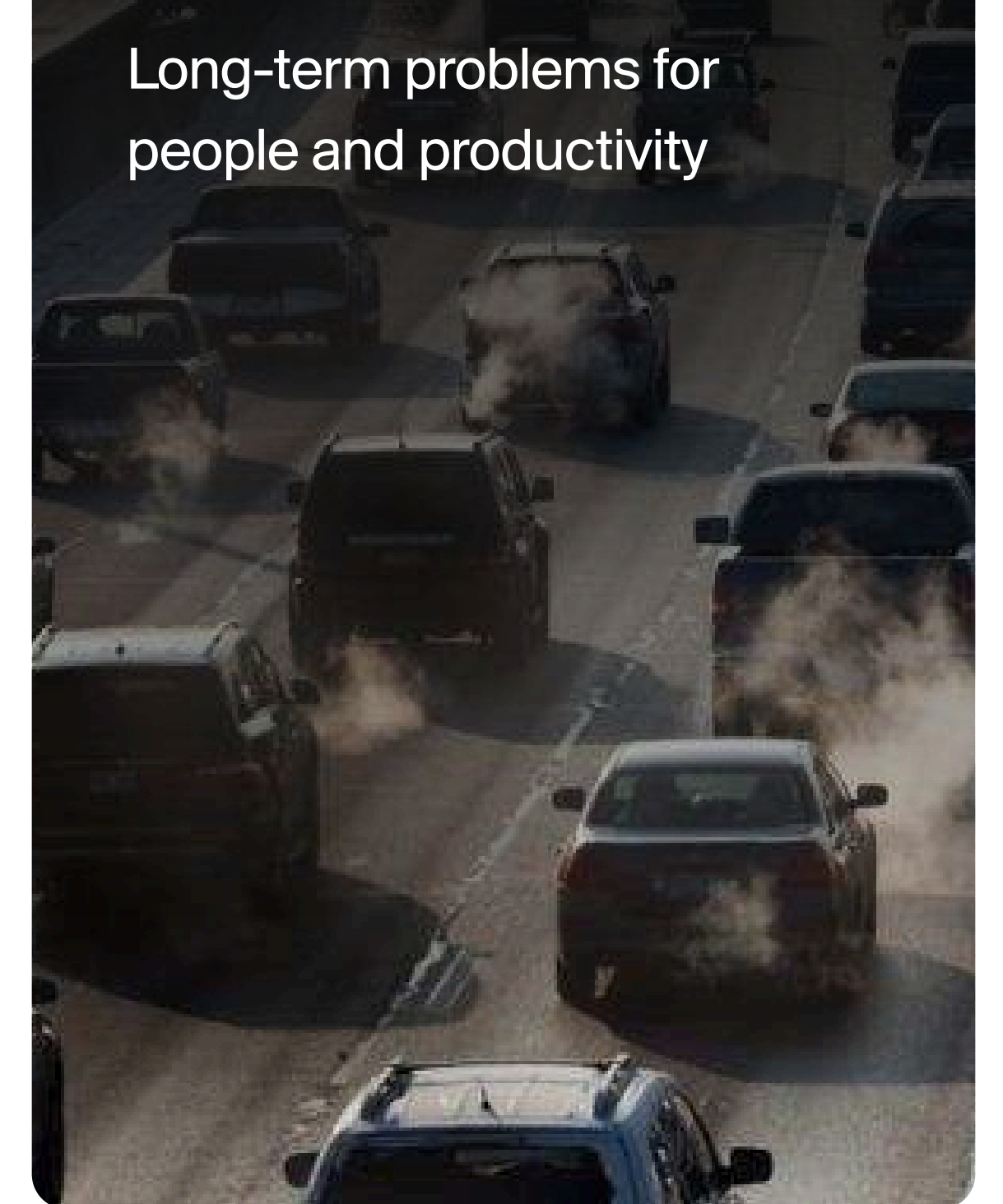
Delays cost millions
(Victorian Grassland Earless
Dragon - Melbourne 2023)



Air quality

Global problem

Long-term problems for
people and productivity



Opportunities in every stage

Using the right data and tools opens up opportunities in every stage of the life-cycle

Due diligence

Understand non-financial risks that can become financial liabilities

Optimise your portfolio mix

Stronger negotiation position

Optimisation/Management

Understand and include existing risks in your strategy

Know which assets to secure and which not

Secure returns

Reporting

Be compliant with current and future regulation

Impress stakeholders

Optimise communication



How does VIDA work?

