

A satellite image of Earth showing a vast expanse of blue oceans and white, swirling clouds. The perspective is from space, looking down at the planet's surface. The clouds are dense and cover much of the visible area, particularly in the upper left and center. The ocean's surface shows some darker patches, possibly indicating deeper water or different ocean currents.

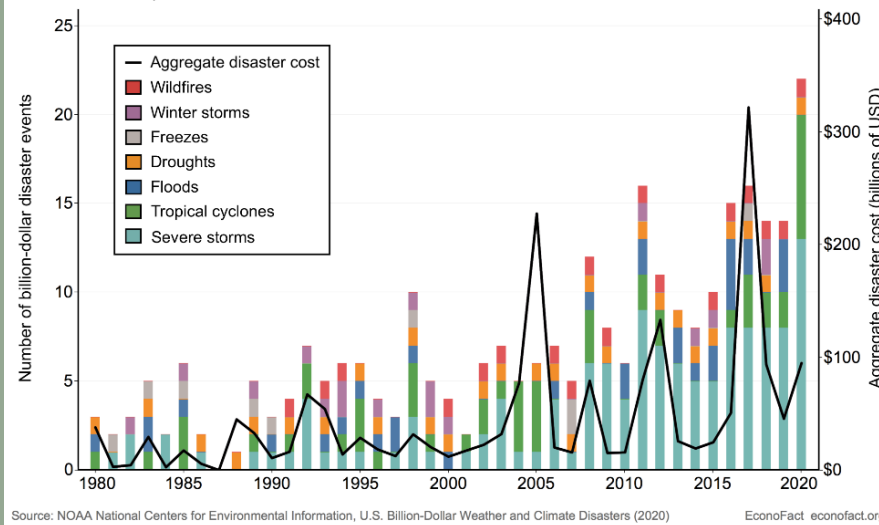
°CelsiusPro

**Life and business must continue.
With climate change.**

Problem

Climate change impact on prices and infrastructure of energy, natural resources and agricultural markets

WEATHER AND CLIMATE DISASTERS EXCEEDING \$1 BILLION IN COSTS
1980 TO 2020, CPI-ADJUSTED

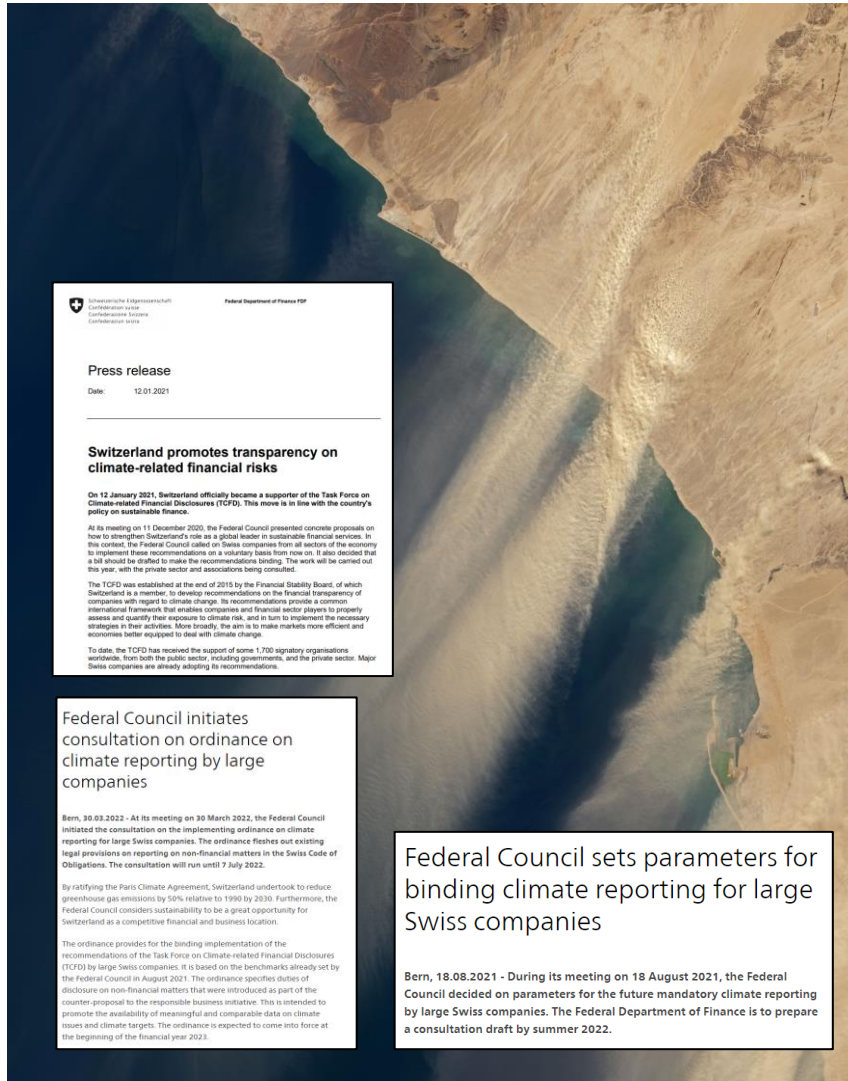


NOAA National Centers for Information, U.S. Billion-Dollar Weather and Climate Disasters (2020)

For Example

- Summer 2022: Floods in Pakistan affect seasonal crop and cotton
- Summer 2022: Heat waves and consequent droughts across the globe affecting agricultural production
- Summer 2022: Low water levels on the Rhine impede shipping

Regulatory Environment



Press release
Date: 12.01.2021

Switzerland promotes transparency on climate-related financial risks

On 12 January 2021, Switzerland officially became a supporter of the Task Force on Climate-related Financial Disclosures (TCFD). This move is in line with the country's policy on sustainable finance.

At its meeting on 11 December 2020, the Federal Council presented concrete proposals on how to strengthen Switzerland's role as a global leader in sustainable financial services. In this context, the Federal Council called on Swiss companies from all sectors of the economy to implement these recommendations on a voluntary basis from now on. It also decided that a bill should be drafted to make the recommendations binding. The work will be carried out this year, with the private sector and associations being consulted.

The TCFD was established at the end of 2015 by the Financial Stability Board, of which Switzerland is a member. It develops recommendations on the financial transparency of companies with regard to climate change. Its recommendations provide a common international framework that enables companies and financial sector players to properly assess and quantify their exposure to climate risk, and in turn to implement the necessary strategies in their activities. More broadly, the aim is to make markets more efficient and economies better equipped to deal with climate change.

To date, the TCFD has received the support of some 1,700 signatory organisations worldwide, from both the public sector, including governments, and the private sector. Major Swiss companies are already adopting its recommendations.

Federal Council initiates consultation on ordinance on climate reporting by large companies

Bern, 30.03.2022 - At its meeting on 30 March 2022, the Federal Council initiated the consultation on the implementing ordinance on climate reporting for large Swiss companies. The ordinance fleshes out existing legal provisions on reporting on non-financial matters in the Swiss Code of Obligations. The consultation will run until 7 July 2022.

By ratifying the Paris Climate Agreement, Switzerland undertook to reduce greenhouse gas emissions by 55% relative to 1990 by 2030. Furthermore, the Federal Council considers sustainability to be a great opportunity for Switzerland as a competitive financial and business location.

The ordinance provides for the binding implementation of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) by large Swiss companies. It is based on the benchmarks already set by the Federal Council in August 2021. The ordinance specifies duties of disclosure on non-financial matters that were introduced as part of the counter-proposal to the responsible business initiative. This is intended to promote the availability of meaningful and comparable data on climate issues and climate targets. The ordinance is expected to come into force at the beginning of the financial year 2023.

