

Climate risk is business risk

22 October 2026



Company overview

A global insurance group founded in London in 1994. We place more than USD$42bn of premium and employ 20,000+ people across 55 countries.

Howden Pacific covers Australia, New Zealand and Fiji, placing more than A$700m of premium.

Our aim is to help clients become **sellers of their risk, not just buyers of insurance**.

Howden Climate Risk & Resilience

A global team of 70+ specialists combining Howden's insurance, reinsurance and capital markets capability with climate advisory expertise.

We identify a client's climate exposure, measure it in real financial terms, and then manage, transfer or mitigate it.

Our focus is insurance as an enabler of investment, not just a cost line.



Matt Weaver

Head of Climate Risk & Resilience, Pacific

Matt is a Fellow of the Faculty of Actuaries (UK) and has over 18 years of diverse experience in insurance, reinsurance, catastrophe and climate analytics, product development, pricing, innovation, and alternative risk transfer.

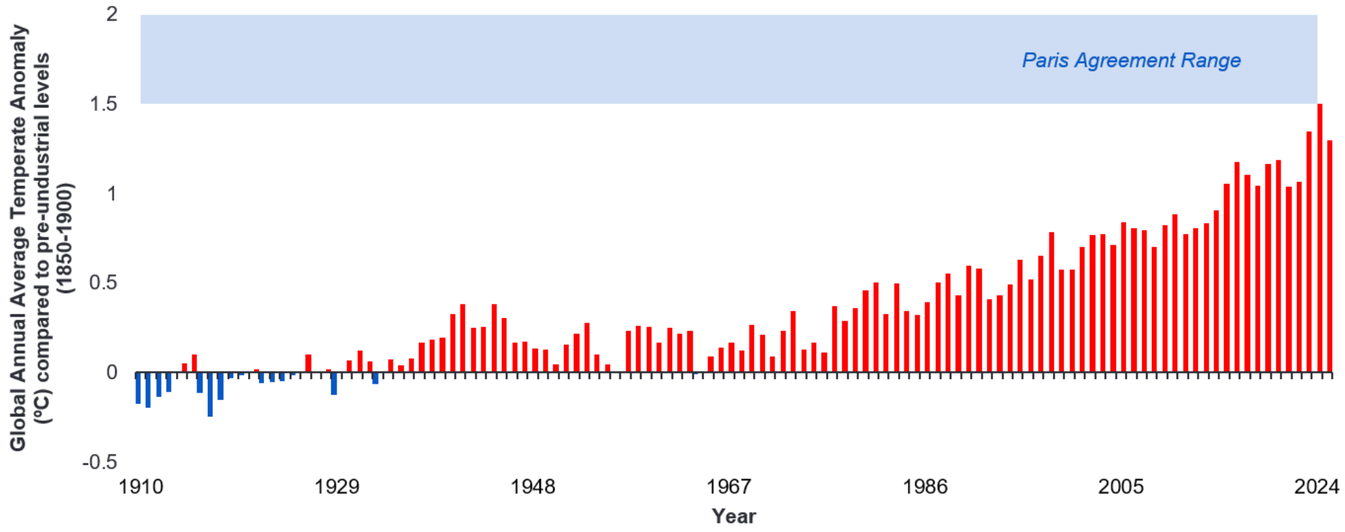
He works with growers, manufacturers and retailers to answer one question their risk register cannot: **what is a bad season actually worth, and what should we spend to change it?**



Climate science update

Global trends and local Australian risks to assets, communities, biodiversity, economies and the rising cost of inaction.

Global temperatures continue to rise, bringing with them extreme challenges to Australia, and the trend is likely to continue…



Source: NOAA National Center for Environmental information, https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/global/time-series

11

The hottest years on record are the last 11 (2015 to 2025)

~1.30°C

Where 2025 landed above pre-industrial, cooler only because a La Niña briefly masked the trend.

1.5°C

First breached across a full calendar year in 2024.

~90%

Of the extra heat is absorbed by the ocean, the engine behind storms, marine heatwaves and coastal risk.

Sources: WMO State of the Global Climate 2025; Copernicus / ECMWF, 2026.

ENSO (El Niño / La Niña) is our single biggest driver of year-to-year climate extremes: drought, heat, flood & bushfire.

El Niño years

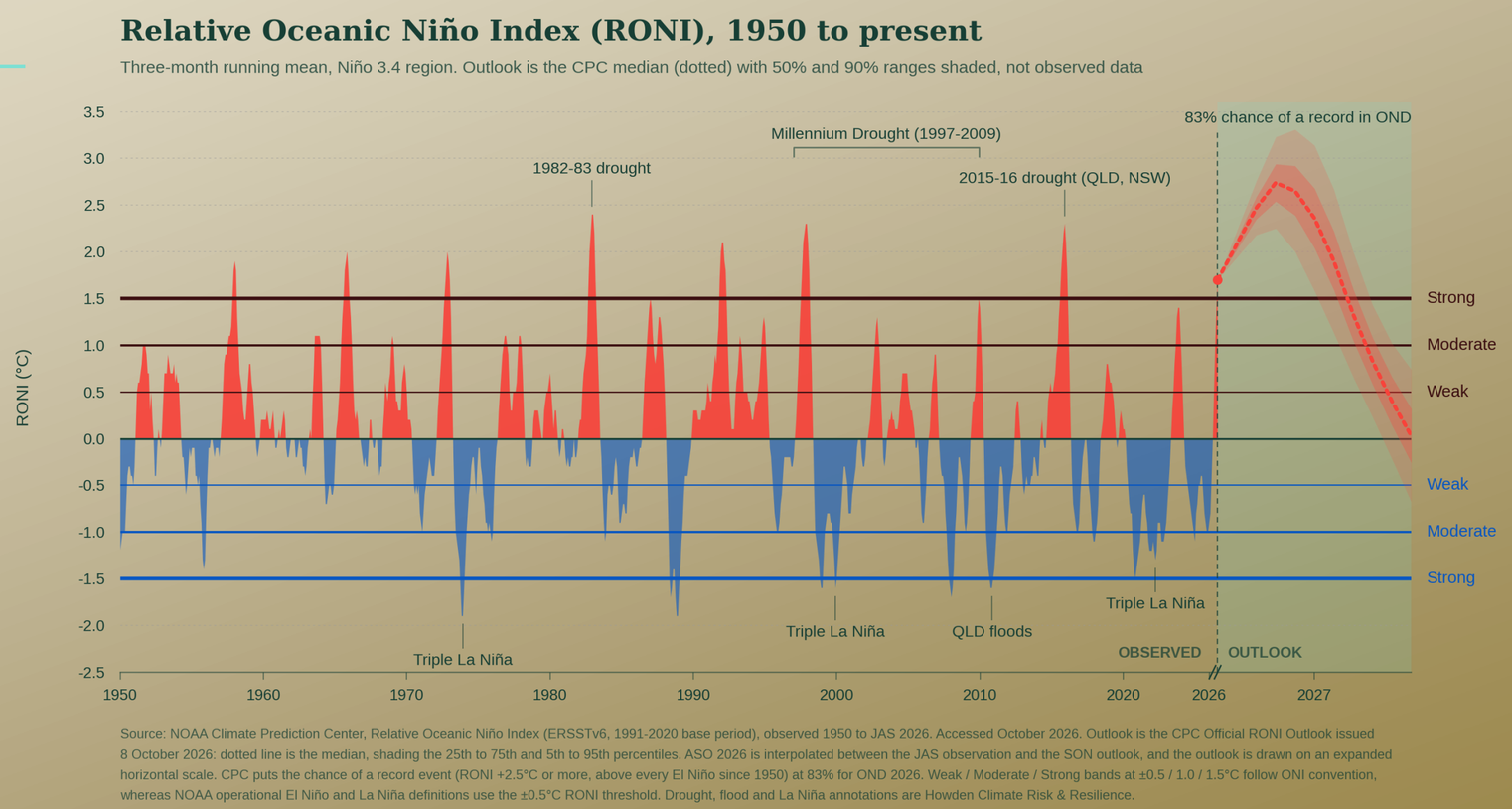
- Hotter, drier conditions
- More intense heatwaves and drought
- Elevated bushfire risk

