

# THE DASHBOARD ON INSURANCE PROTECTION GAP FOR NATURAL CATASTROPHES IN A NUTSHELL

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**eiopa**

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## 1. INTRODUCTION

In light of climate change, EIOPA is concerned that affordability and insurability of natural catastrophes (Nat Cat) insurance coverage is likely to become an increasing concern. Currently, only a quarter of the total losses caused by extreme weather and climate-related events across Europe are insured. This shows that there is an insurance protection gap in Europe.

Climate change will continue for many decades to come. Improved climate projections provide further evidence that future climate change will increase climate-related extremes (e.g. heat waves, heavy precipitation, droughts, flood, top wind speeds and storm surges...) in many European regions (EEA, 2017).

In order to address the protection gap, increasing the insurance penetration is not sufficient as due to the increasing frequency/intensity of some events, some risks might become uninsurable. Pro-active measures on buildings' vulnerability, localisation of exposure and optimised insurance coverages will be important elements of a resilient society.

It is therefore key to understand the current insurance protection gap and identify where it comes from. The main purpose of the dashboard is to monitor the risks related to the insurance protection gap for Nat Cat in Europe.

In addition, such a dashboard should also help to:

- Increase the awareness of the protection gap issues for all stakeholders.
- Promote a science-based approach to protection gap management and decision-making.
- Identify at-risk regions and identify the underlying protection gap risk drivers.
- Develop pro-active prevention measures based on a granular assessment of risk drivers.
- Identify the potential for synergies between national policies to improve protection against natural catastrophes across borders at European level.

The dashboard provides two views of the protection gap:

1. the current protection gap: based on a modelling approach to have an estimation of today's protection gap. In order to estimate the current protection gap, the following information is required: the risk (which is composed of the hazard, vulnerability, exposure) and insurance coverage at present time.

The current protection gap provides a more appropriate view of today's risk from a hazard perspective: only because an event has not occurred in that past does not mean it cannot or would not in the near future. In addition, the current protection gap also uses the latest information on exposure, vulnerability and insurance coverage available.

The different elements of the current protection gap should provide additional information to address the protection gap by:

- Monitoring the exposure impacted by the hazard: one of the main reasons for the increase observed in Nat Cat losses is the growth in exposure. Dynamics such as increasing value of assets, new growth regions, people concentrating in high-hazard areas may contribute strongly to potential high Nat Cat losses. It is therefore important to monitor this exposure growth, get reliable data about the exposure and locate risk areas by using hazard maps. Decreasing the vulnerability should be a clear goal when addressing the protection gap. A number of resilience actions are possible, build back better, developing building codes, etc.
- Optimizing the Nat Cat insurance schemes<sup>1</sup> within Europe

2. a historical protection gap: based on historical data on economic and insured losses to understand the protection gap in the past. The historical losses will depend on the past hazards (past events), exposures, vulnerabilities and insurance coverages (the three last parameters measured at the time of the event).

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<sup>1</sup> Insurance scheme can be public/public-private or private only.

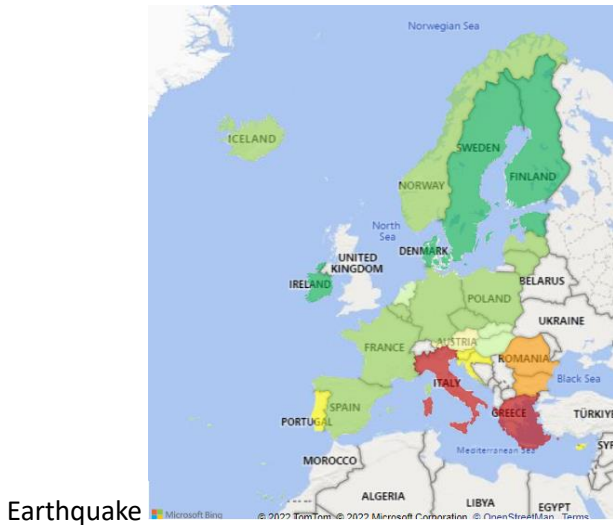
## 2. OUTCOMES

### CURRENT PROTECTION GAP

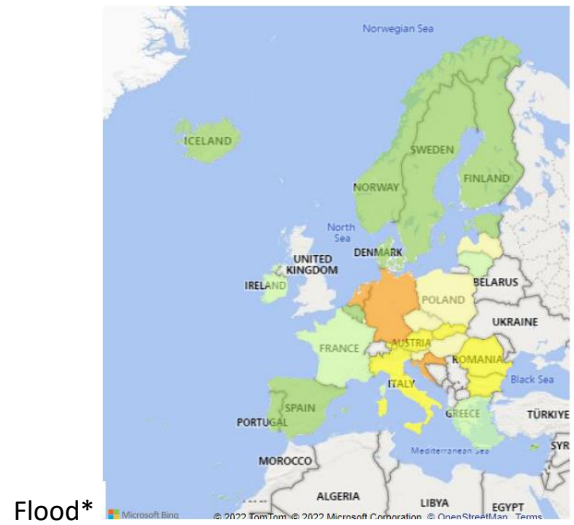
The protection gaps vary significantly among Member States as well as among different perils (from some countries having a very high protection gap to some countries not having any issue with protection gap). The dashboard helps not only to identify regions, which have protection gap issues, but also to understand the root-cause of the protection gap. If a country's exposure to a given hazard is high, then it would be important, for example, that buildings have low vulnerabilities as well as a high insurance coverage.

