

Managing Climate Change in (Re)Insurance

May 2023





Through extraordinary people taking calculated risks
in pursuit of excellence.



STRATEGIES

UNDERSTANDING CLIMATE RISK AND ITS IMPACTS

ADAPTING (RE)INSURANCE PRACTICES

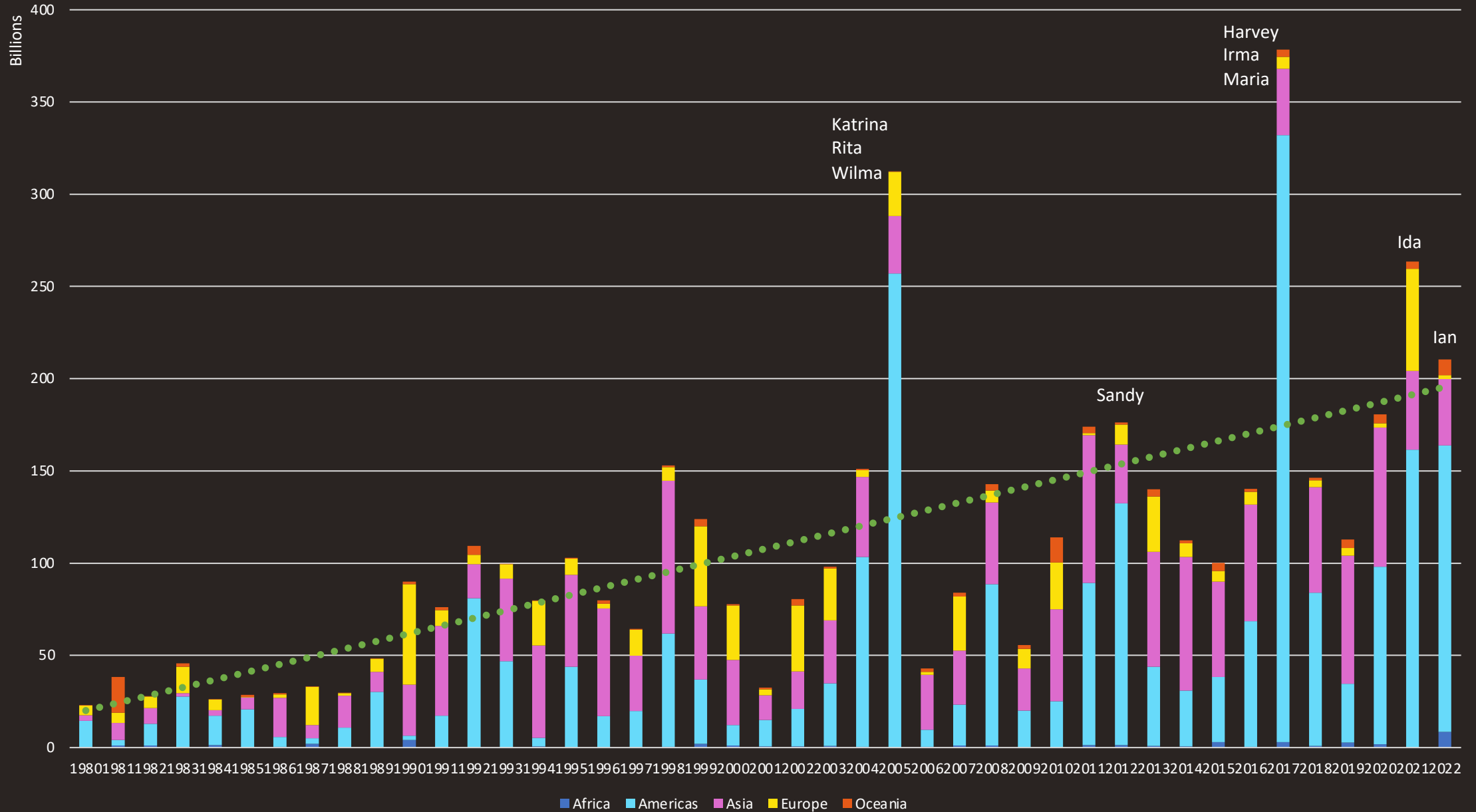
PROMOTING RESILIENCE AND MITIGATION

The Conclusion





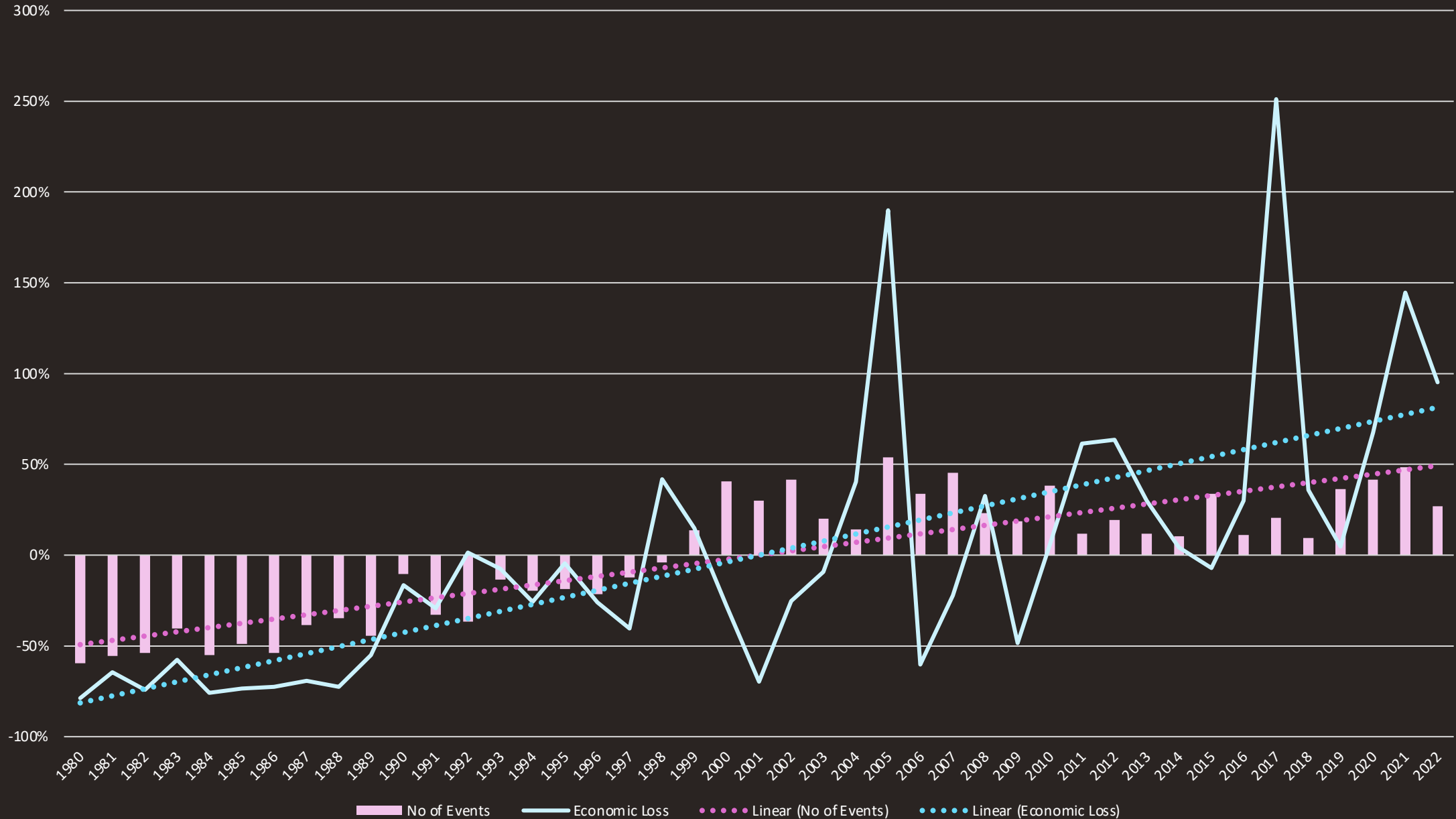
Significant Upwards Trends in Economic Loss