La Niña years

- Heavier rainfall
- More severe flooding
- Saturated catchments, higher flood peaks

A warmer climate intensifies those extremes, meaning heavier extreme rainfall and deeper drought.

Still debated: how much the swings themselves strengthen, and how much of the recent record is natural variability versus human-forced warming.



Source: NOAA Climate Prediction Center, Relative Oceanic Niño Index (ERSSTv6, 1991-2020 base period), observed 1950 to JAS 2026. Accessed October 2026. Outlook is the CPC Official RONI Outlook issued 8 October 2026: dotted line is the median, shading the 25th to 75th and 5th to 95th percentiles. ASO 2026 is interpolated between the JAS observation and the SON outlook, and the outlook is drawn on an expanded horizontal scale. CPC puts the chance of a record event (RONI +2.5°C or more, above every El Niño since 1950) at 83% for OND 2026. Weak / Moderate / Strong bands at ±0.5 / 1.0 / 1.5°C follow ONI convention, whereas NOAA operational El Niño and La Niña definitions use the ±0.5°C RONI threshold. Drought, flood and La Niña annotations are Howden Climate Risk & Resilience.

ENSO drives our extremes and the assumption now is fewer mild years and sharper swings. Businesses must plan for both the flood and the fire in the same decade.

Australia’s first National Climate Risk Assessment

Purpose

- Provide a national evidence base on climate risks to people, economy, infrastructure and ecosystems.
- Informs the National Adaptation Plan and guides action at all levels.

Key Findings

Climate hazards worsening under all assessed scenarios (+1.5°C, +2°C, +3°C)

Extreme heat, bushfires, floods, coastal inundation will intensify and compound.

Sea-level rise could reach one meter, doubling the number of Australians exposed to coastal hazards to 1.5 million by 2050 and 3 million by 2090.

Average number of heatwave days per year would double (+2°C) and quadruple (+3°C). Heat-related deaths could rise 4 to 5x by 3°C warming. Vulnerable groups most at risk.

Average spending on disaster recovery could increase by 7 times by 2090 under a +3°C scenario

Heat exposure could cut productivity, costing $135 - $423 billion by 2063, with agriculture, construction, manufacturing, and mining losing 700,000 workdays annually under +3 °C.

Ecosystem collapse, loss of carbon sinks, food and water security.

Implications

- Proactive adaptation and risk reduction are far more cost-effective than reacting after disasters
- Investing in resilience today can lower the long-term financial, social and environmental costs.
- Stronger governance and urgent emissions cuts are critical.



From qualitative to quantitative

Cashflows are what matter: putting climate on the P&L and the balance sheet

Climate risk lands on a food & beverage P&L in five places

Only one of them is a site you have insured

Where it lands

1 Growing & sourcing

Yield and quality. Heat at flowering, rainfall deficit at sowing, hail and frost in horticulture, water allocation in irrigated regions.

Availability
Input Costs (COGS)

2 Processing & manufacturing

Single-site concentration. Flood, bushfire and storm at the plant. Heat and humidity limits on process lines and worker hours.

Business interruption
Capital expenditure

Insurance responds here

3 Cold chain & logistics

Refrigeration load in heatwaves, power interruption, road and rail closure, port disruption. Shelf life lost in transit.

Waste
Service Levels

4 Demand & category

Weather-driven category shifts, promotional plans that assume a normal summer, consumer price sensitivity after a shock.

