

## EU CLIMATE RESILIENCE FRAMEWORK



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### From payout to prevention: making insurance work for Europe's climate resilience

Europe is on the front line of climate change. Just recently, an exceptional heatwave gripped the continent, breaking temperature records in several countries. In June, France recorded its hottest day since national measurements began in 1947, while Spain and the United Kingdom set new June temperature records and Germany recorded a new all-time high. These events are among the latest reminders of the growing frequency, severity and unpredictability of climate-related extremes in a rapidly warming world.

As climate change intensifies not only heatwaves, but also floods, storms and wildfires, citizens face growing exposure to physical climate risks. In Europe, each of the past four years ranks among the five costliest for economic losses caused by weather- and climate-

related extremes since 1980. Historical data alone is therefore no longer a reliable predictor of future losses. The Network for Greening the Financial System (NGFS) estimates that, by 2050, worldwide losses from climate-related damages could reach up to 15% of GDP under a Current Policies scenario.

Yet, the share of losses that is insured is not keeping pace: only around 25% of natural catastrophe losses in the EU have been insured over recent decades. Take-up remains low, as consumers often misjudge their exposure, perceive coverage as too expensive or expect state compensation after disasters, while rising premiums in high-risk areas make cover harder to afford. As a result, many citizens are likely to bear a larger share of disaster-related costs themselves, and uninsured losses can delay recovery and increase pressure on public budgets.

Strengthening the resilience of European society against risks is one of EIOPA's strategic priorities. EIOPA therefore continues to develop work addressing sustainability risks and natural catastrophe insurance protection gaps as an integral part of its supervisory, regulatory and risk-monitoring activities.

#### Addressing the insurance protection gap is key to Europe's climate resilience.

A concrete example of this work is EIOPA's dashboard on insurance protection gaps for natural catastrophes. Available since 2022 and currently undergoing a review, the dashboard brings together economic and insured losses, current risk estimates and insurance coverage across 30 European countries, supporting evidence-based decisions on how to reduce losses and improve societal resilience. It is complemented by the Catastrophe Data Hub, which gathers insured exposure and loss data, supporting supervisory analysis, financial stability work and the calibration of capital requirements.

To improve awareness of both risks and prevention, EIOPA has also launched targeted initiatives. In this regard, it proposed the development of PROTECT – a tool to help citizens better understand

how vulnerable their properties are to natural hazards, how insurance works in their country and what steps they can take to prevent or reduce damage.

Looking ahead, EIOPA acknowledges the need to continue deploying harmonised, forward-looking tools and indicators for EU-wide climate risk assessments. The forthcoming European Integrated Framework for Climate Resilience offers a further opportunity in this respect: if it embeds insurance as an active instrument of prevention, risk reduction and adaptation, it can help improve risk awareness, incentivise resilience-enhancing investment and, with it, strengthen the resilience of Europe's economy and society.

Within such a framework, establishing a European Observatory on Insurability – as recommended by the Commission's Reflection Group on Mobilising Climate Resilience Financing – could improve the systematic monitoring of insurance coverage gaps and price evolution by peril and region and integrate early-warning indicators from cross-sectoral systemic resilience assessments. The Observatory could build on EIOPA's current work on insurance protection gaps, including the dashboard.

EIOPA could also make use of indicators that track access to insurance (and mortgages) and identify potential consumer detriment due to unavailability of insurance. EIOPA has developed a set of retail risk indicators that could be applied specifically to insurance products covering natural catastrophes to help detect areas or perils affected by increasing exclusions, reduced coverage, higher deductibles, rising premiums or lower availability of insurance.

To conclude, natural catastrophe resilience is a source of economic strength. Yet, the EU and its economy remain insufficiently protected against these risks, and the protection gap will not close on its own. No single sector can solve this challenge, nor can any single country. All stakeholders have a part to play, from citizens and businesses to insurers, reinsurers, national governments and EU institutions. As the insurance sector navigates the complexities of climate change, EIOPA will continue its work to address insurance protection gaps and strengthen resilience, for the benefit of EU citizens and businesses.