Economic Loss as a result of Climatological, Meteorological, Hydrological perils. All figures in USD Trended to 2022 USD using CPI

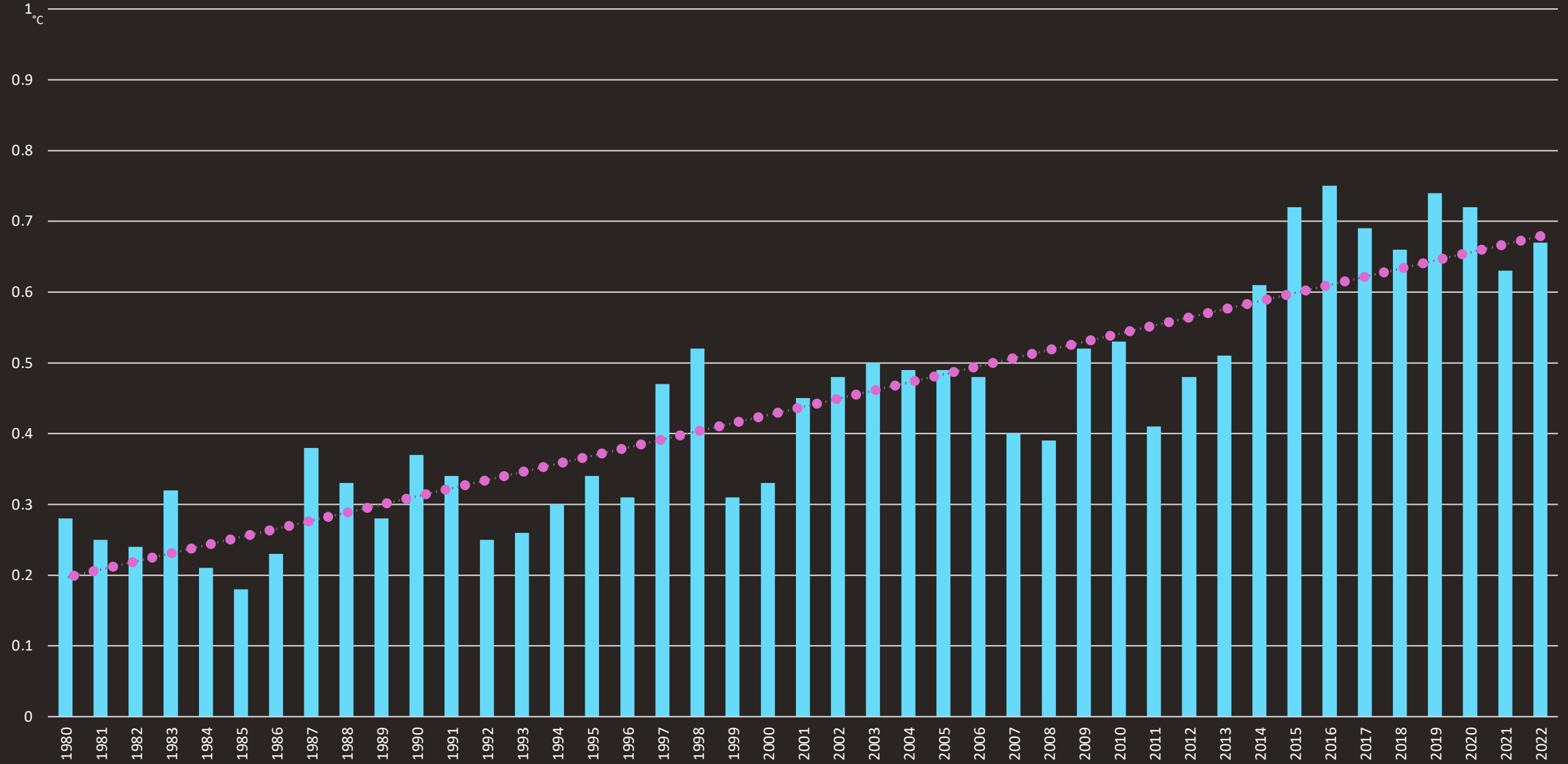


More Events Too





Temperatures Are Up



Annual Sea Surface Temperature (SST) anomalies vs long term mean

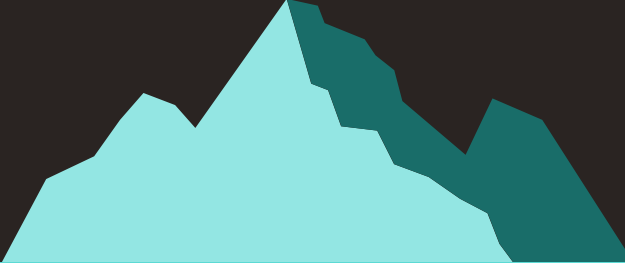
It's All Climate Change!

Not Entirely





Climate Change – A catch all?

An illustration of an iceberg floating in water. The tip of the iceberg is visible above the surface, while the much larger submerged part is hidden below. The water is represented by a solid teal color.

**What's below
the surface**



Location Intelligence

Irrespective of what a company hopes to achieve in understanding climate change, climate risk and climate impacts a detailed understanding of the underlying risk cannot be forgotten.

What is it?

Where is it?

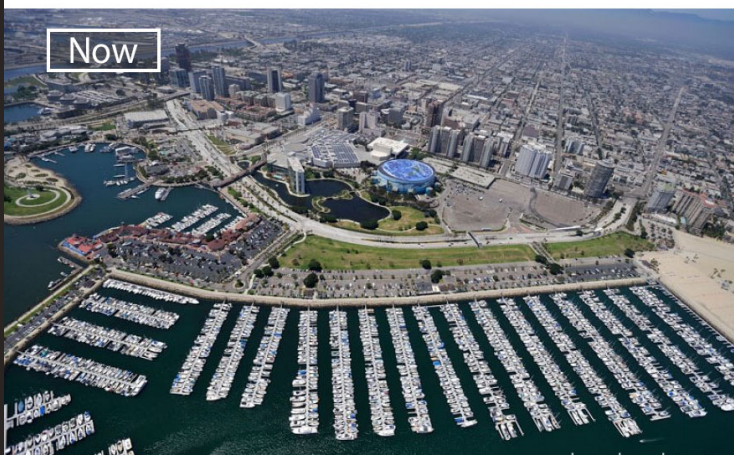
What is it worth?