Federal Council sets parameters for binding climate reporting for large Swiss companies

Bern, 18.08.2021 - During its meeting on 18 August 2021, the Federal Council decided on parameters for the future mandatory climate reporting by large Swiss companies. The Federal Department of Finance is to prepare a consultation draft by summer 2022.

Mandatory Climate Risk Disclosure from 2024 in Switzerland

Companies need to prepare.

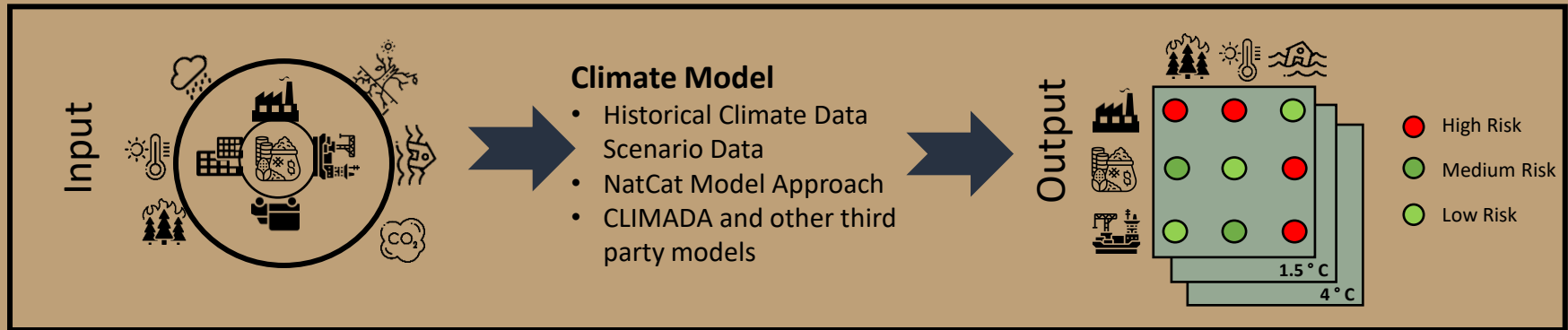
- Public companies, banks and insurance companies with **500 or more employees, more than CHF 20 million in totals assets or more than CHF 40 million in turnover**
- Disclosure Aligned to Taskforce for Climate-related Financial Disclosure (**TCFD**) Recommendations
- This includes **Climate Change Scenario Analysis**



Technology

Assessment, Adaptation and Disclosure

Climate Risk Modeling



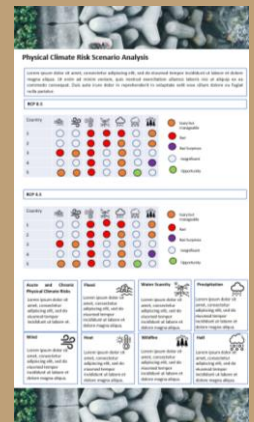
Adapting with insurance and derivatives

- Data driven structuring, pricing and tracking of derivative product with our tools
- Data from 20 different data providers worldwide
- More than 180m new datapoints daily

Disclosing climate-related risks

Support customers' TCFD-aligned climate disclosures incl.

- Governance / Compensation
- Strategy
- Risk Management
- Metrics and Targets

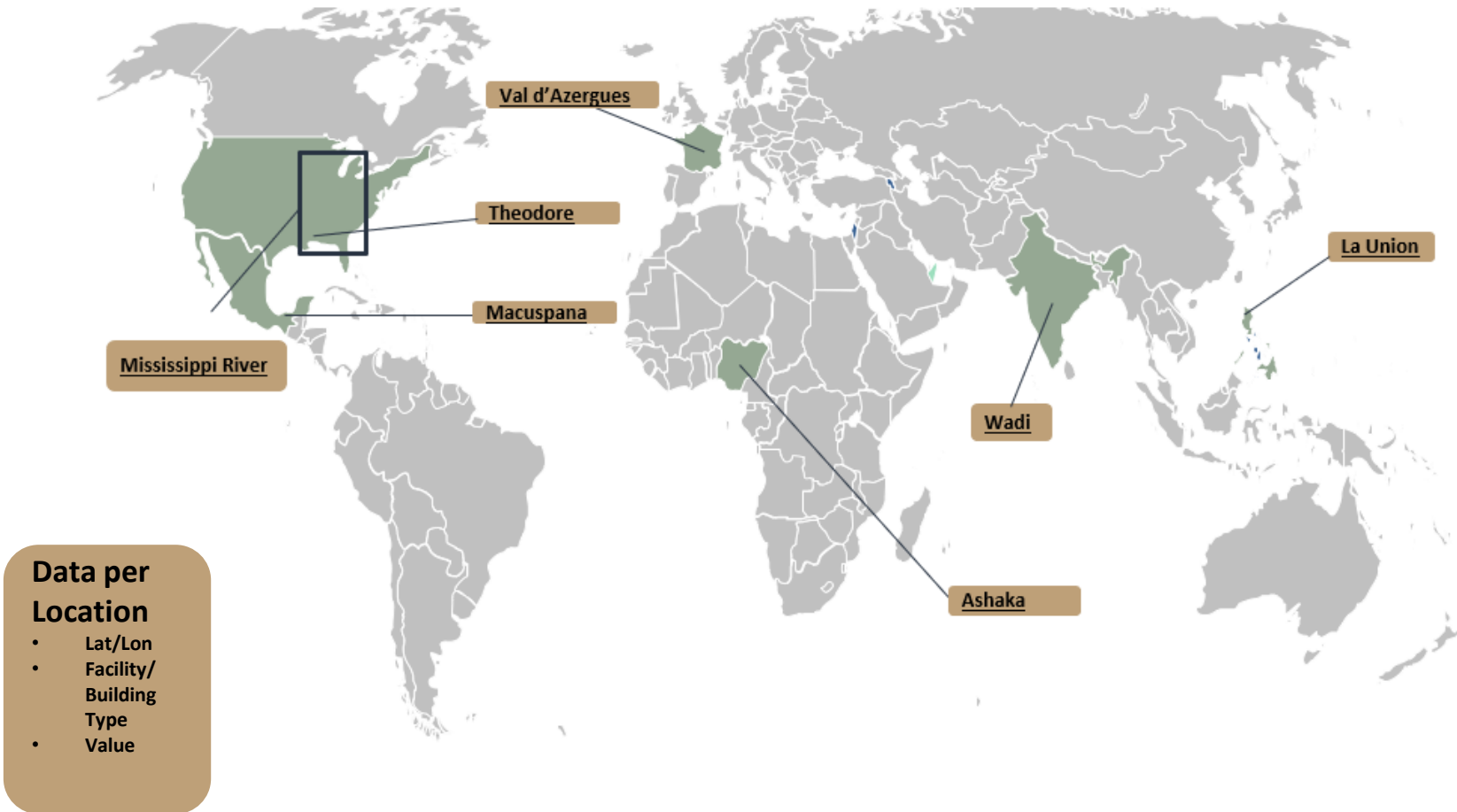


Holcim Use-Case



Scenario Analysis





Scope



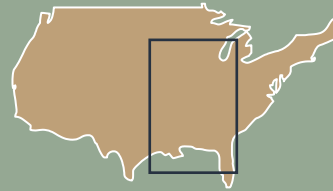
Risk Identification and Scenario Assessment