## UGO BASSI

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### Bridging the climate protection gap

We are establishing a toolkit to address the natural catastrophe protection gap. Currently only around 25% of European catastrophe losses are covered by insurance.

The first priority would be to improve insurance modelling capacity by consolidating climate related data sources. Once more climate data is publicly available, work can focus on innovative climate insurance and their financing. Innovative insurance products that are better attuned to actual consumer needs increases consumer awareness and the uptake of climate insurance.

**Data.** Data on natural catastrophe risks, loss determinations and hazard mapping are highly fragmented across the 27 Member States. This fragmentation prevents insurers from pricing climate risk appropriately. It also prevents policymakers from accurately identifying regional vulnerabilities.

We will examine how various local and national climate data repositories can contribute standardized data to a publicly accessible EU-wide hazard

map. This climate hazard map would be available to all homeowners, businesses, and municipal planners to identify their exposure to flooding, wildfires, and windstorms. It will also be available to innovative providers of climate insurance policies.

**Innovative products and financing.** Traditional indemnity insurance pays out only after a loss is individually assessed and verified. This process is often too slow and expensive for households and businesses that need immediate cash in the aftermath of a natural catastrophe. We will be focusing on innovative insurance cover and financing.

One priority is parametric climate insurance. Rather than compensating for actual physical damage, parametric insurance triggers automated, rapid payouts as soon as an objective pre-defined metric is met (e.g., wind speeds exceeding 120 km/h or rainfall surpassing a specific threshold). Currently, only about 10% of EU insurers offer parametric options.

But in some EU jurisdictions parametric insurance may be characterised as financial derivatives or gambling arrangements. We must make sure that parametric insurance is recognised as a genuine household insurance product that provides much needed immediate liquidity following natural disasters.

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#### We are establishing a toolkit to address the natural catastrophe protection gap.

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Indemnity-based insurance also does not contribute to strengthening climate resilience by, e.g., facilitating resilient reconstruction through Build Back Better (BBB) approaches. Rather than merely restoring damaged assets to their pre-disaster condition or value, BBB enables insurers to finance resilient reconstruction measures, such as elevating buildings, installing flood-resistant materials or improving fire resilience. We will have to make sure that such value enhancements can be offered as climate insurance.

Finally, we must take another look at the EU Cat Bond market. Compared to the US or Bermuda, the European Cat Bond market remains underdeveloped. In 2024, the primary market for the issuance catastrophe bond issued was the Bermuda Stock Exchange. Stakeholders signal that the low uptake of Cat Bonds

results from a lack of standardisation of issuances, and the burden of Member States' administrative procedures when approving the special purpose vehicles (SPVs) that issue Cat Bonds. Do EU rules on special purpose vehicles (SPVs) need a review with a view to streamline disclosures and approval processes for SPVs issuing Cat Bonds?

**Consumer awareness.** EIOPA's Eurobarometer surveys show that only 17% of EU households hold property coverage that comprise NatCat events. EIOPA's Eurobarometer surveys show that nearly 1 in 5 European consumers (20%) are highly uncertain about what their policies cover regarding natural disasters. Vague contractual policy terms create an expectation gap where households assume they are covered for "water damage" only to find localized flood exclusions post-loss.

We must improve consumer awareness and address this "insurance illusion". Ideally a revamped Insurance Product Information Document (IPID) would list covered natural hazards, excluded perils, and deductible structures in plain language.

Another important area of work is impact underwriting. There is currently no clear policy guidance on how to reward risk-reduction measures. If a homeowner installs floodproof doors or fire-resistant roofing, such guidance will set out standardized premium discounts, directly linking consumer awareness to physical climate adaptation.

By looking into all the above we hope to transform European catastrophe insurance from a patchwork of 27 national markets into a resilient, highly capitalized, and consumer-friendly European Climate Insurance Union.



