CEA
Insurers of Europe

Position Paper

Insurance of Natural Catastrophes in Europe

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Introduction

In reaction to the rise of natural catastrophes throughout Europe, questions on how to prepare for and minimise the losses arising from them have gained more attention at the EU level. The CEA is pleased to see that fighting natural catastrophes remains at the top of the European agenda. With decades of experience in effective risk management based on sophisticated models, datasets and time series, the European insurance industry serves as a valuable source on how to cope with these catastrophes as well as an essential instrument for risk sharing and risk transfer. However, in order for insurers to maintain their ability to cover natural catastrophes, it is necessary for Europe to adapt to the changing climate and the likely increase in catastrophe risks.

To assist policymakers with the objective of protecting European citizens and residents against the drastic effects of natural catastrophes (eg floods, storms, earthquakes), the CEA aims to illustrate through this paper how the applicable insurance schemes work in Europe. Firstly, this paper will examine the role of insurers and reinsurers, as well as highlight the criteria for insurability and how a forward-looking approach is essential for more accurate predictions of natural catastrophes. Secondly, this paper will review the diversity of insurance penetration throughout the EU and explain why a "one-size-fits-all" proposal is simply not feasible on an EU-wide scale. Thirdly, this paper will examine the impact of climate change and illustrate how the expected increase in frequency and severity of natural catastrophes will require significantly more attention on adaptation measures. Finally, this paper will detail the core principles for insurance scheme efficiency: responsibility sharing; coordinated action; and *ex-ante* financing.

1. Role of insurers includes the entire risk management cycle

First and foremost, it is important to note that the role of insurers goes well beyond risk sharing and transfer. Insurers constitute an integral part of the **entire risk management cycle**. For instance, insurers have improved risk identification methods (eg flood risk mapping) and have assisted public authorities in the set-up of appropriate risk management frameworks (eg risk modeling initiatives to predict the cost of risk).

Considering that the growing increase in natural catastrophes requires new methods of risk measurement and calculation, a more **forward-looking approach** is necessary to improve the prediction of natural catastrophes and their economic effects. In this respect, insurers are making use of geo-scientific methods of analysis, such as geographical information systems, risk mapping and event scenarios. These methods also aid society and policymakers by quantifying the expected change of future weather related events and incorporating them into premium calculations, thus, helping to provide clear signals about the magnitude of catastrophe risks likely to arise in the future.

European insurers also share a common purpose with policymakers and other stakeholders: limiting the economic consequences of natural catastrophes and **encouraging adaptation to climate change**, both through long-term and short-term policy proposals (eg negotiating on policies in exchange for the implementation of construction or land use/spatial planning standards). To achieve these goals, European insurers continue to provide research, encourage prevention measures and deliver financial solutions. Moreover, **insurers can help policymakers identify the appropriate areas where public-private cooperation can achieve mutual benefits** for the public and national/ European public authorities alike.

Regarding the above, it should be noted that the insurance industry is ***not*** **a financing mechanism for adaptation measures** (eg flood defences, structural defences for buildings, etc.). Financing is the role of banks and/or investors in a certain project, rather than insurers. Thus, the role of the insurance industry with respect to adaptation measures should be clearly defined as one where insurers can help assess the risk reduction potential of such measures, but not one that involves the financing of them.

2. Role of reinsurers is to assist in the absorption of severe losses

Reinsurance helps insurers manage their catastrophe risks by absorbing some of the losses that are covered. Reinsurance diversifies risk globally and, in doing so, places a locally precise yet globally consistent price tag on risk and risk-bearing capital. Through this method, global reinsurance markets are mature and proven to work. Any state solution (ie pool) would alone not be able to provide diversification beyond national boundaries and many of these solutions therefore experience, or have experienced, severe troubles in the aftermath of major catastrophes.

3. General criteria for insurability

When assessing risks, any insurer or reinsurer must take into account the fundamental principles and limitations of insurability. Insurability is not a strict formula, but rather, a set of basic criteria which must be fulfilled in order for a risk to be insurable. Disregarding these constraints ultimately jeopardises the (re)insurer's solvency and its ability to honour its policy obligations. However, the strict criteria required for insurability can mean that certain exposures may remain uninsurable.

