



# Assessing Climate Risks in Insurance

NAIC's Climate Disclosure Survey and  
Regulatory Lens - Physical Risk



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February 28<sup>th</sup>, 2024



<https://content.naic.org/>

**NAIC** NATIONAL ASSOCIATION OF  
INSURANCE COMMISSIONERS



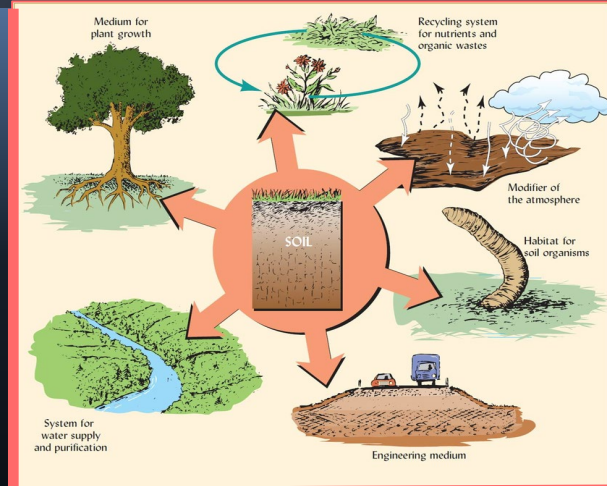
# Extreme Weather Remains One of the Top Risks

(Next 10 Years)

Source: [Global Risk Report 2024](#)



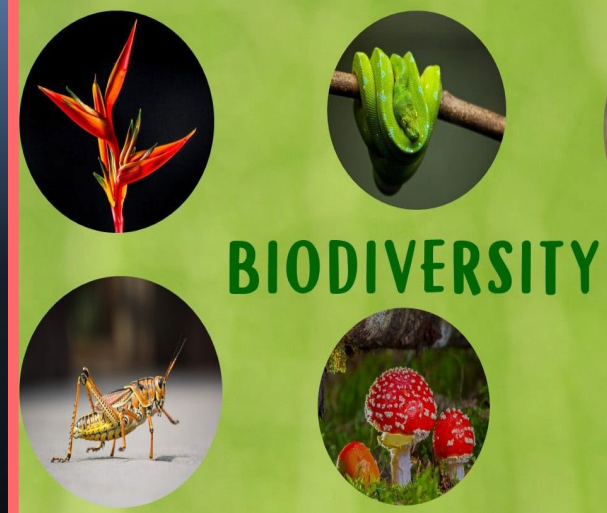
## Extreme weather



## Critical changes to earth systems



## Natural resource shortages (food, water)



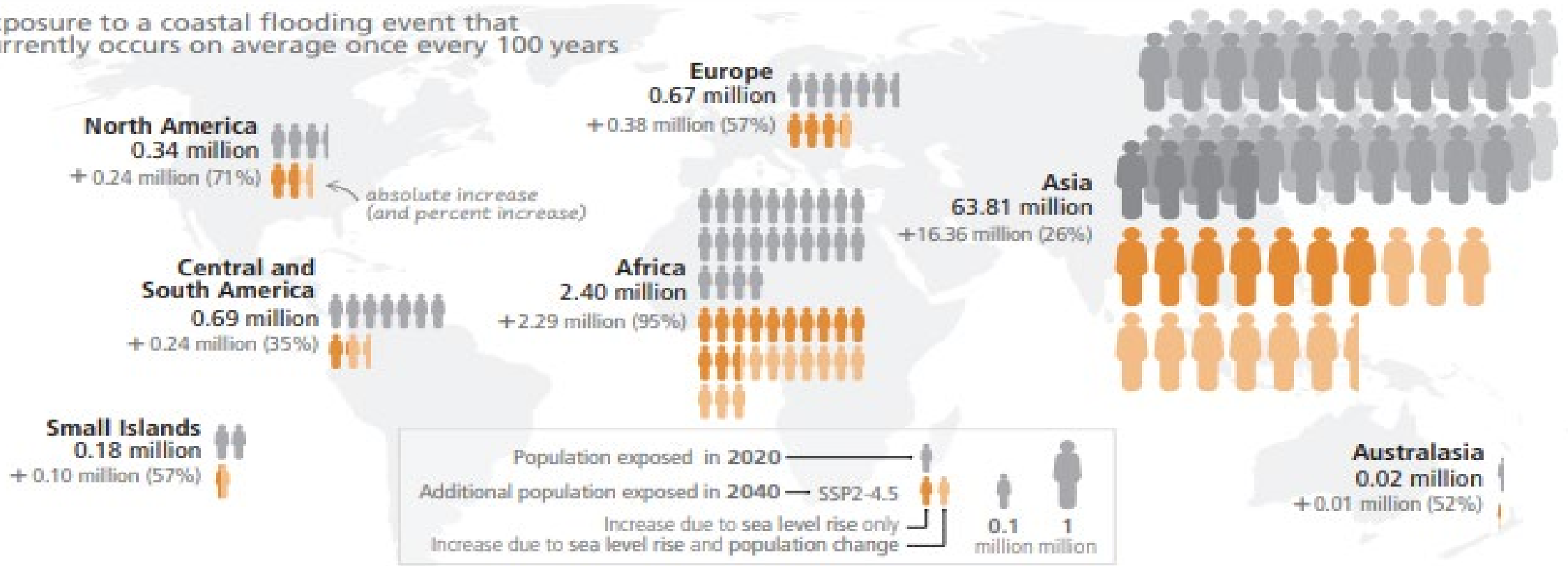
## Biodiversity loss and ecosystem collapse