## MARIA SOFIA MOURTZINI

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### Strengthening climate resilience: insurance as part of a resilience architecture

Climate change is increasingly felt across national economies, public finance, businesses and households. It is reshaping the environment in which financial systems operate and can no longer be viewed solely through the lens of environmental or disaster-management policy. It has become an economic and financial concern, as well as an integral component of sustainable growth.

Across Europe, climate shocks, such as floods and wildfires, are generating significant economic losses and exposing structural vulnerabilities. The widening gap between economic and insured losses arising from natural catastrophes demonstrates this challenge. The question is how can these impacts be anticipated, managed and shared. Insurance contributes by providing financial protection, supporting recovery and enhancing economic continuity following adverse events. Insurers possess significant expertise in risk assessment, modelling, pricing, improving risk awareness and strengthening incentives for preventive action. So, the insurance

sector is not merely a provider of post-disaster compensation but an essential pillar of resilience. Through financial protection and expertise, it supports recovery, prevention and adaptation, while contributing to resilience before disasters occur.

Further, policymakers are moving towards an approach encompassing prevention, preparedness, adaptation and effective risk-sharing arrangements. Discussions on insurance protection gaps, catastrophe risk management and the long-term insurability of climate-related risks are becoming central to the European policy agenda. Commission initiatives on climate risk assessment, risk management and resilience all point in the same direction: preparedness, adaptation and risk management must become central elements of Europe's response.

Climate-related challenges cannot be addressed by the public or the private sector acting alone. The widening protection gap illustrates both the limits of relying exclusively on market mechanisms and the need to preserve incentives for sound risk management. Therefore, effective frameworks require a careful balance between private initiative and public intervention. The aim is not to replace market solutions, but to create an ecosystem in which public authorities, insurers, businesses and citizens contribute according to their respective roles.

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#### Resilience depends on the alignment of incentives across stakeholders.

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In this regard, national initiatives are vital. In Greece, recent developments, such as the Law 5116/2024 and its subsequent evolution, illustrate how national frameworks can support broader objectives. The Greek approach combines insurance obligations, conditionality and incentives that encourage wider insurance participation. The aim is to promote preparedness and structured catastrophe-risk management. Resilience depends on the alignment of incentives across stakeholders. Insurance coverage should not be understood as a contractual obligation, but as part of a broader culture of preparedness. Linking public support mechanisms to risk-management behavior can address moral hazard concerns, while clarifying the respective responsibilities of individuals, businesses, insurers and the state. Closing protection gaps is also a matter

of awareness, as citizens and businesses must understand risks and available mitigation tools. In this respect, climate-risk awareness has clear similarities with financial literacy. Educational and awareness initiatives help individuals make informed decisions on prevention, adaptation and insurance coverage. A culture of resilience is ultimately built not only through regulation and financial mechanisms, but also through informed and engaged citizens.

Affordability and availability are equally critical. In higher-risk areas, sustainable insurance coverage may require a balanced combination of prevention measures, risk-reduction policies, adequate insurance capacity, sustainable financing arrangements and, where appropriate, public support mechanisms that preserve incentives for adaptation.

National experiences should not be viewed in isolation. While implementation takes place primarily at local and national level, European cooperation can provide common direction, facilitate consistency and support mutual learning. The exchange of lessons and best practices is valuable, because no jurisdiction has all the answers. It helps identify effective approaches, avoid fragmented responses and keep resilience frameworks adaptable.

These elements point to the need for integrated resilience architecture. Public policy, insurance, sustainable finance, prevention, awareness and risk-sharing arrangements should not be treated as separate agendas. They are complementary components of the same objective: enabling societies and economies to anticipate risks, reduce their impact and recover effectively when adverse events occur.

The challenge is twofold. Combining effective national frameworks, European cooperation, well-functioning insurance markets, and informed citizens strengthens resilience and preparedness.



## SHREE KHARE

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### Closing the protection gap: better data, better decisions

As the frequency and severity of weather-related catastrophes increase, more economic loss is falling outside insurance coverage. The result is a growing transfer of risk to individuals, companies and the public sector.

