In 1999, NASA lost a spacecraft to a translation error.

$125m

Mars Climate Orbiter, gone. September 1999.

One team wrote thrust in **pound seconds** (imperial).

The navigation software read **newton seconds** (metric).

A 4.45 times error. Intended orbit 226 km, actual 57 km. It burned up.

The data was not wrong. It was never translated into a common language.
That same gap now sits between climate science and the people who allocate capital.

02 | THE QUESTION

The data exists. Capital allocation acts as if it does not.

We have assembled the most complete body of climate and environmental data in human history.

IPCC | WMO | TCFD | TNFD | CDP | ESG ratings

Six IPCC assessment cycles. The TCFD framework adopted across more than forty jurisdictions. Over twenty thousand companies disclosing through CDP. ESG ratings across most of global listed equity.

> ***Yet finance ministers, credit committees and asset managers decide every day as if none of it were there.***
> *This is not denial. The data has never been translated into the form they need to act on it.*

We do not have a data problem. We have a translation problem.

The data does not speak the language of credit, basis points and rating that the investment committee uses. The problem is the same on the carbon side and on the nature side.

THE LANGUAGE OF THE DATA

- Degrees of warming
- Scenario narratives
- ESG scores and ratings
- Disclosure outputs

MISSING TRANSLATION LAYER

THE LANGUAGE OF CAPITAL

- Dollars and euros
- AAL and PML
- PD, LGD and EAD
- Basis points (bps) and NPV

AAL *average annual loss* · ***PML*** *probable maximum loss* · ***PD*** *probability of default* · ***LGD*** *loss given default* · ***EAD*** *exposure at default* · ***bps*** *basis points, one hundredth of one per cent* · ***NPV*** *net present value*

We are stuck at disclosure. ***The task is to move from disclosure to valuation***

Where the signal disappears

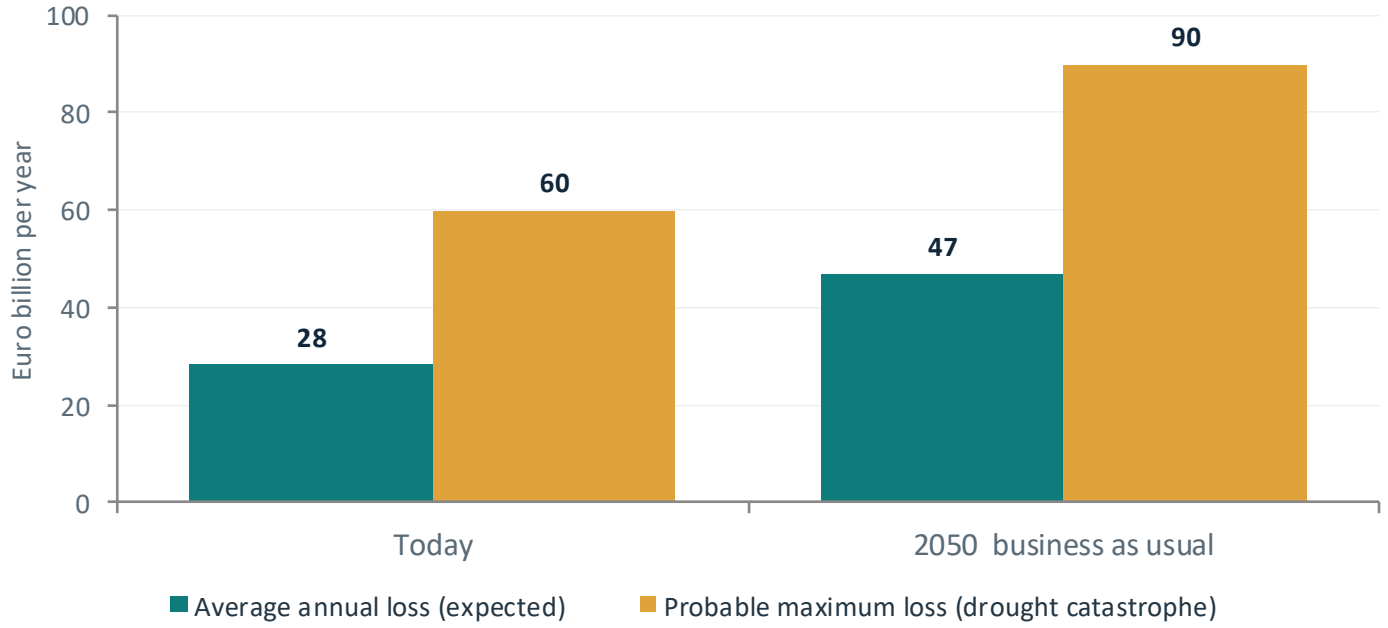
When an investment committee meets to allocate capital, it does not speak in warming pathways, emissions inventories or qualitative risk narratives. It speaks in:

basis points	**risk premia**	**high integrity forecasts**	**forward price curves**
cost of capital	**hurdle rates**	**debt service coverage ratios**	**expected loss**
probability of default	**internal rate of return**	**capital charges**	**net present value**

Climate data is abundant upstream. Nature data is developing rapidly. But the decision relevant financial signal disappears before it reaches the decision point of asset allocation, investment or portfolio alignment.
That is the translation gap we must close.

Translating physics into a price: EU agriculture

EIB and European Commission, with Howden, May 2025. The first EU wide assessment to express climate risk to farming in the core insurance metrics, average annual loss and probable maximum loss, across all twenty seven member states.



20 to 30%

of these losses are currently insured

AAL sets the premium and the budget.

PML sets the capital requirement.

A forward price for physical climate risk that a finance ministry, a CAP budget committee or an agricultural lender can use directly. ***This is disclosure becoming valuation.***