The following are considered when determining the insurability of a risk:

- **Randomness**: The time and location of an insured event must be unpredictable and the occurrence must be independent of the will of the insured. Insurers must also keep in mind the theory of "moral hazard", in which the existence of insurance may lead to a change in the behaviour of the insured (ie where the insured takes less risk adverse action or fails to take risk management measures). This change in behaviour can affect the probable occurrence of a risk.
- **Quantifiable**: The frequency and severity of claimable events must be estimated and quantified within reasonable confidence limits.
- **Mutuality**: For the insurer and reinsurer, it must be possible to build a risk pool in which the risk is shared and diversified at economically fair terms.
- **Economic viability**: From the reinsurer's perspective, the price needs to cover the expected cost of acquiring and administering the business as well as claims costs. In addition, the price must allow for an appropriate investment return on the capital allocated to the risk (ie a return which meets shareholder requirements).

4. Insurance penetration varies throughout the EU

i. Variety in Member State levels of risk and insurance schemes

There is a variety of insurance schemes in place for flood risks, ranging from optional private market solutions to compulsory insurance pools. As the environmental conditions throughout Europe are highly diverse, they expose various Member States to different types of natural catastrophes and risks, resulting in a highly diverse insurance market across the EU. For example:

- In countries such as the Netherlands and Denmark, insurers play a smaller role in the provision of cover for flood risks than in other Member States. In the Netherlands, a national legislation permits natural catastrophe losses to be paid directly from the state budget, though only in exceptional circumstances. This payment, at best, covers part of the loss. In Denmark, a state pool exists for the cover of flooding caused by high levels of the nearby sea. There are, however, private insurers that cover flooding caused by heavy rains.
- In countries such as Belgium, France and Norway, there is a mix of compulsory insurance and state intervention. In most of these countries, a natural catastrophe cover is included in certain insurance policies (eg home insurance) that are compulsory, but the catastrophe cover itself is voluntary. For countries with a high risk exposure to a variety of floods (eg caused by both hydrological and geophysical events), the pooling of risks can be achieved by combining these risks into the same extended property damage cover.
- In Germany, the State does not intervene in the private insurance market. However, nearly 100% of buildings are insured against fire, in which case cover for natural catastrophes can be added to the fire insurance policy. 85% of German policyholders also include cover for storm and hail. This amounts to approximately 30% added cover for flooding (including torrential rain and backwater), earthquakes, subsidence, landslides, snow pressure, avalanches and volcanic eruptions (though this percentage is steadily rising). In addition, many Federal German states have proclaimed that they will not pay any subsidies to a property owner if cover for natural catastrophes is made available but the property owner neglects to obtain this cover.
- In Switzerland, there is a combination of state monopoly and private insurance schemes. The State itself does not intervene in the provision of insurance, but rather, makes the insurance of other risks compulsory (eg in fire insurance). Insurers then "bundle" cover for natural catastrophe risks (up to nine risks total, including floods and storms) with this compulsory cover at a very low prime rate. The insurers then compete on the rates for the additional risks.

As evidenced above, Europe consists of a variety of risk exposures that requires national governments to institute insurance schemes best suited for fighting the risk exposures within their own jurisdictions. As a result, **a one-size-fits-all insurance scheme across the EU is *not feasible***. For example; a flood insurance scheme in the Netherlands, where flash floods (ie storm surges) are rampant and greatly exceed the financial capacity of the insurance industry, would not be appropriate for a country such as Spain, where drought is the primary catastrophe problem, thus necessitating different insurance expertise and policies.

Moreover, some Member States have special needs based upon the nature and financial capacity of the country. In some cases, the public may simply be unwilling to pay for natural catastrophe insurance cover, whether because of the low risk awareness and perception of a catastrophe or because of the economic situation. This can be a problem, for example, in some Eastern European countries such as Romania, which are still experiencing with the development of natural catastrophe insurance. In an effort to develop a form of "micro-insurance" as a catalyse for building property cover, the Romanian State passed a law in 2010 that obliges private individuals and legal entities to ensure their homes against natural catastrophes or else face a governmental fine. Due to the still low uptake of natural catastrophe insurance, despite the introduction of the above mandatory law, such insurance is heavily advertised to help raise demand.