VIDA’s approach to a complex landscape

VIDA supports financial institutions with location-specific risk analyses for real estate to enable informed decisions on climate, environmental and biodiversity risks and to meet compliance requirements with reports and our user interface



Natural hazard analysis according to German standards*

Focus on 9 key natural hazards and calculation of the expected annual loss



Climate risks and vulnerability according to global regulation

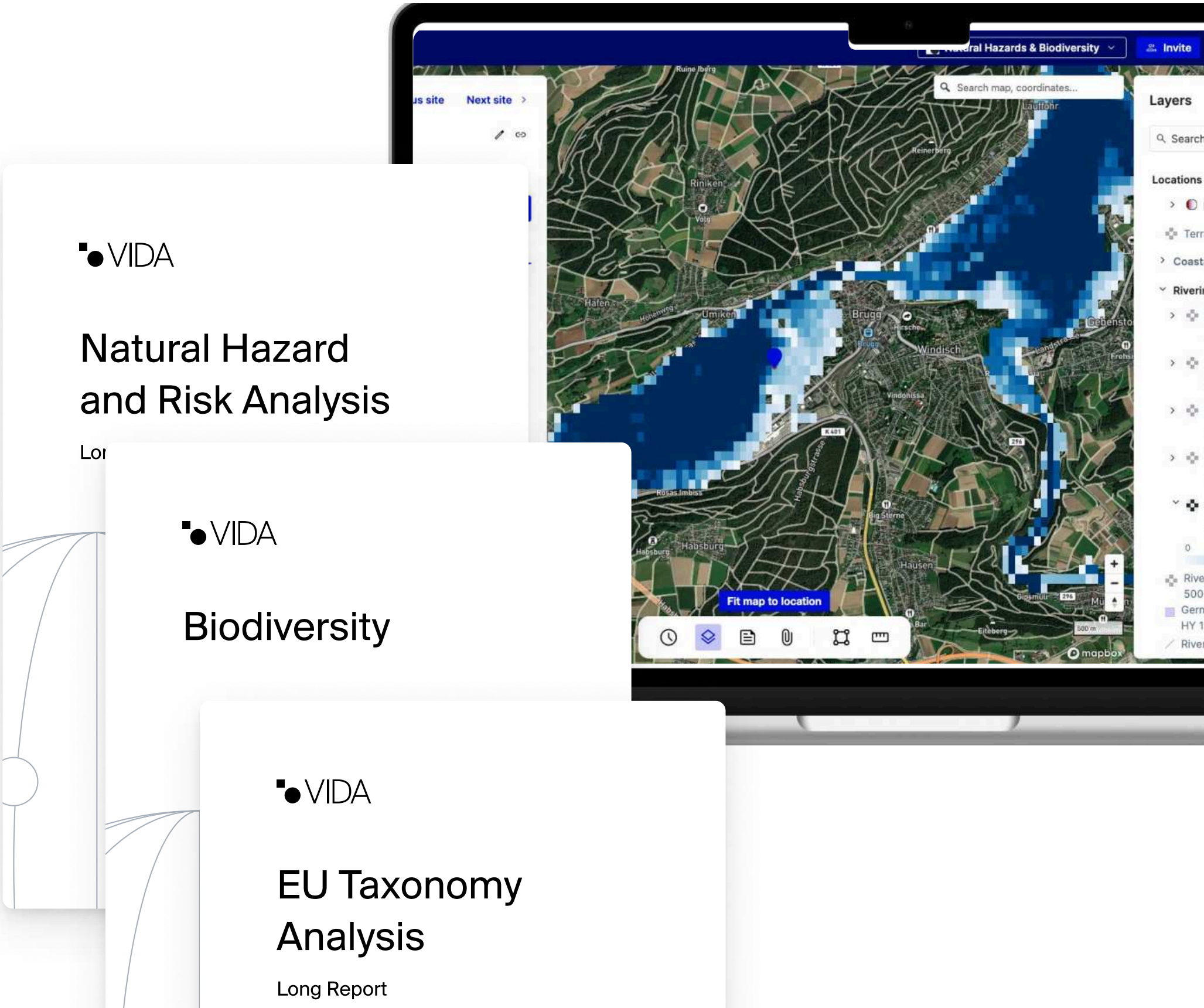
E.g. All climate risk as demanded by EU-Taxonomy – Annex A



Biodiversity and environmental risk analysis

Insights into protected areas, endangered species and ecosystems

*German PfandBG law and standard for covered bonds and mortgages



Three big categories of (risk)data

Natural Hazards

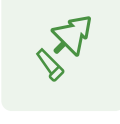
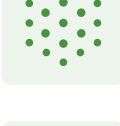
Today's financial risks

