

The questionnaire consists of 24 questions, categorized in four main areas.

Please provide your answers in this Excel-file and send it to EIOPA by email until 04 February 2022:
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General Information

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Influence of climate change on physical risk exposures and insurance underwriting

Question 1

Based on your assessment, how strongly is the physical underwriting risk exposure in the following non-life LoBs generally affected by climate-related hazards (Table 1, Annex)?

Please indicate according to the drop-down list.

LoB	Expected impact of climate change on physical underwriting risk exposures				
	Not affected	Low	Medium	High	Not Applicable
4) Motor vehicle liability			x		
5) Other motor insurance			x		
6) Marine, aviation and transport insurance			x		
7) Fire and other damage to property insurance				x	
8) General liability insurance					x
9) Credit and suretyship insurance			x		
10) Legal expenses insurance					x
11) Assistance Insurance			x		
12) Miscellaneous financial loss					x

Question 3

Have you raised in the past, or do you plan to raise, insurance premiums in specific LoBs due to the impact of climate-related hazards (Annex, Table 1) on physical risk exposures?

If yes, please explain with regard to your lines of business and the impact of climate-related hazards.

LoB	Yes	No	Not Applicable	Comment
4) Motor vehicle liability	x			Motor pricing through localized exposures ("zonier") is fined tuned to allow a better identification of areas with exposed geographical risks
5) Other motor insurance	x			same as Motor
6) Marine, aviation and transport insurance		x		Hurricanes and flood events are likely to have a higher impact on any transports insurance putting pressure on prices on a medium term
7) Fire and other damage to property insurance	x			This line is the most exposed to climate risks and is also experiencing a change in pricing habits with refined localized exposure pricing
8) General liability insurance			x	We consider litigation risks to which general liability would be associated as out of scope in this pilot exercise
9) Credit and suretyship insurance	x			Supply chains are impacted by the increase of climate change linked claim. https://www.gtreview.com/supplements/gtr-credit-political-risk-insurance-2021/sustainability-trade-credit-insurance/
10) Legal expenses insurance			x	We consider litigation risks to which legal expense insurance would be associated as out of scope in this pilot exercise
11) Assistance Insurance		x		Assistance insurance is impacted mostly through the increase of claims requiring assistance
12) Miscellaneous financial loss			x	We consider litigation risks to which legal expense insurance would be associated as out of scope in this pilot exercise

Question 2

Based on your assessment, which type of climate-related hazards (Table 1, Annex) influences the physical underwriting risk exposure in the following LoBs most?

Please indicate according to the drop-down list.

LoB	Type of climate-related hazards				
	Temperature-related	Wind-related	Water-related	Solid mass-related	Not Applicable
4) Motor vehicle liability			x	x	
5) Other motor insurance		x	x	x	
6) Marine, aviation and transport insurance		x	x		
7) Fire and other damage to property insurance	x	x	x	x	
8) General liability insurance					x
9) Credit and suretyship insurance	x	x	x		
10) Legal expenses insurance					x
11) Assistance Insurance	x	x	x	x	
12) Miscellaneous financial loss					x

Question 4

Have you raised in the past, or do you plan to raise, the level of deductibles in specific LoBs due to the impact of climate-related hazards (Annex, Table 1) on physical risk exposures?

If yes, please explain with regard to your lines of business and the impact of climate-related hazards.

LoB	Yes	No	Not Applicable	Comment
4) Motor vehicle liability	x			In France the damage line deductibles ("dommage aux biens") are fixed by the natural catastrophe regime (Articles L.125-1 et +)
5) Other motor insurance	x			Same as above
6) Marine, aviation and transport insurance		x		It is not clear whether deductibles have increased on these lines
7) Fire and other damage to property insurance	x			In France the damage line deductibles ("dommage aux biens") are fixed by the natural catastrophe regime (Articles L.125-1 et +)
8) General liability insurance			x	out of scope
9) Credit and suretyship insurance		x		It is not clear whether deductibles have increased on these lines
10) Legal expenses insurance			x	out of scope
11) Assistance Insurance		x		It is not clear whether deductibles have increased on these lines
12) Miscellaneous financial loss			x	out of scope

Question 5

Have you reduced in the past insurance coverage to policyholders after an extreme weather-related loss event? (Y/N) Please explain with regard to the LoB affected.

Yes	No
	x

Answering Field

France has a mutualized public regime created in 1982 (Articles L.125-1 et suivants du Code des assurances) in which all policies including damage coverages (for housing, companies, public territories, and agricultural companies) have an automatic coverage regarding natural catastrophe. This insurance coverage is linked to an unlimited reinsurance coverage guaranteed by the government. Wind related events ("tempêtes") are not part of this regime but is automatically included in the damage guarantee (article L.122-7 du Code des assurances). There are no plans to reduce coverage so far. Some risks (drought) maybe treated with a standalone regime, but this is still being discussed at government level.