Attempting to harmonise insurance schemes can also hinder insurer ability to contract directly with their policyholders for the type of cover that best reflects their risk exposure. Additionally, an EU-wide legally binding insurance scheme is unlikely to factor in the insurance capacity of the various national markets, which widely differ in competition, level of expertise and ability to insure (Germany and the United Kingdom, for example, have highly developed private insurance markets for natural catastrophes, whereas several Eastern European countries are still working to build their expertise and financial capacity to cover natural catastrophe risks).

ii. Variety in Member State perception of risk

The variety of natural catastrophe cover purchased in Member States also reflects the diversity in the public's perception of the actual risks presented by possible catastrophes. For example:

- an underestimation of the insurance needed due to a lack of information about the risk;
- a lack of awareness of the magnitude of the risk;
- an anticipated receipt of compensation from public authorities.

Underestimation of risk and expectations of state or donor assistance often leads to a lower demand for insurance. When a smaller pool (ie group) of people takes out insurance, insurers must raise premiums to ensure they have the sufficient financial capacity to cover the potential future losses. In cases where the insured pool is particularly small, however, the insurance becomes less economically viable. In this case, some insurers may be forced to withdraw from the market due to their inability to provide cover at prices considered commercially affordable, thereby further limiting the insurance capacity publicly available.

Considering the above, it is important for policymakers to avoid an overlapping of state or EU funds (eg EU Solidarity Fund) in instances where the private insurance market has sufficient financial capacity to cover the natural catastrophe at hand. The establishment of such funds should not risk imperiling the use of insurance or introduce discrimination between those persons who take out insurance and those who do not. Any fund regulation must be very clear in its scope and implementation and should not be used in a manner that would substitute the role of insurance rather than complement a common approach in protecting against natural catastrophes.

5. Future impact of climate change requires attention to adaptation

Climate change is affecting the frequency and intensity of natural catastrophes and will signify a paradigm shift for many of the above lines over the coming decades. The insurance industry will have to adapt its financial processes (eg funding, risk mitigation techniques and provisioning) as well as its business processes (eg underwriting and claims) in order to cope with the challenges of regulatory and market developments. Thus, cooperation between insurers and policymakers is absolutely essential to ensure that a **flexible approach** to natural catastrophes in Europe is taken, one which **encourages *market-driven initiatives*** and **permits risk transfer mechanisms to *adapt*** to the local conditions of the region where these mechanisms are implemented.

The most apparent impact of the increasing frequency of natural catastrophes on insurers and reinsurers is the expected increase in claims expenditures. This results from the insurance industry's pivotal role in the compensation of financial losses incurred by households, farmers, energy providers, etc. However, natural catastrophe insurance cover can be difficult to provide in several countries because of the enormity of the risk involved and the limited pool of insured persons. Thus, a combination of adaptation measures (eg effective use of land-planning and building codes) and cooperation from policymakers (eg raising awareness of the need for cover, enforcing adaptation measures) is crucial toward increasing the insurability of natural catastrophes.

It is important to note, however, that adaptation measures cannot be promoted by the insurance industry alone. While insurers have been encouraging their customers and the general public to take prevention measures in a number of ways (eg communication campaigns, individual advice to insureds, underwriting and pricing policies), the actual financing for such measures must be taken up by the business community and the public. In this respect, public authorities need to encourage, through awareness-raising and enforcement of relevant legislation, **a move towards *more preventive behaviour***. Public authorities must share this responsibility by introducing initiatives (at times, mandatory) that encourage and promote adaptation measures. As investment by the private sector is also necessary for the uptake of adaptation measures, public authorities could also introduce more incentives for businesses to incorporate such measures into their operations (eg tax benefits).

6. Insurance scheme efficiency requires 3 core principles

In order to improve the effectiveness of the insurance of flood risks, one must implement the core principles that are essential to any insurance scheme's efficiency. These core principles are as follows.

i. Responsibility Sharing

The overarching principle is "**responsibility sharing**", wherein various stakeholders (eg governments, private companies, insured parties) all take part in minimising and adapting to catastrophic environmental conditions. Insurance must not be relied upon as the sole solution for catastrophe losses, as insurer ability to cover such risks (ie insurability) corresponds to the action taken by other involved parties.