Revenue
Product mix

5 Capital & compliance

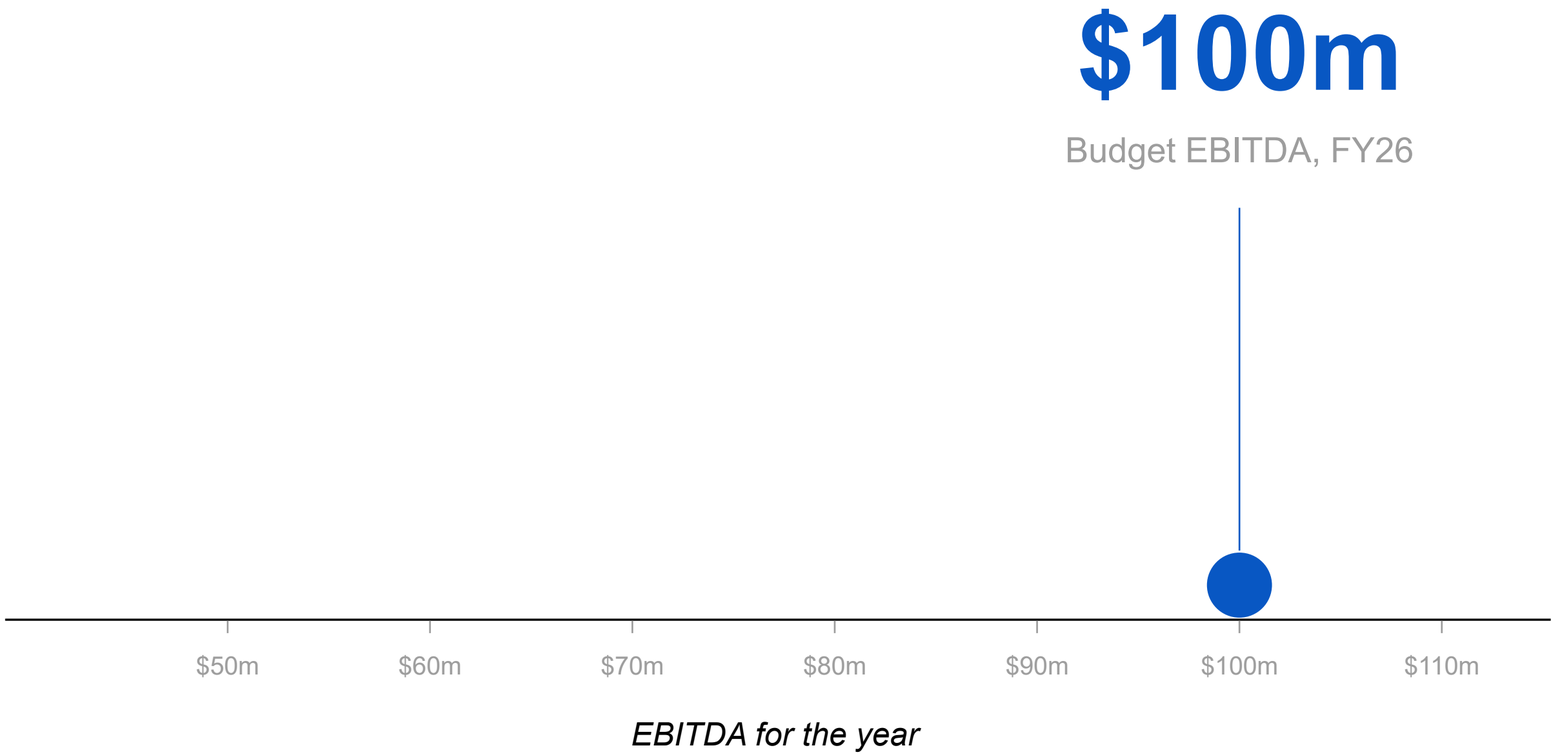
Insurance capacity and pricing, lender and investor scrutiny, ASRS disclosure, retailer and customer requirements.

Cost of capital
Terms

Your insurance covers the one row where you own the asset, not the four where you own the earnings.

Start with the number you already have

Illustrative: a food manufacturer



One number runs everything

Your capex approvals, the test your bank applies to your earnings every quarter, your incentive plan and your guidance all sit on this single figure.

But it is a point estimate

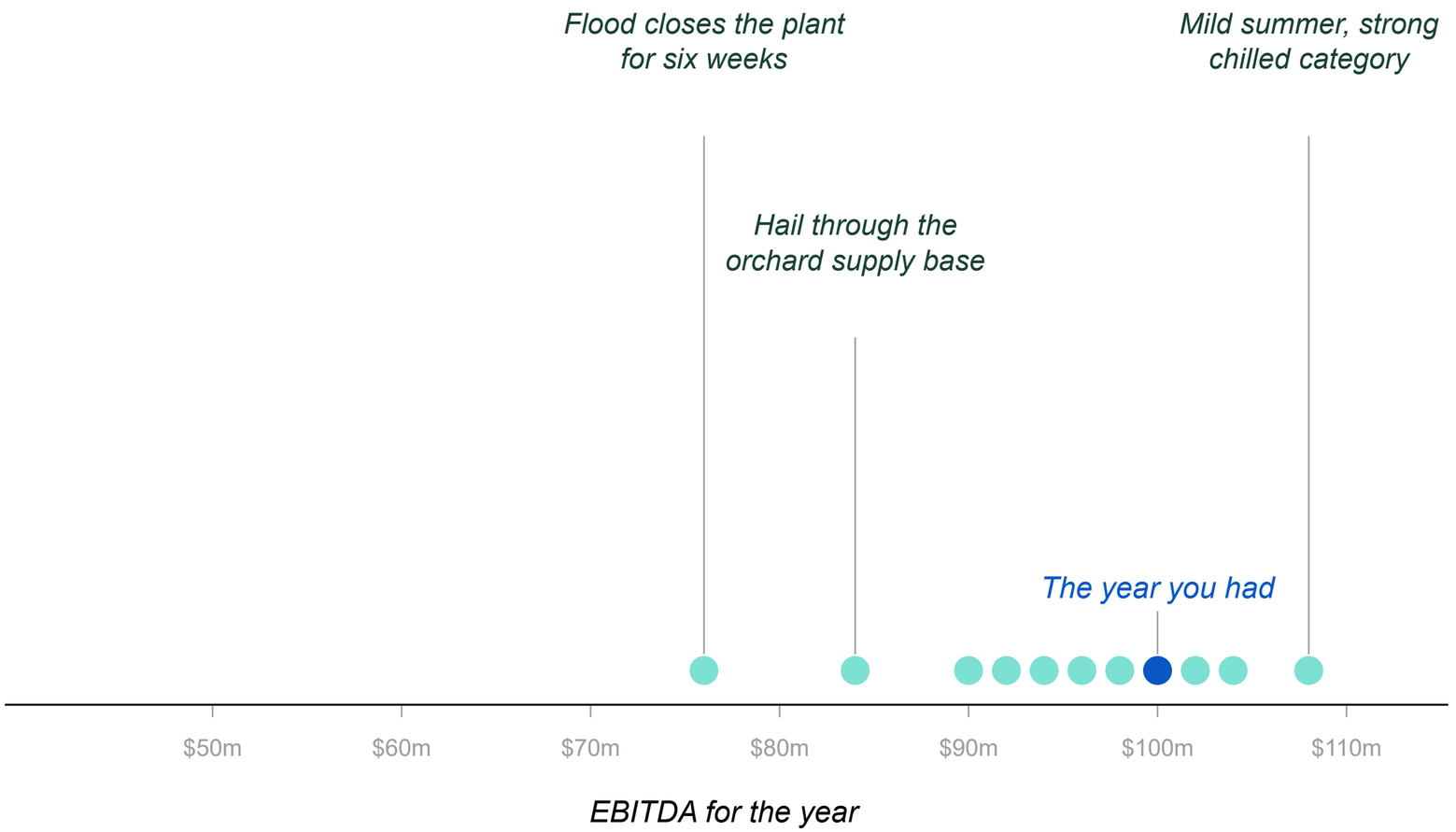
It assumes one version of the weather. Usually the average one and usually based on what it looked like last year.