A recent EIOPA-ESM paper<sup>1</sup> put EU natural catastrophe economic losses at more than €900 billion between 1981 and 2024. Only a small share was insured, leaving an aggregate protection gap of 75% on a historical basis and roughly 50% on a modelled basis.

EIOPA and the ECB have noted<sup>2</sup> that as natural catastrophes become more frequent and severe, it may affect insurance affordability and further widen the sizeable insurance protection gap. Their proposed European approach, built around a public-private reinsurance scheme and a public disaster financing fund, reflects an important consideration: the scale of catastrophe risk now exceeds what markets or governments can manage on their own – a joint and coordinated response will be essential.

The numbers underline the scale of the challenge. Recent Moody's analysis<sup>3</sup>

finds that the United Kingdom's flood insurance protection gap is relatively narrow, at around 10% of total economic losses, supported in part by Flood Re. Yet this position is not guaranteed. Around seven million UK properties were estimated to be exposed to flood risk in 2025, and this is projected to rise by 40% by 2050 under a Paris agreement-aligned climate scenario. The UK's 2007 floods caused €5.6bn (GBP 4.8bn) of economic damage at 2025 prices, including an estimated €1.5bn (GBP 1.3bn) direct fiscal cost.

The protection gap is global and is a challenge for advanced and emerging economies alike. Recent catastrophe events show how quickly uninsured losses can pressure public finances. Germany's 2021 floods required a €30bn reconstruction fund, financed by federal and regional authorities. Pakistan's 2022 floods caused damages equivalent to around 10% of GDP, weighing on growth, inflation and fiscal pressures. Moody's flood research<sup>4</sup> found the US is exposed to €330bn-€875bn (USD 375bn-1tn) in uninsured flood losses from a range of possible extreme events.

Government agencies play a central role shaping these developments. They set building standards, invest in flood defences and resilient infrastructure, design disaster financing arrangements and provide public backstops when losses exceed the capacity of private markets. But public resources are finite. Without robust measurement, pricing and mitigation of risk, the fiscal burden will continue to rise. The challenge may lie less in how losses are allocated between insurers, households and governments and more in how they can be reduced.

### Catastrophe models can quantify how interventions would reduce losses.

Analytical capabilities from the private sector can complement the role of public authorities. Moody's catastrophe models, climate risk analytics and exposure data, can help identify where risk is concentrated and how it may evolve under future risk scenarios, and which interventions could reduce losses more effectively. These capabilities inform underwriting, capital allocation, stress testing, infrastructure planning and disaster-risk financing.

Adaptation and mitigation are central to any credible protection-gap strategy. More insurance is necessary, but is

not sufficient. Interventions can range from large-scale public infrastructure to property-level upgrades. Catastrophe models can quantify how such interventions may reduce losses by changing input assumptions. For example, advances in storm surge modelling now explicitly account for the effect of levees, helping public authorities and insurers direct resilience investment where it will most reduce expected loss. Flood defences, stronger building standards, improved land-use planning, resilient infrastructure and nature-based solutions can reduce the physical risk that drives losses. Analytics can help prioritise these investments, quantify their benefits and identify where each euro of resilience spending is likely to produce the greatest reduction in expected loss.

The opportunity for Europe is to build a model that combines public leadership, private capital and advanced risk intelligence. Done well, this can improve insurance availability, protect public finances and make communities more resilient. Closing the protection gap is not only about post-disaster recovery financing. It is also about robust risk assessments, resilience-building, informed decision-making and targeted interventions to reduce losses before they materialise.

