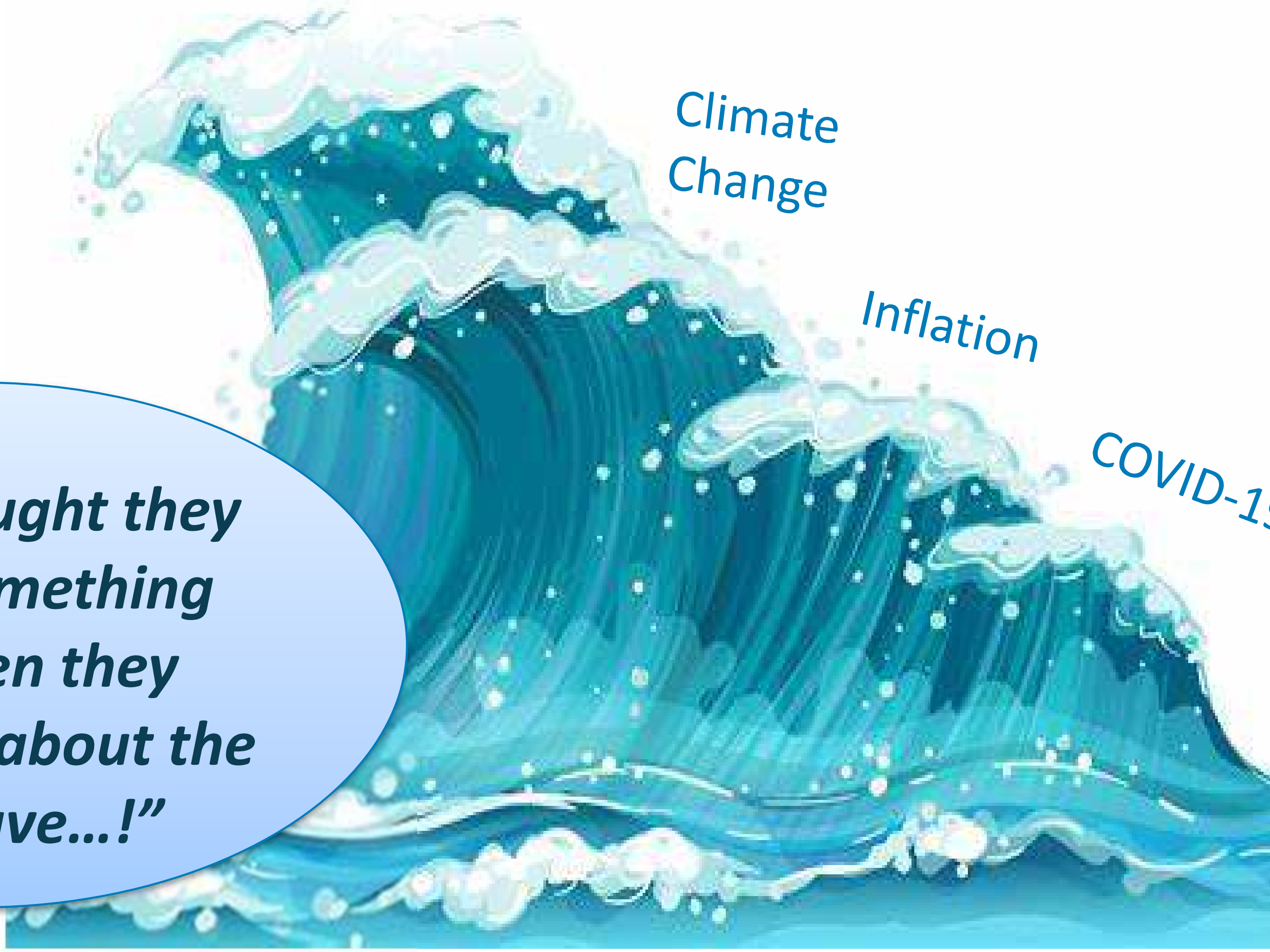
The only constant is change – climate change presents us actuaries with new challenges and opportunities

Frank Schiller, Chair AAE Sustainability & Climate related Risks WG

26 August 2022, SAV Mitgliederversammlung – ASTIN

What's next?!