The honest question

Not “will we hit it”. It is: how far below it could we land, how often, and what would that cost us?

Same business, an additional ten different years

Same business, same strategy, same people. Different weather.



Re-run FY26 ten times

Nothing about the business changes. Only the weather, and everything the weather touches: yield, quality, freight, energy, refrigeration, demand.

Most versions cluster

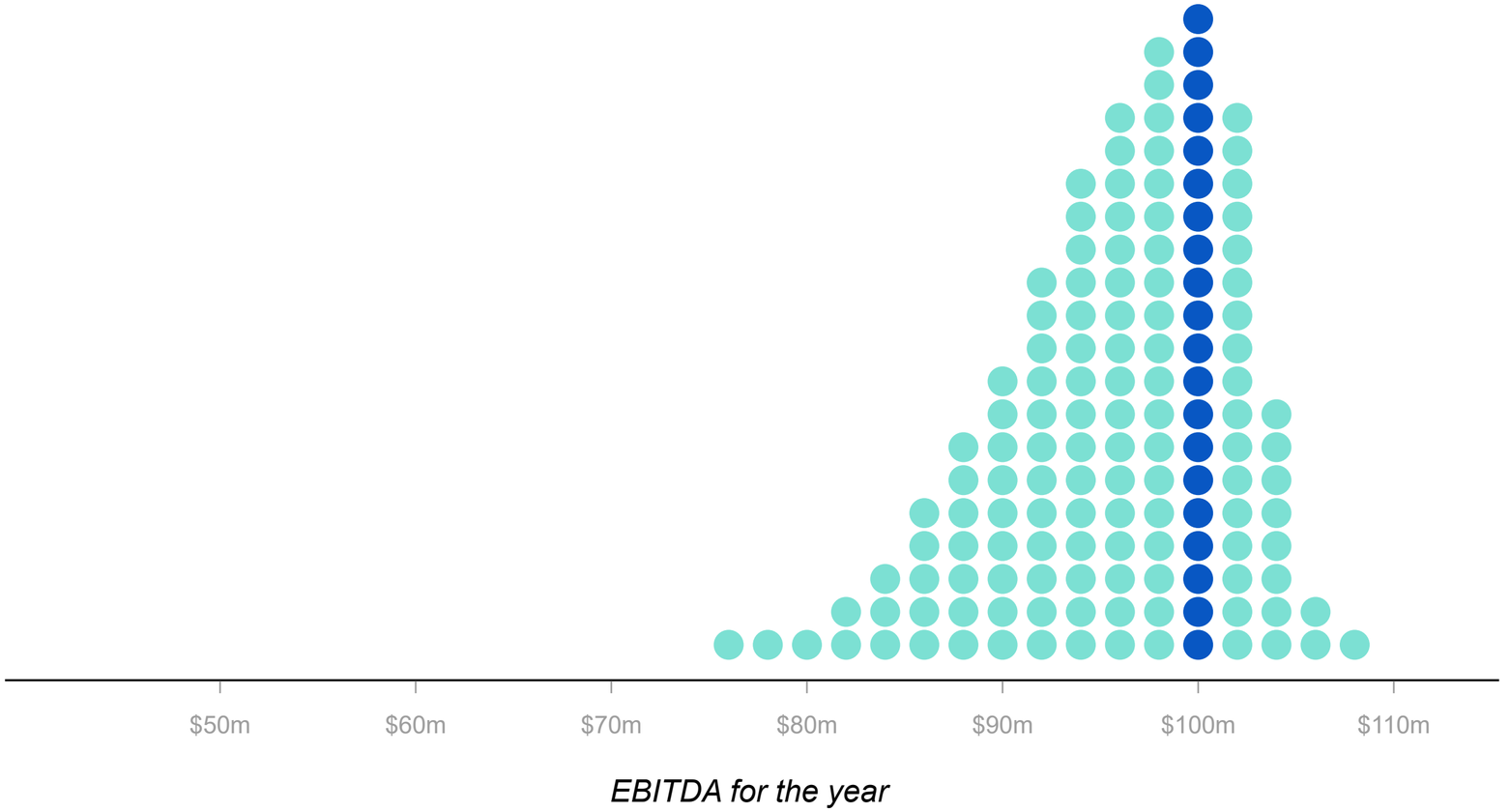
The majority land close to budget. That is why budgets mostly work, and why a single number feels safe.

A few do not

One or two land a long way left. Those are the years people remember, and the ones the budget did not contemplate.

Now run it thousands of times and the dots pile up

Each dot is one version of the year. Stack them where they land.



Each dot is one version of the year

Stack them where they land. A tall column means that outcome happened often. A short one means it happened rarely.