Insurers have valuable expertise in identifying and analysing risk, as well as developing sustainable financial solutions and encouraging risk-reducing behaviour of their insureds. Public authorities, however, decide on land-use planning (eg permitting or forbidding construction in areas with high risk exposure), the capacity of sewage systems (eg building sufficient capacity to prevent the overflow of sewage following heavy floods or storms) and adopting certain construction codes (eg structural plans that reduce the impact and costs of extreme weather). Public authorities are also responsible for investment in general prevention measures such as adequate flood defences for coastal regions and river embankments.

Evidently, the cooperation from public authorities makes a significant difference in the level of insurability for a natural catastrophe risk. Policyholders are responsible for small scale adaptation measures concerning their property, such as strengthening their roof structures in order to withstand higher wind loads or adapting the drainage capacity of their homes to the intensifying torrential rainfall. A failure in "responsibility sharing", however, leads to more losses and higher premiums in the long run. There may even be a destabilisation of established insurance schemes, most likely for those who do not penalise a lack of adaptation or that foster mal-adaptation (ie measures that create more harm than good, such as faulty structural defences that can cause more damage to neighbouring properties than would have occurred as a result of a natural catastrophe).

ii. Coordinated Action

Effective risk management requires **coordinated action** that aims at an optimal combination of all stakeholders' expertise and strengths. This should first encompass the dissemination of coherent risk data that can be easily interpreted and integrated into the decision-making process of public and private stakeholders. Such data can also help insurers to design appropriate insurance cover, thus further improving insurability. Moreover, financial support from governments to subsidise the cost of premiums or lower the level of risk by establishing prevention measures (ie public-private partnerships) can be of great assistance in cases of very high risk exposure.

Active public-private partnerships can help to ensure that the conditions of insurability are met or improved, thereby helping to make the cost of insurance more commercially acceptable. A public perception that insurance is more affordable is likely to increase the insurance pool, as more people may consider buying insurance at the lower rate. Insurance works most efficiently when the pool of insureds is sufficiently large and widespread (also known as "the law of large numbers"). It is particularly important for insurers to have geographically diversified risk portfolios in this case, as natural catastrophes strike large areas at once and lead to a wealth of simultaneous losses. For these reasons, European insurers initiate and actively support public-private partnerships in areas with a very high risk of natural catastrophe perils.

However, for some Member States, legally binding public-private partnerships, or state-owned pools, can impair the adaptive capacity of insurance. To avoid this problem, the aim of such partnerships should be introduced only to those areas where the economic risks of the possible natural catastrophes exceed the financial capacity of the private insurance market. This could be the case where the premium necessary to build enough financial capacity to cover a risk is high, which can lead to low demand for cover and an inability to build a sufficient pool for spreading the risk. Public-private partnerships can be of great value in these situations. However, their target should be to enlarge the pool of insureds to help build insurance availability and capacity at commercially affordable premium rates.

iii. Ex-Ante Financing

Considering the differences in natural catastrophe risk exposure and in insurance market capacity across the EU, it is important to support the movement of each EU Member State towards a **coherent legal framework** that can effectively deal with the effects of natural catastrophes. However, such a framework should encourage economic players to turn towards the **appropriate market responses for *ex ante* financing of damages** and **limit the intervention of the state** as an insurer of last resort.

Ex-ante financing schemes boost efficiency and are more advantageous than ex-post financing, as insurers receive their premiums prior to any flood-related disaster and, via this system, can provide quicker financial support to their insureds. Pure ex-post compensation, such as state relief and EU solidarity funds, rely upon limited tax revenues that may or may not satisfy the extent of the loss. These types of funds should be restricted to those cases where the necessary prevention measures have been taken and/or where the resulting losses were not insurable. The allocation of public funds should additionally be subject to conditions so as to increase the public's resilience to natural catastrophes and to increase investment in adaptation to catastrophic risks.

7. Conclusion

Through the exercise of the above principles, insurers can continue making a vital contribution to the relief of natural catastrophe losses. This includes the development of insurance schemes and products for each Member State according to their levels of risk exposure, risk awareness and government action. The variety in these factors demonstrate that no "one size fits all" scheme for the EU is appropriate, but that methods of improving insurability – such as enforcement of adaptation measures, more access to data and cooperation between public authorities and the private sector – can greatly help to improve the ability of insurers in continuing to offer their services.

