

FEEDBACK STATEMENT

on comments received on the discussion paper
on Methodology on potential inclusion of
climate change in the Nat Cat standard formula

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Introduction

EIOPA conducted a public consultation on the discussion paper on Methodology on potential inclusion of climate change in the Nat Cat standard formula, which ran from 2 December 2020 until 26 February 2021. EIOPA received 15 stakeholder responses to the public consultation, of which 12 were public and 3 confidential responses. EIOPA would like to thank all stakeholders for their responses to the public consultation. The input received provided important guidance for EIOPA to finalise the methodological paper. All comments submitted were given careful consideration by EIOPA. This feedback statement summarises the main responses received and how EIOPA addressed them in the methodological paper. The non-confidential individual responses received and EIOPA's feedback on these responses are published in a separate document.

Objective and conclusions

The discussion paper constituted a follow-up to EIOPA's Opinion on Sustainability within Solvency II (EIOPA, 2019), which considered that further work is needed to investigate if and how to include climate change in the Nat Cat standard formula (SF), and is transformed to a methodological paper after the public consultation. This methodological paper discusses the methodology used so far for the Nat Cat SCR calibration and presents perils/countries, which are impacted by climate change. Finally, the paper elaborates on how to include climate change in the Nat Cat SCR calibration in the SF.

There is a clear need to explicitly consider climate change in the Nat Cat SF calibration. The main conclusions from this paper strongly support to formalise an approach to re-assess and, where material, recalibrate Nat Cat SCR parameters on a regular basis. These regular re-assessment/recalibration would integrate new considerations such as the use of models which explicitly consider climate change as well as the possibility to include new countries for particular perils, where material. The paper also identifies the need to enhance the understanding on new emerging perils such as wildfire or droughts.

Main responses received to the discussion paper and how EIOPA addressed them

The majority of stakeholders agrees that in light of climate change, it is necessary to explicitly consider climate change in the recalibration of the Nat Cat SF for certain perils/regions as identified in the paper. A number of respondents mentioned the need for more transparency as it is another component for adequate consideration of climate change. Disclosure of the handling of climate change for any model used in this context would be very useful for industry as well as supervisors. Undertakings could use this information to assess possible deviations of risks that are not reflected in the calculation of the Solvency Capital Requirement.

Coverage of the perils in the SF

A vast majority of stakeholders agrees with the coverage of perils in the SF. Respondents raised issues with regard to the coverage of the perils Hail and Windstorm in the SF:

- The paper should clarify that the peril currently named Hail in the SF refers to convective storm/is a sub-peril of convective storm. The paper clarifies that the SF includes in particular Hail as the dominant sub-peril, but also other sub-perils of severe convective storms, such as tornadoes and lightning.
- The majority of stakeholders agrees that it should be clarified that the peril currently named windstorm in the SF refers to cyclonic storm.

The paper therefore further clarifies the coverage for Hail and Windstorm.

However, for both Hail and Windstorm perils the majority of stakeholders did not support to rename these perils (Hail -> Severe Convective Storms and Windstorms -> cyclonic storms) in the SF.

Current and short-term impact of climate change in Europe

Almost all stakeholders agreed with the risks identified where there is a high confidence level on the current and short-term impact of climate change in Europe. Stakeholders pointed out that the analysis has been performed using widely acknowledged sources and has conclusions that are shared.

The paper refers to a 1.5°C warming scenario for short-term (5-10 years) projection of climate change. The stakeholders' view was split on this point. The paper now includes further reference to current observed data, which already show in 2021 an increase of 1.19°C compared to pre-industrial times (in 2010 the increase was equal to 0.89°C). The 1.5°C warming scenario for short-term (5-10 years) projection is therefore a very plausible projection.

In the discussion of including climate change into the SF, the paper also highlighted the need to consider adaptation measures. Stakeholders are unanimous on the need to take into account adaptation measures when assessing weather-related risks. Stakeholders noted however the complexity of such exercise and suggest using a simplified approach.