That is the whole idea

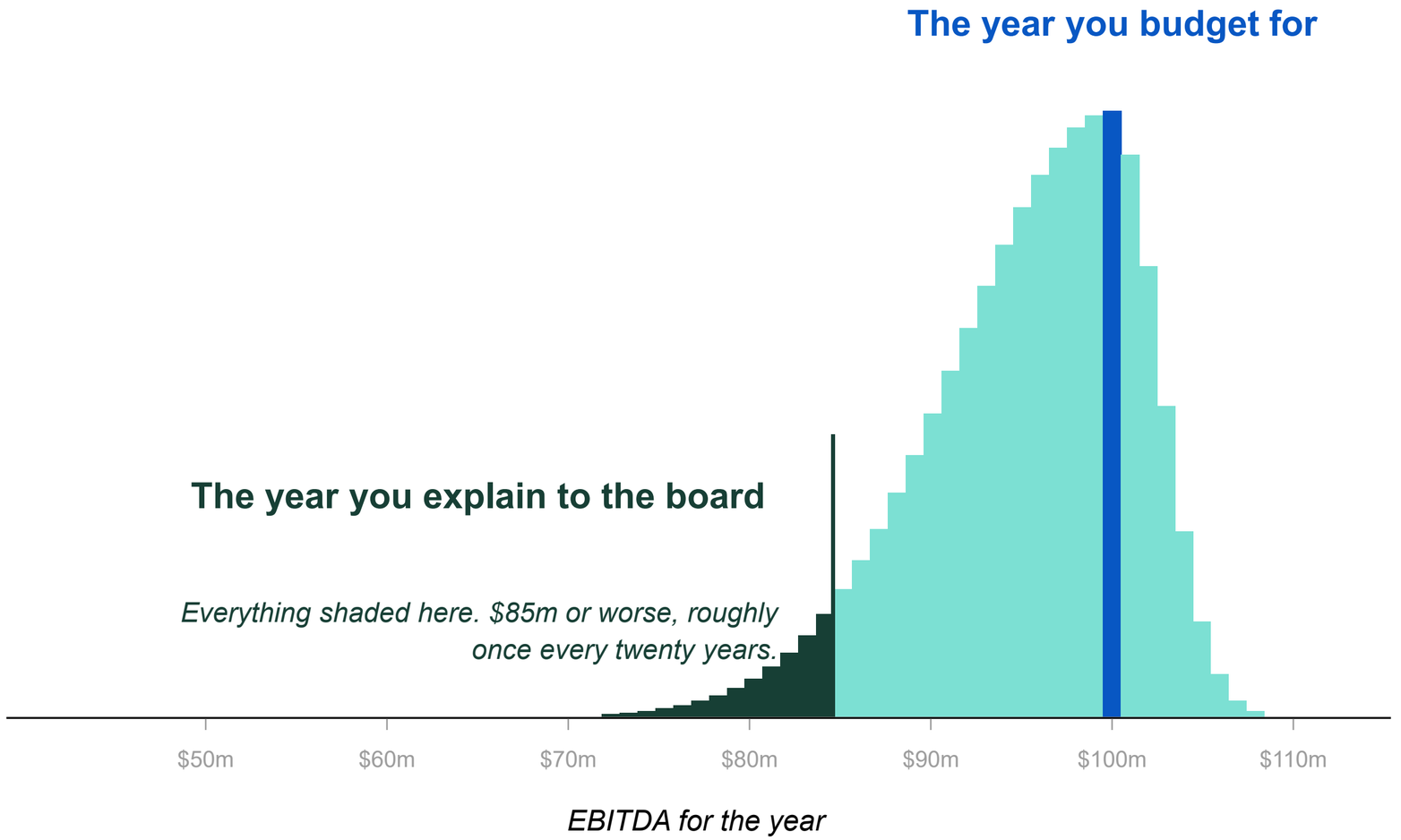
No forecast, no single answer. Just a count of how often each result turned up when you let the weather vary the way it actually varies.

Height means frequency

Tall means often, not big. The short columns on the left are the ones that hurt.

Smooth it out and two numbers matter

Neither of them is the average



The middle

Where the year usually lands. This is the number your plan, your guidance and your incentive scheme are built on.

The left edge

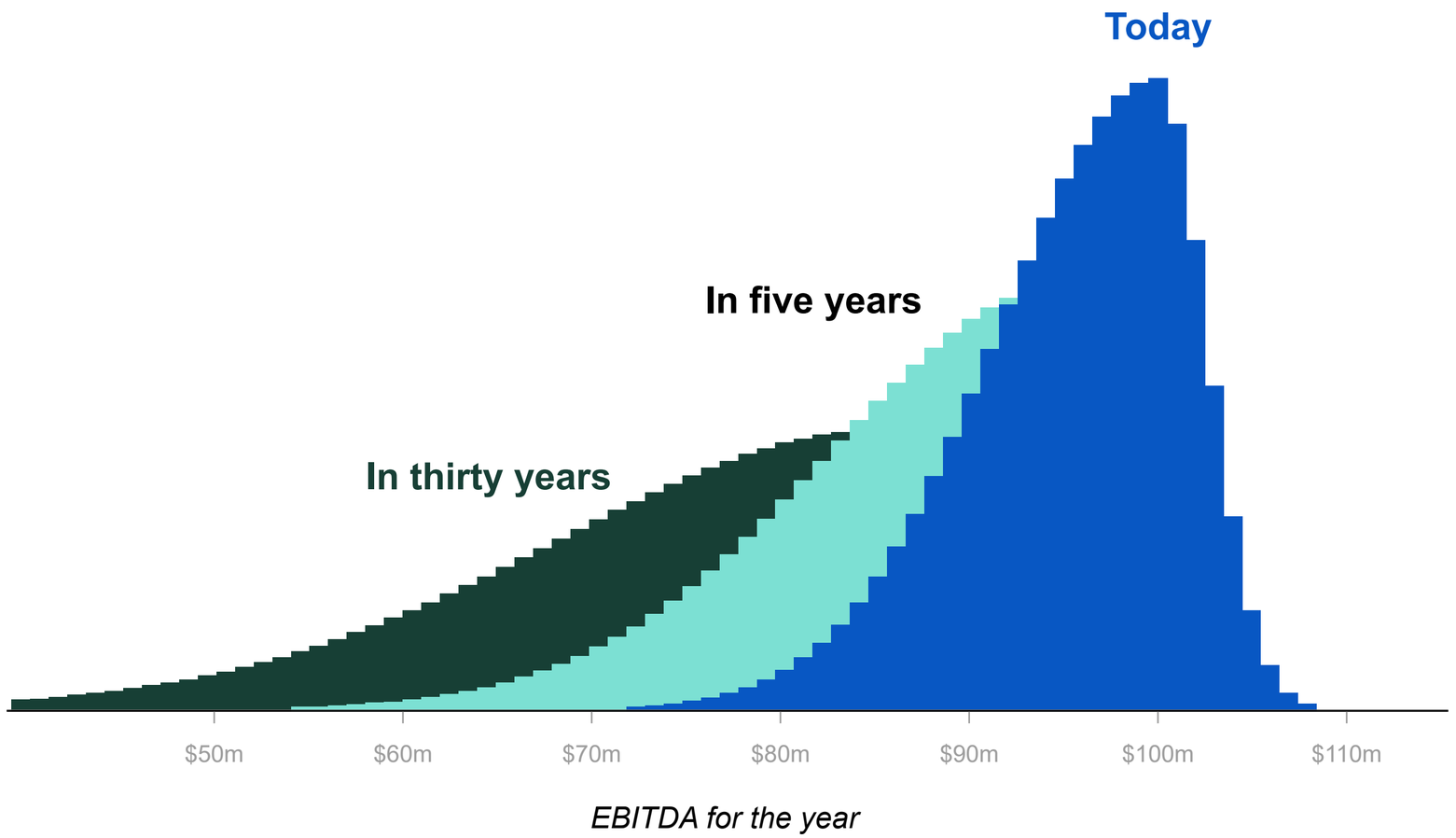
The 1-in-20 and the 1-in-100 year. This is the number your bank commitments, your balance sheet and your continuity of supply are built on.