Philippines

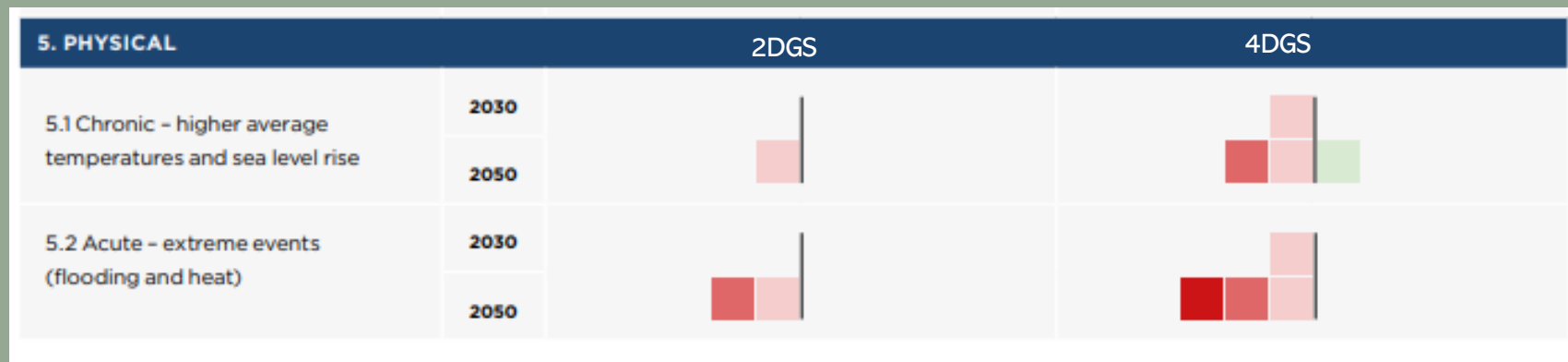


Peril	2° C	2.5° C	4° C
	↗	↗	↑
	↗	↗	↑
	→	→	→
	→	→	→

Mississippi

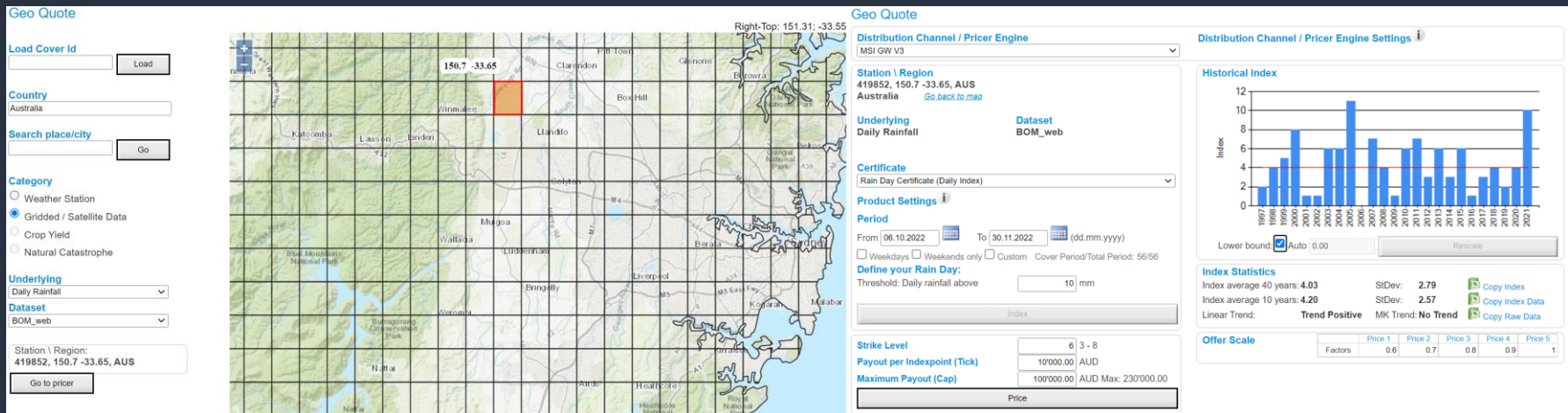


Peril	2° C	4° C
Low Water Extremes	↗	↘
High Water Extremes	→	→



Climate change adaptation for the agricultural sector

Parametric derivative solutions for Australian Farmers



Contact

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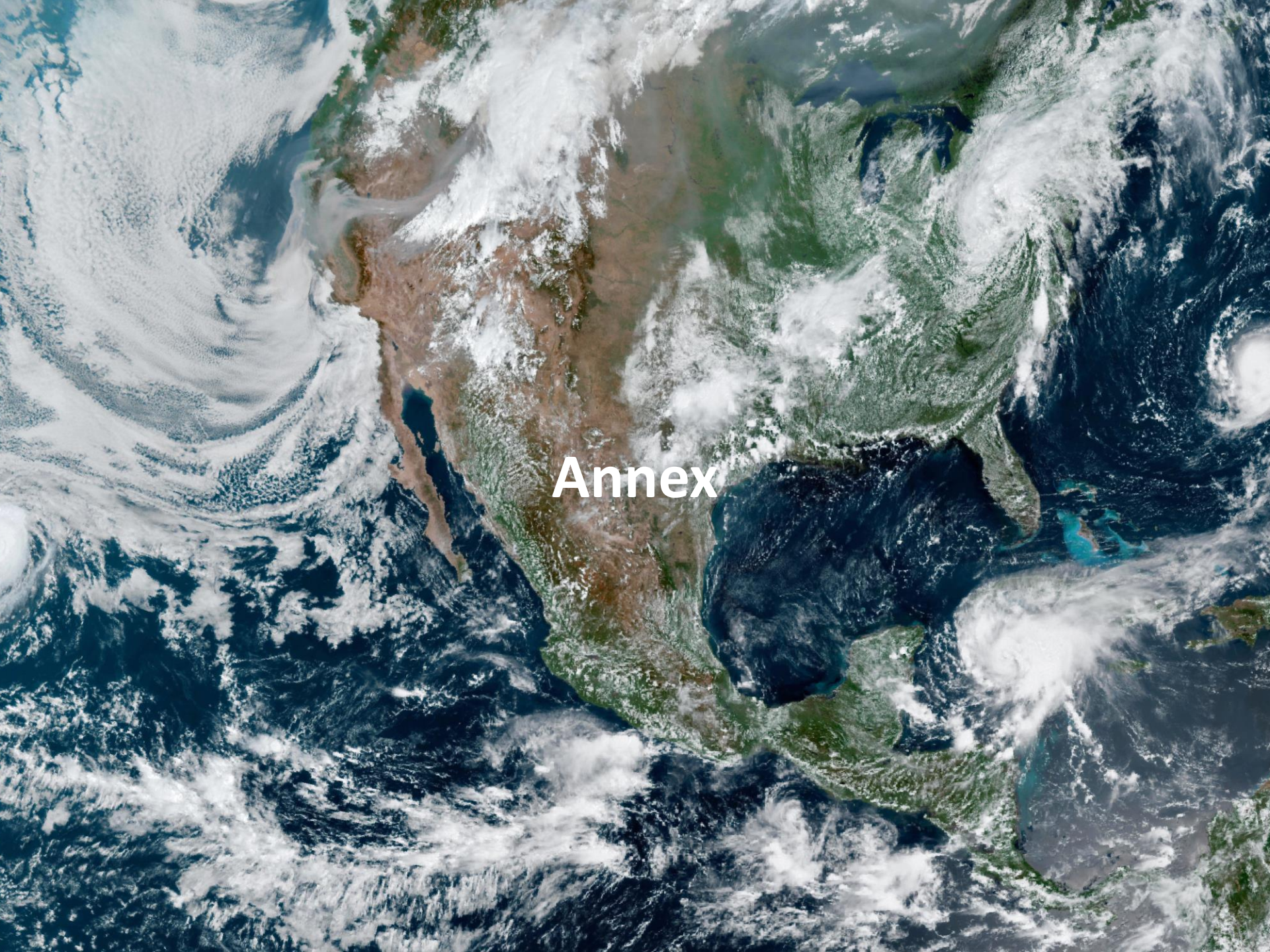
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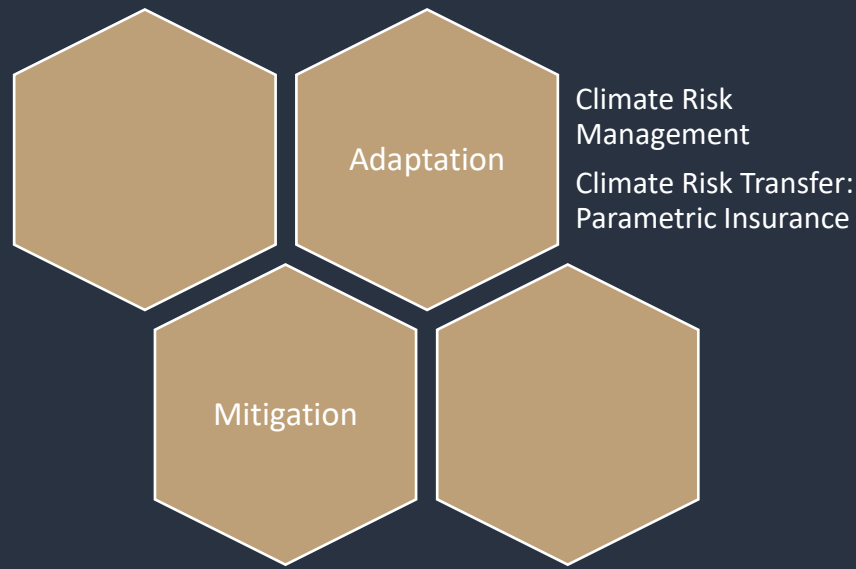
naomi.pfister@celsiuspro.com