# Every Region Faces More Severe and/or Frequent Compound and Cascading Climate Risks

## Increase in the population exposed to sea level rise from 2020 to 2040

Exposure to a coastal flooding event that currently occurs on average once every 100 years



Source: IPCC 6<sup>th</sup> assessment report

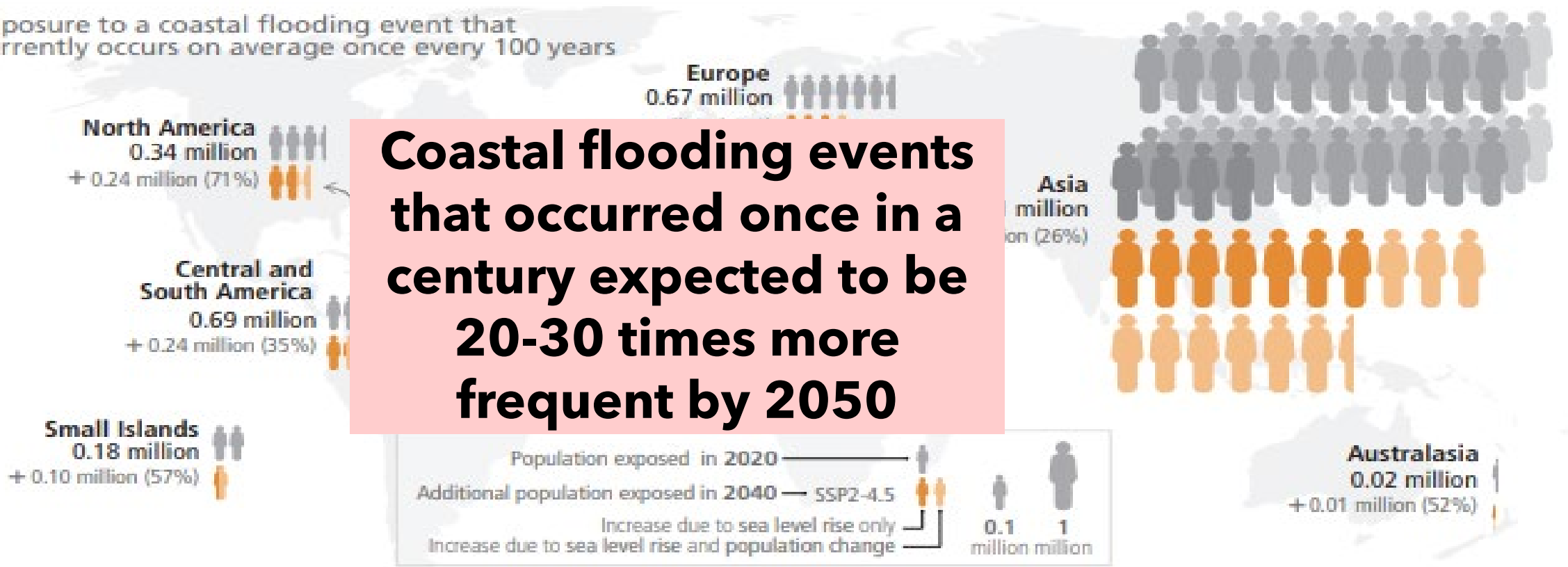


# Every Region Faces More Severe and/or Frequent Compound and Cascading Climate Risks

## Increase in the population exposed to sea level rise from 2020 to 2040

Exposure to a coastal flooding event that currently occurs on average once every 100 years