Question 7

Do you have specific exclusions in the contractual terms of your insurance products that are explicitly related to the effects of climate change on the policyholder's physical risk exposure? (Y/N) Please explain.

Yes	No
	x

Answering Field

Since climate change evaluation is done at medium and long term (5 years to 30 years) when contracts are renewed every year in addition to the current natural catastrophe there are no explicit climate change linked exclusions in current terms and conditions.

Question 6

Climate change is expected to raise the frequency and severity of extreme weather events. Have you adjusted in the past, or do you plan to adjust, the contractual definitions of weather-related loss events for your insurance products in relation to climate change? (Y/N) Please explain.

Yes	No
x	

Answering Field

As mentioned in the previous question, even though there is a mutualized insurance regime in France, there are discussions to adjust coverage especially for drought risks which is still at an initial stage.

Question 8

Do you provide specific information to your policyholders on the potential impact of climate change on their insurance coverage or insurance premiums? (Y/N) Please explain and if possible, provide examples of the format of communication with the policyholders.

Yes	No
x	

Answering Field

Based on our feedbacks from a global insurer, some actors have started specific actions with insurance policyholders to alleviate climate risk exposure that may impact coverages and insurance premiums. For example AXA in France foster rebuilding and sustainable alternative through "Troubleshooting Pack and the New Energies Pack (for individuals)". Moreover, on the overall insurance markets, agents are currently being trained on these impacts to be able to correctly communicate on climate change impacts only when asked on the topic.

Integration of climate-related adaptation measures in non-life insurance products

Question 9

Do you consider climate-related adaptation measures according to the provided definition to be an effective tool to maintain the availability and affordability of insurance coverage in the future? (Y/N) Please explain.

Definition of climate-related adaptation measures:

Structural measures and services that are implemented by the policyholder ex-ante to a loss event, which reduce the policyholder's physical risk exposure to climate-related hazards through lowering i) the probability that a loss occurs and/or ii) lowering the severity of a loss.

Yes	No
x	

Answering Field

From IA point of view, it is key to follow adaptation measures through policyholder, policymakers risk alleviation in addition to working groups with administrative agencies to strengthen climate-resilient public policies.

Based on our feedbacks from a global insurer, adaptation measures are key and the cornerstone to maintain availability and affordability for insurance since it maintains the hazardous nature of risks. Discussions have already started for some commercial lines insurers regarding a more selective underwriting based on available adaptation measures.

Discussions are more complicated for individual non-life insurance for legal reasons. For example, in France, property insurance is mandatory making it almost impossible to exclude some risk from a coverage based on adaptation measures' compliance.

Question 10

Do you currently offer insurance products that include or incentivize climate-related adaptation measures? (Y/N) Please list these insurance products and give details on the climate-related adaptation measures included in these products.

If you plan to offer products in the future, please list them as well.

Yes	No
x	

Answering Field

Based on our return on experience, commercial lines product includes progressively incentives on adaptation measures. For individual lines, there are more obstacles due to legal considerations however based on our response to question 8, some insurers in France have started offering incentivization to policyholders regarding sustainable quality of material and devices.

Question 11

What is the estimated level of risk reduction due to climate-related adaptation measures in your insurance products?

Please give quantitative examples of the risk reduction according to your insurance products as a percentage of the (net) premiums or EUR amounts.

Answering Field

According to a very macro feedback we received from an interviewed company, a 25% increase of adaptation measures through for example vulnerability curves in Nat Cat models could imply a 50% risk reduction in climate exposed areas. Adaptation measures have very localized impacts in terms of total net exposure but with climate change impact, these exposed areas are likely to expand.

Question 13

Do you use deductibles as a measure to incentivize policyholders to take up climate-related adaptation measures? (Y/N) Please explain with regard to your lines of business and, if possible, give quantitative examples of the reduction in the level of deductibles.

Yes	No
	x

Answering Field

In France, deductibles were legally modulated as part of the natural catastrophe regime depending on the localization of the exposure through cities subscription to specific adaptation measure plans (PPRN - plan de prévention des risques naturels) however a recent law passed has cancelled this deductible modularization. Thanks to the natural catastrophe regime, French insurers do not modularize deductibles depending on adaptation measures. In spite of the current protection regime, 24% of french insurers* have modified their coverages (premiums and deductibles) over the last 24 months due to 2021 recent natural events (Flood in Belgium and Germany).

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Question 12

What are the estimated costs policyholders have to pay for implementing climate-related adaptation measures suggested in your insurance products?

If possible, please give quantitative examples of the costs/expenses in EUR amounts.