Annex

Why do we exist?

We aim to ensure life and
business worldwide continue.
With climate change.



Climate Change Adaptation

How can companies adapt?



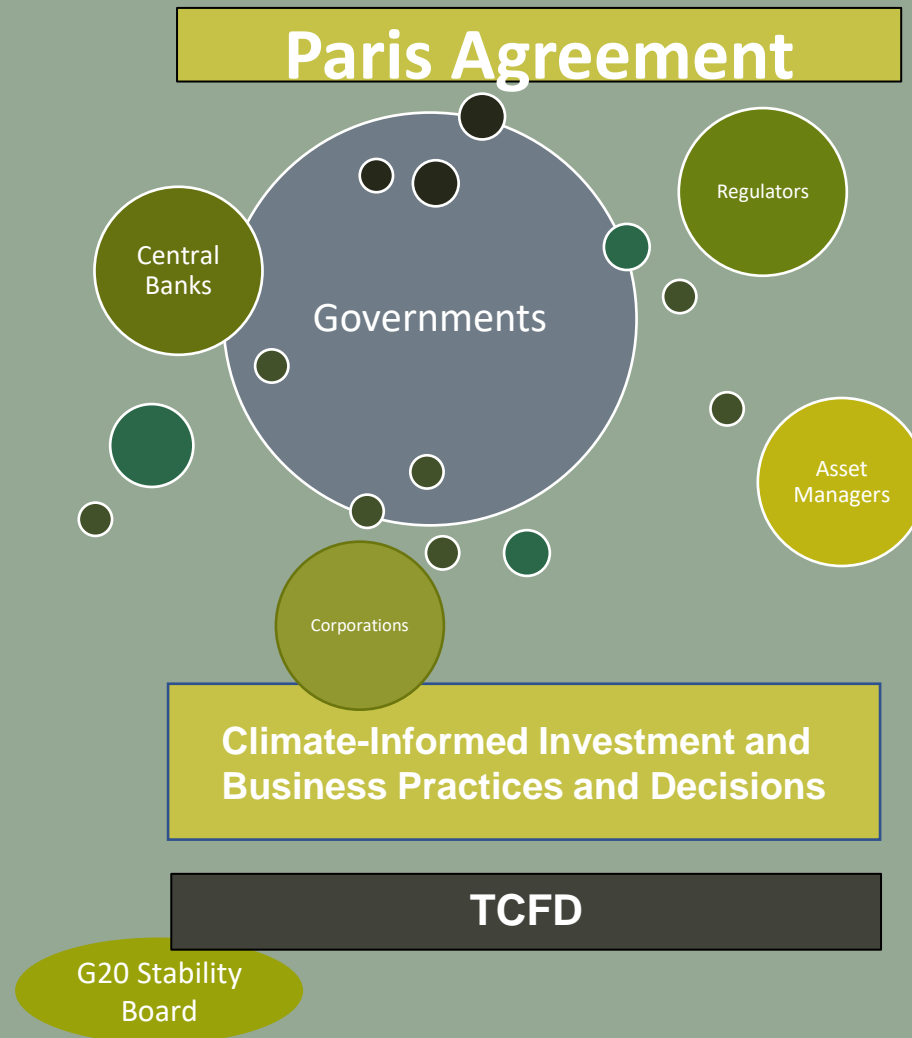
Framework

TCFD Recommendations

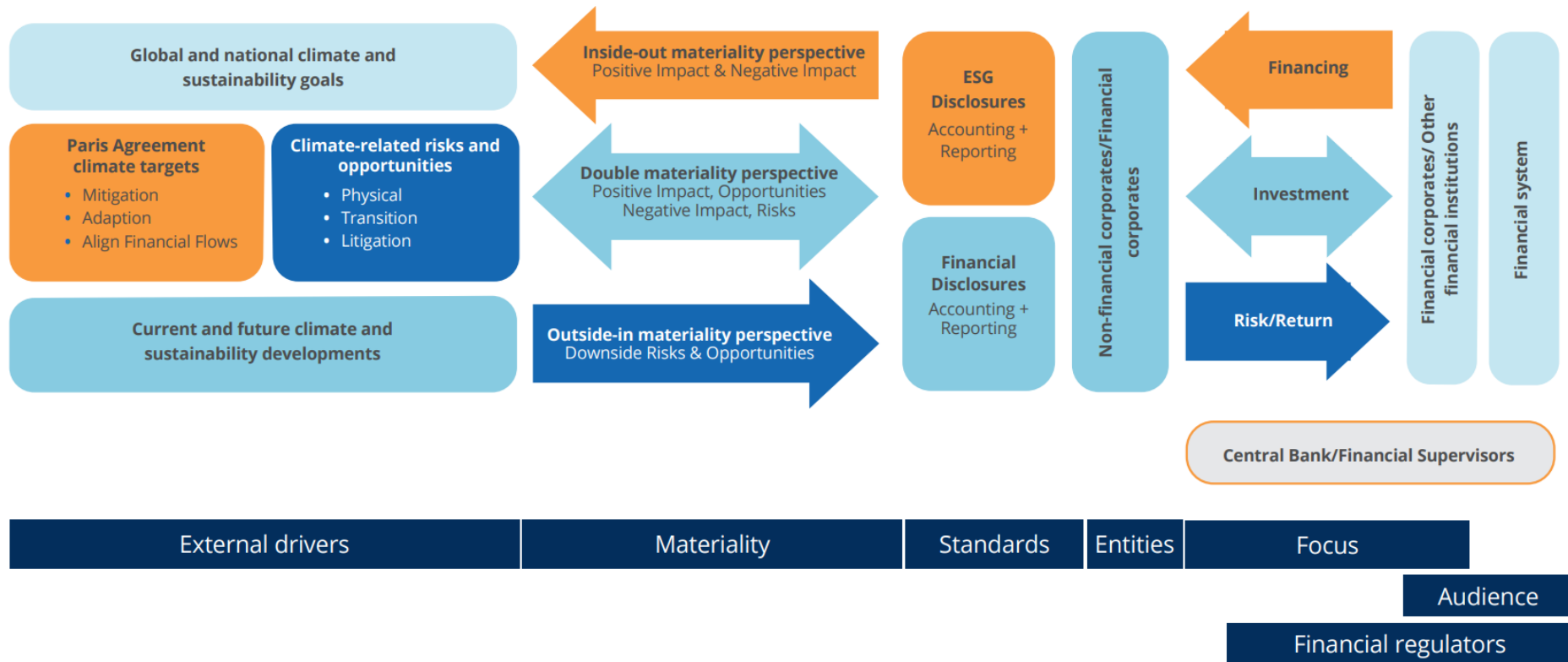


Conceptual Overview

TCFD

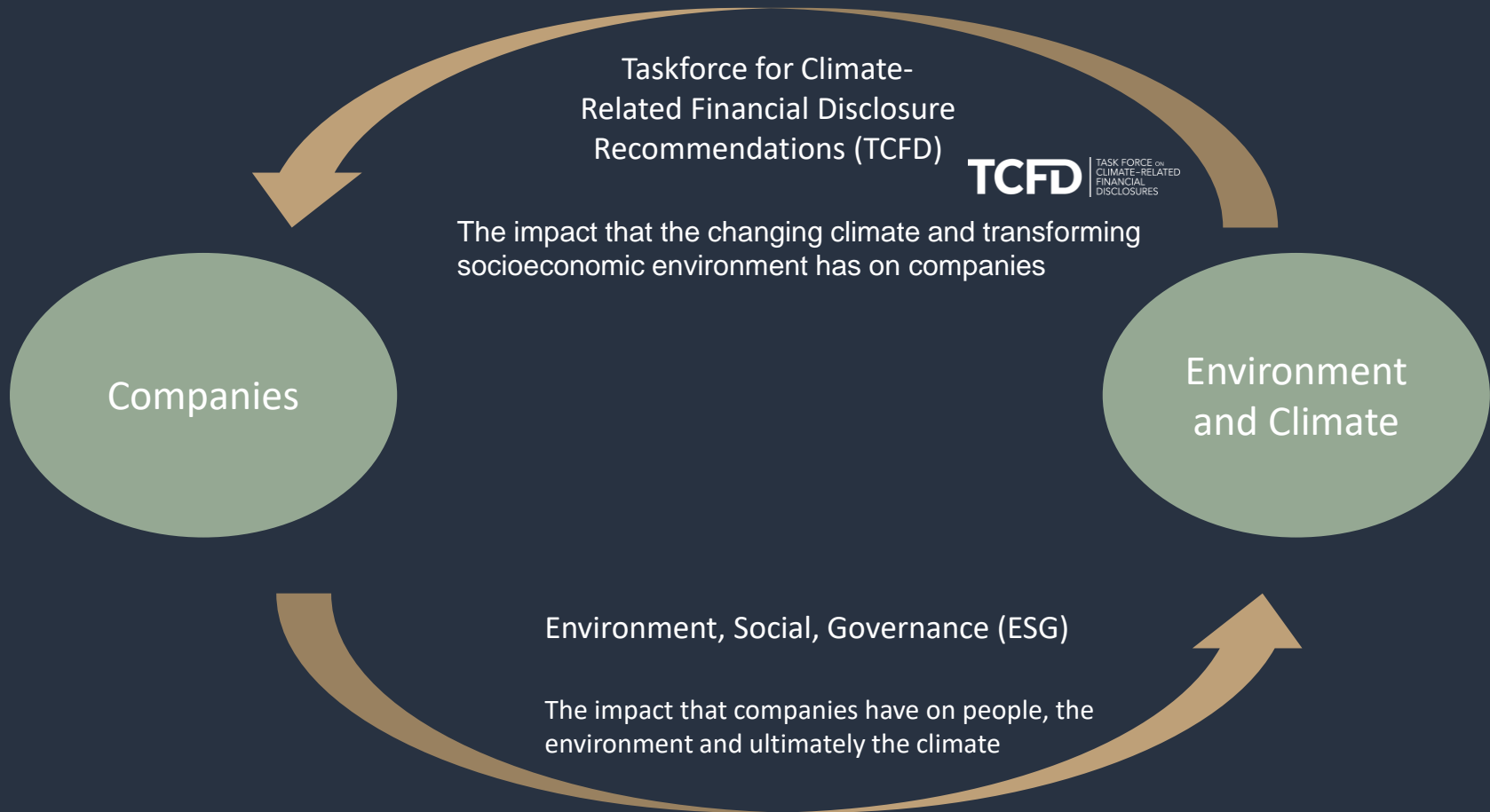


Regulatory Landscape Overview

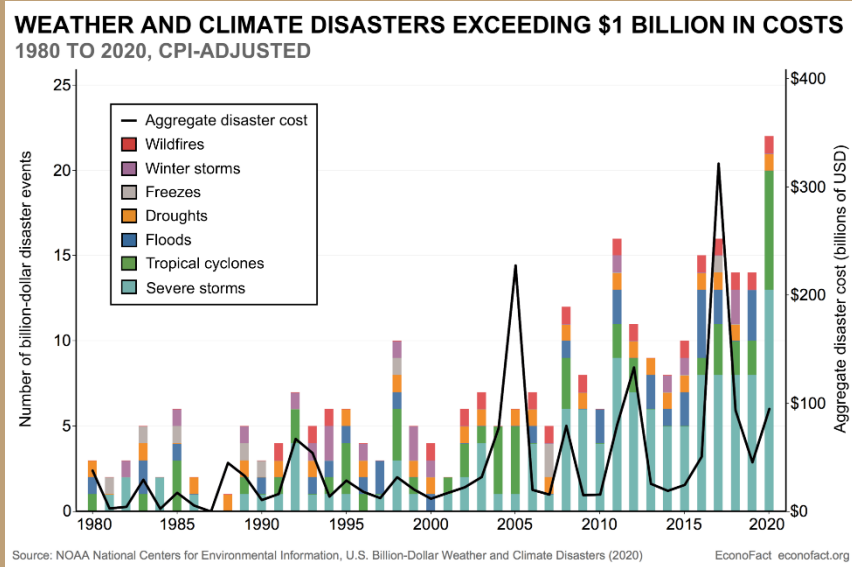


Regulatory Landscape

Double Materiality



Global economic losses from extreme weather events are increasing



- Climate Change has led to an increase and intensification in weather and climate related disasters and financial losses
- Governments recognize the financial risk of climate change impacts and endorse the TCFD recommendations
- Through systematic assessment and management of climate risks, risk and asset managers, sustainability officers can smoothly transition to a low carbon economy and leverage arising opportunities

