

DEVELOPING STRATEGIES FOR NATURAL CATASTROPHES

INTERVIEW BY **JENNIFER BAKER**

Can you explain what the goals are of the EIOPA Expert Network on Catastrophe Risk? How does the network intend to achieve these goals?

‘Firstly, the network is composed of experts on natural catastrophes from industry, model vendors, academics and also other EU institutions. And the main goal of this network

is to contribute to the EIOPA initiative regarding modelling and mitigation of natural catastrophe risks, as well as climate change. The network also helps us with supporting



collection analysis of data for the calibration of these risks for EIOPA. So we meet regularly to discuss shared technical expertise on different areas, and of course, also on climate change. And we really use this work for our ongoing work on sustainable finance.

For example, in 2021 we published a methodological paper to include climate change in the NatCat standard formula. We use the network to better understand the impact of climate change in Europe and see the latest scientific evidence. Another example we will also discuss later, is the dashboard that we have developed on the insurance protection gap for natural catastrophes – to understand the protection gap, we need to first know, what is the earthquake risk in Europe or what is the flood risk in Europe. And the network helped us to assess this risk for the dashboard. So to conclude, this is an extremely important network for our work at EIOPA.’

So, what are the main challenges for the insurance sector related to climate change – we've seen for example wildfires were particularly widespread this summer?

‘We have been working on this question for a couple of years now, and we really see that the main challenges are the insurability of this risk and the pricing of climate related risks. We expect growths in physical risks, and therefore insurance claims are expected to grow as they are risk based. And this could lead to mid-term or long-term unaffordability. (Re)insurance companies may also decide not to make this type of insurance coverage available anymore for policyholders. So this is an issue that we are concerned about. In addition, we also see changes in patterns of extreme events that will make it more and more difficult for insurers to actually price this type of insurance product. To price insurance products, historical data are typically used. But now with climate change changing patterns, I think this will be more and more difficult to continue to do it like that. We need to have more innovative solutions to address these issues.’

Well, let's come back to one of those points, affordability. EIOPA encourages insurers to include financial incentives to take prevention measures. This is not always desirable from a customer perspective. In some cases preventive measures can be expensive

and only the insured that can afford the preventive measures are rewarded. That is not desirable from a social perspective. How can insurers find the right balance?

‘First, we are really convinced at EIOPA that the insurers have the right experience to help to manage catastrophic risks, I mean, they have gathered that over many, many years. For example, they provide risk engineering services, where risk engineers go on industrial sites, and help policyholders to take risk mitigation measures. This can be reflected in the premium. Another very simple example is wildfires, where there could be measures taken, such as how far a tree should be from your house and which vegetation to plant. These are examples of risk mitigation measures that might not be that expensive.

Raising awareness about how to behave during and after a catastrophe could also help to reduce loss of life and properties. But indeed, you're right, some mitigation measures, for example, retrofitting a house, could be quite expensive. But what we would really like to see is the consumer being informed about their risk. What are the possible prevention measures? How much would >

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it cost? And also, how would the premium look with and without prevention, so that the consumer really can make more informed decisions.

What we are working towards with our key messages is increasing risk awareness and increasing awareness about prevention measures. In addition, we also want to see insurers have a clear role to work closely with governments. If there are new adaptation measures such as new flood defences that could be taken, they should work together so that these types of measures can be then reflected in the risk-based premium for the benefit of consumers.’

Climate change is expected to lead to an increase in both severity and frequency of catastrophes for many perils. However, the current Standard Formula model only really focuses on severity. The same holds for the recalibration proposals. Could you comment on how we bring in this frequency as well as severity?

‘So the proposed approach that we are taking to include climate change in the standard formula, is actually to perform a more regular reassessment. The idea behind that is to make sure that we include the latest model updates in the parameters of the standard formula, and also the scientific evidence.’ What is important with this exercise is that it will have two steps. First, we will do the reassessment: analysing the changes in these parameters, and then only propose a recalibration if the changes are material. During the reassessment, we would also start reassessing what we call the country factor.

To derive the country factor, we need to know the 250-year return period losses that we obtain from catastrophe models. This return period loss gives us two pieces of information: one piece on the amount of the losses and one on the probability. And, as you said, climate change will change both frequency and intensity. So if we look at frequencies, maybe we have a 100-year event that could become twice as likely now, as it has been seen in the past,

coming maybe now every 50 years on average, rather than every 100 years. The estimated 250 year RPL would be impacted by changes of event frequencies. But indeed, in the future we could also look at the standard formula and additionally incorporate the number of events in each scenario to reflect the changes in frequencies.’