Answering Field

The current premium increase estimation in the French market due to climate change is an increase from 130% to 200% according to the 2020 Stress Test exercise. Through the French natural catastrophe regime, French insurance policyholder pay a state-fixed rate of 6% for motor fire and 12% for damage to other goods linked to natural catastrophe, we assume that the cost is embedded in the current loading but there are questions regarding its stability as climate change impact will increase on the medium-long term.

Question 14

Do you offer premium discounts as a measure to incentivize policyholders to take up climate-related adaptation measures? (Y/N) Please explain with regard to your lines of business and, if possible, give quantitative examples of the premium discounts.

Yes	No

Answering Field

So far no insurers offer premium incentives in France regarding adaptation measures. In spite of the current protection regime, 24% of french insurers* have modified their coverages (premiums and deductibles) over the last 24 months due to 2021 recent natural events (Flood in Belgium and Germany).

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Question 15

What potential issues (e.g. legal, practical, solvency related...) might prevent the general integration of climate-related adaptation measures in the product design of non-life insurance products? Please explain.

Answering Field

The main potential issues for climate related adaptation measures in the product design of non-life insurance products are mainly linked to legal topics and practical topics.

- Legally in the current insurance contracts, in case of a claim, insurers must put the policyholder back to their pre-claim state. As Non-Life insurance is mostly indemnity based, any sustainable or green material used for any repair would increase costs for the policyholder, what's more such increase is usually not in the current contracts' terms and conditions.
- From a practical standpoint, the feedbacks we received from the French market show that data quality is a key obstacle to efficiently integrate adaptation measures in product design for pricing and for exposure management. Consequently, vulnerability information currently lacks accuracy and granularity. This may create biases in climate change impacts estimations / quantification.
- From a solvency standpoint, an undertaking designing more climate change-adapted products would be positively impacted since the reserve and Nat Cat SCR would be reduced as less provisions would be needed since claims' severity would be reduced. However, the Gross Written Premium volume could be impacted as insurance would be less affordable.

To conclude, the current practice is based on like-for-like repairing. Undertaking are committed to sustainability development goals (UNEP-Fi, PSI for example) creating a push for changes in the indemnity practices which could accelerate the integration of adaptation measures in products design.

Question 16

Do you consider public climate-related adaptation measures (e.g. dikes against flood risk) as essential to continue your insurance business in the future? (Y/N) Please explain with regard to your lines of business and, if possible, give examples of public adaptation measures you consider to be most relevant in that regard.

Yes	No
x	

Answering Field

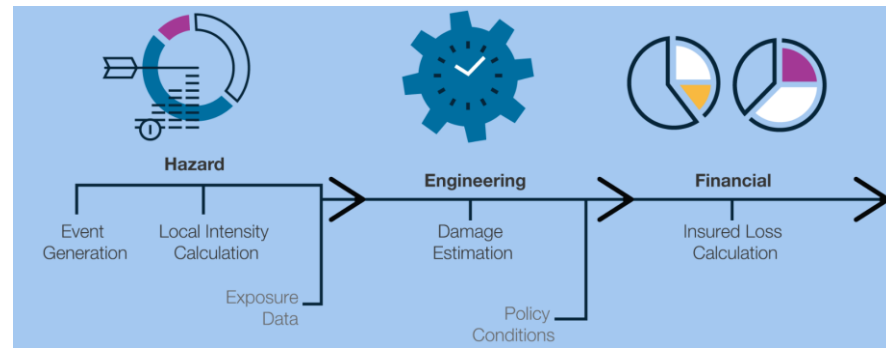
Adaptation measures directly impact vulnerability curves which are a key module in Natural Catastrophe models* (along with Hazard modules and Exposure module) therefore it has a direct impact on solvency calculations in addition to business planning calculations.

Adaptation measures impact directly the vulnerability curves (of the underlining exposure). The vulnerability module is a key module in Catastrophe models (along with the Hazard module and the Financial module) therefore it has a direct impact on solvency calculations in addition to business planning calculations.

Example of adaptation measures:

- Motor vehicle liability: construction and localization of parking spaces regarding floods
- Fire and other damage to property insurance: high rise construction (flood), a raise in ground floor elevation (flood), sustainable material construction incentives, energy reduction incentives,...

*A Catastrophe model is made up of 3 modules: Hazard, Vulnerability and Financial. <https://www.air-worldwide.com/models/About-Catastrophe-Modeling/>



Prudential treatment of climate-related adaptation measures

Question 17

Do you use Standard Formula, Standard Formula with undertaking-specific parameters (USPs), a Partial Internal Model or a Full Internal Model to calculate solvency capital requirements?

- Please indicate according to the drop-down list.

- Please comment on the line of business covered by USPs and risks covered by internal models, if relevant.