"And I thought they meant something else when they warned us about the next wave…!"

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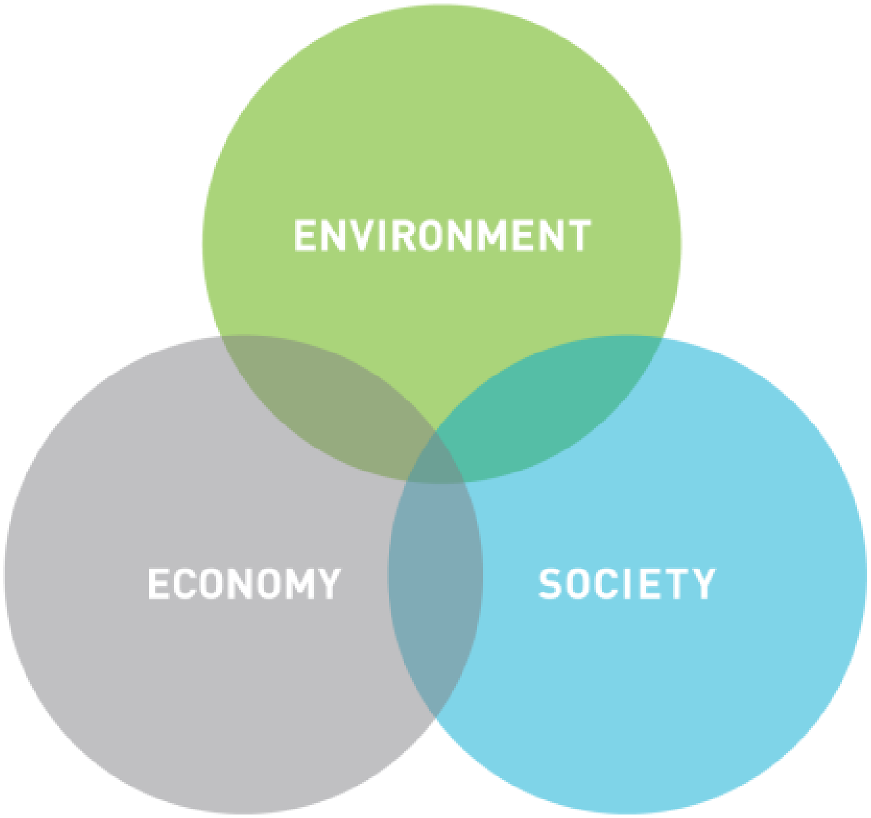
Climate Change and Sustainability

The three pillars of sustainability



University of Alberta: What is sustainability?
https://www.mcgill.ca/sustainability/files/sustainability/what-is-sustainability.pdf

*Sustainability means **meeting our own needs without compromising the ability of future generations to meet their own needs**.*

*In addition to **natural** resources, we also need **social** and **economic** resources.*

Sustainability is not just environmentalism.

Main Action Points for European Actuaries

We must assure that the **pensions and insurance industry** maintain their **role for the economy** despite the climate change by answering the three questions:

Financial Sustainability

- How can we effectively **manage the risks posed to insurance and pension systems** from the short and long-term policy effects?

Climate and Social Sustainability

- How can insurance and pensions **contribute to the transition through investments and transition project insurance**
- as well as **pay-out on climate related physical risks** which are insurable?

Climate Protection Gap

- For climate risk borne by society which are not currently insurable, or may become non-insurable under current market conditions, how do public policies work with the insurance and pension industries to **assure society is covered** in these areas?