You mentioned right at the beginning, this dashboard that EIOPA produces. Tell us a bit more about that, who are the intended readers and what is the project all about?

‘The dashboard that we developed on the insurance protection for natural catastrophes covers 30 European countries and looks at five different perils – earthquake, flood, wildfire, coastal flood and windstorm. And we really wanted to look at each peril individually because often the protection for natural catastrophes looks at all perils together. But we know in Europe, the situation for windstorms is very different from the situation for earthquakes or floods. >

MARIE SCHOLER

is chairman of the NatCat Expert Network since 2019. She has written consultation papers on sustainability. She has also developed the **Protection Gap Dashboard** of EIOPA and is also currently (re) assessing the parameters of the standard formula for NatCat.



The main purpose of the dashboard is to monitor the insurance protection gap. The idea was to increase awareness about the protection gap. We also want to follow a science-based approach to help to identify the risk regions. Our idea with a European dashboard is to also look at potential synergies between different national policies to increase the protection against natural catastrophes across borders, because natural catastrophes don't stop at borders. But the way NatCat is insured in Europe is extremely different from one country to another.

If you want to have policy measures, you look at a current view of the protection gap. We complement the current view with a historical view. There we use historical loss, data insured and economic loss data, and

look at the historical protection gap in the past. In addition, what was also important for us, was to provide what we call a country insurance view – information about how natural catastrophes are covered in each country. As I mentioned before, it's extremely diverse. Some countries in Europe have public private partnerships, in others, it's only the private sector.

The dashboard is currently used by different stakeholders, including the ECB. There is a recent paper published by the ECB and EIOPA on policy measures to address the protection gap. The European Commission also uses the dashboard for the country report for the EU semester. And we know that there are also many discussions at national level, so it's quite dynamic.' >

What does EIOPA expect from insurers with respect to the protection gap?

‘In order to address the protection gap EIOPA has identified different measures. The first one is that we need to be able to understand and measure the protection gap because if we want to develop any policy measures, we need to know what we are talking about. We just spoke about the dashboard. This is only one example of an initiative that uses a specific type of dashboard, data and models. Insurers can help to get access to more relevant data to measure the protection gap.

Secondly, to address the protection gap, the insurance sector has the possibility to not only cover risks through insurance products, but also to contribute to climate change mitigation and adaptation. This is our concept of impact underwriting and engagement with public authorities to really push for more adaptation measures.

A third point would also be the work we have been doing on the consumer side to understand why consumers do not purchase insurance cover. We recently published a report on that aspect. We researched consumer behaviour and looked at the barriers, why people do not take more

NatCat insurance products, and found certain points like perceived unaffordability or a perceived lack of clarity in the conditions of the insurance contract, negative experience in the past with insurance claims or the misperception of the risks. So solutions could be more standardisation in insurance products or make them simpler, and also to improve the purchasing process. We also need more public private partnerships in the future to really ensure that we can continue to insure this risk.’

Some stakeholders criticise the data used for the protection gap. Could these issues be solved? And what role do you see for actuaries in helping to address challenges related to the protection gap and climate change?

‘Firstly the dashboard. This is the first European dashboard that was developed on the protection gap. And the idea we had in mind was really to have one methodology and common data for 30 countries. Of course, this brings challenges. For example, bigger countries with a high insurance penetration, might have more data. But in looking at the protection gap we also want to have data on countries which might have low insurance penetration.

So this was a very difficult task. But we also work with partners, like all European insurance supervisors, and also with the NatCat Expert Network to develop the dashboard. We have committed to regularly update the dashboard and we are in continuous discussion with different stakeholders to see how we can do so.

I’m also convinced that actuaries are extremely important people with the quantitative background to actually help to address these challenges. For example, we talk a lot about models and actuaries with the quantitative background. They have the right skills to understand and think about how climate change risks should be reflected in these models in the short term as well as in the long term. In addition, actuaries also create insurance products – they define the pricing and can therefore potentially reflect adaptation measures in risk-based premiums. They can share the expertise in the monitoring within the insurance companies, but also with external people, government and encourage more proactive risk management in climate change. I think these are extremely important skills that are needed not only in the insurance sector, but also when we talk with the public sector.’ <