

Sustainable finance: tools for mitigating climate-related risks

Interinstitutional EMAS Days, 5 November 2024

Sustainable finance: tools for mitigating climate-related risks

14:00-14:05 WELCOME

14:05-14:15 OPENING: Introduction by Dorota Wojnar (EBA)

14:15-14:30 **FIT-FOR-55 CLIMATE SCENARIO ANALYSIS** by Raffaele Passaro (EBA)

14:30-14:40 Q&A session

14:40-14:55 **HOW GREEN IS YOUR COIN?** by Clement LUZEAU /Laura WEIL (ESMA)

14:55-15:05 Q&A session

15:05-15:20 **NATURAL CATASTROPHE RISK AWARENESS AND PREVENTION** by Carlos GUINE (EIOPA)

15:20-15:30 Q&A session

15:30 CLOSING

14:00-14:05

WELCOME



Virtual etiquette

- Mute your microphone
- Use the chat for any questions you have; they will be treated in the Q&A session at the end of the event
- During the Q&A session, raise hand function to request the floor
- If possible, turn on your camera when you speak

14:05-14:15

OPENING by Dorota Wojnar (EBA)

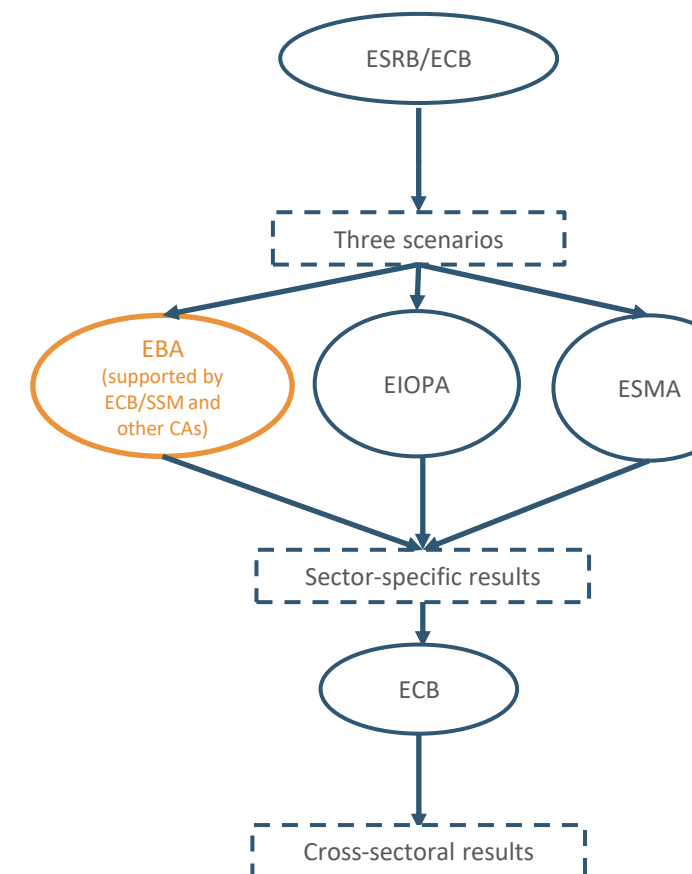


14:15-14:30

FIT-FOR-55 CLIMATE SCENARIO by Raffaele Passaro (EBA)

FF55 climate scenario analysis: overview

- Fit-for-55 package refers to a set of EU policy measures to achieve a reduction of net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.
- Coordination: **EBA and ECB as coordinators of the project** by co-chairing the Expert group.
- Primary focus: **assess the resilience of the financial sector in line with the Fit-for-55 package**, while **gaining insights** into the **capacity** of the financial system to support the **transition** to a lower carbon economy **even under conditions of stress (risk compounding)**.
- Timeframe and Scope: **from 2022** (starting point) **to 2030** (FF55 deadline), **focused on transition risk**.
- Three scenarios: not only climate but also **compound risks scenario** (climate shocks + financial crisis).
- System wide perspective adds more complexity: the one-off is a **cross-sectoral and system-wide exercise**, which requires collaboration and coordination among the parties involved. This was modelled with the ISA model (ECB), which assumes that second-round effects stems from markets shocks (mainly funds).
- Results presented at the October BoS. Report to be **published on the 19th November**. Currently going through a BoS **Joint WP**.