AAE Position on Sustainability and Climate Change: https://actuary.eu/memos/aae-position-sustainability-and-climate-change/

Financial Sustainability

With respect to climate change the basic principle “**same risk - same capital**” is underlined:

- If so-called ‘green supporting’ or ‘brown penalising’ factors are introduced in Solvency II capital requirements, they should be **science-based** and reflect the **quality of investments and the inherent risks**
- If such factors are also introduced on the underwriting side, similar **risk-based requirements** apply
- It is acknowledged that the integration of emerging risks cannot rely solely on historical statistics but needs to **factor in forward-looking considerations**

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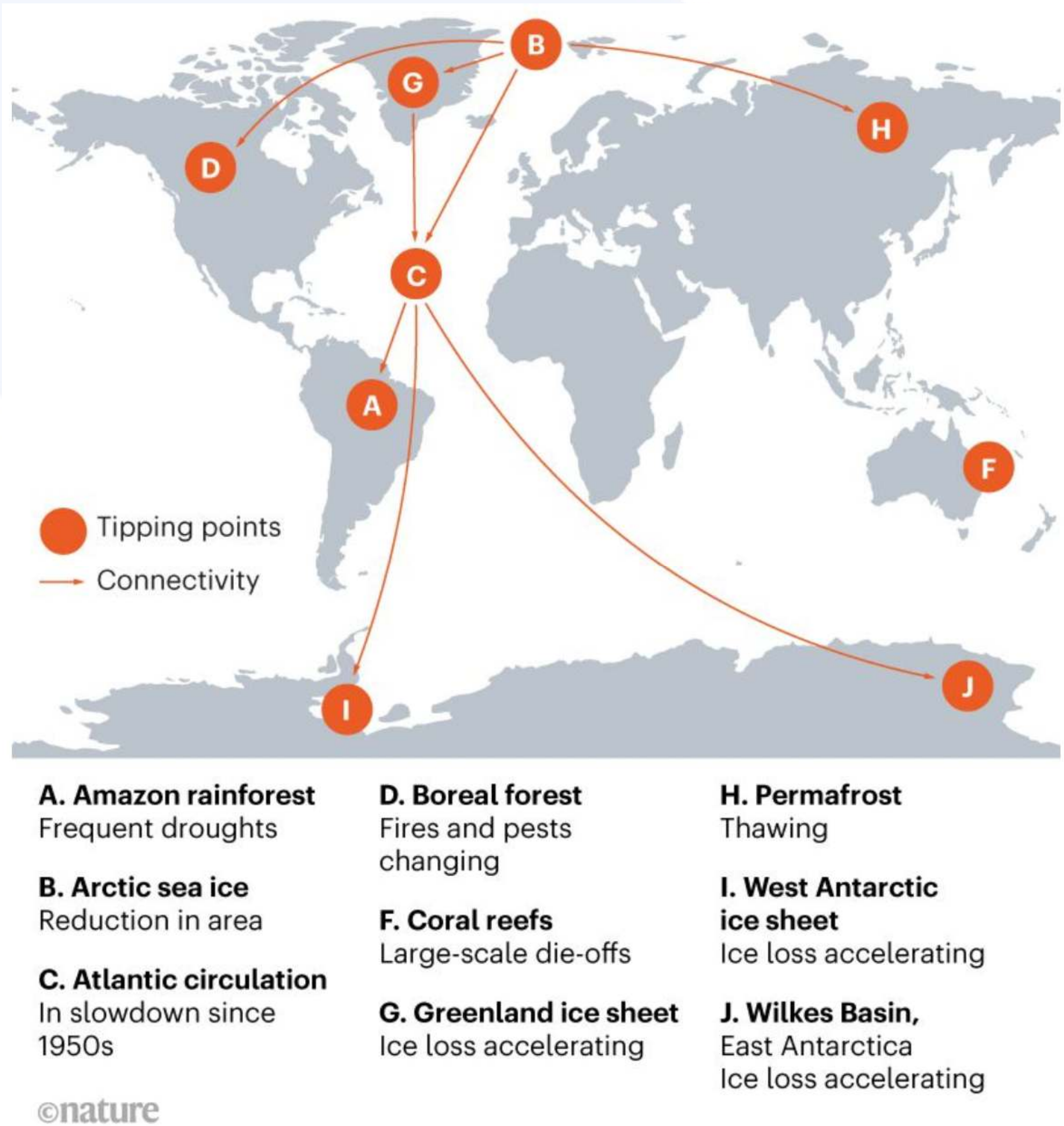
A forward-looking approach is needed!