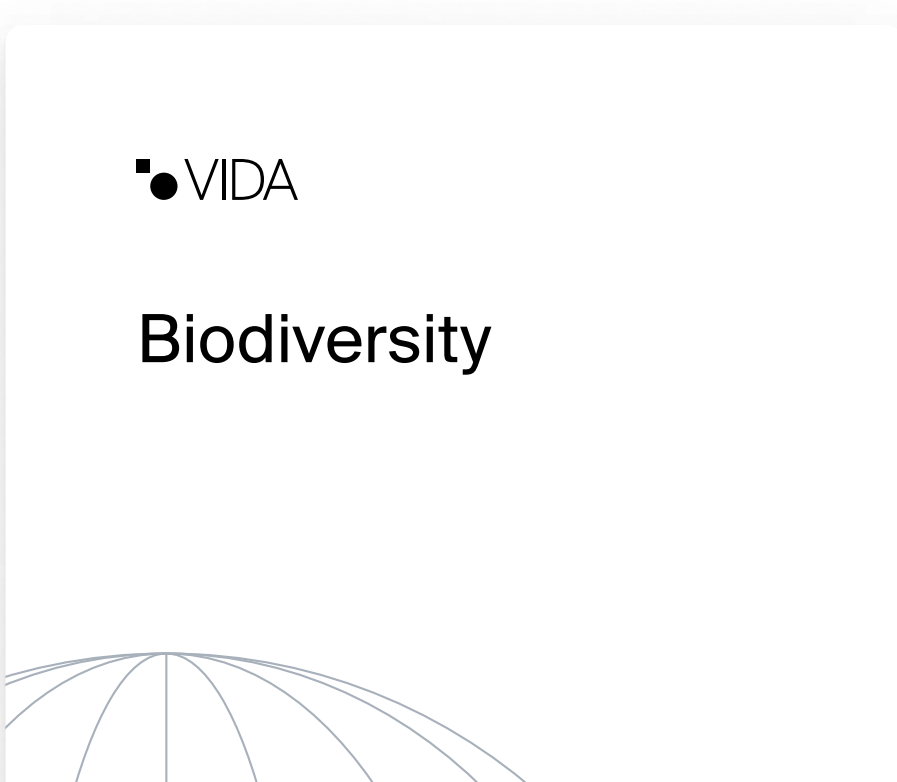
-  Riverine flood
-  Costal flood
-  Heavy rain
-  Hail
-  Storm
-  Tornado
-  Earthquake
-  Volcano
-  Tsunami



Biodiversity data

Past, present and future

-  Protected areas
-  Key biodiversity areas
-  Endangered species
-  Deforestation
-  Land cover use
-  Available blue water
-  Drought risk
-  Air quality
-  Number of buildings