Three scenarios in line with the Fit-for-55 package developed by the ESRB, with the support of the ECB

The key assumption is that in all scenarios the FF55 package is implemented as planned. The NGFS NDC scenario, considering all pledged policies, are leveraged.

- In the **baseline scenario** the Fit-For-55 package is implemented in an economic environment that reflects current forecasts
- One **adverse scenario** focuses on short-term climate-change related risks that could materialise in the form of asset price corrections triggered by a sudden reassessment of transition risk - “**Run-on-brown**”(RoB)
- A **second adverse scenario** combines climate-change related risks with other macroeconomic stress factors. The selection of non-climate related stress factors represents a subset of the main financial stability risks included in the EU-wide EBA stress test 2023, including geopolitical risk



Note. More details are internally available in “[Narrative and methodological aspects for the one-off exercise on the Fit-for-55 package](#)”, Dec. 2023.

A flavour of the main findings

- **Under the baseline scenario**, i.e. Fit-for-55 package implemented in an economic environment that reflects current forecasts, **aggregate losses over the 8-year horizon (including the instantaneous market risk shock) are relatively contained.**
- First-round losses, i.e. without any amplification effects, stemming from a “**Run-on-Brown**” have a **limited impact on the financial system**, indicating that perceived changes in climate risks are not a source of financial stability concerns **per se.**
- **Adverse macro developments could negatively impact banks** by increasing their losses and limiting their capacity to finance green investments, interfering in turn **with the evolving transition.**
- **Amplification effects can lead to further losses** if market conditions worsen liquidity stress, **but the shocks do not threaten the overall safety of the financial system**; most institutions are protected by strong capitalisation, high liquidity levels, and diversification.

Limitations and caveats

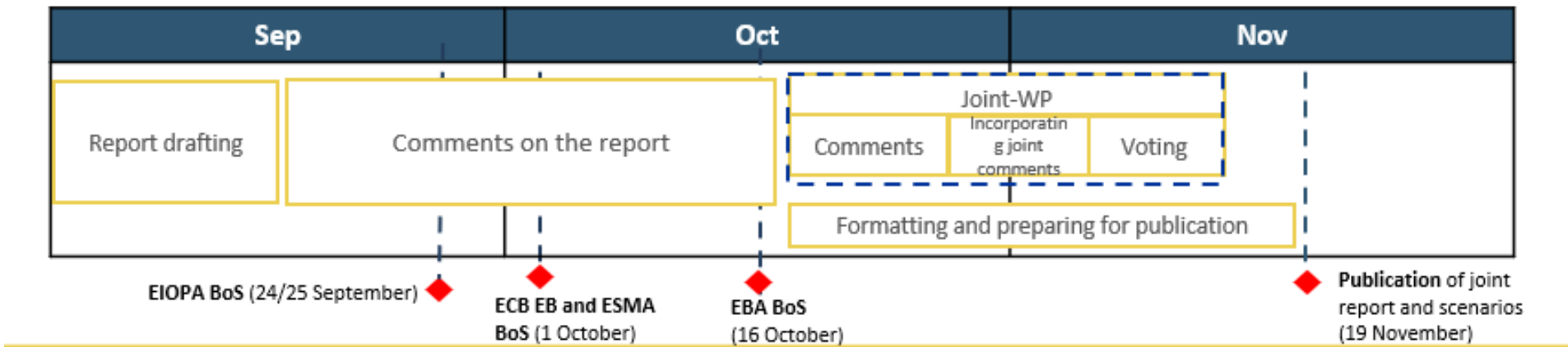
- The **outcomes are subject to inherent uncertainty** given the novelty of the climate stress testing approaches, especially **in the cross sectoral model**.
- **Heterogeneity in the data coverage** and data quality add to this uncertainty.
- **Income components for banks and liabilities for insurances and IORPs' liabilities are not considered** for this exercise. During high-interest rate periods, income could mitigate losses, so this assumption results in a conservative overestimation of losses.
- **Hedges (derivatives) are considered only for banks** due to their relevance for the banking sector.
- Market risk exposures for the three sectors are assessed **according to an instantaneous shock assumption**, which is less realistic with an 8-year horizon. Furthermore, **the static balance sheet assumption** doesn't allow to consider reactive management to mitigate losses.