The lowest current protection gap is observed for windstorms (all countries have a score equal or below 2) (see Figure XX). Windstorm is a peril which is generally well insured, in particular, in the countries where there is a high risk. Coastal flood is a peril which could be more relevant with regard to climate change. Currently, one country, the Netherlands is showing a protection gap (score  $\geq 3$ ) and one country, Germany, should be monitored (score = 2.5). Wildfire is also heavily impacted by climate change. Currently, two countries, Portugal and Greece, show a protection gap (score  $\geq 3$ ). Four countries, Austria, Croatia, Slovakia and Cyprus, should be monitored (score = 2.5). For flood\*, three countries have a protection gap, the Netherlands, Germany and Croatia. Five countries should be closely monitored, Italy, Romania, Slovakia, Bulgaria and Austria. Earthquake is the peril where the protection gap score is the highest for both Greece and Italy (score = 4 – very high protection gap). Two additional countries also shows a current protection gap, Romania and Bulgaria (score = 3). In addition, four countries should be monitored, Slovenia, Cyprus, Croatia and Portugal (score = 2.5).

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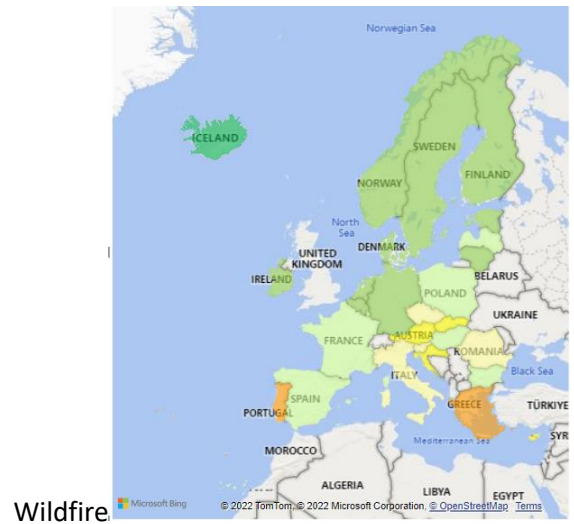
Earthquake



Flood\*



Windstorm



Wildfire

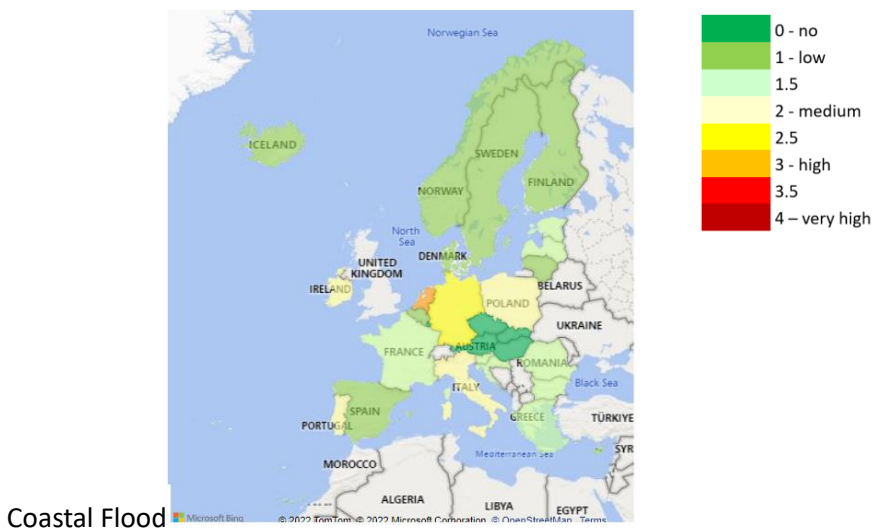
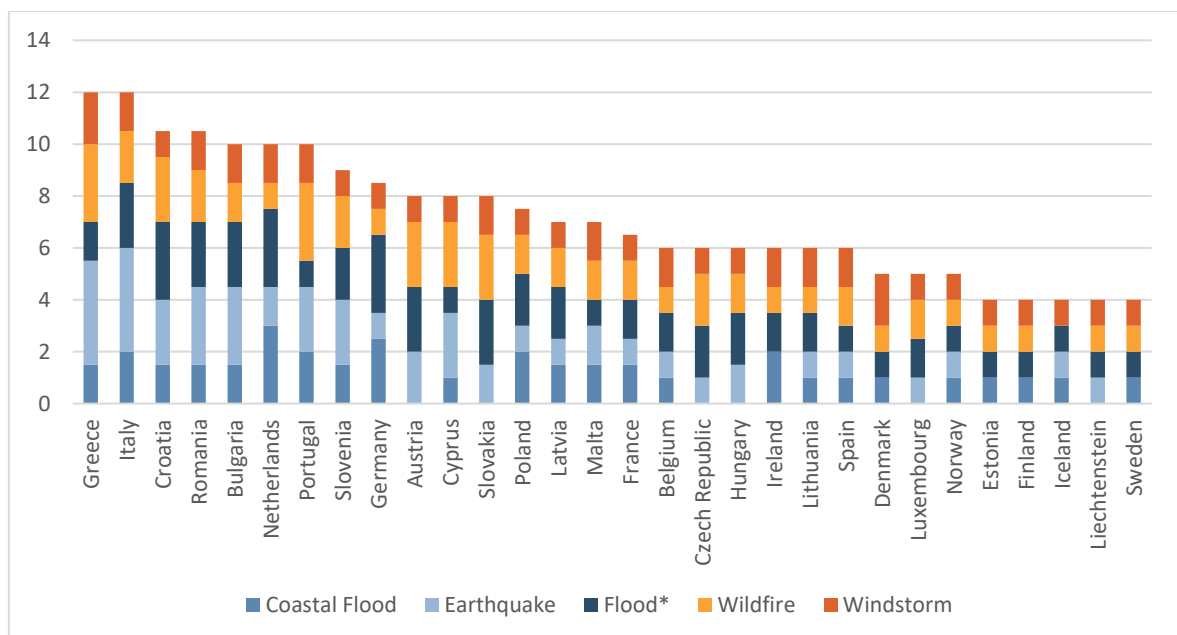