1. *ESM/EIOPA Discussion Paper: Sharing Risk – European Approach to natural catastrophe risk management – April 2026*
2. *ECB/EIOPA Report: Towards a European system for natural catastrophe risk management – December 2024*
3. *Moody's Special Report: Credit risk of floods in the UK is contained. For now. – June 2026*
4. *Moody's Report: US Exposed to \$375 billion-\$1trillion in aggregated uninsured flood losses from a range of extreme events – May 2026*



## FRANÇOIS COSTÉ

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### Joint responsibilities for an effective country resilience to climate change

The **EU resilience framework** for climate change will be disclosed by EU Commission at the end of 2026, following the main expectations arising from the consultation: more EU funding for adaptation, harmonized risk-assessment standards with shared climatic scenarios around +3 degrees, resilience by design criteria for all public spending, nature-based solutions as first line of defense, systematic integration of health in all plans including heat-health.

**Resilience to the increasing severity of climatic events is a joint responsibility:** the asset owner for reducing its vulnerability and for retaining part of the risk, the insurance system being accountable for effective mutualization and solvency monitored by Authorities. Whilst the frequency and intensity of climatic events are increasing with global warming, the insurance premium will remain accessible under 2 conditions: forced mutualization (especially with PPP) and proactive reduction of vulnerability through prevention. **The climate risk should be transformed before it is transferred to insurance/reinsurance.**

**Prevention measures to reduce vulnerability to climatic risks should be**

**practical and accessible;** let me take the example of clay shrinkage and swelling, a risk to which 12 million individual homes are exposed in France, with 110.000 claims in 2025 for 3,5 billion €, now the more costly natural disaster. Whilst it is expensive to reinforce building foundations, a practical and easier prevention measure consists in avoiding worsening factors of humidity in the vicinity of building such as trees or leaking gutters.

**Assets owners need help and incentives in managing their risks:** risk-awareness, practical advice to reduce it (one of criteria for alignment to non-Life insurance taxonomy), insurance premium incentive, differentiation between insured and non-insured for the determination of the amount of public relief after a natural disaster (ex crops insurance in France, floods in Romania).

**The insurer has specific accountabilities for resilience to the climate change:**

- continued appetite for insuring climatic events although their severity is increasing
- economic sustainability of the insurance system, through: geolocalization, management of the exposures, adequate mutualization, healthy technical premium, adequate reinsurance, proper coverage of the SCR
- practical prevention advice to insured clients

Among the good practices in EU, **France resilience model offers a reference**, with 4 pillars:

1. **Legal obligations:** according to the natural disaster law from 1982, stemming from a principle of equality and solidarity in front of natural disasters stated by the Constitution of France, a mandatory flat 20% surcharge is added on top of fire related premium to fund the reserve for drought, floods and cyclones. Insurance against storm, hail, and snow is also mandatory in order to get insured for fire but the tariff is set commercially.
2. **State owned reinsurer CCR** gets ceded 50% of premium for natural disasters and of related claims.
3. **An observatory of the insurability** of climatic events: its first findings in June 2026 showed that out of 35.000 territorial collectivities, 1.000 have limited insurance offers, mostly in overseas.

4. **Public funding dedicated to adaptation** (Fonds Barnier): In 2025, 300 m€ of funding; each € invested helps avoid in average 3 € of damages, even more if we add to physical damages the indirect loss of business margin.

I could also mention another **good practice in an emerging EU insurance market, Romania:** a law in 2009 created a mandatory insurance against flood, landslide (and earthquake) up-to 20.000 € sum insured at a flat yearly premium of currently 26€, by a dedicated private insurer PADROM. But much remains to be done to grow penetration from the current 25% and to foster prevention.

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**Climatic risks to be transformed before being transferred to insurance/reinsurance.**

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The **EU resilience framework should set a few principles** but should respect the principle of subsidiarity for each 27 EU countries in establishing the right national solution (when not yet the case):

- The vulnerability to climatic events must be managed and mitigated/transformed by the risk owner before the risk is transferred to the insurance/reinsurance system
- The largest possible mutualization of the risks and affordable premium to be made possible by a PPP, such as in France or Romania,
- A law making mandatory the insurance against natural disaster
- Equal and affordable premium to all
- Effective sanction system to ensure the right penetration (natural link with real estate transactions, enforced by non-elected bodies...)
- The solvency of the insurance system to be ensured by consistent risk-modelling and effective reinsurance
- In each country governance for resilience, players should act in good complementarity: the risk owner, collectivities to incentivize an effective prevention, the insurer and reinsurer, the insurance supervisory Authority.