Lessons learnt

- The exercise marks a major advancement in climate stress testing. We've **made significant progress, especially when it comes the integration of interconnected features across sectors**. The results reveal that climate shocks, in the form of *run on brown*, **have a limited impact on the financial system**.
- It helped exploring **compound risk scenarios which could be leveraged for regular climate stress test**. However, a **disorderly transition risk was not tested** as we had to assume that FF55 was implemented smoothly in all scenarios.
- **It has been an important learning experience** for all institutions involved. It required everyone **to refine their modeling tools**, compare results, and ultimately improve their methodologies. However, **estimates do rely on several high-level assumptions** (hedging, static balance sheet, coverage), particularly for the SRE, which might affect results.
- **Coordination efforts were overly complex**, involving numerous groups (e.g., ECB/EBA, EBA/ESA), which significantly **strained EBA resources**. For future cross-sector initiatives of this nature, a more **streamlined governance** structure is recommended to improve efficiency and optimize resource allocation.

Road to publication

- The joint FF55 report should be published on **19th November 2024** by the ESAs and ECB on their respective websites, together with a **joint press release and FAQs**. A link to the ESRB website, where the **scenarios will be published** at the same time, will be included.
- The EBA, who is coordinating the communication process, will host a **joint technical background briefing** with journalists, where ECB and ESAs experts will be also invited.
- The report will be published after a **joint written procedure, split into two procedures (of 5 days each): commenting and voting phase**.



14:30-14:40

QUESTIONS & ANSWERS

14:40-14:55

HOW GREEN IS YOUR COIN? by Clement Luzeau & Laura Weil (ESMA)

How Green is Your Coin?

The sustainability impact of crypto-assets' consensus mechanisms



Crypto-assets: the basics

What's a crypto-asset?

- Virtual currency (e.g. Bitcoin, Ethereum)
- Issued and stored on a blockchain
- Can be used for payments, investments etc.

What's a blockchain?

- A network of computers that work together to maintain a public record where all transactions are recorded.

How does it work?

- Two main methods of consensus: Proof of Work and Proof of Stake.



Markets in Crypto-Assets Regulation (MiCA)

- Rulebook published in 2022 to make using and investing in crypto-assets (as fair and safe (as possible))
- Three types of crypto-assets
- Two types of entities:
 - Issuers / offerors of crypto-assets
 - Crypto-Asset Service Providers (CASPs)
- Objective:
 - Uniform rules across the EU
 - Consumer protection
 - Transparency
- Complemented by technical rules written by ESMA, EBA and EIOPA incl. RTS on sustainability indicators



Sustainability indicators

Objectives:

- Help investors understand the sustainability impact of crypto-assets through their consensus mechanisms





Constraints:

- Alignment with ESG requirements in the rest of the economy for consistency and comparability
- Streamline to facilitate retail investor understanding
- Proportionality: Limit burden to providers
- Take into account specificities of blockchain technology



What are we looking at?

