INSURANCE PROTECTION GAPS

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Fostering societal resilience against the impact of natural disasters

Natural catastrophes (NatCat) can have devastating consequences, not only economic losses but also human and societal impacts. The extensive destruction brought by recent events such as the California wildfires and floods in Valencia leave deep scars on communities. These disasters may also have wider financial stability impacts.

Insurance has a significant societal role in enhancing NatCat resilience by providing effective disaster preparedness (ex ante) and by absorbing losses otherwise born by consumers and businesses (ex post). Insurance can provide risk assessment and risk management solutions that help communities minimise potential damages. It can also incentivise risk mitigation and risk prevention measures. Furthermore, insurance offers financial support for recovery and rebuilding efforts, thereby minimising potential secondary impacts caused by delayed responses.

Not all economic losses are, or can be, covered by insurance, resulting in a protection gap. These gaps are further increasing, driven by climate change and growing exposures in high-risk areas. With the impact and pace of climate change intensifying, protection gaps and the resulting losses are likely to increase further.

Addressing these gaps is a broad societal challenge that requires an urgent, coordinated response from a range of parties, including governments, supervisors, the insurance industry, international organisations, and local communities and consumers.

Insurance supervisors have a critical role in addressing NatCat protection gaps and in fostering a multi-stakeholder collaborative approach to tackle this complex societal issue. The IAIS, in its Call to Action, made it clear that addressing NatCat protection gaps is relevant to all insurance supervisors, regardless of their mandate. Since the release of the Call to Action, supervisors globally have been taking measures in support of the five areas of action outlined in the report. Some examples are outlined below.

Regarding the role of supervisors in assessing the magnitude and drivers of protection gaps, the Central Bank of Ireland recently undertook analysis on the nature and scale of the flood protection gap in Ireland, and the European Insurance and Occupational Pensions Authority (EIOPA) has created a NatCat protection gap dashboard.

With regard to creating an enabling regulatory and supervisory environment to support the availability of insurance and uptake of coverage, the Angolan Insurance Regulation and Supervision Agency (ARSEG) and the World Bank Group International Finance Corporation have partnered to help Angolan insurers develop an agriculture insurance market and products. This initiative includes a financial education element, as well as consideration of innovative insurance products and services such as parametric insurance.

In an example of successful collaboration with other partners, in 2024 the IAIS and OECD supported the G7 publication of a High-Level Framework for Public-Private Insurance Programmes (PPIP) against Natural Hazards. The G7 Framework underscores that narrowing the protection gap requires a collaborative effort between multiple parties, including governments, insurance and the insurance sector, and sets out important parameters for the successful design and implementation of such public-private schemes.

The IAIS is committed to continue supporting its members in 2025 to address NatCat protection gaps. Some examples of that support are:

- In April, we will publish an Application Paper on the supervision of climate-related risks in the insurance sector. This report supports supervisors in integrating climate-related risks into their supervisory mandate, from financial stability and inclusion to market development as well as policyholder protection and fair treatment of customers.
- As part of its annual Global Monitoring Exercise, the IAIS will publish a Global Insurance Market Report (GIMAR) special topic edition in October that will provide an analysis on the potential impact natural catastrophes could have on financial stability, based on in-depth empirical studies of several significant NatCat events.
- The IAIS is also conducting joint work with partners, including:
  - Staff papers co-authored with the Financial Stability Institute (FSI) on the topic of parametric insurance and the climate-related reinsurance protection gap (forthcoming).
  - Co-authoring with the World Bank an input paper for the G20 Sustainable Finance Working Group (SFWG) on assessing and addressing NatCat insurance protection gaps, as part of the SFWG's priority focus on adaptation.

Tackling insurance protection gaps and fostering long-term societal resilience to NatCat risks requires decisive and coordinated action from all stakeholders. The role insurance supervisors can play in finding multi-party solutions to this challenge will remain a priority topic for the IAIS.

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Natural catastrophes and insurance: Managing risk and building resilience in EU

Europe is the fastest-warming continent in the world. Extreme heat is becoming more frequent while precipitation patterns are changing. Precipitation extremes are increasing in severity, and recent years have seen catastrophic floods. At the same time, southern Europe can expect more severe droughts[1].

The insurance industry plays a unique role in raising the resilience of society and the real economy. Insurance products protect economic wealth and social welfare by pricing risks accurately and providing compensation after natural catastrophes events. However, as climate change increases physical risk exposures, risk-based premiums are expected to rise over time. This could reduce both the affordability and availability of insurance products covering climate-related hazards in the medium to long term.