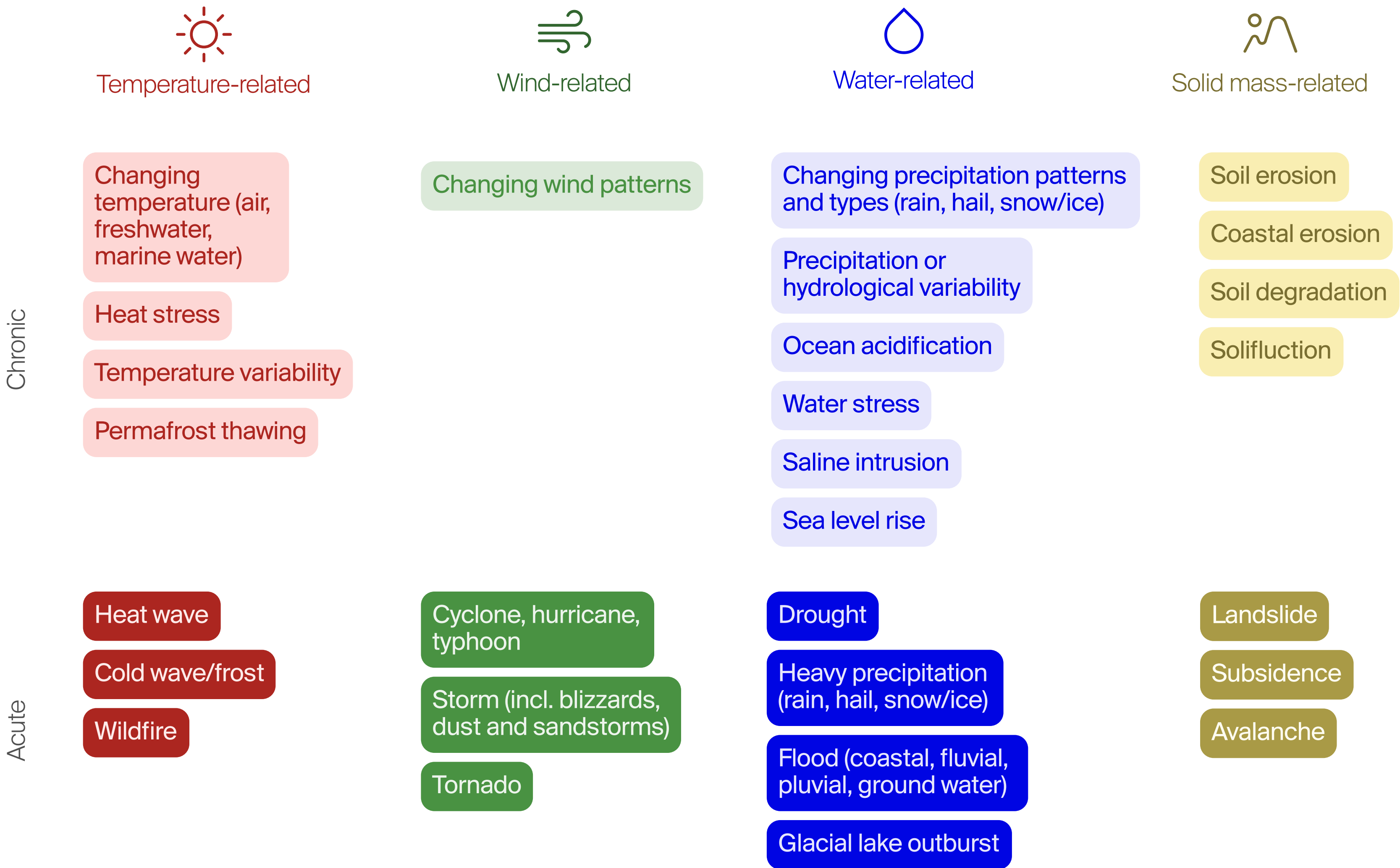


Three big categories of (risk)data

Global frameworks like the EU-Taxonomy - Multiple-Future-Scenario-Analysis

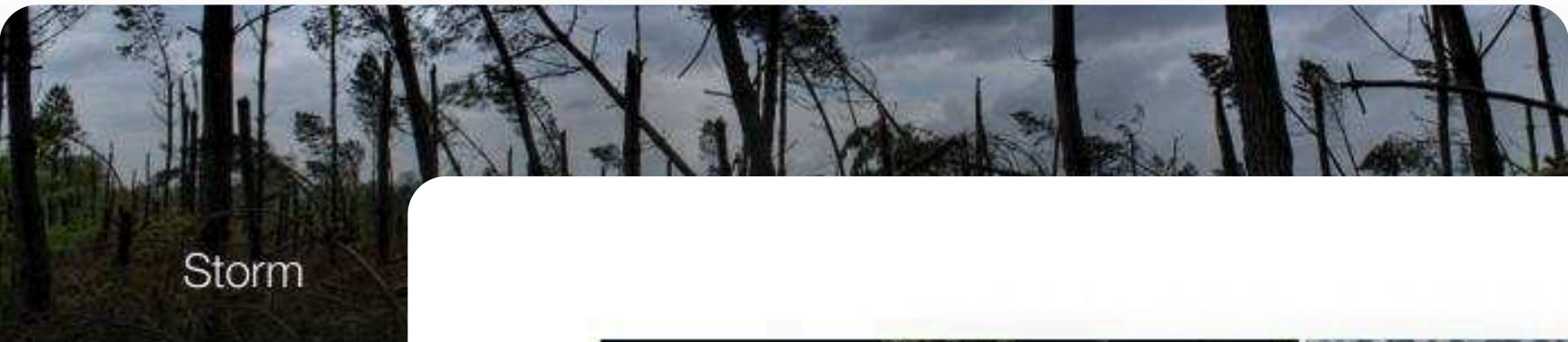
3 different climate scenarios (SSPs)

3 different time horizons compared to the status quo



Clarity in every step

A transparent methodology that clearly outlines how we gather, process, and calculate our data



Storm

Storms pose a series of challenges that have been the subject of the last 30 years of European flood observations and analysis.

We first take the mean wind speed and then fit a general power law to the extreme value distribution of the wind speed to the maximum



Figure 1

Storm vulnerability
The vulnerability curves are defined by different building types. We assume that smaller buildings are more vulnerable than larger buildings. These were chosen based on the fact that they are generally more



Figure 1: Left: Visualization of flood risk. Right: JRC GLOFAS maps showing flood periods (greens). In blue, the map shows smaller streams (orange).