Businesses fail due to the left edge

Nobody goes under because of a slightly disappointing average. They go under because of one year they never priced.

Now we can age the picture

Two separate things happen, and they need two separate responses



The middle slides left

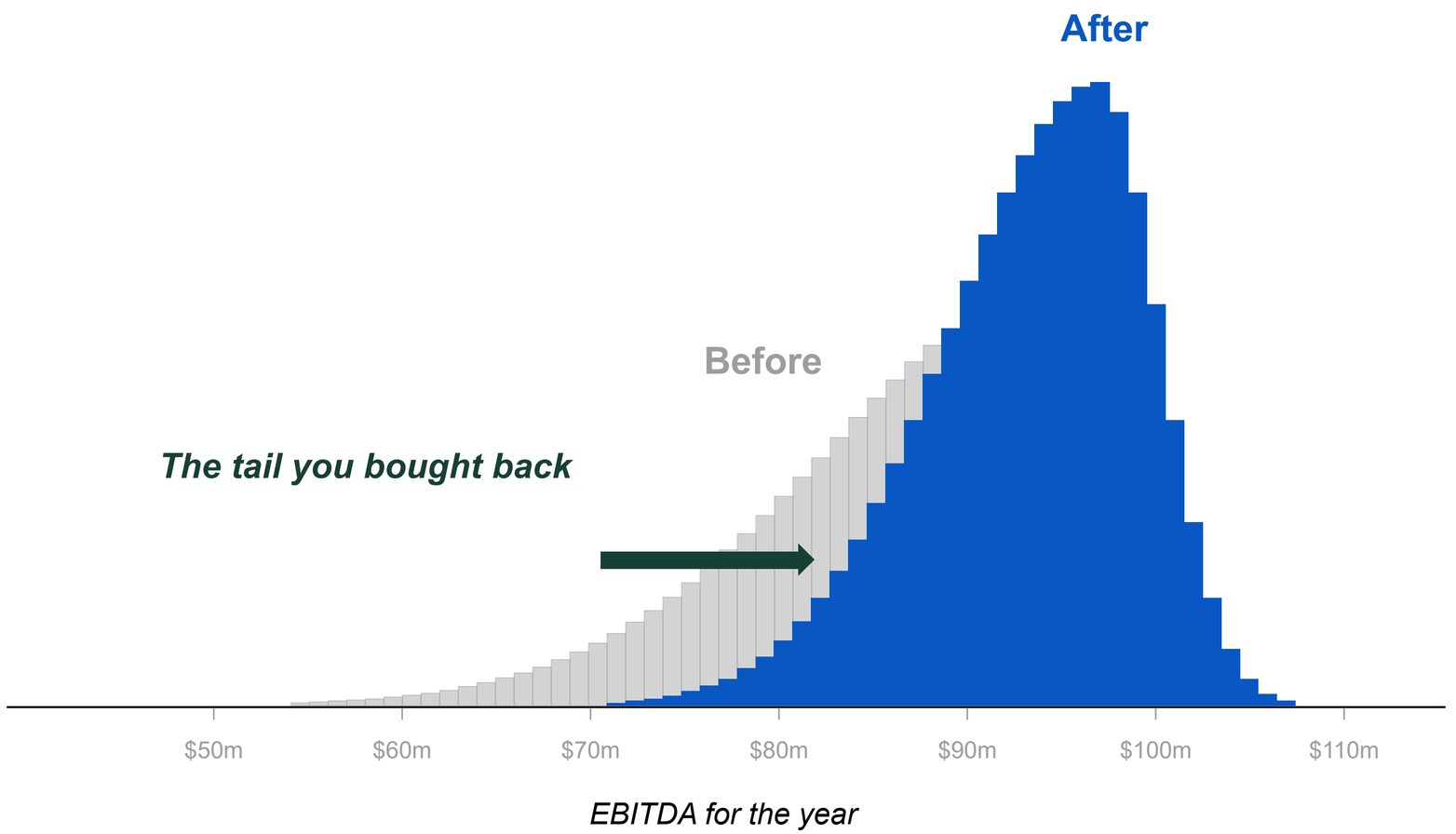
Structural margin erosion. Lower yields, higher input and energy costs, more refrigeration, higher premiums. This is a strategy and pricing problem.

The tail stretches

Severe events arrive more often and hit harder. This is a capital, insurance and continuity problem, and it is the one that gets neglected.

Money changes the shape and that is the business case

Every intervention does one of two things: moves the middle or pulls in the tail.



What it costs

Premium, or the capital cost of the mitigation. A single, known, budgetable number.

What it buys

A measurable reduction in expected loss, plus the removal of the outcomes that breach a covenant or interrupt supply.