The European insurance industry looks forward to continued cooperation with European and national institutions in order to discuss how natural catastrophes can best be prevented and their resulting losses minimised. Through this cooperation, the industry will remain committed to developing the ideas and methods for carrying out those means.

Annex: An overview of natural catastrophe insurance schemes in Europe

Country	Major risks	Risks covered	Cover purchase	Penetration rate	Public institution	Nature	State guarantee	Public Private Partnership	Form of cover	Who issues the policy	Losses covered	Properties covered	Pricing	Indemnity limits	Deductibles/ franchises	Equalisation Reserves	Official declaration required
Austria	Floods, storms, landslides, snow, avalanches and hail	All except volcanic eruption	Optional	>75 % for storm, hail, snow pressure and landslides	Disaster Fund	Federal Ministry of Finance	No	Compensation by Länder up to 20-30% , of which 60% reimbursed by Disaster Fund for severe flood, avalanche, eartquake, landslide, hurricane or hail		Private insurance companies	Direct material losses, business interruption in commercial and industrial	Residential, industrial and commercial buildings	Free (risk-based)	Free (from 3 700 to 10 000 eur for residential flood risks, earthquake and avalanches)	Residential risks: no; commercial and industrial risks: yes	No tax-exempt equalisation reserves allowed	No
Belgium	Floods, storms, overflow or blockages of public drainage	Storm, hail, weight of snow, flood, overflow or blockages of public drainage, landslides, subsidence and earthquake	Natcat cover in compulsory guaranties in the frame of the simple-risk fire policies which are not compulsory	> 75%	Legislative limit on intervention according to total insurance premium. National Calamities Fund covers losses beyond those limits up to a ceiling. Beyond ceiling, indemnities owed by insurers are reduced proportionally.	Ministry of Finance	National Calamities Fund (type of reinsurance)	Yes (insurers / Calamities Fund)	Simple risk policies	Private insurance companies	Material losses	"Simple risks" where insured value does not exceed 1.328.709 EUR; limit rises to 42.740.149 EUR for following: premises where business not > 20%; agricultural/ livestock; non-pharmacy professions; cultural/ social/non-tertiary education purposes; art facilities; sport facilities; and medical/health/care homes.	Insurers set premiums and deductibles. If no affordable cover available cover on the market, a Tariff Office is created to specify the rating terms. The Tariff Office-assigned premiums and claims are distributed among all insurers operating in simple-risk fire cover.	The guarantee is limited to the insured amount	Free, except for risks which are covered at the "Tariff Office" terms		No
Bulgaria	Floods, earthquakes	Flood, earthquake, storm, hail, weight of snow, landslides	Optional	10% for flood, <10% for earthquake. Penetration rate is calculated on the basis of the number of dwellings for 2008.	No					Private insurance companies	Material losses	Residential, industrial and commercial buildings	Free	No			
Cyprus	Storms, cyclones/ hurricanes, floods, hail, landslides, snow frost, drought, subsidence, earthquakes, forest fires, lightning	All risks except drought; subsidence, landslide snow and frost not widely offered and demand is limited	Optional cover that is generally an add-on to fire cover	Property insurance is the second largest class of non life business; no official information penetration	No public cover scheme, though ministers can cover government property; government may cover special groups (social benefit/low-income persons); cover subject to criteria; remaining cases dealt on ad hoc basis		No	No	Direct insurance; insurers obtain reinsurance	Private insurance companies	Material damage; business interruption in commercial and industrial	Residential, commercial and industrial property, including motor / cars	Free; set by insurance undertaking	Amount insured	Subject to deductibles fixed by insurance undertakings	No equalisation reserves	No official declaration is necessary; insurance company makes an informed decision
Czech Republic	Flood, storm, hail, snow pressure	All (incl cyclones, landslides, avalanches, earthquakes and volcanic eruptions)	Optional	>75 % for storm and hail; 25-75 % for floods and landslides	No	Public business institutions	No	No	Direct insurance	Private insurance companies	Material losses	Residential, commercial and industrial risks	Free (risk based)	Amount insured	Free (risk-based)	Yes	No
Denmark	Storms, floods, hail	Storms, floods, cyclones, hail, landslides, snow, frost, subsidence and forest fires	Optional except for storm surge, which is compulsory for those taking out a fire insurance policy.	> 75 %	Storm Council		If necessary (because of high losses), credit guaranteed by the State.	Yes (in the new storm surge scheme)	Direct insurance	Private insurance companies	Direct material losses (unless covered against floods and storm surge by another (private) insurance)	Residential, commercial and industrial buildings unless: (1) located in a risk zone or (2) covered / possible to cover for floods / storm surge	Storm surge scheme: annual fee /fire police (DKK20)	Storm surge scheme: No		No tax-free provisions allowed	No but the Storm Council establishes whether an event qualifies for public cover
Estonia	Storm and floods	All except earthquakes, landslides and volcanic eruptions	Optional	N/A	None	N/A	None	None	Direct insurance	Private insurance companies	Direct material losses; business interruption	Residential, industrial and commercial buildings	Free (risk-based)	No standard limits	Free (risk-based)	Not allowed	No
Finland	Storms and floods (state cover floodings of lakes and streams)	All except frost, drought, subsidence, earthquakes and volcanic eruptions	Optional	> 80 % for storms; 30 % for hail and forest fires	No			Yes, loss prevention measures	Direct insurance	Private insurance companies	Material losses and business interruption	Residential, industrial and commercial buildings; vehicles			Deductible		