By enhancing JRC data analysis to account for risks effectively. These scenarios near smaller streams

Flood risk methodology
JRC provides flood damage hazard map does not cover the world, there typically are no defenses, the JRC

In order to provide an estimate of flood damage. This dataset provides estimates of flood damage (design, policy, model) level. In Germany, this

For each location, the estimate the actual flood damage as a function of return period

with some strength, and the Class 4 roof curve for commercial buildings, as we expect commercial buildings to have stronger roofs. We further modify the damage curve to assume the roof is at most 15% of the total building value based on the general cost of roofs in buildings. This results in the vulnerability curves in the figure below.

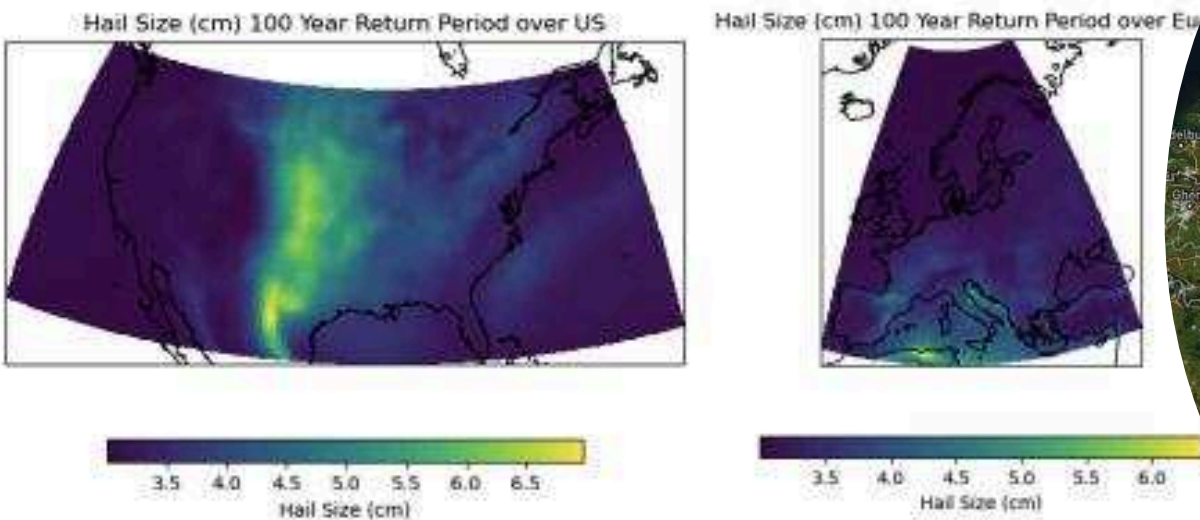
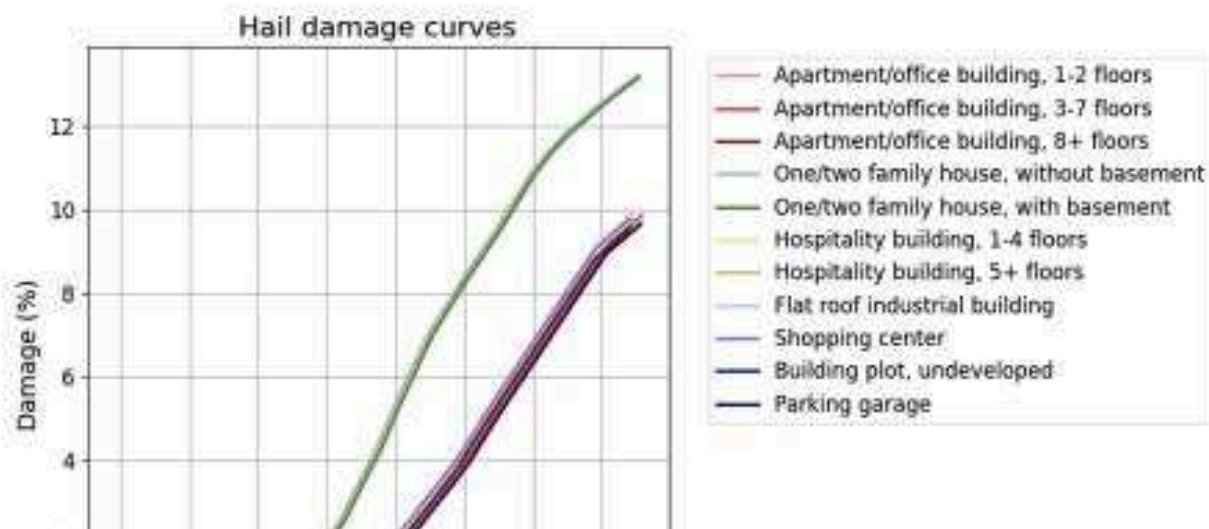
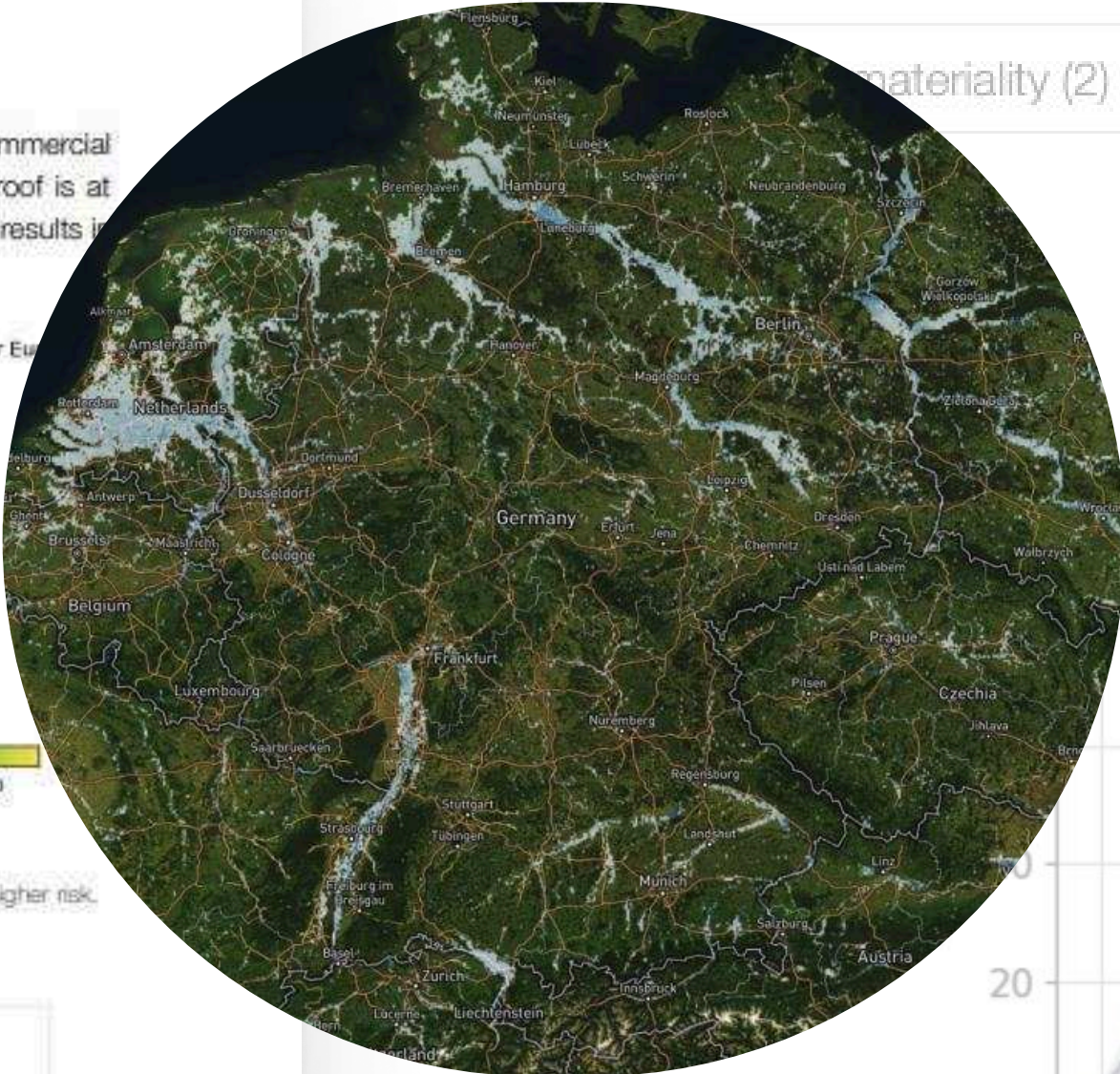