Understanding of other contextual risk factors

Understanding of factors that can change that risk (including climate change and variability)

Changing Exposures – A Visual

Long Beach, CA (USA)



Fortaleza (Brazil)



Sydney (Australia)



Miami Beach, FL (USA)

Shenzhen, China – A 22 year growth story

2020

2010

1998



Shenzhen, China

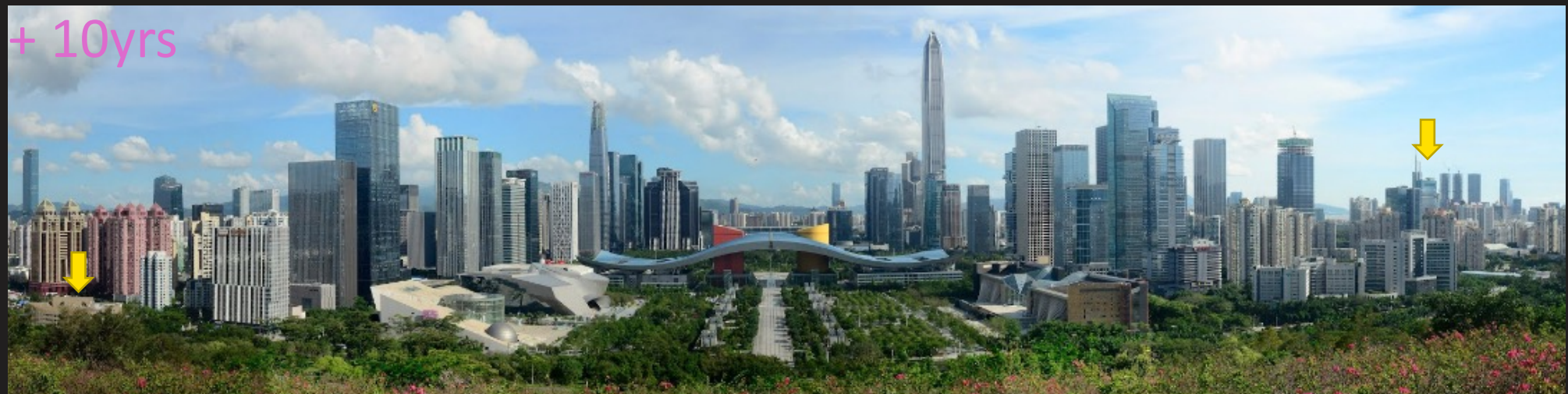
1998



2010

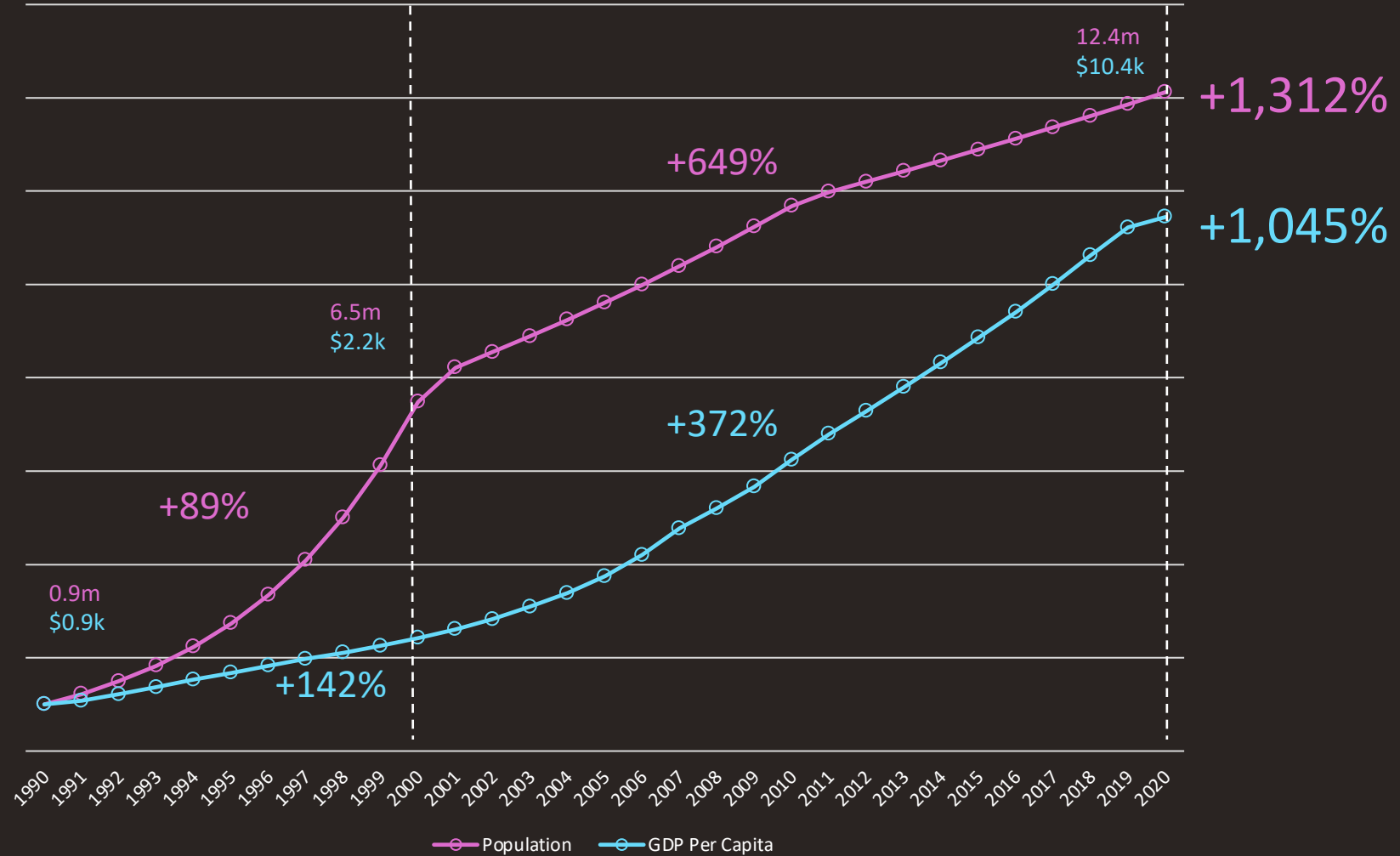


2020



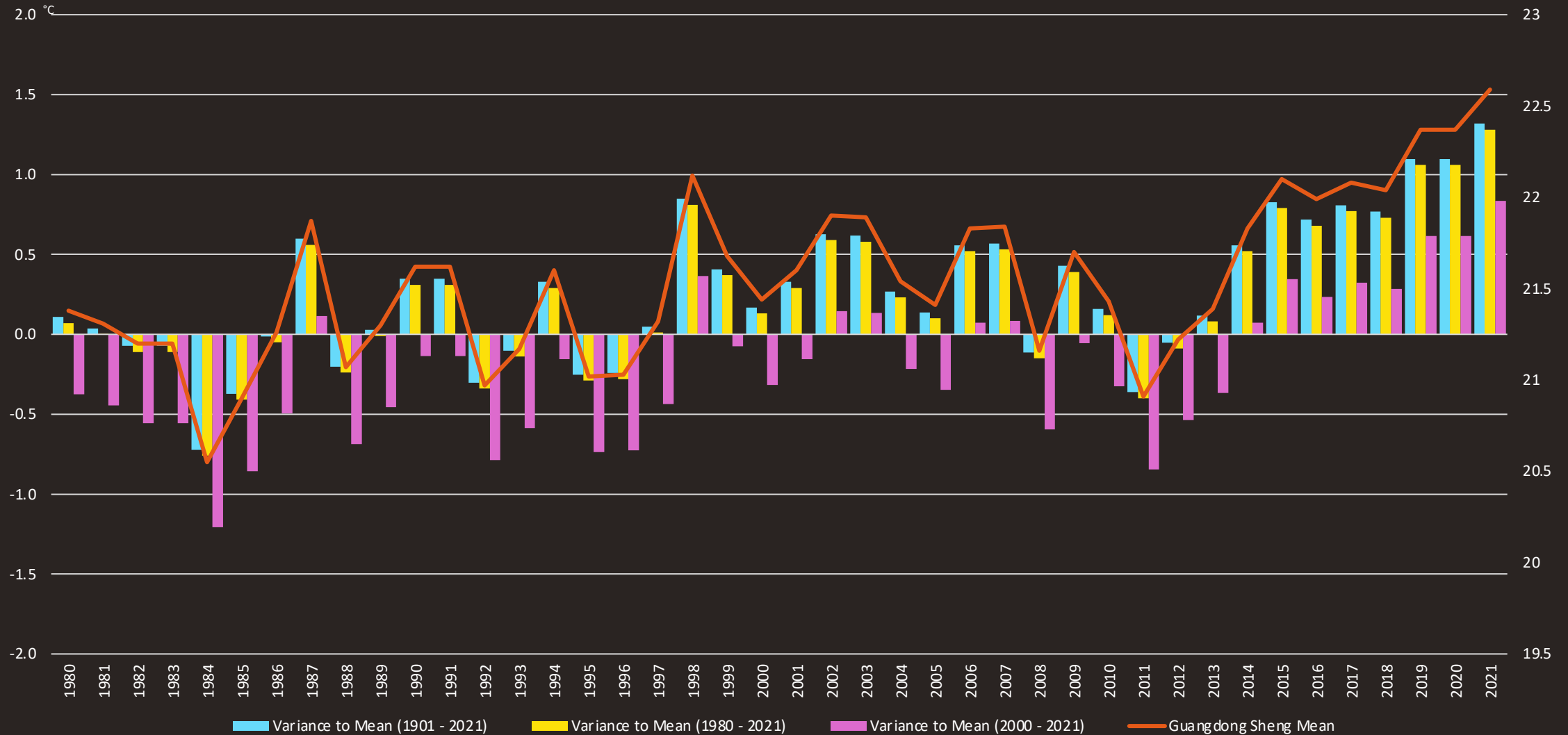


Population and Economic Growth - Trends



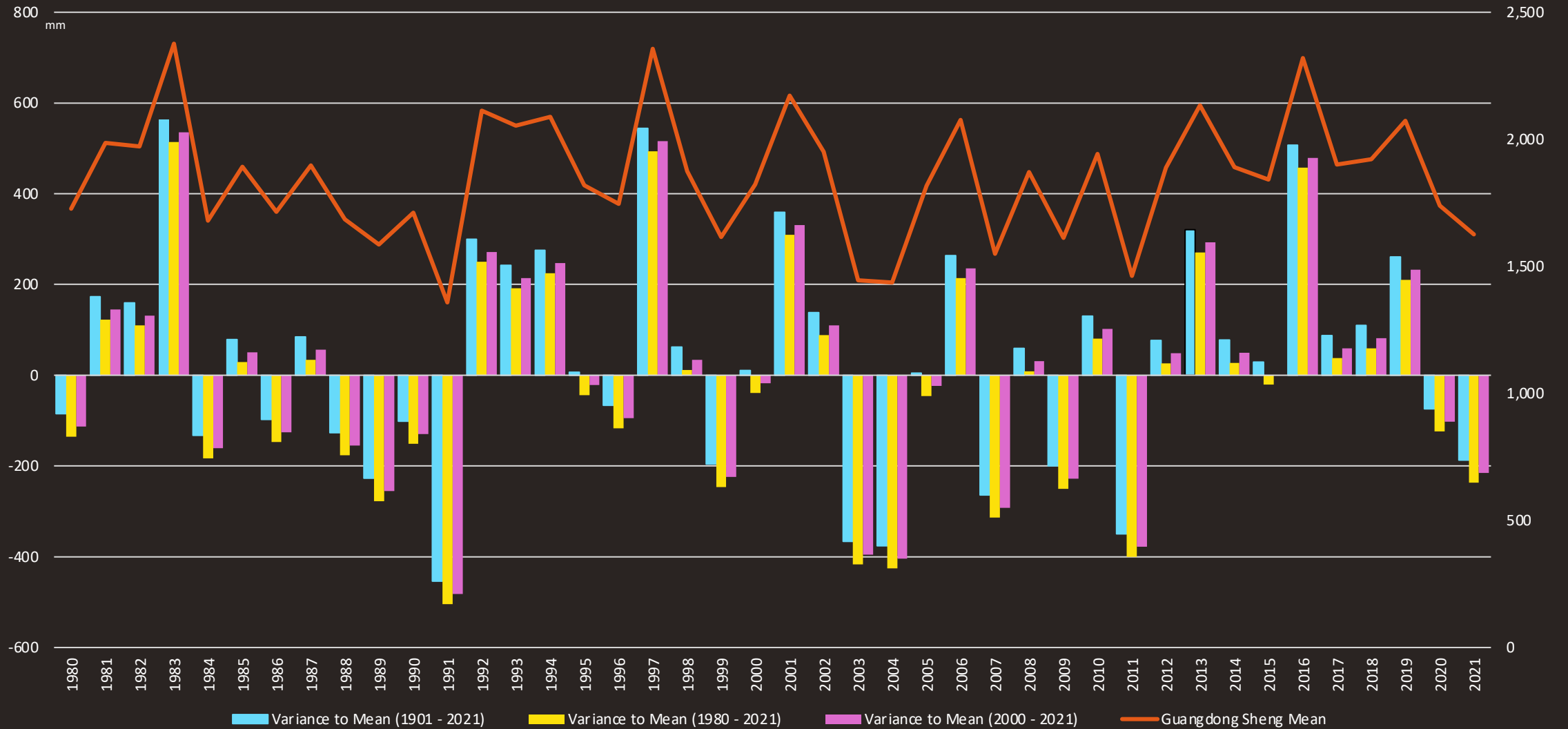
Population of in Shenzhen
GDP per Capita for China

Mean Temperature – Signals?