## ANTHONY BRENNAN

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### Building resilience is key to closing Europe's climate insurance protection gap

Extreme weather is becoming more frequent and severe, and the impact on the economy and communities is rising. In Europe, estimated damages to infrastructure and physical assets reached an average of around €45 billion per year over the 2020-2024 period, a five-fold increase compared to the Eighties.<sup>1</sup> Only around one quarter of losses from extreme weather events are covered by insurance in the EU. Flooding in Valencia in 2024, for example, caused around € 11 billion damages, of which only 4.5 billion were covered.<sup>2</sup>

Preventing risks is the best way to address extreme weather events and should be the first step to building climate resilience. Investing in resilience pays off. To start with, it is more efficient than fixing damages. In a 2025 report, Zurich showed that without action to improve resilience, there could be over €270 billion losses related to energy generation and storage assets as a result of extreme weather events by 2050. Risk reduction measures, costing around 2% additional capital expenditure, could instead reduce the potential scale of losses by as much as 50%.<sup>3</sup>

EU institutions and national governments should adopt a prevention-first mindset in policymaking, nudging more responsible risk management in business decisions and local communities. Climate resilience policies, for instance, should offer clear, stable, predictable and long-term incentives for companies and local authorities to invest in risk prevention and adaptation measures. EU and national policymakers are also best placed to promote risk awareness and financial education, making risk data transparent to the public.

Insurers can help companies and public authorities to understand what perils they are most exposed to today, how these perils may evolve in the future, and how these patterns could affect their physical assets, operations and ability to deliver services.

Through risk engineering services, insurers can also help companies identify the most appropriate resilience interventions, as well as help them quantify the cost-benefit of individual adaptation actions to inform investment decisions.

For all damages that cannot be prevented, insurance policies offer the opportunity to transfer financial losses from individuals, companies and communities to insurers in exchange for annual premiums.

### Leveraging expertise across the private sector is crucial for developing collective resilience.

To guarantee affordability and access to insurance, lessons could be drawn from successful government initiatives addressing related challenges, for example the energy transition. In Ireland, the Sustainable Energy Authority of Ireland (SEAI) has been instrumental in making the energy transition a just transition. In a just transition, vulnerable individuals and communities are not overly burdened by the necessary changes resulting for example from improving the energy efficiency of homes. Thanks to SEAI, those least able to afford to retrofit their homes are supported to decarbonizing their homes, and various grant supports are available to homeowners to upgrade their home's energy efficiency. Similar mechanisms could help incentivize investments in flood resilience in Ireland, and the

insurance industry is using its technical skills, data and experience to work with government and other key stakeholders to find a just solution for climate driven rising flood risk.

Governments should also encourage insurance uptake by removing misaligned incentives – such as flat-rate pricing that makes insurance feel like a tax. Premiums should always reflect actual exposures and vulnerabilities, as this is essential for signaling the true level of risk investments in adaptation.

Risk-sharing solutions, such as public-private partnerships and insurance pools, can support access to insurance at national level, if they are carefully designed to preserve risk-based pricing and incentives to invest in prevention. Schemes that prioritize affordability over prevention struggle to remain profitable over the long-run.

Finally, leveraging expertise across the private sector is crucial for building capacity and developing collective resilience across Europe. The upcoming debate on the European Commission's Climate Resilience and Risk Management Framework will require Ireland's leadership: during its Presidency of the EU Council, Ireland is well placed to steer discussions among Member States by drawing on the expertise of its vibrant financial sector – a unique opportunity to develop approaches that align public and private efforts and reduce protection gaps while maintaining a well-functioning insurance market.

1. *EIOPA Dashboard on insurance protection gap for natural catastrophes*
2. *EIOPA/ESM: Sharing the risk. 2026*
3. *Zurich Resilience Solutions: Safeguarding our energy future. 2025*