Between 1980 and 2023, only around a quarter of the losses caused by natural catastrophes across Europe were insured, with material differences in the protection gaps across countries and perils. Given the current trajectories of climate change, these insurance protection gaps are expected to become even wider in the future. This is why adaptation and mitigation measures need to go hand in hand. In the short term the insurance sector can shield itself from increasing risks by raising prices and deciding on which risks it can continue to cover. In the longer run, the gap will put into question (re)insurers' role in providing financial resilience. This requires action on different fronts.

Firstly, adaptation measures that are implemented ex-ante to a loss event, such as water-resistant walls in case of flood risks, reduce the policyholder's physical risk exposure. As such, adaptation measures can be a key tool to stabilize risk-based premium levels and to maintain the future availability and affordability of insurance products covering climate-related hazards. In this regard, EIOPA introduced the concept of impact underwriting, which refers to how insurance companies can contribute to the adaptation of society and the real economy to climate change through their underwriting practices in terms of data, risk assessment and expertise, thereby promoting and incentivizing policyholders to take up climate-related adaptation measures.

The insurance industry is crucial in raising climate resilience by promoting adaptation.

While the current implementation of adaptation measures in the European insurance market shows progress, a global comparison suggests there is further room for improvement.[2] Efforts are needed to standardise the implementation of climate-related adaptation measures in insurance contracts, for instance through dedicated risk-based certificates and programs. The risk-based recognition of adaptation measures in premiums, for instance through discounts, merits further analysis. In addition, raising awareness about climate risks and related prevention measures is also needed.[3]

Finally, further innovation is needed to place adaptation measures at the core of all insurance products. For this, new technologies such as the use of satellite data, open-source data and models[4] and AI play a significant role.

Secondly, the insurance sector should engage with policymakers to develop national and European approaches for reducing the impact of catastrophes. In a new joint paper, EIOPA and the ECB highlight how individual insurers and consumers often fail to factor in the broader economic benefits of insurance[5]. Combined with the expectation that governments and EU Member States will cover losses after disasters, insufficient insurance coverage slows recovery from disasters, burdens fiscal budgets and misses the essential benefits of ex ante risk management. Analysis shows that national schemes help improve insurance coverage and reduce the insurance protection gap. Examining the design features of such national schemes can inform potential EU solutions to support and supplement national initiatives. Pooling insurance risks of businesses and households across the EU could increase diversification benefits and reduce the cost of capital. Strengthening EU disaster risk management can contribute to national adaptation efforts. It is in the long-term interest of insurers to contribute to the development of such solutions.

1. *European Climate Risk Assessment | European Environment Agency's home page*
2. *Impact underwriting: EIOPA reports on insurers' use of climate-related adaptation measures in non-life underwriting practices - EIOPA*
3. *Consultation on a blueprint for an awareness tool for natural catastrophe risks and prevention measures - EIOPA*
4. *Open-source tools for the modelling and management of climate change risks - EIOPA*
5. *EIOPA and ECB joint paper: Towards a European system for natural catastrophe risk management - EIOPA*

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Aligned for risk reduction: the role of insurance in societal resilience

In the context of growing risks and losses, and of the insurance approaches to this, it is helpful to review risk as the composition of hazard, exposure and vulnerability. *Hazard* is the causal agent of the damage (i.e., a hurricane), *exposure* is the number of elements (population, homes...) potentially affected by a hazard and *vulnerability* is composed by *susceptibility*: the capacity of a given exposure to be damaged (i.e., elderly people are more susceptible to heatwaves) and *response capacity*: an indication of the societal capacity to return to the previous state after being hit.

Insurance is obviously a provider of response capacity by indemnifying losses quickly and certainly, minimizing the economic impact of catastrophes, but it can also reduce susceptibility by means of incentivizing risk prevention. Loss data give an indication of where exposure should not be raised any higher and, in extreme cases, of where it should be reduced. Exposure has grown exponentially since the Industrial Revolution: both the number of humans and their economic output, translated in property value are in all-time records. Therefore, with a huge exposure, losses grow accordingly. Hazard is also going up. A warmer climate is, in general, a more dangerous one, with perils such as flood, hail, heatwaves, drought or wildfires increasing. Climate change is, then, another aggravating factor for higher losses.

