



CLIMATE · OPERATIONAL RESILIENCE

Climate Stress & *Operational Resilience*

The five hidden transmission channels between climate stress and operational-resilience failures. A framework for insurers modelling the intersection.

SEVEN DOMAINS. ONE COUNSEL.

EXECUTIVE SUMMARY

Climate stress and operational resilience are governed in different parts of the firm, regulated under different supervisory letters, and modelled in different teams. They are also, in five specific ways, the same problem. This paper sets out the five transmission channels by which climate stress becomes operational-resilience failure, why each is hard to see in the standard governance architecture, and how insurers should re-shape ORSA, SS5/25 and DORA evidence so that the intersection is covered rather than fallen between two stools.

§ 1

Two regimes, one underlying physics

Two supervisory letters land on most large UK and EU insurers in 2026 with overlapping demands. SS5/25 (PRA) asks the firm to embed climate risk in its risk-management framework and to evidence its capability to model physical and transition stress. DORA Article 25 (EU) asks the firm to demonstrate operational resilience against severe-but-plausible scenarios, with explicit attention to ICT third-party risk. Read narrowly, these are two different tasks. Read for substance, they ask the firm to show the same thing — that under stress, the operations continue.

Insurers staff the two demands separately. Climate sits in CRO or sustainability. Operational resilience sits in COO or technology risk. Each team produces evidence; the evidence is rarely cross-walked. That is where transmission channels live.

§ 2

The five transmission channels

CHANNEL 1

Supply-chain physical exposure cascading into business-continuity

The supplier the firm depends on for claims handling, policy administration, document storage, or specialist underwriting support sits somewhere geographically. So does the supplier's own supplier. Climate physical events do not respect the boundary of the firm's perimeter. A flood in a third-party operations hub is climate stress at the supplier and operational-resilience failure at the insurer in the same instant. The standard supplier-due-diligence questionnaire rarely asks for primary-peril exposure of the supplier's processing sites. It should.

CHANNEL 2

Data-centre power and cooling under heatwave

The cloud and colocation infrastructure on which the modern insurer's policy systems, claims platforms, broker portals and reporting infrastructure depend has thermal limits. UK and continental-European heatwaves of the magnitude observed in 2022 and 2023 caused thermal events in named hyperscale providers; the insurance industry's exposure to those providers grew through the same period. Climate physical risk transmits to ICT availability, which transmits to the firm's ability to settle claims in the same week as the underlying weather event that generated the claims. The two stresses arrive together and amplify one another.

CHANNEL 3

Workforce displacement and continuity

The pandemic taught insurers that workforce continuity is not the same as headcount. Climate stress raises the same problem in a different form. A flood that closes a major operating centre, a heatwave that forces a workforce reduction in non-air-conditioned sites, an air-quality event that constrains attendance at specialist underwriting hubs — each transmits climate physical exposure into operational continuity. The pandemic-era continuity infrastructure addressed network access and dispersed working; it generally did not address the coincident loss of housing or transport that climate displacement generates.

CHANNEL 4

Third-party concentration in physical-exposed regions

The shift to specialist outsourced services — claims TPAs, actuarial platforms, broker portal providers, KYC providers — has concentrated significant insurance-industry operational dependency in a relatively small number of vendor sites. Many of those sites sit in areas of elevated primary or secondary climate peril. The firm's individual concentration analysis on a single TPA may be modest; the industry's concentration on the underlying provider may be large. When climate stress strikes the underlying site, the insurer experiences operational stress that its own concentration framework did not see.

CHANNEL 5**Regulatory cascade — multiple letters concurrently**

The fifth channel is the one most often missed. A material climate event triggers parallel supervisory action across multiple regimes: a SS5/25 capability follow-up, a DORA scenario test review, an ISSB disclosure verification, and — for cross-border firms — a similar set of letters from EU or US supervisors. The firm receives all of them in the same quarter. Each demands evidence; each requires the same scarce risk-team capacity; each carries its own remediation deadline. The aggregate burden is operational, even though no individual letter is. The regulatory channel is itself a vector of operational stress.

§ 3**Why the standard governance architecture cannot see them**

None of the five channels is hidden. Each is observable. The standard governance architecture cannot see them as a coherent set for three reasons.