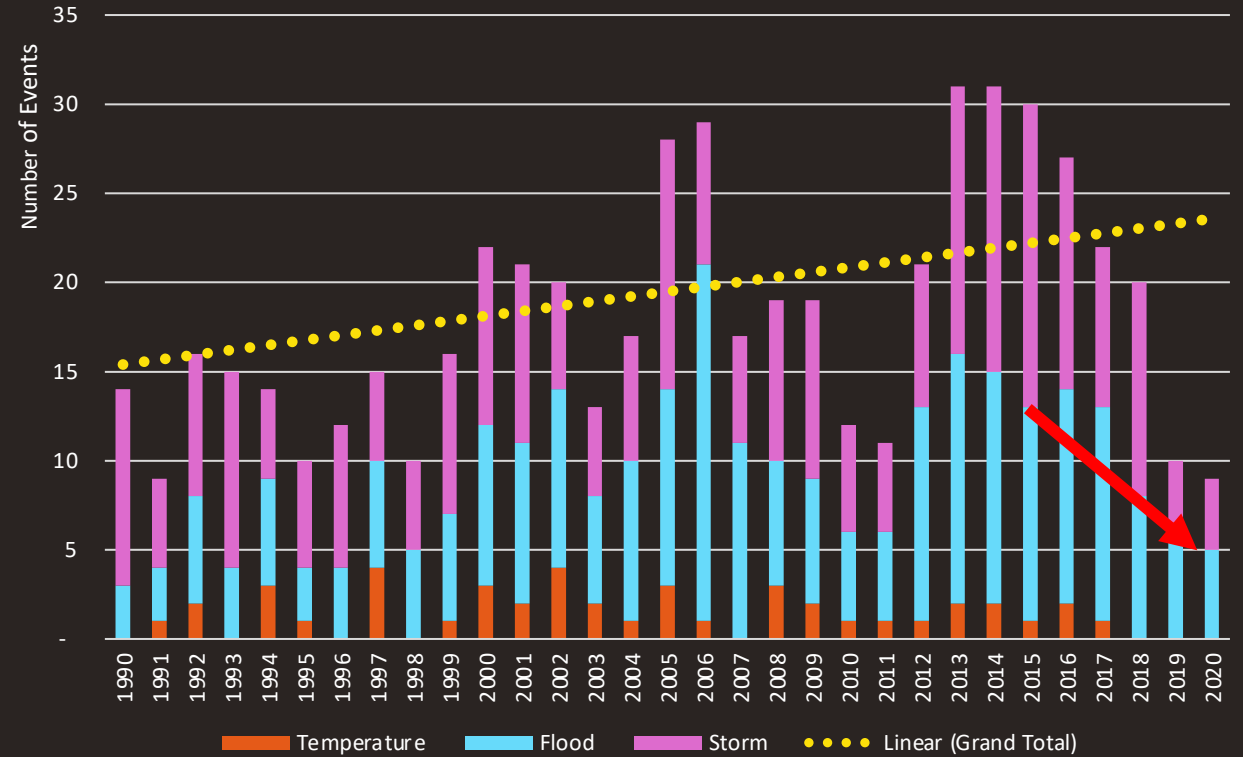
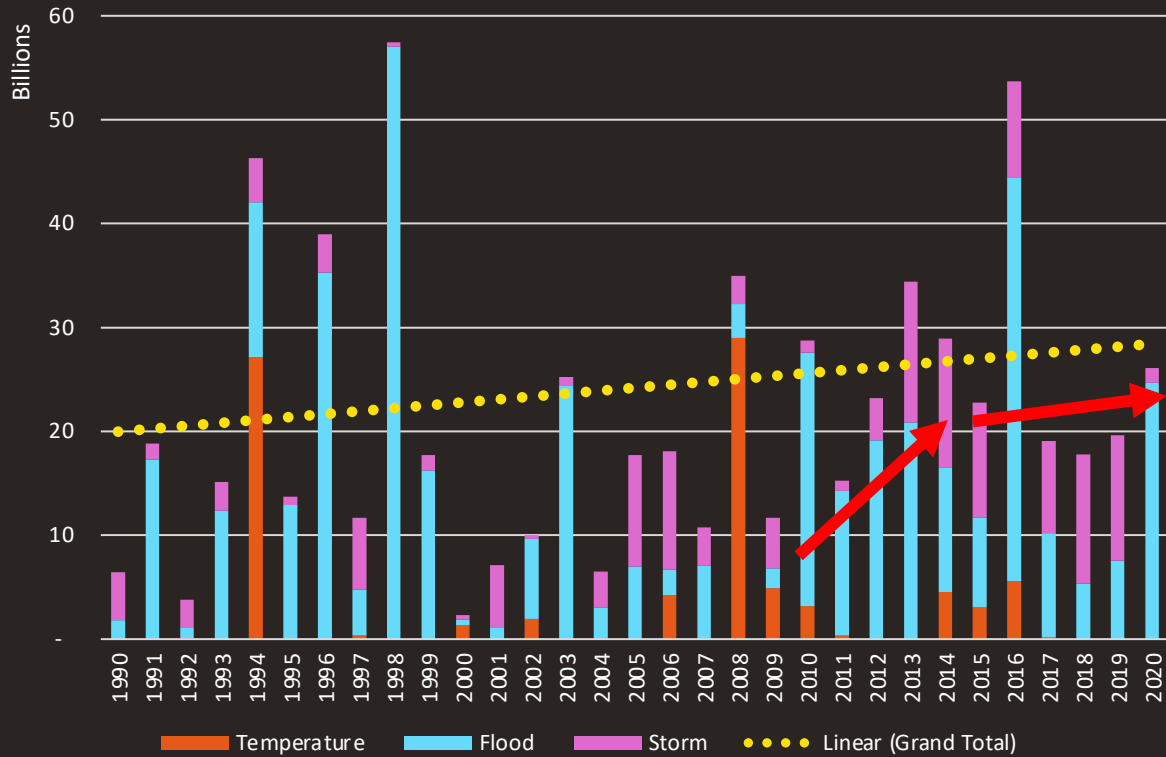


Mean Rainfall – Signals?





Meteorological Events – Loss and Counts



Deltas – What is the potential impact?

communications earth & environment

COMMENT

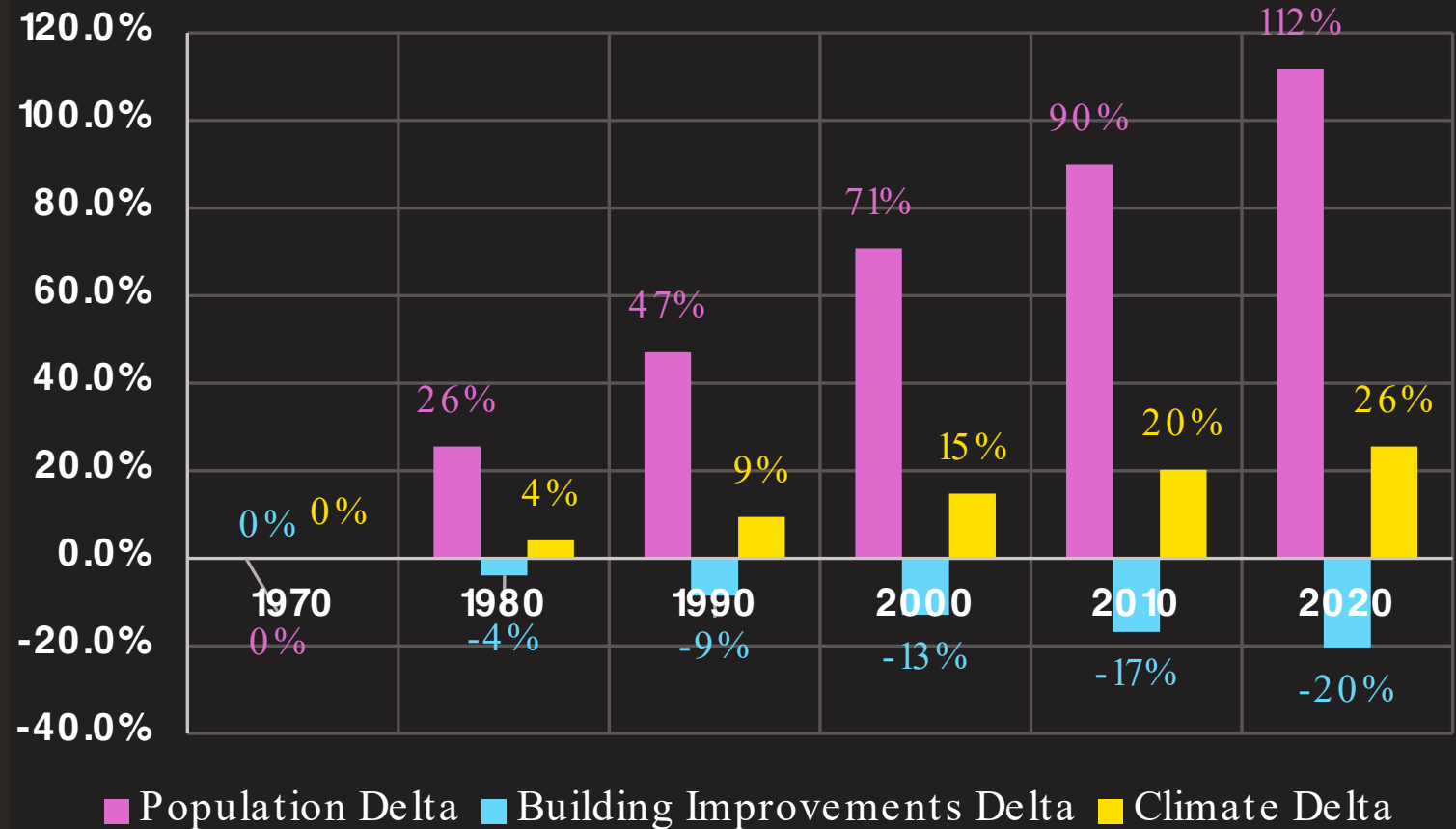
<https://doi.org/10.1038/s43247-021-00332-2>