**Coastal flooding events that occurred once in a century expected to be 20-30 times more frequent by 2050**



Source: IPCC 6<sup>th</sup> assessment report



# Highly Complex, Uncertain, Systematic

## Physical Risk

**Acute: Event driven**



**Chronic: Longer-term shifts in climate patterns**



Climate-related risks

## Transition Risk

**Policy and Legal**



**Technology**



**Market**



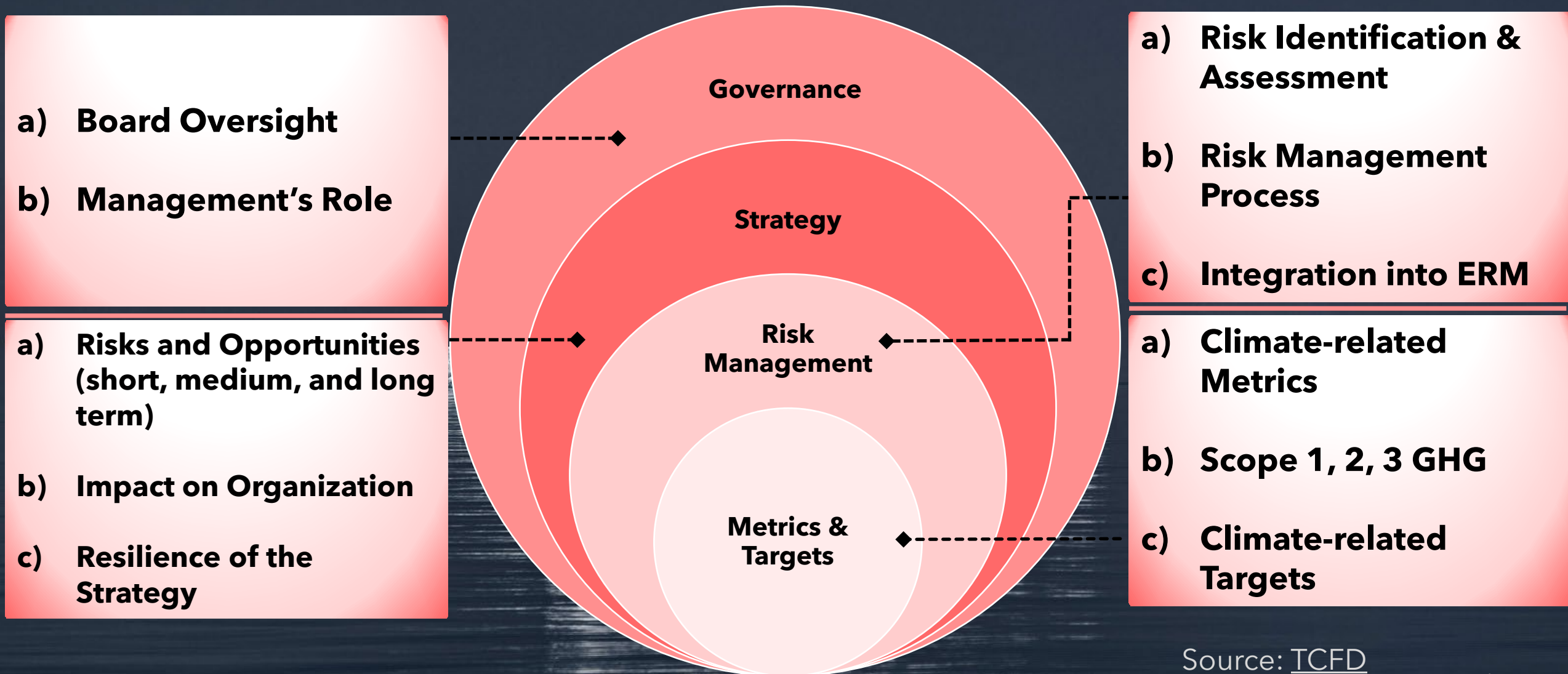
**Reputation**



Source: : TCFD



# Task Force on Climate-Related Financial Disclosure





# NAIC's Climate Disclosure Survey - Voluntary Risk Management Tool for US Regulators

**2010:** Originally adopted

**2022:** Survey aligned to TCFD framework

Administered by the **California DOI**

All insurers (P&C, Life, Health and Others)  
with **DWP >100M** Nationwide

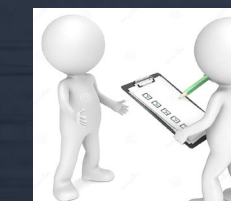
(licensed to write in participating states/territories)