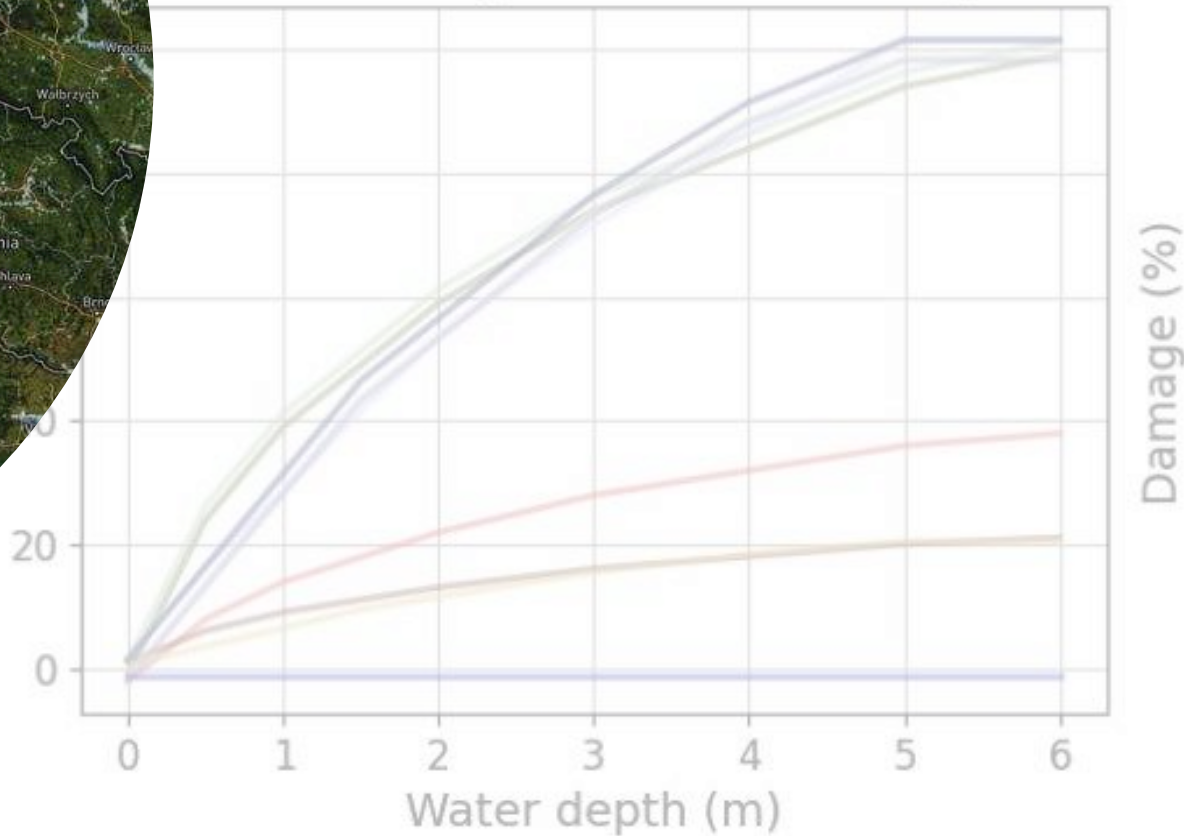
Figure 8: Expected hail size for the 100 year event for the US (left) and Europe (right). Brighter yellow equals higher risk.



Materiality	Description
Not material (0)	The hazard does not pose a material threat to the asset.
Significant materiality (1)	The hazard poses a material threat to the asset. The asset shows a vulnerability to the asset.
Materiality (2)	The asset shows very considerable vulnerability to this hazard.