1. **Different owners.** Channel 1 sits with procurement and supplier-management. Channel 2 sits with technology risk. Channel 3 sits with HR continuity. Channel 4 sits with concentration risk. Channel 5 sits with the regulatory-affairs team. No one of those owners sees all five, and most do not see two.
2. **Different evidence frameworks.** Each channel generates evidence in a different format — supplier questionnaires, ICT continuity tests, HR scenario plans, concentration thresholds, regulatory tracker logs. Cross-walk requires a structural overlay; few firms have one.
3. **Different time horizons.** SS5/25 evidence is produced annually with a multi-year horizon. DORA evidence is produced quarterly with a near-term horizon. Supplier due-diligence is produced on contract renewal cycles. The evidence assembled in each window does not align in time with the evidence assembled for the others.

THE DIAGNOSTIC

Ask the CRO and the COO, separately, to identify the firm's three largest climate-driven operational-resilience exposures. If the lists do not substantially overlap, the firm has the visibility problem this paper describes.

§ 4

What insurers should change

Cross-walk the evidence

The single most useful change is to publish — internally — a one-page cross-walk between SS5/25 and DORA Article 25 evidence. Each piece of evidence should be tagged with the channels it covers. The map will reveal the channels for which there is no current evidence at all. In our work with insurers in 2025 and 2026, Channel 4 is the most common gap.

Tier suppliers on physical peril

Add a primary-peril exposure attribute to the supplier register. This need not require new on-site assessment; geocoded vendor sites against the firm's existing physical-peril data is sufficient as a first pass. The output should be visible to procurement and to the climate-risk team simultaneously.

Run the regulatory-cascade scenario

Add a single ORSA scenario in which a named climate event triggers four supervisory letters in the same quarter. Size the scenario by the operational capacity it consumes from the risk and regulatory teams, not by the financial loss. This is the scenario most insurers do not currently run; it is also the one that most directly tests Channel 5.

Treat data-centre thermal events as climate stress

The technology-risk team's continuity testing typically includes a generic "data-centre outage." Re-frame the same scenario as a heatwave-driven thermal event correlated with elevated claims volume from the same heatwave. The two stresses arriving together is the realistic version; the generic outage is not.

§ 5

Where the Abgalis Engine fits

The Abgalis Engine treats the climate-to-operational pathway as a first-class transmission channel rather than an analytical bolt-on. For insurers, that delivers three things in this specific intersection:

- A unified evidence map across SS5/25 and DORA Article 25, tagged by channel, kept current as the firm's supplier and infrastructure footprint changes.
- Geocoded primary and secondary peril exposure for the supplier register, with the same data layer ICRIP uses for the underwriting portfolio — enabling the firm to see whether its operational dependence and its insurance exposure share concentration.
- A regulatory-cascade scenario library, instrumented for ORSA and reverse-stress use, sized in operational capacity as well as financial loss.

None of these requires the firm to disclose internal capital-model details, and none replaces the firm's own continuity governance. The work is structural — making sure the evidence the firm already produces is cross-walked into the channels supervisors are increasingly explicit they expect to see covered.

SS5/25 evidence and DORA evidence answer the supervisor's questions one at a time. The intersection — where the climate event arrives at the supplier the firm depends on — answers neither.

§ 6

How to engage

Insurers typically engage on this intersection in one of three ways:

1. **Channel cross-walk diagnostic — four weeks.** A targeted assessment of existing SS5/25 + DORA evidence, mapped to the five channels, with explicit gap identification.
2. **Supplier physical-peril overlay — six to eight weeks.** Geocoded peril exposure on the supplier register, integrated with the firm's existing concentration-risk framework.
3. **Regulatory-cascade ORSA scenario.** A bespoke scenario for the firm's ORSA cycle, modelling the operational capacity consumed by parallel supervisory action.

COLOPHON • SOURCES • TRADEMARKS • NOTICES

ABOUT ABGALIS

Abgalis is a climate and cross-domain risk intelligence platform for insurers and reinsurers. The name draws from the Sumerian *Abgal* — the seven divine sages sent by Enki to counsel the earliest kings of civilisation — re-instantiated as seven cooperating analytical domains. The civilisation that invented the insurance contract, the actuarial table, and the systematic record of risk.

TRADEMARKS & METHODOLOGY IP

References in this paper to Abgalis frameworks — the **Abgalis Engine™** (Abgalis's cross-domain transmission framework), **ICRIP™** (Integrated Climate Risk Intelligence Platform), and **The Cascade™** (Abgalis's monthly intelligence brief) — are trade marks of Abgalis Ltd, used and explained inline. The internal mathematical methodology is reserved to Abgalis Ltd and is not disclosed in this document. Reproduction outside Abgalis requires written permission.

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“Climate stress and operational resilience are not two regimes. They are one underlying physics looked at from two regulatory chairs.”

FROM §1 – TWO REGIMES, ONE UNDERLYING PHYSICS

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Seven Domains. One Counsel.

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