More than **25** participating states/territories



**Public** disclosure



About **1,700** companies submitted disclosures for 2022 reporting year



# Climate Disclosure Survey (P&C Segment)

**926** total filings,  
**62%** in TCFD format  
and remaining in survey  
format

**310** unique filings  
as multiple  
companies under an  
insurance group  
submitted the  
disclosure report

**36** filings with net assets  
of >10B contributed to  
**82%** of the net assets

Net Assets Category	No. of Unique Filings	Net Assets (in billions)
5 Billion or less	248	\$270 B
5-10 Billion	26	\$179 B
More than 10 Billion	36	\$2,073 B
<b>Total</b>	<b>310</b>	<b>\$2,522 B</b>

*As reported on YE2022 annual statements to NAIC*





# Sample Selection for Survey Analysis (P&C Segment)

**35 (or 11%)**  
filings selected  
representing  
**41%** of the total  
net assets for 310  
filings

Assest Size	No. of Filings	Filings (%)	Net Assets(%)
5 Billion or less	20	8.1%	10.5%
5-10 Billion	5	19.2%	20.5%
More than 10 Billion	10	27.8%	46.2%
<b>Total</b>	<b>35</b>	<b>11.3%</b>	<b>40.6%</b>

## Focus of the analysis

What are the insights on disclosure of climate-related impact of **'Physical Risk'** on the **Natural Catastrophe Property Portfolio** and how specific the disclosure is in terms of use of **Climate Scenario (e.g., 2°C) Modeling** and **Time Horizons (e.g., 2040)** for quantification?



# Notable Themes Worth Highlighting

1. **All 35 disclosures in the sample **recognized** climate-related impact of 'Physical Risk' for the Natural Catastrophe Property Portfolio and most of the companies disclosed this risk being part of the existing ERM governance framework.**

2. **33 disclosures referred to **managing** such a risk (today and in future) with the use of**

- **Catastrophe Models for portfolio management**
- **Annual pricing/underwriting cycle**
- **Transfer of risk through reinsurance**



# About **50%** of the Disclosures in the Sample Mentioned Use or Non-use of Climate Scenarios

**8** disclosures with **specific scenarios** being used

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**3** disclosures mentioned **using** scenario analysis, but **no other specifics**

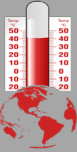

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**7** disclosures specifically mentioned **not using** scenario analysis

**Rest (17)** provided **no disclosure** on use or non-use of scenario analysis



# Disclosures Mentioned Using a Combination of Scenarios and Time Horizons (based on GHG emission projections)

	<b>Scenario<sup>(1)</sup></b>		<b>Scenario Type</b>	<b>No. of times used</b>
	RCP2.6/SSP1		Low Emission	2
	RCP4.5/RCP6.0/SSP2		Moderate Emission	6
	RCP7.0/SSP3		High Emission	2
	RCP8.5/PRA CBES		Worst-Case	5

## Most Common Perils Considered



## Time Horizon Range





# Notable Themes for the Scenario Analysis Disclosed

1.

Majority of the disclosures expressed **high uncertainty** in the estimates due to

- Challenges with **decoupling** natural variability with the climate signal
- Use of **simplified business assumptions**
- Not accounting for potential **societal changes**

2.

Some uses of the scenario analysis

- Informing the future strategy
- Stress testing (internal or external assessment)
- Research and evaluation of the future risk impact
- Fulfilling regulatory disclosures



# Closing Thoughts

## 1. Insights from the analysis - 'Physical Risk' (P&C NatCat Exposures)

- P&C Segment: Recognition, awareness and integration into ERM
- Scenario analysis: Evolving, higher uncertainty, long-way for wider adoption

## 2. Other reports for NAIC's Climate disclosure analysis *(Physical and Transition risks)*

- [Analysis of U.S. Insurance Industry Climate Risk Financial Disclosures for Reporting Year 2021](#)
- [Climate Risk Management in the U.S. Insurance Sector](#)

## 3. Increasing regulatory disclosures and use of scenario analysis

- NAIC: [Climate Scenario Analysis Proposal](#) *(exposed for public comment till Feb 28<sup>th</sup>)*
- IAIS : [Draft Paper on climate scenario analysis](#) *(Nov 2023)*
- BMA: [Guidance Note](#) *(March 2023)*



Thank you!