The ratio is the pitch

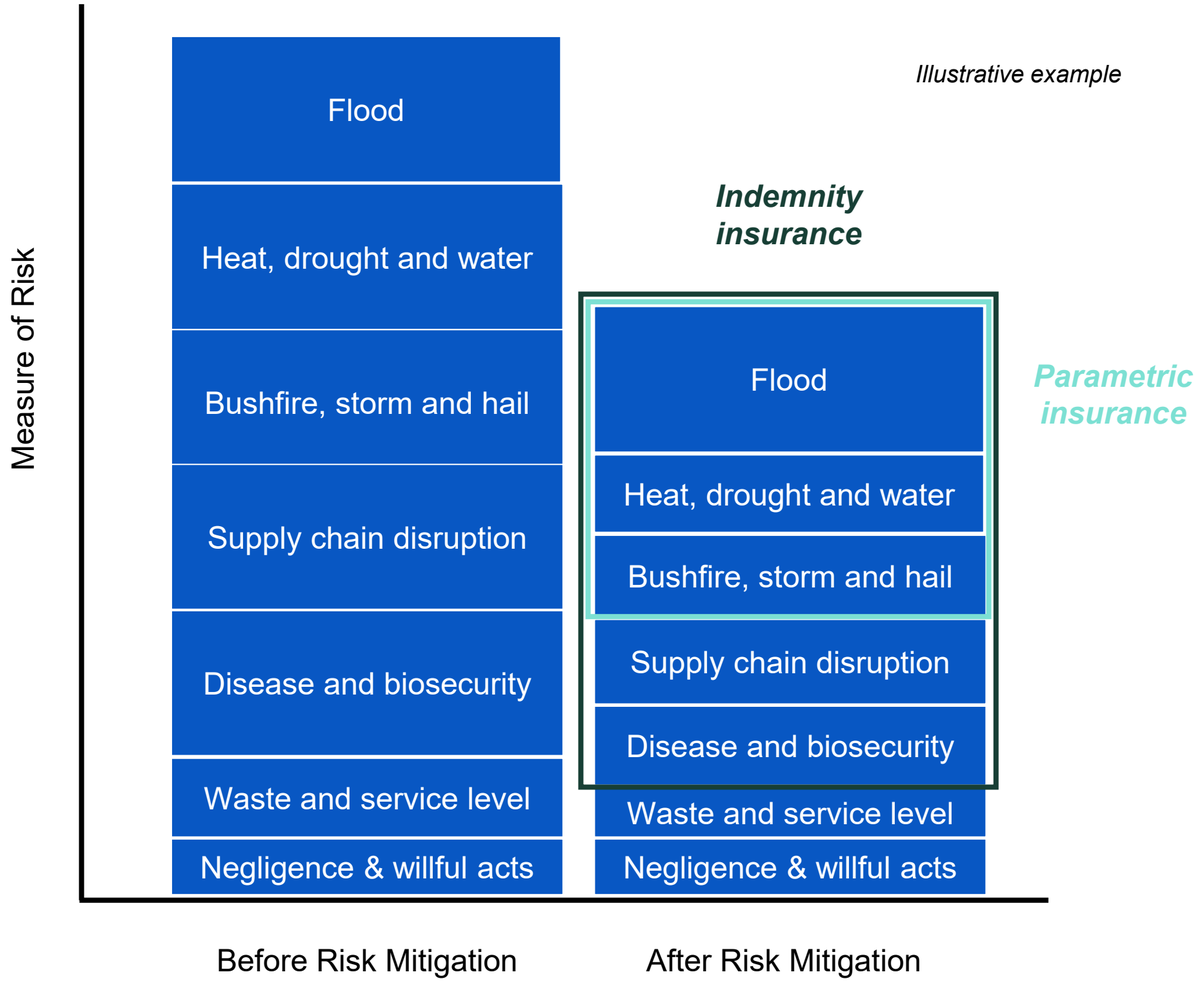
Cost versus reduction in expected loss and tail. That is an ROI calculation, in the same language as every other capex paper CFOs read.

This is the moment climate stops being a disclosure exercise and becomes a capital allocation decision.

Case studies

Case study: de-risking a food manufacturer

Mitigation shrinks the risk, then the residual is split between two very different markets





Case Study 1: securing an ingredient supply

Adaptation investment. A manufacturer funds cover on a risk it does not own.

The exposure

A single growing region supplied the majority of one category's key input. Yield and quality turned on a six-week window. Hot and dry together, at the wrong moment, and the season was gone.

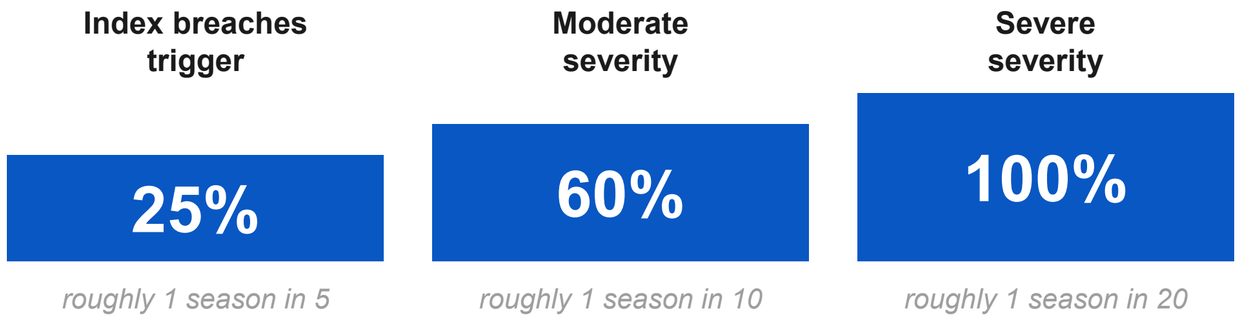
Why nothing covered it

The manufacturer owned no farm but had an insurable interest. Multi-peril crop cover sat with growers, was uneconomic, and responded to single perils rather than the compound event that caused the loss.

What we built

An index on gridded temperature and rainfall, calibrated over 40+ years, with the measurement window matched to the crop's critical growth stage rather than the calendar. Funded by the buyer.