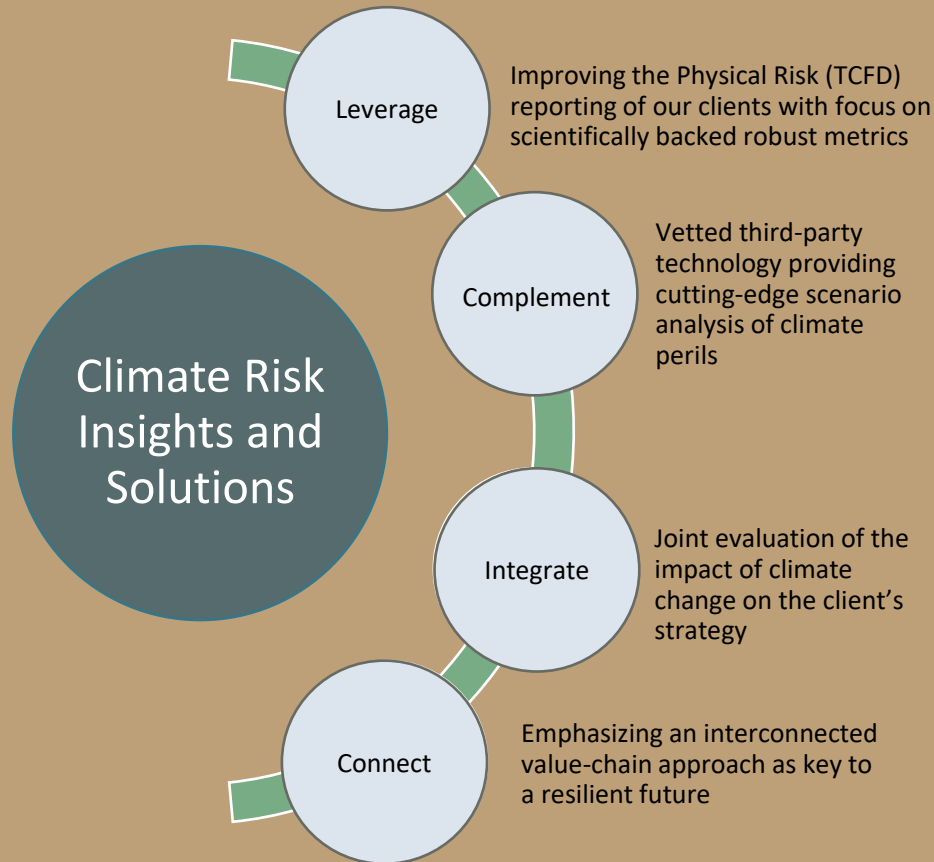
Services

TCFD Pillars



TCFD PILLARS	CRIS SERVICES
GOVERNANCE	Management Structures, Gap Identification, Capacity Building
STRATEGY	<p>Investigation of changes to physical climate risk landscape due to climate change and consequently provide basis for strategic decision making due to climate change</p> <p>Climate Risk Adaptation and Opportunity Assessment to support individual and portfolio wide strategy development</p>
RISK MANAGEMENT	<p>Identification and quantifying of Physical Climate Risk and supporting assets and companies with information regarding adaptation opportunities</p> <p>Develop tailored adaptation recommendations and technical insurability analysis to support local and portfolio wide risk management</p>
METRICS AND TARGETS	<p>Identification and implementation of qualitative and quantitative metrics for Physical Climate Risk to measure performance and communicate with stakeholders</p> <p>Support identification of targets in Physical Climate Risk reduction to lead by example through innovative analytics</p>

Climate Risk Insights and Solutions (CRIS) at CelsiusPro



Climate Risk Insights and Solutions (CRIS) at CelsiusPro

°CelsiusPro

Consulting

- Experienced Consultants
- A decade of Physical Risk Expertise
- Science Backed Financial Metrics Expertise
- Climate Risk/ TCFD Market Expertise
- Partnerships and Licenses
- Risk Transfer Solutions
- Flexibility to tailor output to needs of client
- Global network

Technology

- Proprietary Risk Model (Environmental Monitoring System(EMS))
- 180M Climate Datapoints daily

Partnerships

- Transition Risk



- Data providers for:
 - Scenario Analysis (2030,2050, 2100)
 - Supply Chain Drill Down
 - Adaptation Measures and Cost Benefit Analysis

Client Needs

- Advisory and Consulting
 - Physical Risk Analysis incl. Scenario and Supply Chain Analysis
 - Business Impact
 - Disclosure
- Capacity Building
- Cutting edge tailored outputs addressing the needs of the client
- Resources

Physical Climate Risk Targets

Net-Zero and 100 per cent Adapted (?)

- Based on disclosures; companies are focusing strongly on transition risk, thereby neglecting physical climate risk
- What targets can companies set?
- How can we measure them?
 - # Risk Mitigation Plans
 - # Exposed Locations / Supply Chains
 - # Risk Measures

Real Estate

Effects on Equity Value

Illustrative chart and examples of physical and transition risk effects on equity value of assets, %








McKinsey

Other Disclosure Example

Effects on EBIT of Construction Company

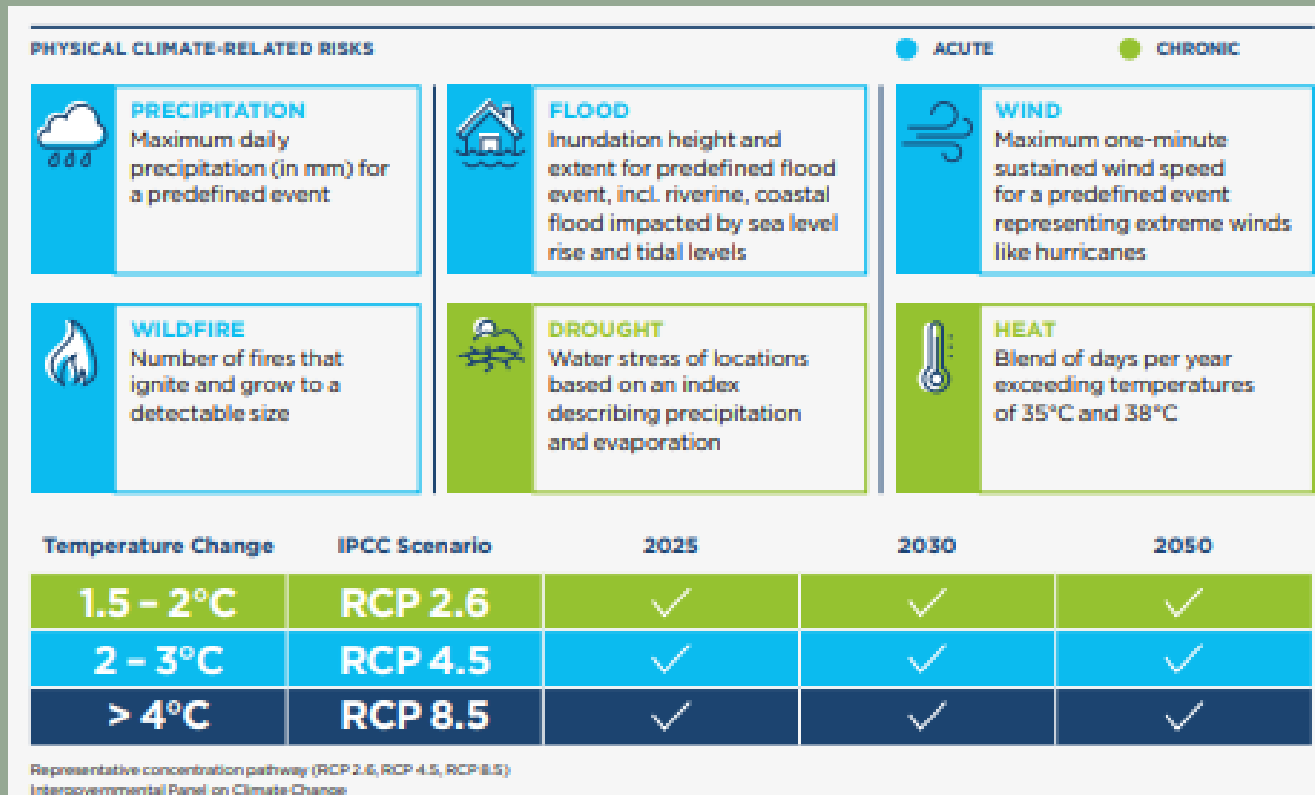
Scenario analysis potential climate risk and EBIT impact

RCP8.5 – 4°C global warming scenario in 2050

Cluster					
Sydney	●	●	●	●	●
Southern Highlands, NSW	●	●	●	●	●
Melbourne	●	●	●	●	●
South East Queensland	●	●	●	●	●
Perth	●	●	●	●	●
South Australia	●	●	●	●	●
Potential adverse EBIT impact	Significant	Modest to significant	Insignificant¹	Neutral to positive impact	Neutral to positive impact