- 1 mandatory key indicator for all
 - Energy consumption
- 5 supplementary key indicators for large crypto-assets and for consumer-facing CASPs
 - Renewable energy consumption
 - Energy intensity
 - Scope 1 DLT GHG emissions – Controlled
 - Scope 2 DLT GHG emissions – Purchased
 - GHG intensity
- 16 optional indicators

	
<p>Energy consumption <i>Renewable energy consumption</i> <i>Energy intensity</i> Energy mix Energy use reduction Carbon intensity</p>	<p><i>Scope 1 DLT GHG emissions – Controlled</i> <i>Scope 2 DLT GHG emissions – Purchased</i> <i>GHG intensity</i> <i>Scope 3 DLT GHG emissions – Value chain</i> GHG emissions reduction targets or commitments</p>
	
<p>Generation of waste electrical and electronic equipment (WEEE) Non-recycled WEEE ratio Generation of hazardous waste Generation of waste (all types) Non-recycled waste ratio (all types) Waste intensity (all types) Waste reduction targets or commitments (all types)</p>	<p>Impact of the use of equipment on natural resources Natural resources use reduction targets or commitments Water use Non recycled water ratio</p>







Next Steps

Short term:

Finalisation of the regulatory process (adoption by Commission, scrutiny from Parliament and Council) and implementation

Mid to long term:

Review of the technical standards as needed

Coin ^	Type ^	Marketcap ^	Electrical Power ^	Electricity Consumption (annualised) ^	CO ₂ Emissions (annualised) ^
 Bitcoin BTC	PoW	\$ 1,433,074,341,869	20.0 GW	158.0 TWh	78.0 Mt
 Ethereum ETH	PoS	\$ 321,690,036,950	697.6 kW	6,097,642.4 kWh	1,954,062.0 kg
 BNB Chain BNB	PoS	\$ 88,088,820,167	2.8 kW	24,822.7 kWh	8,271.9 kg
 Solana SOL	PoS	\$ 84,123,037,488	1,452.2 kW	12,717,064.1 kWh	3,895,740.0 kg
 USDC USDC	Token	\$ 34,856,906,986	N/A	11,652.0 kWh	3,728.2 kg
 XRPL XRP	Other ¹	\$ 29,784,705,350	34.1 kW	299,673.5 kWh	115,794.0 kg