Actuaries are looking to the …	**… past …**	**… present …**	**… future …**
… , e.g., for …	… traditional reserving and pricing	… market consistent valuation	… assessment of climate scenarios
The philosophy behind this approach	*"The historical development is a valid prediction of the future"*	*"Today's financial market already includes all relevant information"*	*"The future needs to be explored comprehensively from all perspectives"*
Required expertise for its application	historical observations and classical statistics	mark-to-market or market consistent modelling	future looking scenario analysis reflecting various external aspects

Non-linear effects of Tipping Points dominate



Nature, Climate Tipping Points: https://www.nature.com/articles/d41586-019-03595-0

Domino-effects connecting tipping points further increase non-linearity.

Need to base our scenario analyses on **long-term scientific assessments** and **modelling**.

No prediction but **what-if-analysis** to support management.

Reverse pillar journey will add complexity

Solvency II framework:

Based on a **1-year** risk valuation that translates into risk management practice and disclosures

Pillar 1	Pillar 2	Pillar 3
Quantitative Requirements	Risk Management and Governance	Reporting and Disclosure

ESG and sustainability frameworks:

Currently often originating from disclosure requirements and **multi-year** approaches that need to be translated back to risk management and quantitative assessments

Climate and Social Sustainability

Non-life insurance can play a major role during the transition in **protecting companies against physical losses** and **providing supporting services**.

- We believe that **underwriting approaches** that **include ESG criteria** in the assessment of risk exposures are important for developing sustainable solutions that price climate change risks appropriately
- Companies should use such approaches to judge and implement effectively their **risk appetite** when pricing or agreeing to insure such risks, as well as the economic capital they need to face these risks

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Position insurance as long-term partner

UN Environment Finance Initiative formulated Principles of Sustainable Insurance (PSI):

PSI
Principles for Sustainable Insurance

*"Sustainable insurance is a **strategic approach** where all activities in the insurance value chain, including interactions with stakeholders, are done in a responsible and forward-looking way by identifying, assessing, managing and monitoring risks and opportunities associated with environmental, social and governance issues. Sustainable insurance aims to **reduce risk, develop innovative solutions, improve business performance, and contribute to environmental, social and economic sustainability**."*

UN Environment Finance Initiative (UNEP FI), Principles for Sustainable Insurance (PSI): https://www.unepfi.org/insurance/psi/

actuarial association of europe

Principles to apply for sustainable products

Embed in **decision-making** ESG issues relevant to insurance business.

- Company strategy
- Risk management & underwriting
- Product & service development
- Claims management
- Sales & marketing
- Investment management

Work together with **clients and business partners** to raise awareness of ESG issues, manage risk and develop solutions.

Clients & suppliers:
- firm dialogue
- transparency
- empowerment
- common goals

(Re)insurers & intermediaries:
- promote ideas
- support implementation

Work together with **governments, regulators and other stakeholders** to promote action across society on ESG issues.

Governments & regulators:
- support policies
- open dialogue

Other key stakeholders:
- open dialogue
- transparency

Demonstrate accountability and transparency in **regularly disclosing publicly the progress** in implementing the Principles.

- Assess, measure and monitor progress and disclose publicly
- Participate in disclosure or reporting frameworks
- Dialogue with clients, regulators, rating agencies to gain mutual understanding

UN Environment Finance Initiative (UNEP FI), Principles for Sustainable Insurance (PSI): https://www.unepfi.org/insurance/psi/

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Embed in **decision-making** ESG issues relevant to insurance business.