Figure 1: Current protection gap score for (a) Earthquake, (b) Flood\*, (c) Windstorm, (d) Wildfire and (e) Coastal flood.

Figure 2 shows the aggregated valued of the current protection gap score for the five perils for each country. Greece and Italy are the countries which have the highest total current insurance protection gap score for natural catastrophes (See Figure 2). This can be explained by the fact that these two countries have high hazards and very low insurance penetrations in particular for earthquakes.



**Figure 2: Total current protection gap score by country by peril.**

## HISTORICAL PROTECTION GAP

Only a quarter of the losses were insured in the past (1980-2021) in Europe. In absolute terms, three peril regions show the highest uninsured losses: Italy Earthquake, Germany Flood and Italy Flood which corresponds to ~45% of the uninsured losses in Europe. For all three perils/regions the insurance penetration was very low (98%, 75% and 97% of these historical losses were uninsured for each peril/region).

| Peril Region     | % of total uninsured losses considering all perils in the EEA | Uninsured losses (1980-2021) in percentage of total economic losses |
|------------------|---|---|
| Italy Earthquake | 22%   | 98%   |
| Germany Flood    | 12%   | 75%   |
| Italy Flood      | 11%   | 97%   |

The highest insurance protection gap has been observed for earthquake where three countries have a score equal or above 3.5: Croatia, Italy and Greece. Flood\* is the peril which has the highest number of countries which show a high protection gap (score equal 3). Windstorm is the peril which has been the most insured in the past.

## COUNTRY INSURANCE SCHEME

An interesting outcome of this added functionality is the possibility, e.g to understand whether the country offers protection to natural events via specific structured local schemes which guarantee a coverage (partial or full) in case of natural events. For example, in Spain a public entity, the Consorcio de Compensación de Seguros (CCS), assumes those risks from insurance undertakings and compensates the damages caused by extraordinary catastrophic events. Similar examples can be found in Norway, Belgium, France, Iceland among others.



Another important outcome is the difference in the product specificities between residential and commercial properties. Commercial insurance policies could differ significantly from residential ones. The amount of limits and deductibles for the commercial segment is more volatile because it is less standardised and related, normally, to very high sums insured. These large contracts with low limits and high deductibles might impact the results of some countries but are more related to the business model of the commercial property insurer rather than to the actual protection gap.

### 3. OUTLOOK

**Input data:** The work on this dashboard highlighted the need to have data to estimate the protection gap in the past (economic and insured loss data) as well as data to estimate the risk, the insurance penetration for the current view. EIOPA conducted a data collection in 2021 to improve the understanding on the insurance penetration. For historical losses, EIOPA relied on external databases. EIOPA recognizes that there would be the need to get better views on historical loss data in particular on insured losses in the future.

**Estimation of the future protection gap:** The dashboard currently provides two views, a historical protection gap and a current protection gap. In view of climate change, the dashboard could also add a third view with an estimation of the future protection gap. This could be for example done for perils, which are estimated to be strongly impacted by climate change. This would require not only to study the way the hazard and the exposure would change in the future due to climate change, but also to monitor the evolution of vulnerability and the insurance coverage.

**Additional perils:** In light of climate change, droughts or freeze could also be added in the dashboard, for example. In addition, linking with EIOPA's work on the shared resilience solution for pandemics (EIOPA, 2020), the main elements defined in this dashboard could also serve to measure the protection gap for pandemic risk.

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