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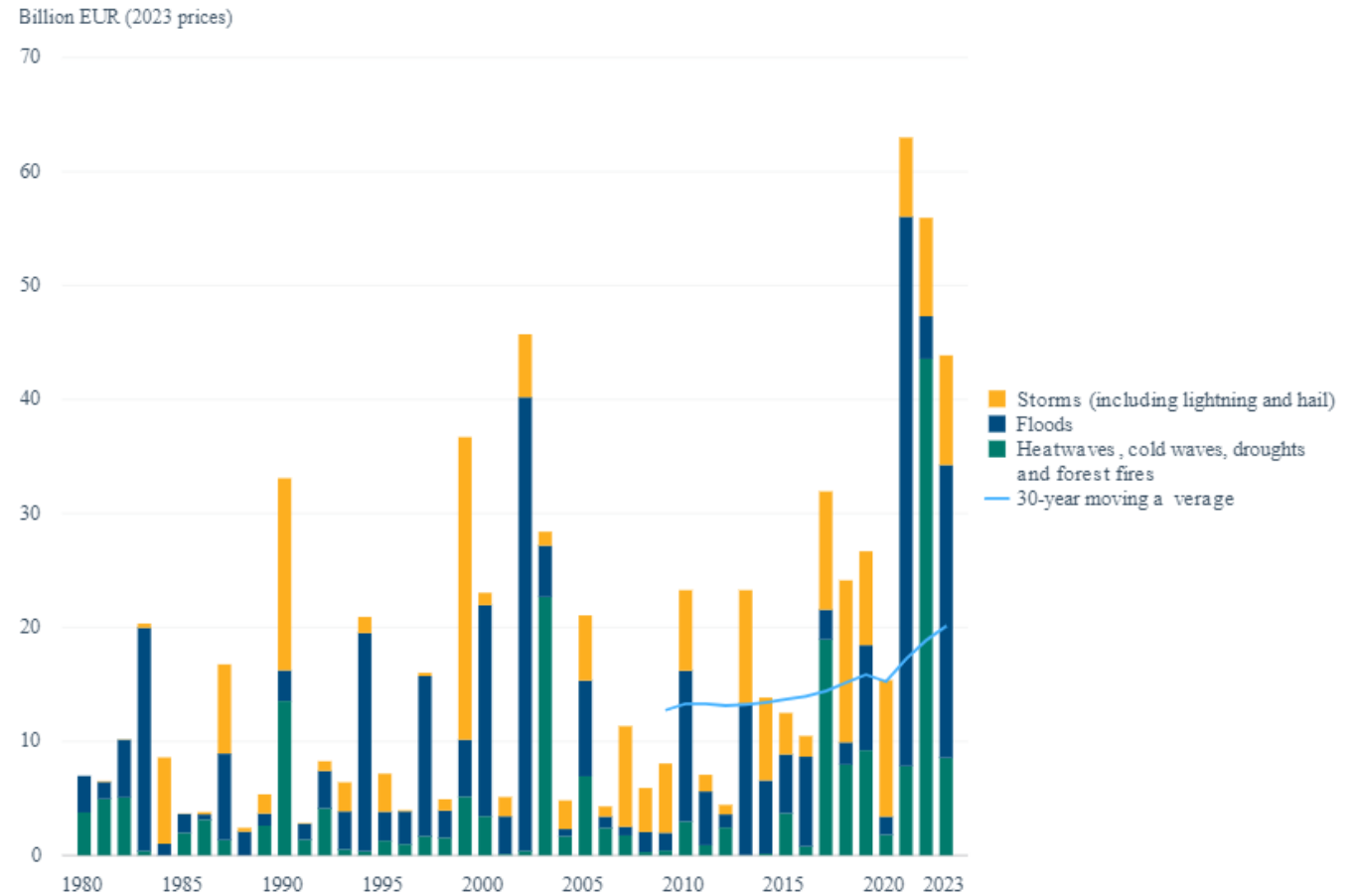
QUESTIONS & ANSWERS

15:05-15:20

NATURAL CATASTROPHE RISK AWARENESS AND PREVENTION by Carlos Guine (EIOPA)

Climate-related catastrophe events are increasing in frequency and severity in Europe

- Europe is the fastest warming Continent in the World [EEA EUCRA 2024]
- Weather- and climate-related extremes caused economic losses of assets estimated at EUR 738 billion during 1980 - 2023 in the European Union, with over EUR 162 billion (22%) between 2021 and 2023 [EEA]



How much is the insurance protection gap?