- Company strategy
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Risk management & underwriting:

- Establish process to identify and assess ESG issues during UW
- Integrate ESG issues into RM & UW decision processes

Product & service development:

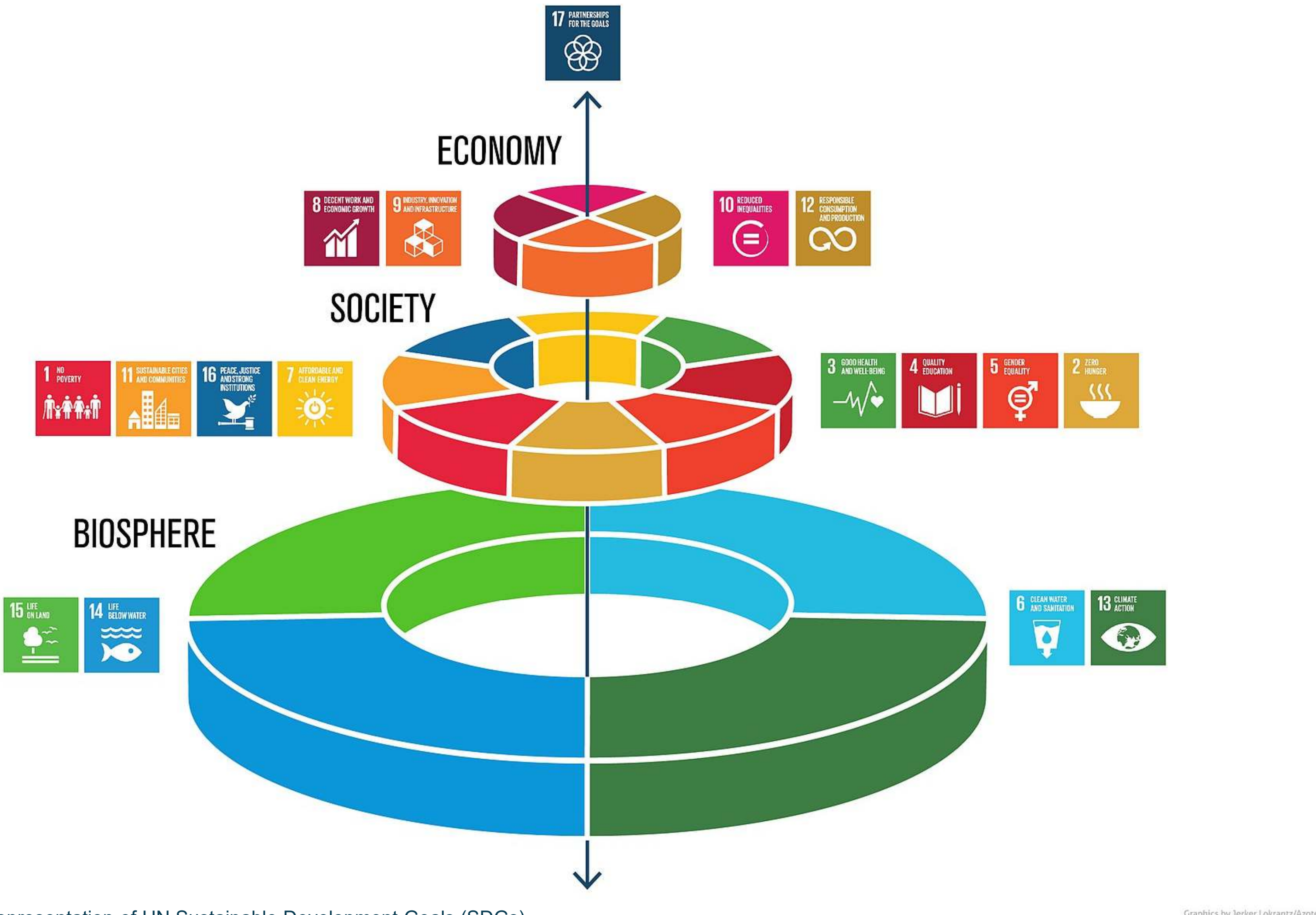
- Develop P&S which reduce risks, have a positive impact on ESG issues and encourage better RM
- Support literacy programs on risk, insurance and ESG issues

Claims management:

- Respond to clients quickly, fairly, sensitively and transparently
- Integrate ESG issues into repairs, replacements and other claims services

UN Environment Finance Initiative (UNEP FI), Principles for Sustainable Insurance (PSI): https://www.unepfi.org/insurance/psi/