How it pays, with no loss adjustment and no argument



Percentage of limit paid

What the buyer received

- Cash within weeks of the window closing, while reformulation and spot-buy decisions were still live
- A known worst case for input cost, which the category plan could be built around
- A 40-year evidence base that unstuck a stalled irrigation and storage capex case

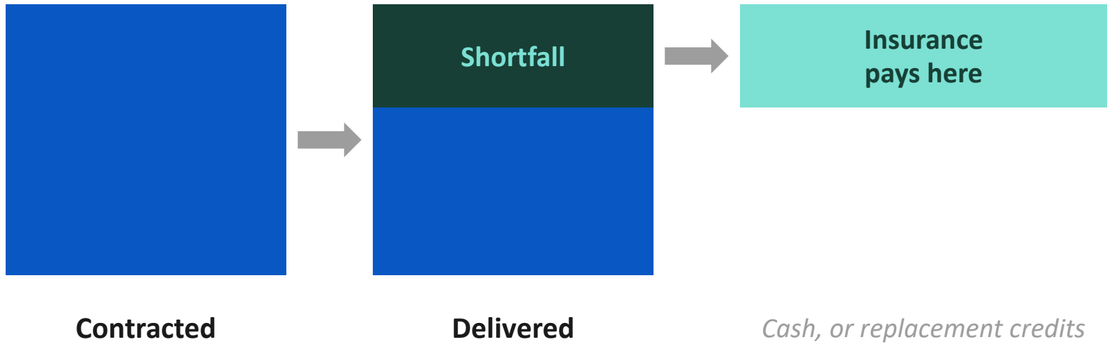
Case Study 2: carbon markets

Insurance is what turns a forward carbon position into a contract you can rely on

The exposure nobody prices

- A public Scope 3 commitment, met with credits bought forward
- Those projects are exposed to fire, drought, flood and reversal
- Under-deliver and you buy at spot, in a thin market, at the worst moment
- Plus the reputational cost of missing a commitment you announced

Illustrative



Carbon delivery insurance

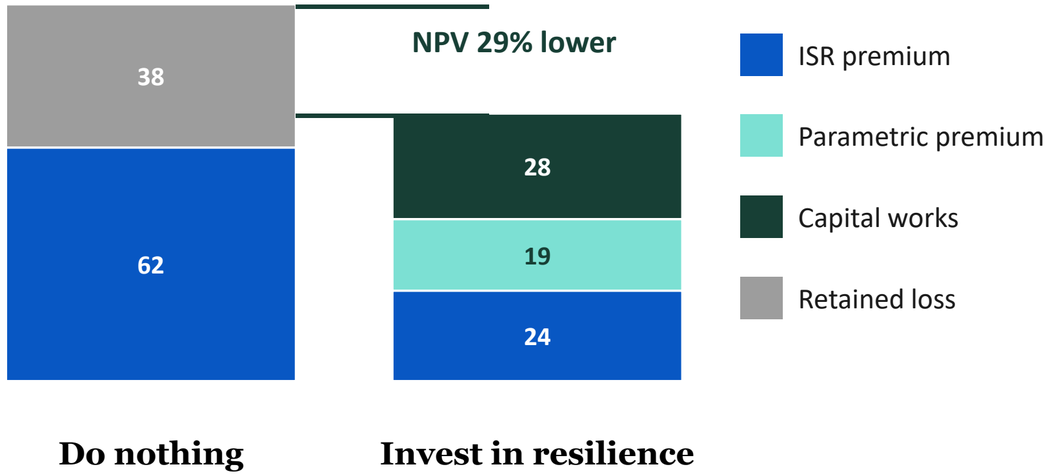
Cover against shortfall in issued credits, triggered by the physical and regulatory events that stop a project delivering. Placed across reforestation, soil carbon, environmental plantings and savanna fire management.

- Turns an uncertain delivery obligation into a contractual one
- Allows a buyer contract straight with a project instead of paying an intermediary's risk margin
- Unlocks project finance, because lenders can lend against an insured offtake

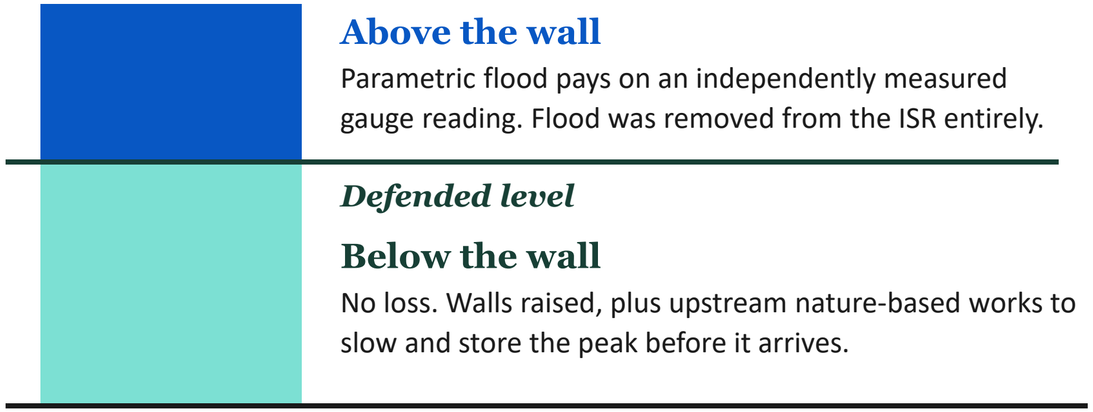
Case Study 3: investing in resilience

A commercial asset in a high flood exposure catchment, where event frequency is rising year on year

NPV of cashflows over 20 years, illustrative, indexed to 100



Flood height at the gauge



The exposure

A commercial asset in a catchment where flood frequency is rising year on year. The ISR was repricing hard, sub-limits were tightening, and the direction of travel was toward flood becoming uneconomic to insure at all.

What we structured

Walls raised to a defined level, with upstream nature-based works to slow and store the peak. Flood then removed from the ISR and replaced with a parametric layer triggered on gauge height above the defended level.

The outcome

Presented to the CFO as cashflows, not as a risk paper. Capital works plus parametric premium plus a reduced ISR, discounted over twenty years, against the do-nothing insurance cost. Resilience cleared the hurdle rate.

“If the insurer does not understand my risk, I will design my own cover.” Resilience stopped being a theory and became a return on investment.

Thank you



Get in touch

matt.weaver@howdengroup.com
0424 083 201

www.howdeninsurance.com.au

The information contained in this document is confidential and may not be copied, distributed or disclosed to any third parties without our consent. Howden has taken care in the production of this document and the information contained in it has been obtained from sources that Howden believes to be reliable. Howden does not make any representation as to the accuracy of the information received from third parties and is unable to accept liability for any loss incurred by anyone who relies on it.

Howden Insurance Brokers (Australia) Pty Ltd (Howden) (ABN 79 644 885 389 | AFSL 539613) is part of Howden Group Holdings Limited. Please read our Financial Services Guide www.howdengroup.com/au-en/financial-services-guide.

© Copyright 2025 Howden Insurance Brokers (Australia) Pty Ltd.