**Insured
Losses**

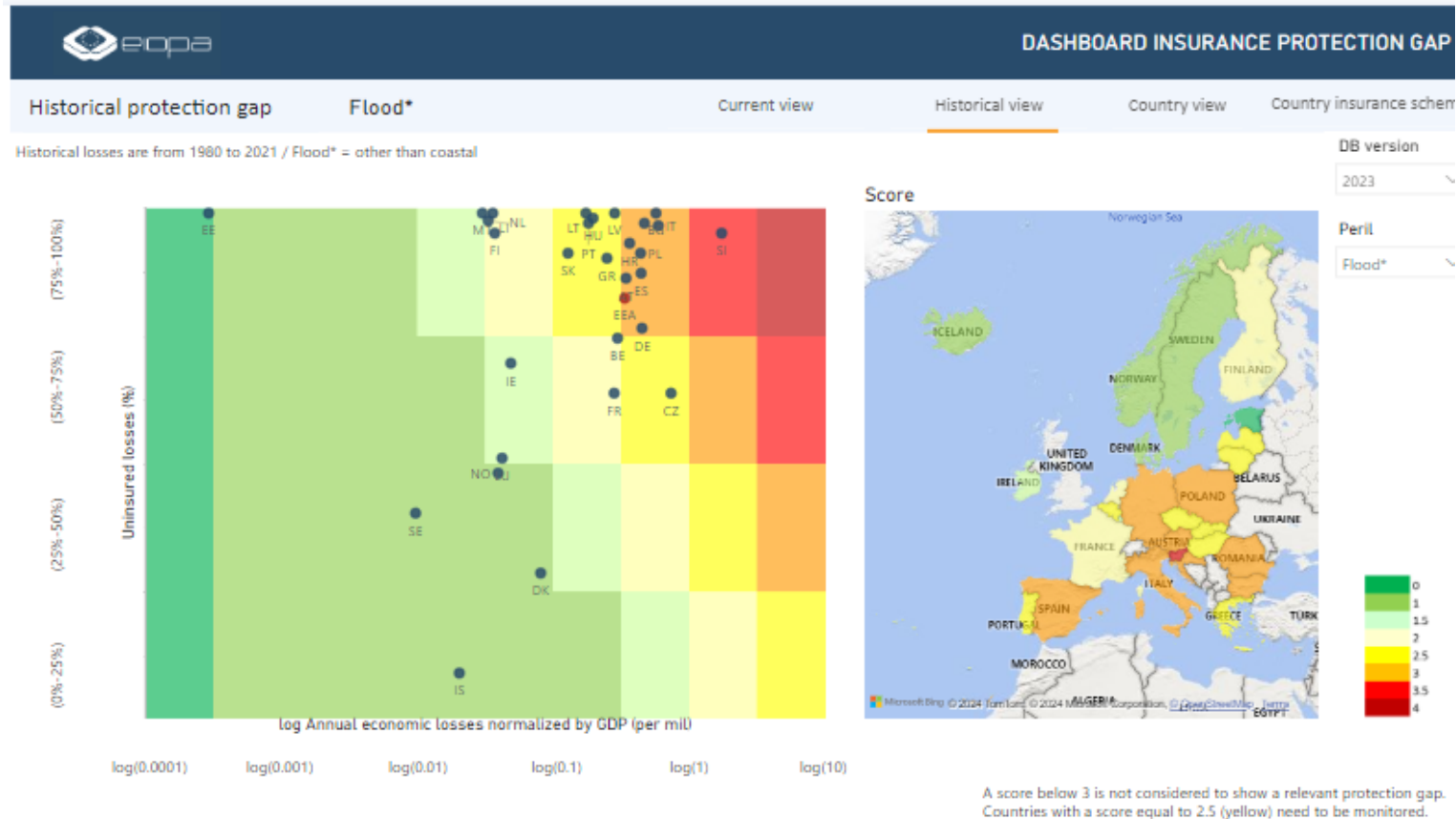
**Uninsured
Losses**



Total Economic Losses

**Only ~25% of the losses for natural catastrophes
were insured (1980 – today) in Europe.**

Understand the insurance protection gap

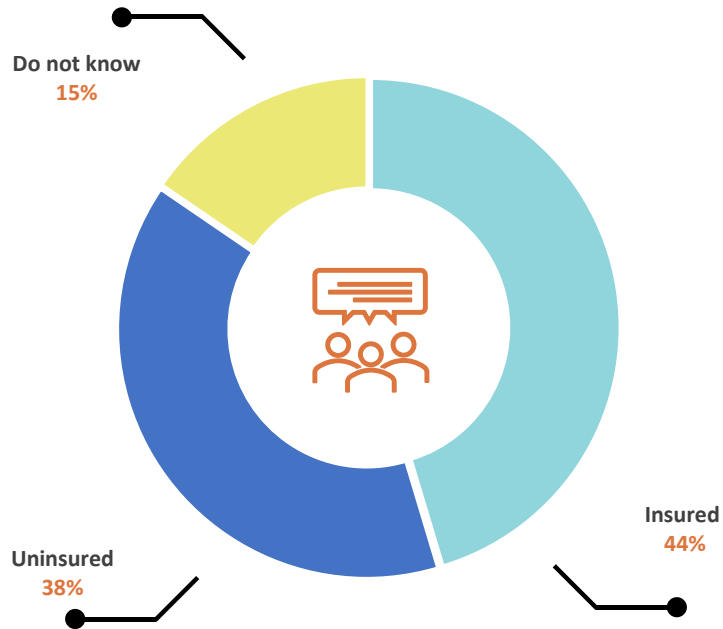