Answering Field
(drop-down list)

Full Internal Model

Answering Field (Comments)

Our answer pertains to a company we have interrogated which is fully using Full Internal Model for all lines of business.

Question 19

The amended Article 260 of the Commission Delegated Regulation (EU) 2021/1256 and Article 29 of the Commission Delegated Regulation (EU) 2015/35 require to take environmental developments for the calculation of the Best Estimate into account.

In how far do you take account of climate change and climate change assumptions (e.g. time horizon, frequency and severity of extreme weather events) in the Best Estimate calculation? Please explain.

Answering Field

Our answer pertains to a company we have interrogated on this topic. Their feedback is that climate change is not explicitly taken into account in their Non-Life Best Estimate calculation since lines exposed to climate change usually have a short to medium term claims' development pattern.

In rare cases, it is taken implicitly through an additional complementary reserve (mostly on top of the IBNR claims provision and on top of the UPR premium provision) on future premium for longer duration provisions with the limitations due to the boundaries of contracts.

Question 18

Do you consider the claim equalization reserve as a tool to mitigate the impact of climate change on the physical underwriting risk exposure in your lines of business? (Y/N) Please explain.

Yes	No
x	

Answering Field

In France the equalization reserve provision aims at absorbing potential future claims distribution volatility. It is usually increased during good development years to absorb bad development years. Therefore, equalization provision could be used to mitigate climate change as the speed of the increase in severity and frequency is accelerating. This provision should be assessed every 5 to 10 years with a forward-looking approach as it should be aligned with climate evolutions time horizons.

Question 20

What is the average time period for claim settlements in those lines of business you consider most affected by climate change and does this time period affect your consideration of climate change in the calculation of the Best Estimate? Please explain.

Answering Field

The line of business that is mainly exposed to climate change is the fire line which has a 1-to-3 year duration in terms of claims payment pattern. This duration corresponds to a short-term view from a climate change time horizon standpoint. This description of current vs. 5-10 years impact by perils is described in the latest EIOPA publication on the ORSA consultation (https://www.eiopa.europa.eu/media/news/eiopa-consults-application-guidance-climate-change-risk-scenarios-orsa_en) on page 83.

Question 21

Do you experience in the calculation of the Best Estimate any prudential obstacles that prevent an appropriate risk-based consideration of i) the impact of climate change on physical risk exposures, and of ii) the risk reduction stemming from climate-related adaptation measures? (Y/N) Please indicate and explain.

i) obstacles regarding the impact of climate change on physical risk exposures

Yes	No
	x

ii) obstacles regarding the risk reducing effect of adaptation measures

Yes	No
x	

Answering Field

In current models used to manage and project cash-flows, adaptation measures are mostly based on expert judgment in best estimate calculation. As Best Estimates are based on a prudent approach, the inclusion of adaptation measures based on expert judgment may require additional justifications which are not always based on actuarial judgment but rather on engineering views. As mentioned in question 15, another prudential obstacle would also be the current exposure data quality that may impact risk-reduction estimation from vulnerability curves that could be applied on the non-life Best Estimate calculation.

Question 23

Do you experience in the solvency capital requirements for i) non-life premium and reserve risk, and for ii) non-life nat catastrophe risk any prudential obstacles that prevent a full reflection of the risk reducing effect of climate-related adaptation measures? (Y/N) Please explain.

Yes	No
	x

Answering Field

Based on the return on experience we collected from insurers, adaptation measures are fully considered under the form of vulnerability curves within Nat Car models used for the SCR calculation. These curves are usually validated at group level when used. One obstacle that could appear in the future is the update frequency of these curves since some vulnerability curves have not been refreshed for a long time.

Question 22

Based on your assessment, how do climate-related adaptation measures affect your solvency capital requirements for i) non-life premium and reserve risk, and for ii) non-life nat catastrophe risk?

Please differentiate between the SCR input factors for premium risk, reserve risk and nat cat risk, and if possible, give quantitative examples of the effects of adaptation measures on the amount of solvency capital related to your insurance products.

Answering Field

Based on the return on experience we collected from insurers, climate change adaptation measures are mostly included through the Nat Cat SCR. However, since it could also be included in the premium Best Estimate to take into account the evolution of exposures due to exposition measures it is likely to be included in premium and reserve in the future.

Question 24

Do you apply an own natural catastrophe model to assess your capital requirements in the ORSA? (Y/N)

If yes, in how far do you take climate change into account in this Nat Cat ORSA model and how frequently do you adjust your Nat Cat model? Please explain.

Yes	No
x	

Answering Field

Currently, Nat Cat models have a 1-year horizon view aligned with the SCR calculation horizon. For ORSA, Nat Cat models are also currently used to project indicators, with a simplified approach, from year 1 to year 5 to be aligned with business planning assumptions.