Methodological steps to include climate change in the Nat Cat SCR calibration

The paper discussed the following methodological steps:

- Nat Cat models explicitly considering climate change should be used if available: Almost all respondents agree that for relevant perils/regions where climate change is expected to have an impact, Nat Cat models explicitly considering climate change should be used if available. The methodological paper therefore considers this option further and also adds concrete examples.
- New countries to be considered in the SF in light of climate change: A majority of respondents did not agree to consider the need to add new countries but also emphasized the need to make a clear materiality assessment to take such a decision. The methodological paper includes therefore further evidence on the potential materiality of specific countries (for example for Hail).

- New perils to be considered in the SF in light of climate change: A majority of respondents did not see the need to consider additional perils such as wildfire in the SF as only a few countries have forests insured by the private insurance sector. Stakeholders however mentioned the need to monitor “new” perils. The lack of available data and models were also mentioned as issues for these “new” perils. The methodological paper therefore includes a section “Monitoring new emerging perils”.
- New losses to be considered in the SF in light of climate change: Most of the respondents noted that they did not see additional losses, which would be material enough today, to be considered in the SF. This specific section has therefore been placed in the annex of the methodological paper. However, the need to further enhance the understanding of the materiality of crop insurance for example, is placed under the new section “Monitoring new emerging perils” which would also consider droughts. This peril would be particularly relevant for crop insurance.
- Adding a loading factor: A large majority of the respondents does not support the introduction of a loading factor to capture climate change. Most of them highlighted the same drawbacks noted in the discussion paper: difficulty to estimate such a factor and isolate the impact of climate change on the perils/regions; increased complexity in the framework; possible double counting when effects of climate change are also embedded in the historical data used for the recalibration. Some respondents also noted that climate change could have an impact on the number of events but not on their severity and, thus, including a loading factor may be inappropriate, especially for perils for which robust models are in place. The methodological paper does therefore not consider this option.
- Reevaluating the correlation matrices: A large majority of the respondents does not support the approach based on the re-evaluation of correlation matrices. Although many of them recognize that in principle climate change can be captured through the reassessment of correlation matrices, most of the respondents see this approach as being too complex and not necessarily more accurate. Stakeholders noted, in particular, that the existing correlation matrix already relies heavily on expert judgment; in order to take into account all climate change-related uncertainties, the matrices may be too granular and lead to over parametrization. The methodological paper does therefore not consider this option.

Process changes to include climate change in the Nat Cat SCR calibration

A strong majority of stakeholders agree that there is a need to formalise an approach to re-assess current Nat Cat SCR parameters on a regular basis. Stakeholders pointed out that the understanding of Nat Cat risk is evolving over time and that EIOPA should revisit country factors regularly to ensure that the SF reflects the state of the art.

Stakeholders also mentioned that climate change is not the only factor that influences the calibration.

The following considerations were also mentioned by stakeholders:

- The factor used in the calculation should be confirmed, and if necessary, updated in a fixed and well-defined time horizon by a standard process.
- The assessment should ensure that recalibrations are only undertaken where material changes have occurred to avoid unjustified volatility in the parameters. Determining materiality thresholds for adding/removing/amending parameters is key.
- The time horizon needed for each individual parameter could therefore be different.

- Any recalibration should avoid any double-counting with the other sub-modules of the “non-life underwriting risk module”.

Stakeholders are unanimous that regular recalibration should be made under the condition that the changes are material in order to not include artificial volatility, that a materiality threshold should be included in the process and that the recalibration should not take place too often – e.g. each 5 years.

The methodological paper and conclusions reflect the strong agreement toward process changes to include climate change in the Nat Cat SCR calibration.

EIOPA

Westhafen Tower, Westhafenplatz 1

60327 Frankfurt – Germany

Tel. + 49 69-951119-20

info@eiopa.europa.eu

<https://www.eiopa.europa.eu>