Country	Major risks	Risks covered	Cover purchase	Penetration rate	Public institution	Nature	State guarantee	Public Private Partnership	Form of cover	Who issues the policy	Losses covered	Properties covered	Pricing	Indemnity limits	Deductibles/ franchises	Equalisation Reserves	Official declaration required
France	Floods, storms, 'subsidence', earthquakes, hail, snow pressure (100% covered within property insurance)	All	Compulsory (provided that a property policy is contracted in the market)	98%	Caisse Centrale de Réassurance (CCR)	Co. Ltd. (100% owned by the State)	Yes, if CCR reinsured Unlimited	Yes Direct cover: private market Reins. (not compulsory): CCR	Direct insurance Reinsurance (CCR) Proportional and Stop loss	Private insurance companies	Material losses Business interruption	Industrial risks Commercial Residential Cars, contents	Flat rate Extra premium applied on the premium of the base policy (12% for fire insurance policy). General application	Amount insured (No global limit of the system)	Legal deductible	Yes	Yes
Germany	Floods, storms, hail, earthquakes, torrential rain, snow pressure, frost (pipewater) (scope covers 100% of inhabitated areas - approx 98,5% can be insured "off the shelf", 1,5% need individual cover)	All except drought	Optional	Approx. 85 % for storms, cyclones and hail, approx. 75 % for frost (pipewater), approx. 30 % for floods, torrential rains, backwater, landslides, avalanches, subsidence, volcanic eruptions, snow pressure	No	N/A	No	No	N/A	Private insurance companies	Material losses and business interruption	Residential, commercial and industrial buildlings	Free (risk-based zoning system); premiums ranging from approx 50,- EUR p.a. for a house up to 300,- EUR p.a. depending on the sum insured and the NatCat exposure)	No	Free (risk-based)	Yes for storm, hail and frost; Solvency II compatible solutions ready for operation	
Greece		All except avalanches and drought	Optional	< 10 %													
Hungary						Flood not covered by commercial insurance companies	Yes, but state only enters if fund is insufficient	No	Simple risk policies	Fund	Flood	Residential (though very few policies contracted)	Premiums given in the act depending on the value of this property	15.000.000 HUF per loss	No	No	No
Iceland		Earthquakes, volcanic eruptions, avalanches, landslides, floods	Compulsory Cover attached to a fire policy which must be compulsorily purchased		Vidlagatrigging Islands	Public business	If necessary (ie high losses); State guarantee	Yes	Direct insurance Reinsurance: international market	Private insurance companies	Direct material losses	Residential and commercial buildings	A single premium : 0,25 p.m. (infrastructures: 0,2 p.m) General application	1 % of the total insured amounts per event at the moment of the losses	Deductible		
Ireland	Floods, storms, frost (burst pipes)	Storms, floods, frost (burst pipes), fires (under household / commercial policies)	Optional - but most mortgage lenders require borrowers to have buildings insurance	Approx 98% for flood but this is likely to fall unless there is more government investment in flood defences / risks agreements	No	N/A	No	No	Direct insurance	Private insurance companies	Material damage; business interruption	Residential and commercial buildings	Risk-based with a certain amount of cross-subsidisation	Amount insured			
Italy	Earthquakes, volcanic eruptions, hail, lanslides, floods	Floods, hail, snow, frost, avalanches, earthquakes	Optional	< 25%, except for frost (25-75%)	No	N/A	No	No		Private insurance companies	Direct material losses	Buildings and contents	Free (risk-based)				
Luxembourg	Storms, hail, floods, snow pressure	Storms, hail, snow pressure	Optional	> 80 %	No	Private business	No	No	Direct insurance	Private insurance companies	Material loss	Buildings, contents, cars	Free (risk-based)	Depends on insurance contract	Depends on insurance contract		No
Netherlands	Storms, hail, floods	All except earthquakes, volcanic eruptions and sea / major river flood	Optional	> 75 %	No	N/A	Government can pay flood claims after major event (WTS)	No	Direct insurance	Private insurance companies	Material losses and business interruption	Residential, industrial and commercial buildings; agricultural and vehicles	Free (risk-based)	Amount insured	Deductible	No	For flood claims after a major event only