OPEN

Stop blaming the climate for disasters

Emmanuel Raju^{1,2}, Emily Boyd³ & Friederike Otto⁴

“We must acknowledge the human-made components of both vulnerability and hazard and emphasize the human agency in order to proactively reduce disaster impacts”



So...



No it isn't

It is just more complex than that

There are many pathways to understanding climate change and its impacts on the (Re)Insurance industry



The need for tailored potential solutions depends on the company's risk profile.



Today?



Tomorrow?



A few years ago?



The Aim?



Vessel, Hudson Yards in Manhattan

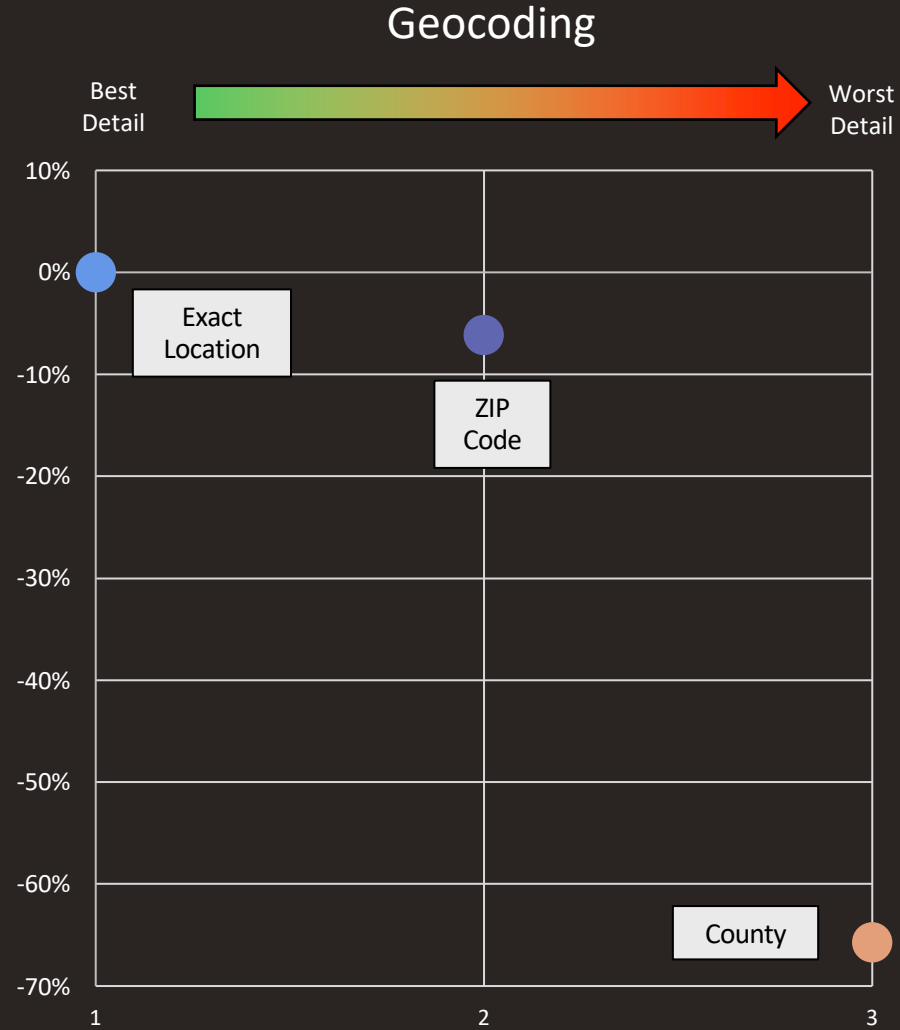
Even with the best understanding of climate risk, are adjustments for views of risk being applied to the most accurate view of base risk?