Insurance business requires accumulating capital beforehand to pay for potential losses later. More losses translate into more expensive premiums, but this process cannot grow forever: there is a point at which premiums become unaffordable for the policyholders and, as a result, insurance protection gap widens. Another source for expanding protection gaps are insurers themselves: when damages lose their random character, risks become uninsurable and insurers leave some markets and perils. There are several ways to try to avoid this, and often act combined: coinsurance, reinsurance, new insurance products such as parametric and cat bonds, and public-private partnerships (PPPs). All of them intend to broaden the funding base, to add financial capacity, or both. The need for these measures grows in parallel with losses and governments, through insurance regulation, have a key role to play in, at least, two ways:

- Acting on the supply side of affordable insurance products. Measures can range from making cover against some catastrophic risks available, to making the extension of insurance policies compulsory for these risks, up to compulsory insurance. In most cases, this implies the creation of a specific (re)insurer for cat risks.
- Incentivising risk prevention. With rising exposure and hazard levels, the only way to keep insurance in the game is reducing susceptibility by means of premiums or deductibles and/or through cooperation between insurance and other bodies dealing with risk reduction. Sharing insurance loss data and loss experience with those in charge of creating building codes and land planning is basic, and the role of regulators in loss data collection and disclosure is crucial.

There is no single and universal solution, but some principles are useful to reduce protection gaps: expanding mutualisation, enhancing financial capacity and aligning all the private and public actors of the insurance industry with the common, shared goal of maintaining insurability and reducing risks. For this ultimate goal, insurance has to be aligned with other players. These ways intend to make insurance sustainable, so it will continue to provide economic resilience to society, but it cannot stop there: insurance must also be a conveyor of physical resilience to both continue making societies more resilient and keep insurance sustainable. Silo thinking won't get us into this virtuous circle.

Spain has one PPP in place since 1954. Recently, the country experienced its most expensive insurance loss event: the Valencia floods of 29th October 2024. Four months later, Consorcio de Compensación de Seguros (CCS) has made payments on about 80 % of the 240,000 claims filed. The huge number of claims is a token of the own design of the scheme: In Spain it is compulsory to extend the cover of most policies for the extraordinary risks, meaning that above 80% of residential, commercial and industrial properties and 100% of the 140,000 cars damaged were insured and, thus, automatically had flood insurance. The capacity of the scheme has been reinforced by joining forces with the private sector, through an ad-hoc agreement so that 38 insurers work together with CCS in filing claims and assessing losses. This agreement has been reached in a matter of days thanks to decades of joint work and shared goals, and has been essential for speeding-up the loss compensation process. All the loss data will be shared, as usual, with national, regional and local authorities, hoping that, should something like this happen again, society will be better prepared to cope with it.

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Demutualization in the face of climate risks, mutualist insurers' battleground

Resilience and insurability, two sides of the same coin

The first step in building community resilience is to ensure the insurability of climate catastrophes.

The 2023 report by EIOPA and the ECB points out that only around a quarter of losses suffered as a result of extreme weather and climate events in the EU were insured, and that this gap is set to widen due to the increasing severity and frequency of natural disasters caused by climate change.

For insurers, this acceleration and aggravation of hazards translates into higher costs. In France, for example, prices have risen by 55% in 2 years. In a general context of protection of purchasing power, the insurance market has not increased rates beyond inflation, and has not passed on this rise in reinsurance costs to policyholders, assuming most of the increase in retention. In 2023, Aéma Groupe even increased its redistribution capacity, paying out over 9.2 billion euros to its policyholders. True to its mutualist model, with no financial shareholders, Aéma Groupe's level of redistribution of benefits (in Property & Casualty and Health-Provident) and financial products (in Savings-Retirement) to its members and customers is among the best on the market. Yet, faced with sharply rising out-of-pocket expenses and tariffs, and suddenly tougher reinsurance conditions for insurers, the question of the insurability of certain risks and territories arises.

Insurers alone cannot provide all the answers to climate insecurity and protection issues. Current protection systems will not suffice. Insurance has a part to play in a more global model that needs to be reinvented. This model must be the result of a proper articulation between the intervention of the State and that of the insurance sector, and propose a more global approach to risks. We need to think in terms of prevention and anticipation, integrating mitigation and adaptation efforts, contributing to the emergence of a culture of prevention, implementing genuine structural prevention while raising the awareness and responsibility of citizens and political decision-makers, and ensuring the implementation of proactive land-use planning policies.

In this sense, the climate change adaptation plan announced by the EU will be essential to guarantee the climate resilience of our Union and the effective protection of our citizens.

Technology and data sharing: Beware of demutualization risks

Insurance, unlike other financial products, is deeply rooted in the principle of mutualization. It is not simply a commodity to be exchanged, but a social contract that distributes risk within a community. Data sharing and artificial intelligence in insurance carry the risk of undermining this fundamental principle by inadvertently encouraging demutualization.

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These risks are particularly acute in the case of protection against natural disasters. On the one hand, some players could use the data to develop geographic segmentation strategies that would call into question the solidarity of the cat nat compensation scheme. On the other hand, there is a risk of a significant downgrading of certain territories and a loss of value for certain properties. These risks are present, for example, in the proposed FiDA regulations. At a time when discussions are underway on mutualization at EU level to cope with the increase and intensification of climate risks (following the publication of the ECB and EIOPA proposal), the EU is preparing to provide, with FiDA, the tools for segmentation and "cherry-picking right risks" on a platter. It is therefore essential to erect safeguards to prevent this risk of demutualization, to ensure that everyone is protected, and to avoid property devaluation in the regions most exposed to risk.