Flood damage curves for Europe



International track record

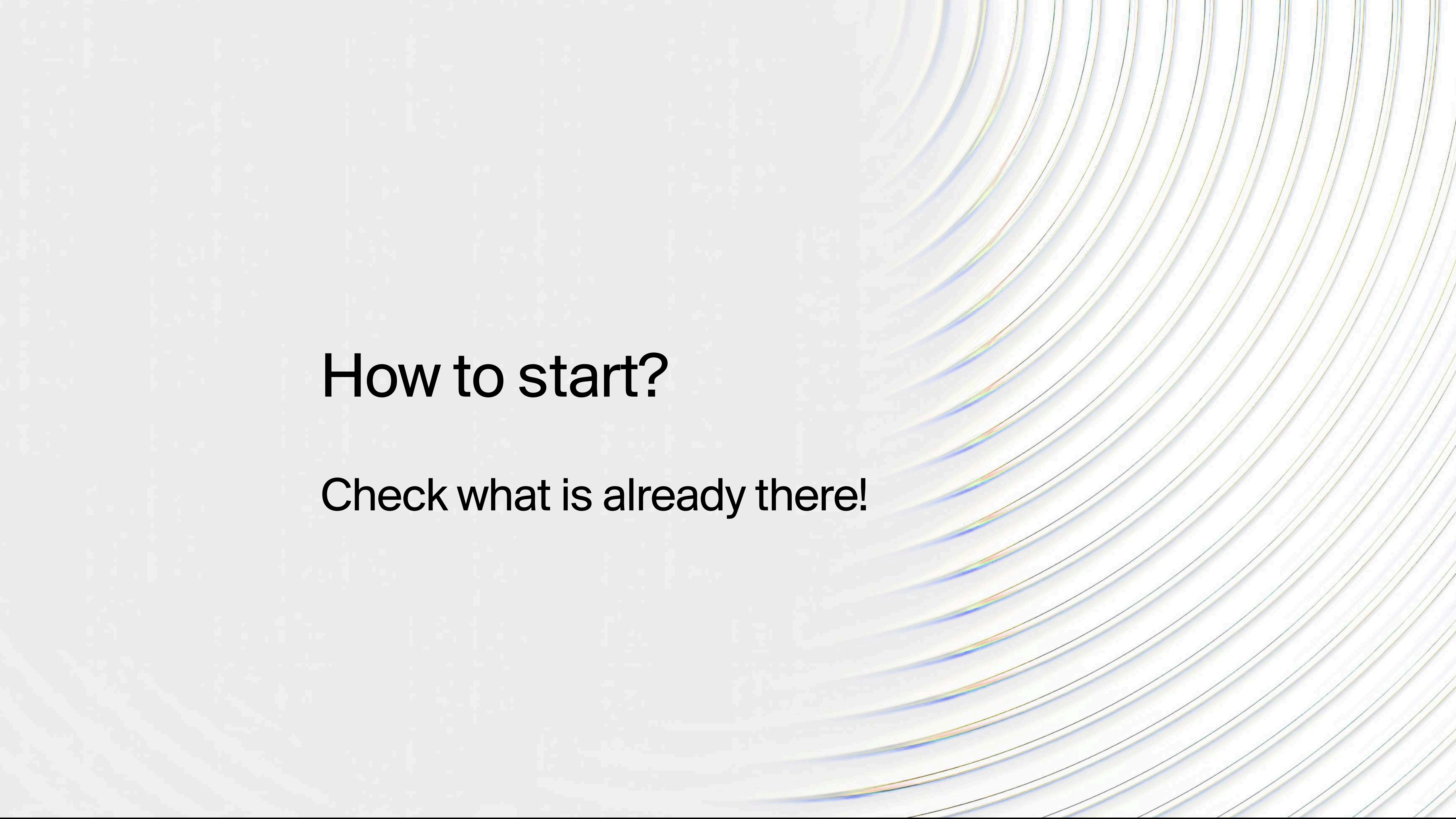
Based in **Munich**, VIDA's global team of geospatial and climate experts supports:

-  Banks
-  Investment funds
-  Data tools & Service providers
-  Governments
-  Consultants

Through our API, an intuitive UI, tailored solutions, and consulting services, we've already supported clients in over 50 countries.

Used and trusted globally by:





How to start?

Check what is already there!

VIDA: Products and data for your needs

VIDA offers a wide variety of products and delivery methods to meet your specific needs delivered via API, PDF, CSV or in our geospatial platform

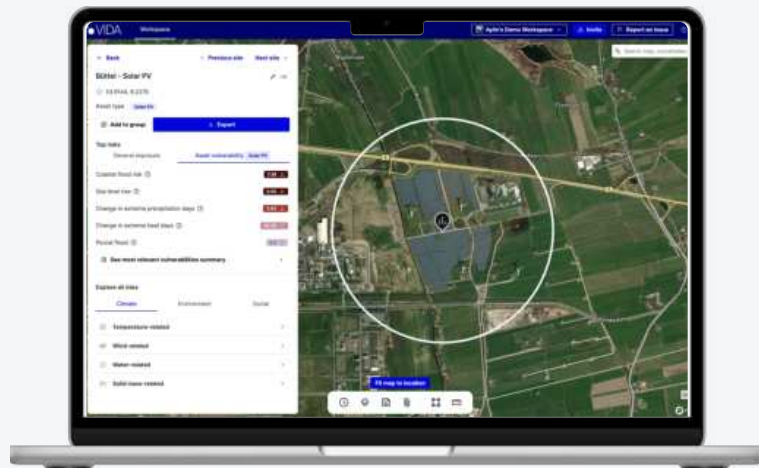
Categories

-  Material hazards
-  EU-Taxonomy & global frameworks
-  Biodiversity

Products

-  Short report
-  Long report
-  Portfolio / User interface

Delivery







For a cost and risk free example reach out



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