



A2ii-IDF Workshop on Risk Modelling for Insurance Supervisors | Part I

29 November 2023

Welcoming remarks



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Agenda Part I

Session 1-1: The value of understanding climate and disaster risk for supervisors

Session 1-2: A supervisor's perspective on using climate and disaster risk analytics

Session 1-3: Risk analytics and tools for supervisors

Q&A and closing remarks

Session 1.1:

The value of understanding climate and disaster risk for supervisors



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The value to supervisors of understanding climate and disaster risk

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IAIS – the global insurance standard setter

The mission of the IAIS is to:

- Promote effective and globally consistent supervision of the insurance industry in order to develop and maintain fair, safe and stable insurance markets for the benefit and protection of policyholders; and to
- Contribute to global financial stability.

More than **200** jurisdictions,
constituting **97%** of global insurance premiums,
represented by **39** members of our ExCo

Role of NatCat Models in Insurance Supervision

NatCat models are necessary for addressing many of the principles underpinning the globally accepted framework for insurance supervision (ICPs)

- The need for insurers to have an effective ERM framework and risk management and actuarial functions, capable of identifying, assessing, monitoring, mitigating and reporting on its key risks (ICP 8, 16).
- ERM framework to include an underwriting policy that addresses interaction with the insurer's reinsurance strategy and pricing (ICP 16)
- The supervisor requires the insurer's ORSA to encompass all reasonably foreseeable and relevant material risks (ICP 16)
- The supervisor requires the insurer's ERM framework to address liquidity risk (ICP 16)
- Regulatory capital requirements reflects all risks appropriately (ICP 17)
- The supervisor has an established process to assess the potential systemic importance of individual insurers and the insurance sector (ICP 24)
- Setting up a reinsurance programme that is appropriate for insurers' business, risk and capital profiles (ICP13)

What is CLIMADA

- It is an open source natural catastrophe model, developed by the academic research group of Weather & Climate Risk at ETH Zurich,
- The model is under constant development at ETH Zurich in collaboration with research groups around the world
- CLIMADA covers both acute and chronic hazards such as Tropical Cyclones, River Flood, Heat, Drought, Wildfire, Sea Level Rise, Storm Surge and European winter storms.
- The probabilistic event sets at high spatial resolution are available for current as well as future climate scenarios.
- It provides estimates of financial losses across the whole exceedance probability curve.
- CLIMADA has been in place for more than a decade and has been used by supervisors, academics and corporates for assessing NatCat exposure.

Access to CLIMADA Data and EMDE Support

- The access to CLIMADA data will be through a simple web-based frontend interface, which makes it easy to access the calculated data by selecting a country and the relevant parameters
- IAIS could provide a data download to the data to all members. In addition, all members will have access to the interface for their own use.
- Based on initial engagement with EMDEs, NatCat data and models is one of their top areas they would like support

CLIMADA offer covers the following perils:

- Tropical Cyclones, Wind (global)
- River floods (global)
- European Winter Storms
- Storm Surge (global)
- Sea level Rise (global)

For each peril CLIMADA will provide

- Calculation of a global hazard event set for past and future scenarios
- Calculation for RCP climate scenario 8.5 until 2100
- Impact calculation based on LitPop (night light) exposure data set and globally calibrated impact functions
- Data output including: exceedance frequency curves for hazard and impact; per country or US state

The IAIS work on protection gaps

- IAIS set up the Protection Gap Task Force (PGTF) in early 2023 to identify challenges and opportunities for supervisors in addressing protection gaps, and to consider how supervisors can respond, including through multi-stakeholder approaches
- The report from the PGTF was published on 6 November and outlines five major areas of supervisory activity that can contribute to addressing NatCat protection gaps, supported by case studies from jurisdictions spanning all IAIS regions:
 - Contributing to the assessment of protection gaps;
 - Enhancing consumer financial literacy and risk awareness;
 - Incentivising risk prevention;
 - Fostering an enabling regulatory and supervisory environment to support insurance availability and coverage uptake; and
 - Advising government and industry on financial inclusion and societal resilience.



Thank you

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The logo features the letters 'D' and 'F' in a bold, dark grey sans-serif font. The left vertical stroke of the 'D' is a solid red color. To the right of the 'DF' initials, the words 'Insurance', 'Development', and 'Forum' are stacked vertically in a dark grey sans-serif font. The background consists of several large, light beige triangles pointing towards the center.

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Supervisory activities to address protection gaps



The IAIS has identified the following five major areas of supervisory activity that can help address NatCat protection gaps*:

1. Assessing insurance protection gaps
2. Improving financial literacy and risk awareness
3. Incentivising risk prevention and reduction of insured losses
4. Creating an enabling regulatory and supervisory environment to support availability of insurance and uptake of coverage
5. Advising government and industry on financial inclusion and societal resilience, including on the design and implementation of public-private partnerships or insurance schemes

See., “ A call to action; the role of insurance supervisors in addressing natural catastrophe protection gaps outlining actions for supervisors.” November 2023.

Thank You.

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