West Palm Beach, FL 33401, USA

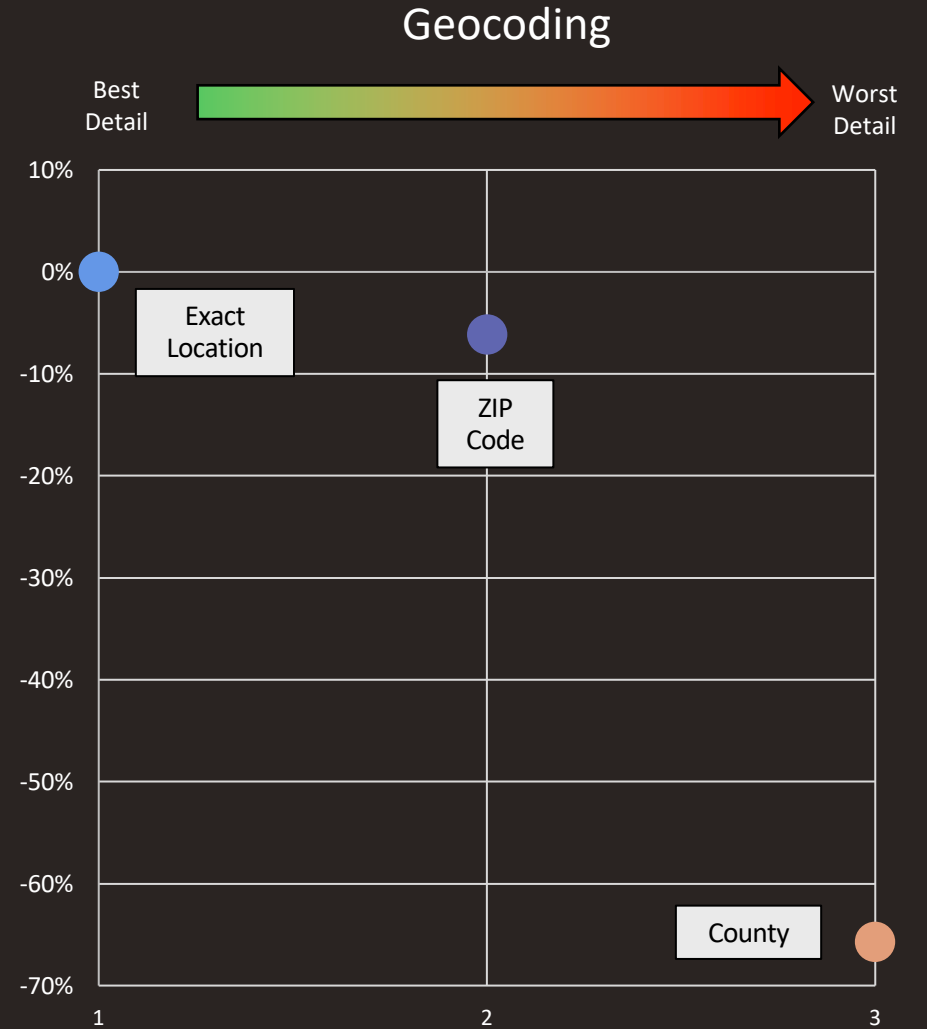
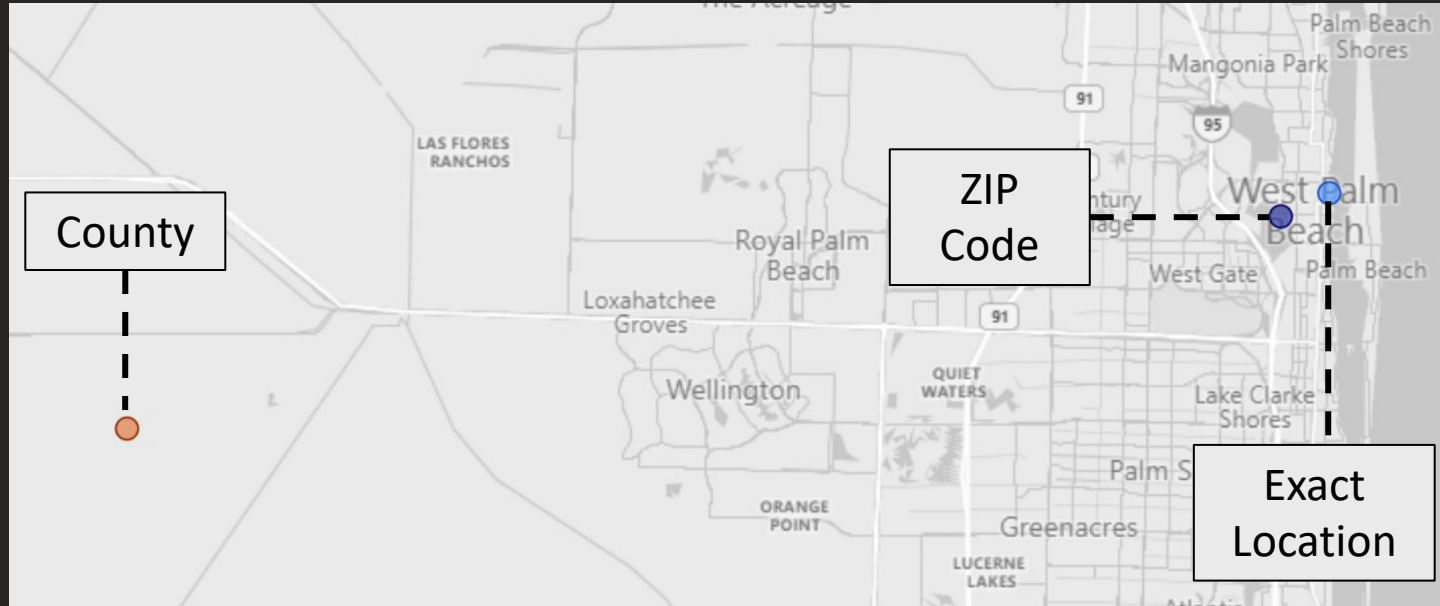
An illustrative example of pricing variance





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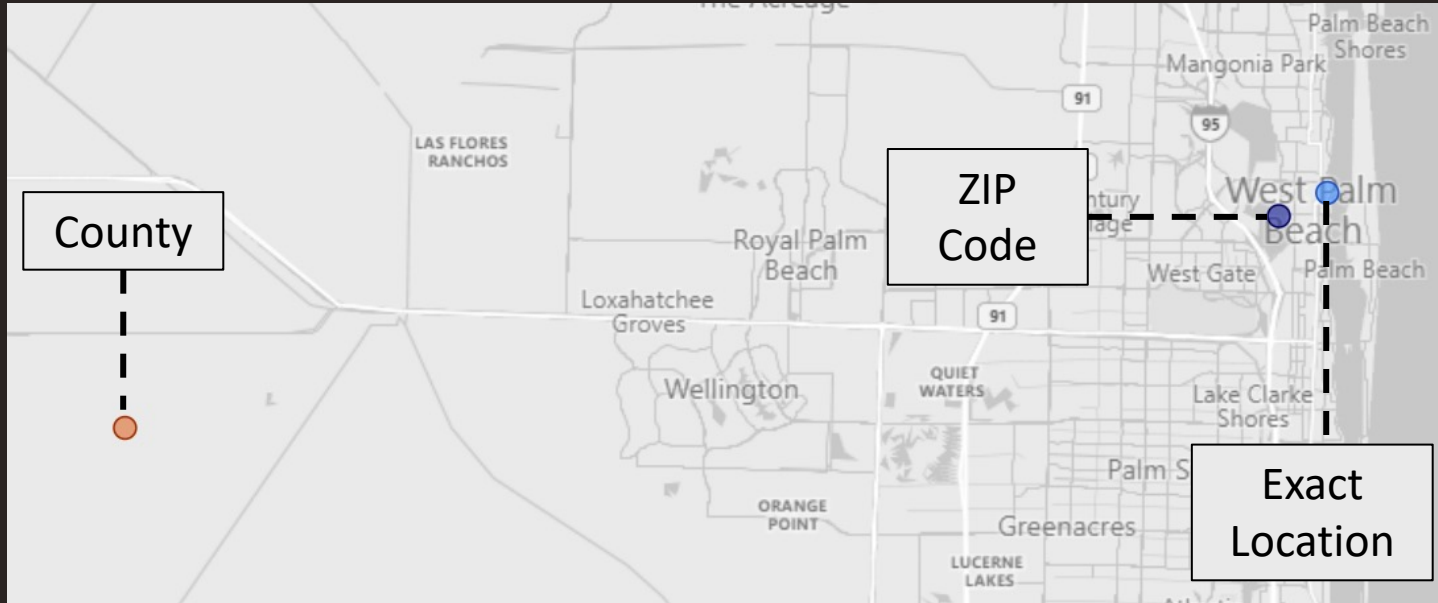
An illustrative example of pricing variance