Country	Major risks	Risks covered	Cover purchase	Penetration rate	Public institution	Nature	State guarantee	Public Private Partnership	Form of cover	Who issues the policy	Losses covered	Properties covered	Pricing	Indemnity limits	Deductibles/ franchises	Equalisation Reserves	Official declaration required
Norway		Storms, cyclones, floods, landslides, avalanches, earthquakes and volcanic eruptions	Compulsorily attached to fire policies	> 90 %	Norsk Naturskadepool / Statens Naturskadefond	Damage pool managed by FNO (private)	No		Direct insurance	Private insurance companies	Direct material losses	Buildings and contents	Flat rate: 0,08 p.m. on the insured capital	Total limit per event: 12,5 bn NOK	Deductible		
						(all the fire insurance companies)			Reinsurance: International market				General application				
		Hail, frost and forest fires	Optional via separate insurance cover														
Poland	Floods, storms, hail, landslides, drought, torrential rains, snow	Floods, storms, hail, landslides, drought, torrential rains, snow	Optional, though some NatCat risks are compulsory for farmers	> 75 % for storm, hail, 25-75% for floods, landslides; 25-50% for snow, torrential rain	No	N/A	No for commercial cover; Yes, for field crop losses.		Direct insurance	Private insurance companies	Material losses / business Interruption; field crops	Buildings and contents	Free (risk-based)	Amount insured			
Portugal	Earthquakes, storms, floods, landslides and forest fires	Storms, cyclones, floods, landslides, subsidence, earthquakes, forest fires and volcanic eruptions	Optional	25-75 % for storm, cyclone and floods; 10-25 % for landslides, subsidence, earthquakes, and forest fires	No	N/A	No	No	Direct insurance	Private insurance companies	Direct material losses	Residential, commercial and industrial buildings unless: (1) located in a risk zone or (2) covered / possible to cover for floods / storm surge	Free (risk-based)	Amount insured	Deductible	Yes, for seismic risk	No
									Reinsurance: International market								
Romania		Earthquakes, floods, landslides	Compulsory for every dwelling (private or public)		Natural Disaster Insurance Pool (PAID)	Joint stock Company owned by insurers (Reinsurer)	Yes	Yes	Direct insurance	Private insurance companies	Material losses (direct and indirect)	Residential	Single tariff (2 types depending on dwelling construction)	Limits per event and total annual limit per policy	Deductible		
							Lender of last resort	Market and PAID: cover	Reinsurance by PAID			(not contents)	General application				
								State: reinsurance premiums in early years & cover promotion									
Slovenia	Floods and storms	Storms, floods, earthquakes, hail, landslides, fires, avalanches, frost	Optional	50 % for floods and other perils	No	N/A	No	No	Direct insurance	Private insurance companies	Material losses, personal injuries and business interruption	Residential, industrial and commercial buildings; contents; vehicles		Amount insured	Deductible		
Spain	Floods and storms	Storms (>135 km/h), tornadoes, floods, earthquakes, tsunamis, volcanic eruptions, meteorites	Compulsory within a property or personal (accidents or life) insurance cover	100% regarding the ordinary policies issued in the market	Consorcio de Compensación de Seguros (CCS)	Public business institution	Yes (unlimited)	Yes (Market: policy issue, management; CCS: damage management, indemnity)	Direct insurance	Private insurance companies	Material losses, personal injuries and business interruption	Residential, industrial and commercial risks, contents and cars	Flat rate; surcharge on insured capital (tariff according to type of property)	Amount insured (no global limit of the system)	Deductible for industrial / commercial	Yes	No
Sweden		All except breakage	Optional	>90%	No	N/A	No	No	Direct insurance	Private insurance companies	Material and personal losses	Residential, industrial and commercial buildings		Amount insured	Deductible		
Switzerland	Earthquakes, floods, storms	Floods, storms, hail, avalanches, weight of snow, falling rocks, falling stones, landslides	Compulsory for fire insurance with NatCat cover included; optional for business interruption	> 97%	Intercantonal Reinsurance (monopoly insurers) covers buildings in 19 of 26 cantons; rest of market served by private insurance	Intercantonal public corporation	No	No	Direct insurance (for private insurers and monopoly insurers)	Private or monopoly insurers	Property damage (direct and indirect losses)	A ll individual and commercial risks	Private insurers have fixed rates (by law) for buildings and individual / commercial content; monopoly insurers have Cantonal tariffs	Private insurers - CHF 2B per event (limits revised every 5 yrs); monopoly insurers - no global limit	Deductible	Yes	No