SouthPole

Risk Identification and Scenario Assessment



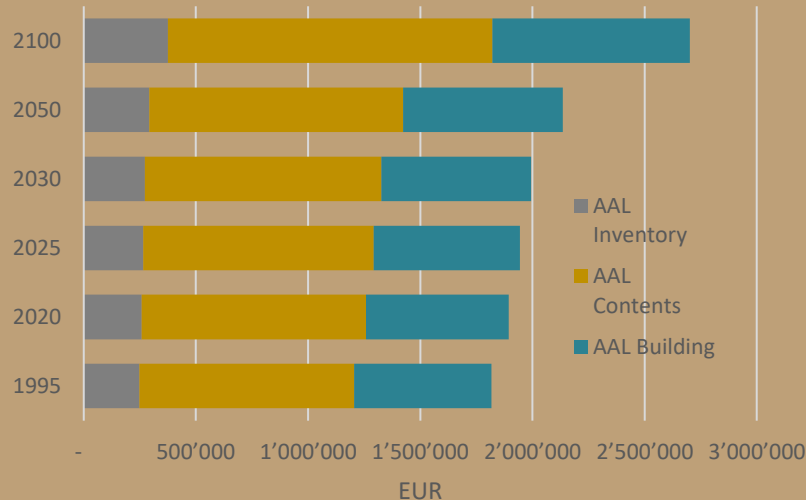
Excerpt from Holcim Climate Report

Metrics

Financial Risk Quantification

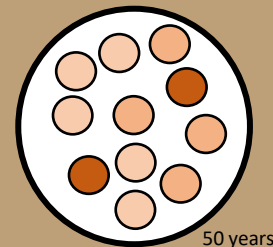
Physical damage to assets

Annual Average Loss for Flood 4° C

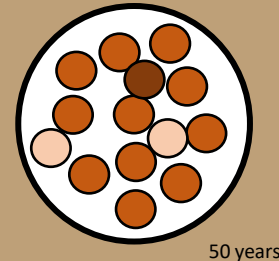


Supply chain disruptions

Historical Business interruption costs per month of interruption: 2.5 m \$ USD



In current climate, a 3-month event returns every 25 years

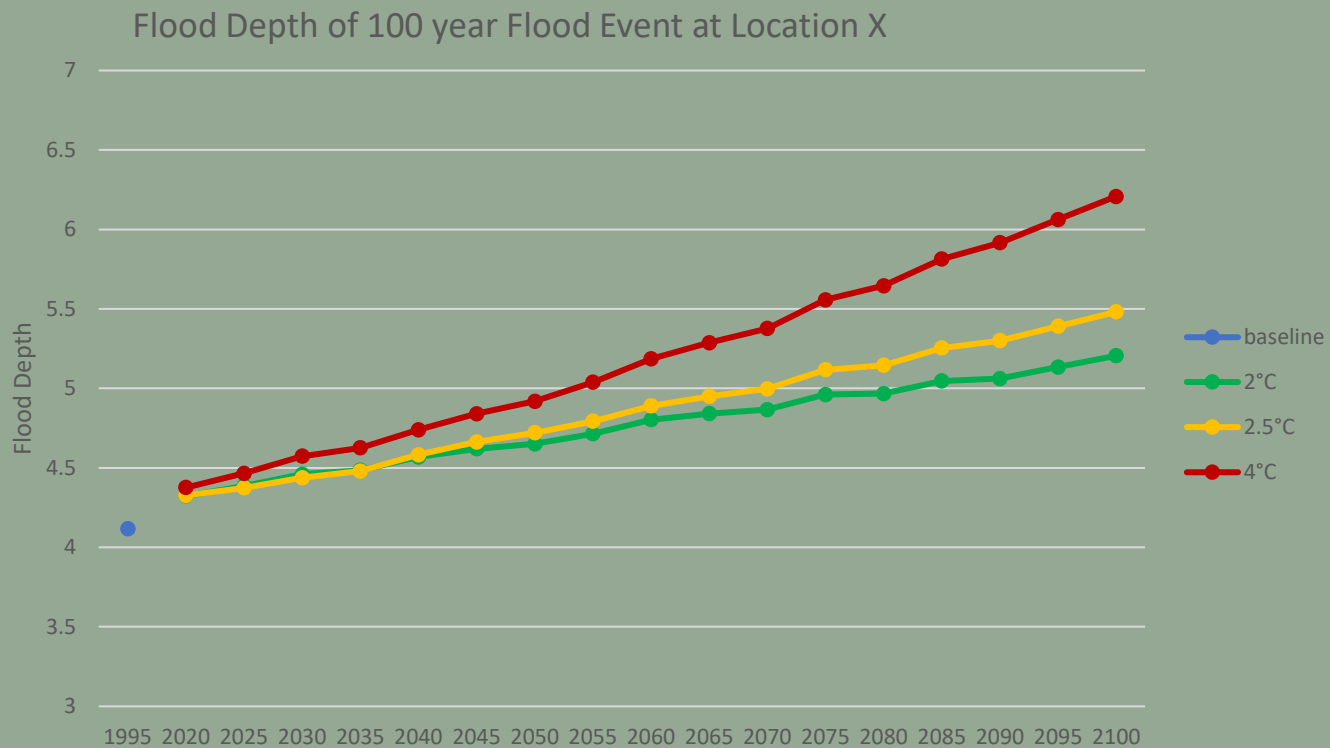