Mutualist insurers: Social buffers in the face of social crises

The mutualist model, which is democratic and rooted in local communities, enables us to inform politicians of citizens' current and future needs, to identify regulatory anomalies and risks, to formulate proposals to guarantee the best possible protection for as many people as possible, and to support citizens by responding to their need for protection.

The proximity of mutualist insurers to local populations and their territorial anchoring, while is by no means an innovation, is a fundamental characteristic that enables us to better respond to the risks associated with natural disasters, and to provide faster, more effective coverage. Mutualist insurers are key players in the prevention, support and accompaniment of populations, acting as close as possible to their members to help them through the difficult times in their lives.

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The role of Japanese life insurance companies in addressing natural disasters

Japan is one of the most earthquake-prone countries in the world. Most Japanese can remember where they were and what they were doing at the moment when past large-scale earthquakes hit, and we generally have a high awareness of the need for disaster preparedness in our own homes and families. Not only earthquakes, but other large-scale natural disasters such as flooding from typhoons and devastating rains have been a common occurrence. Natural disasters result not only in property damage, but have also often resulted in losses of life and injuries. Over time, the Japanese life insurance industry has developed a number of protocols to help support customers impacted by natural disasters.

As a life insurance company, we focus on three crucial aspects to support customers following large-scale disasters such as recent earthquakes, typhoons and floods. First, ensuring the swift and appropriate payment of insurance benefits, by relaxing certain documentation requirements in cases such as when insurance certificates or personal identification documents may have been lost or damaged during a disaster. Second, providing payment holidays or relief from lapse rules to ensure that policyholders can continue their contracts even if their income temporarily decreases in the aftermath of a disaster. Third, contributing to the provision of necessary funds for evacuation-related living expenses and housing/life reconstruction by offering reduced loan interest rates and adjustments to loan conditions. We have also paid hospitalization benefits in cases where customers had to cut their treatment short due to a disaster.

In response to increasing disaster-related losses, in recent years Japanese non-life insurance companies have raised fire insurance premiums and implemented a system that classifies flood risks for each municipality into five levels, adjusting premium rates according to the risk level. As life insurance companies have not seen devastating insurance claims or solvency issues due to disasters, our industry has not invoked earthquake exclusions in life policies but have paid all claims. Similarly, the life insurance industry has not raised premiums due to disasters, but many firms are advancing their analysis of the potential impact of different climate scenarios on the life insurance business.

The Japanese life industry developed protocols to support customers impacted by natural disasters.

The analysis and quantification of the impact of climate on the life insurance business is still not established internationally, and each company is conducting research and analysis through trial and error. Since 2020, Dai-ichi Life group has started an initiative to statistically analyze the correlation between peak summer temperatures and claims performance. We focused on the increased health risks caused by elevated summer temperatures and conducted an impact analysis on mortality and hospitalization, assuming various future climate scenarios. A scenario assuming rising temperatures projected that mortality claims would increase by approximately 0.2% in the 2050s and 0.8% in the 2090s compared to baseline data from 2010-2019. Additionally, in fiscal year 2021, we conducted an analysis of the impact of elevated summer temperatures on hospitalization. Under a similar climate scenario, we estimated that the increase in hospitalization for heat-related diseases would result in an increase of 100 million to 200 million yen in hospitalization benefit claims in the 2090s, compared to fiscal year 2019 hospitalization benefit payments by our three Japanese life insurance subsidiaries of about 60 billion yen. Moving forward, we will also consider investigating the occurrence of various diseases, approaches from a medical perspective, and impact studies from overseas companies, as we work to understand the overall risk for the group.

Finally, going beyond our role in supporting customers in their time of need, Dai-ichi group leverages our large balance sheet and role as an institutional investor to contribute to damage mitigation strategies for natural disasters. In a first for Japan, Dai-ichi Life invested in bonds issued by Aichi Prefecture (a municipality in central Japan) in February 2025 with funds earmarked specifically for disaster prevention. These “Green Bonds” (with a total face value of 5 billion yen) were issued for flood control measures and earthquake prevention. The prefectural government will use the funds raised through these bonds to fund coastal area improvements as climate adaptation measures, such as developing rivers with insufficient flow capacity by dredging and embankment modifications to strengthen flood control measures. Public-private collaboration is expected to increase further in the future as local governments seek support from institutional investors to help strengthen resilience against disasters.