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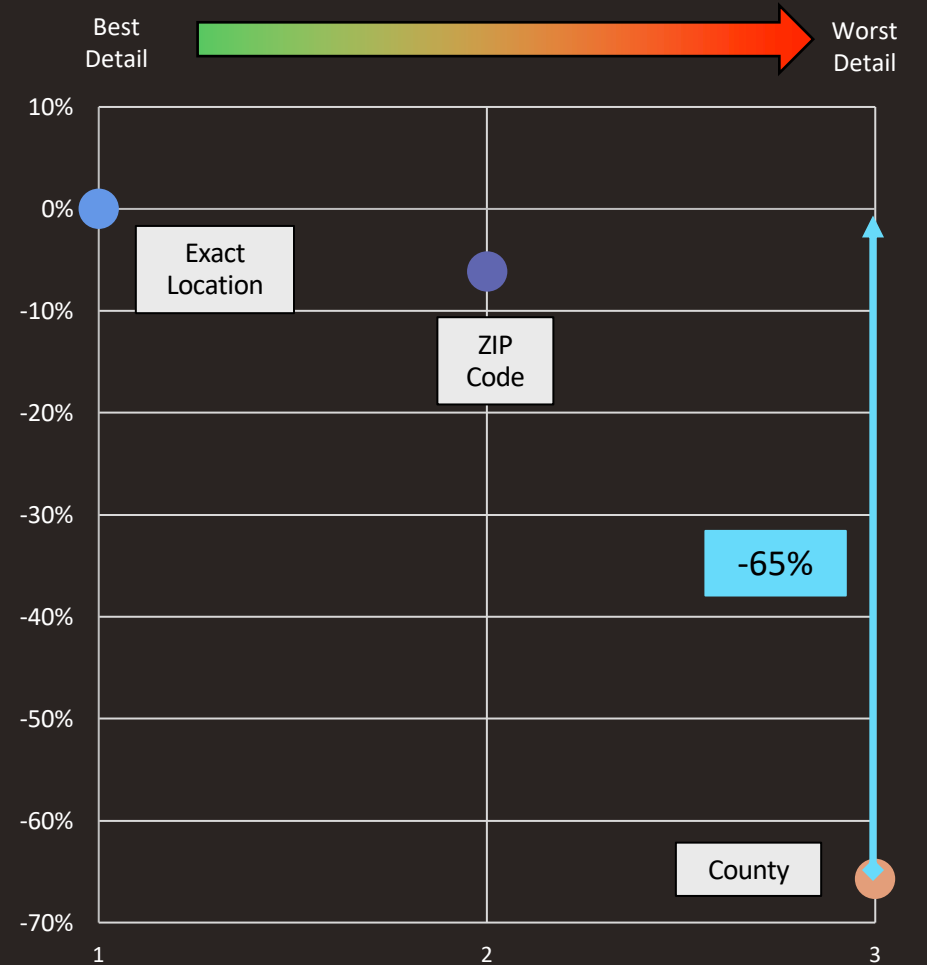
An illustrative example of pricing variance



Without full details of the location you could be significantly under-pricing risk (even without considering Climate impacts)

In this instance by as much as 65%!

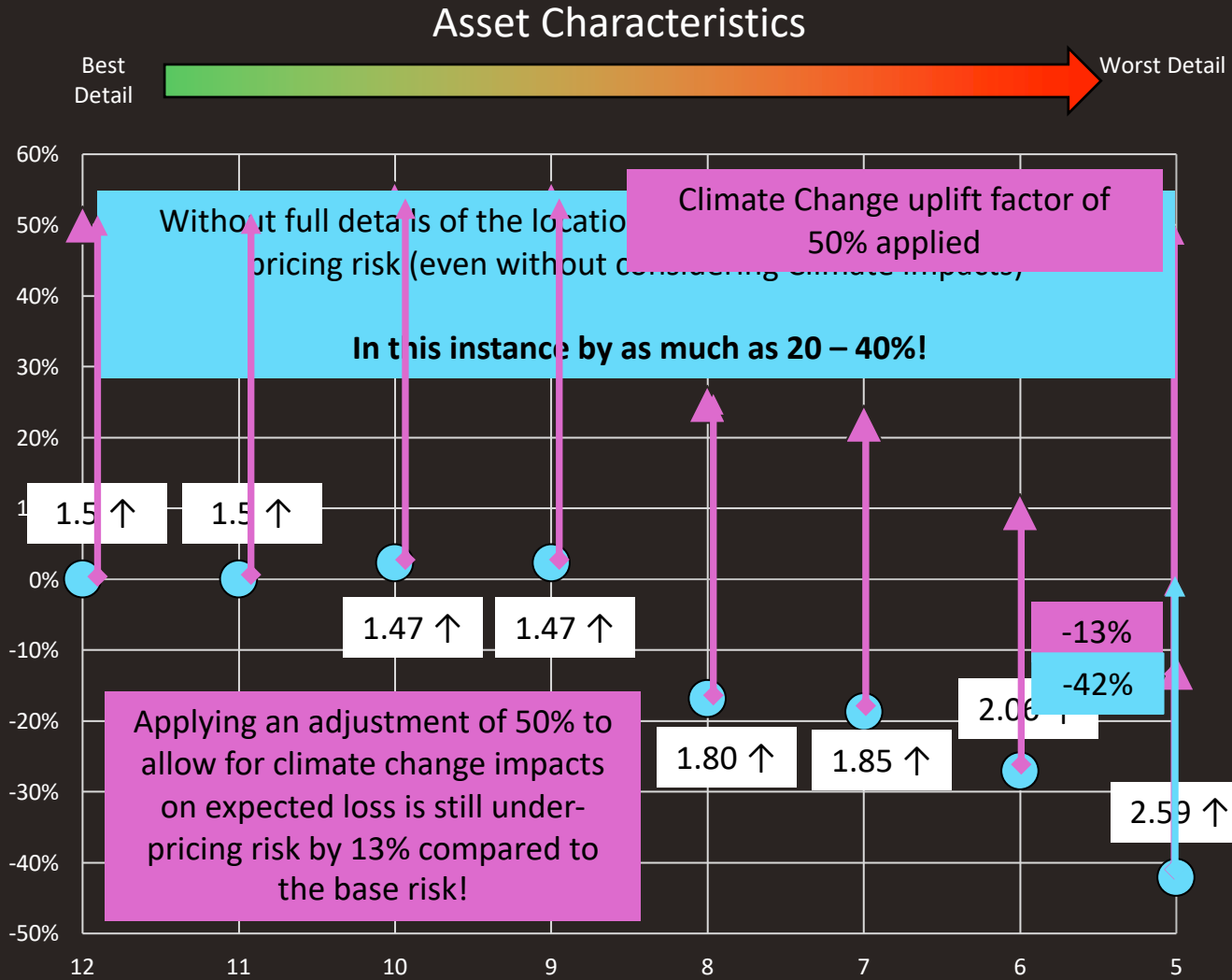
Geocoding





West Palm Beach, FL 33401, USA

An illustrative example of pricing variance



Run	Occupancy	Construction	Year Built	No. Stories	Floor Area	Roof Type
12	Yes	Yes	Yes	Yes	Yes	Yes
11	Yes	Yes	Yes	Yes	Yes	No
10	Yes	Yes	Yes	Yes	No	No
9	Yes	Yes	Yes	No	No	No
8	Yes	Yes	No	No	No	No
7	No	Yes	No	No	No	No
6	Yes	No	No	No	No	No
5	No	No	No	No	No	No

Greater understanding, and intelligence gathering on location characteristics leads to a better understanding of risk.

This, combined with the understanding of climate change impacts, can in turn, further a more accurate assessment of the impact of climate change.



SURFACE THE SCIENCE OF RISK



**Thank You
and
Please Get in Touch**