EIOPA developed a dashboard to understand the current insurance protection gap, identify its sources and monitor its development. It should contribute to:

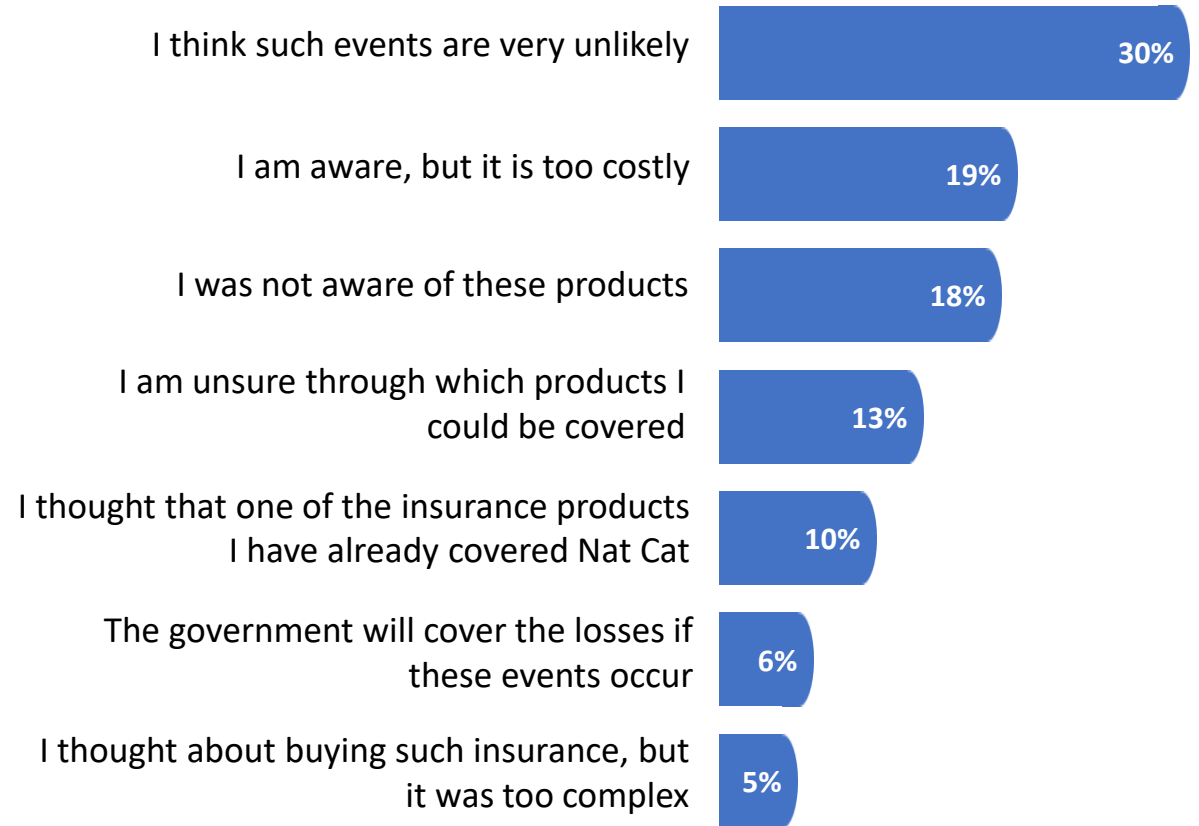
- Raise awareness to the protection gap
- Promote a science-based approach
- Develop pro-active prevention measures
- Identify synergies between national policies across borders