Country	Major risks	Risks covered	Cover purchase	Penetration rate	Public institution	Nature	State guarantee	Public Private Partnership	Form of cover	Who issues the policy	Losses covered	Properties covered	Pricing	Indemnity limits	Deductibles/ franchises	Equalisation Reserves	Official declaration required
Turkey	Earthquakes and floods	Earthquakes	Compulsory for every dwelling inside the boundaries of municipalities		Turkish Compulsory Insurance Pool (TCIP)	Legal public entity	No	Yes	Direct Insurance	TCIP policies arranged through accredited insurance companies	Direct material losses	Residential buildings inside municipality boundaries	Premium depends on risk zone, construction type and square area of dwelling	Max insured capital dep on construction type	Deductible		
								Private Pool ("Eureko")	Reinsurance								
									Alternative Risk Tranfer								
		Storms, cyclones, floods, hail, landslides, snow, subsidence and forest fires	Optional	> 75 % except snow (25-75 %), hail, and forest fires	No	N/A	No	No									
United Kingdom	Floods (various types), windstorms and subsidence	All except avalanche and drought (eg economic losses, subsidence), forest fires and volcanic eruption. Most policies exclude flooding due to rising groundwater levels.	Optional - but most mortgages require home owners to have flood insurance	> 85%, except avalanche, drought, forest fires, volacanic eruptions.	No	Private insurance solution where NatCat cover is a standard component of property insurance; government agreement on flooding	No	Flood: Statement of Principles (SoP) agreement - insurers cover up to 1in75 year risks as long as government tries to manage floods (SoP to expire post-2013)	Direct insurance	Private insurance companies	Property damage / business interruption	Private insurance widely available; SoP applies to residential and small business properties built before 2009	Not bound by the SoP - pricing based on risk. However there is some cross-subsidisation in the market, where those at low risk are subsidising those at high risk. This cross subsidy is slowly starting to disappear.	Amount insured	Not bound by the SoP		

The CEA is the European insurance and reinsurance federation. Through its 32 member bodies — the national insurance associations — the CEA represents all types of insurance and reinsurance undertakings, eg pan-European companies, monoliners, mutuals and SMEs. The CEA, which is based in Brussels, represents undertakings that account for around 95% of total European premium income. Insurance makes a major contribution to Europe's economic growth and development. European insurers generate premium income of over €1 100bn, employ nearly one million people and invest almost €7 500bn in the economy.

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