Benchmark product benefits against UN SDGs



“Wedding Cake” representation of UN Sustainable Development Goals (SDGs),
by Azote for Stockholm Resilience Centre, Stockholm University: https://www.stockholmresilience.org/research/research-news/2016-06-14-how-food-connects-all-the-sdgs.html

Consider Double Materiality for SDG effects

Identify goals that are affected by product	Describe the effects in detail	Aggregate product's measurements
Identify material effects of product on 17 goals	Describe the ways in which that goal is harmed or benefits	Define OKRs of product's effects on SDGs
Assess if impact is negative (harmful) or positive (beneficial)	Assign a measurement to the extent of harm or benefit	Setup monitoring and reporting process for internal measurement and public disclosure
	Describe risks & opportunities for better or worse effects	
	Translate the risks and opportunities into actions	

UN, Sustainable Development Goals (SDGs): https://sdgs.un.org/goals

Climate Protection Gap

With **limited capacities and increasing physical risks** due to the climate change, insurers adopting well-informed underwriting processes may need to **decline coverages**.

- **Protection gaps** are areas in which societal risks are not covered by the insurance industry
- Risks that are uninsurable in profit-oriented markets can only be covered by **public policy encouragement**
- The **early identification** of protection gaps and the **development of shared resilience solutions** between the insurance industry and public protection facilities are key

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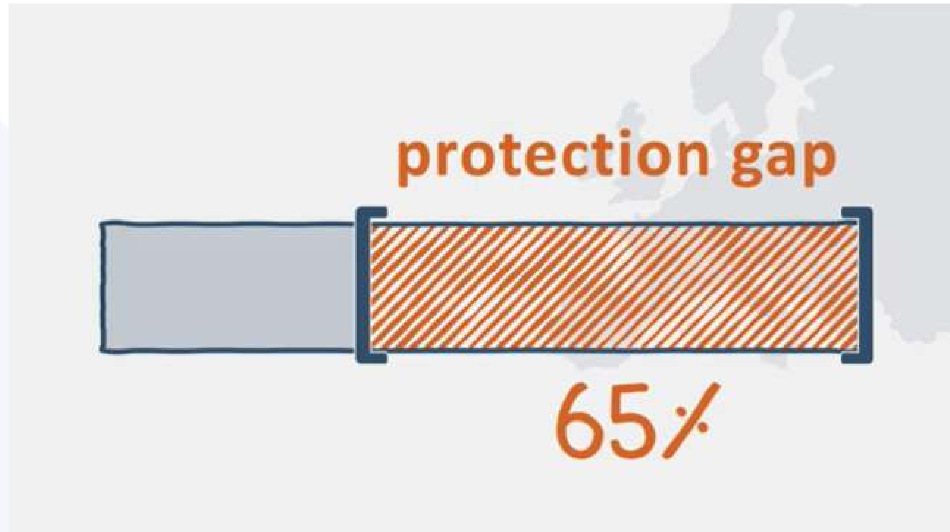
EIOPA works on early identification of gaps



1. **Understand drivers** for existing protection gaps
2. Analyse **measures for mitigating** gaps:
   - reduce vulnerabilities
   - identify proactive prevention measures
   - improve cross-border cooperation
3. Understand possibilities to establish **public-private partnerships**

   vs.

   public schemes and private protection

EIOPA, Protection Gaps: https://www.eiopa.europa.eu/document-library/feedback-request/pilot-dashboard-insurance-protection-gap-natural-catastrophes_en

Only a world-wide approach will be successful

Climate change is not just a European issue. Solving the climate crisis will need a **global view**.

- There should be **no worldwide inconsistencies** or local regulatory loopholes that can be exploited
- Actuaries can support the development of **accounting and valuation approaches** to make such loopholes more transparent

More details to be found at AAE webinar on "Role of the Actuary" (June 2022).

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AAE Webinar, Role of the Actuary: https://actuary.eu/event/aae-webinar-sustainability-and-the-role-of-the-actuary-a-professionalism-perspective/

Any questions or comments?