Cover – why do people tend to not buy Nat Cat insurance

EIOPA's Study Consumers' Experience



Reasons for not being insured:



[Measures to address demand side aspects of the Nat Cat protection gap \(europa.eu\)](http://europa.eu)

RAISING AWARENESS ON RISKS AND PREVENTION MEASURES FOR NATURAL CATASTROPHE RISKS

EIOPA's work related to the natural catastrophe protection gaps	
<u>Dashboard</u>	Understand/monitor
<u>Impact Underwriting</u>	Mitigate
<u>Demand aspects</u>	Cover
<u>Layer approach</u>	Transfer

All stakeholders looking for solutions to address the insurance protection gap for natural catastrophes do agree, there is the **need to increase the risk and prevention awareness** among policyholders.

RAISING AWARENESS ON RISKS AND PREVENTION MEASURES FOR NATURAL CATASTROPHE RISKS



A BLUEPRINT



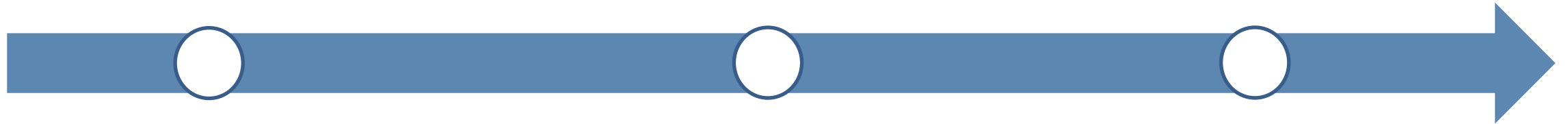
FLOOD SAFETY TIPS

PREPARING BEFORE

- Know your area's flood risk
- If you live in a flood-prone area, purchase flood insurance
 - Flood insurance is NOT included in your homeowner's policy
- Take photos of important possessions
- Clean drains & gutters regularly
- Sign up to receive weather alerts

- **Exposure to Nat Cat risks:** show homeowner's risk score regarding natural hazards;
- **Risk prevention:** describe hazard-related prevention measures per type of peril;
- **Risk-based benefits of prevention measures:** provide information that measures can be reflected in the premium;
- **Financial literacy:** increasing consumers' awareness about the benefits of adequate insurance coverage.

POTENTIAL NEXT STEPS



Blueprint paper

- Discussion paper – Dec. 2024
- Consumer survey
- Final paper – Sept. 2025

Pilot tool

- Development of a pilot tool (translate blueprint into a tool)

Implementation ?

- Deploy a tool for all EU

15:20-15:30

QUESTIONS & ANSWERS

15:30

CLOSING



More information

	EBA	EIOPA	ESMA
WWW	https://www.eba.europa.eu/	https://www.eiopa.europa.eu	https://www.esma.europa.eu/
Sustainable finance	Sustainable finance European Banking Authority (europa.eu)	https://www.eiopa.europa.eu/browse/sustainable-finance_en	Sustainable Finance (europa.eu)
EMAS	Sustainable EBA European Banking Authority (europa.eu)	Environmental Management (europa.eu)	ESMA Environmental Statement - 2023 (europa.eu)
Session-specific link	One-off Fit-for-55 climate risk scenario analysis European Banking Authority (europa.eu)	Dashboard on insurance protection gap for natural catastrophes - EIOPA	Markets in Crypto-Assets Regulation (MiCA) - ESMA

Thank you for your attention

If you want to receive the slides, please reach out to
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