In a future climate, this event will return every 2.5 years

Powered by Sam Lüthi

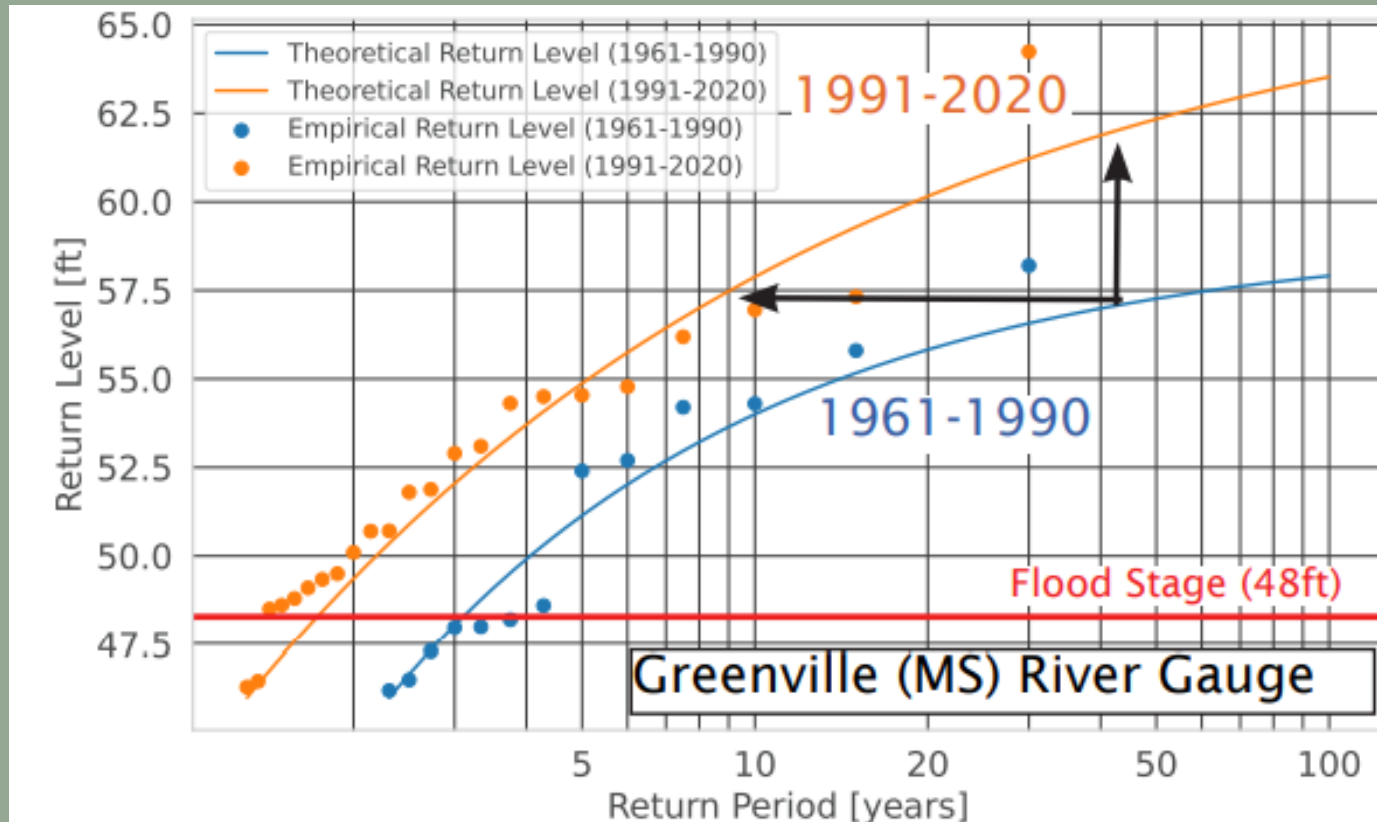
Calculation of impact

Quantitative Hazard Metrics



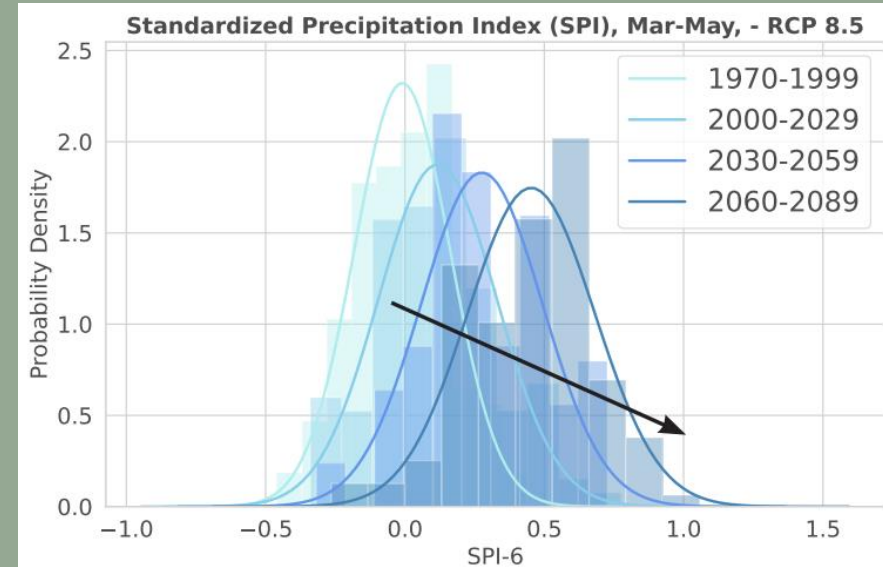
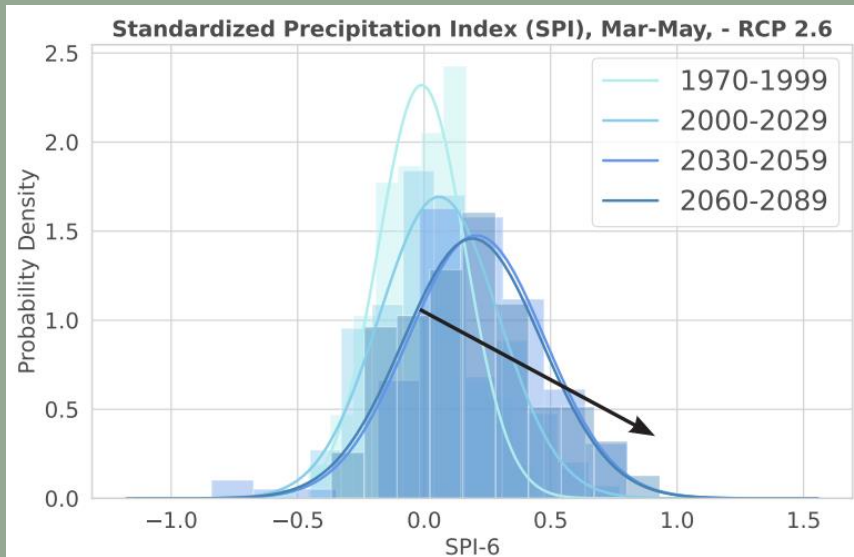
Mississippi River

Shift in Return Periods



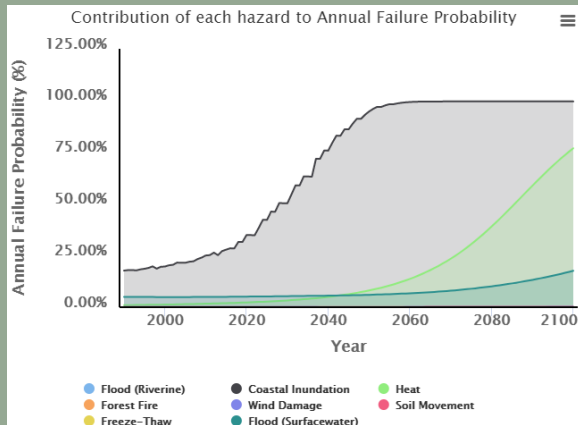
Mississippi River

Shift in Return Periods

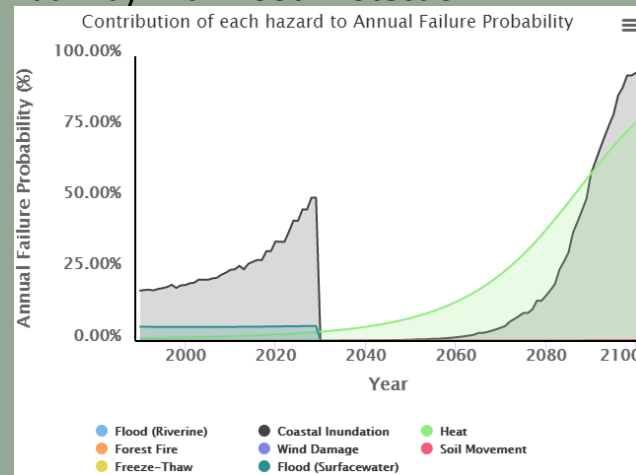


Adaptation Pathways Modeling

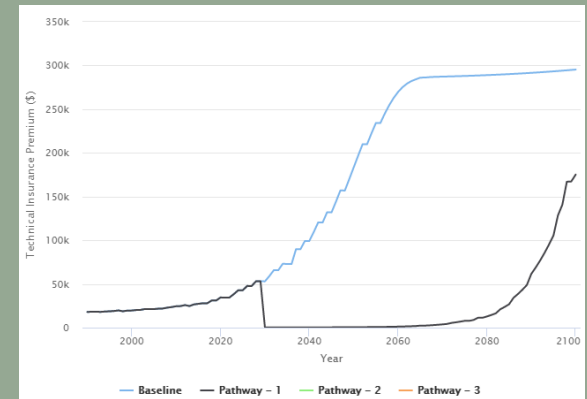
Baseline



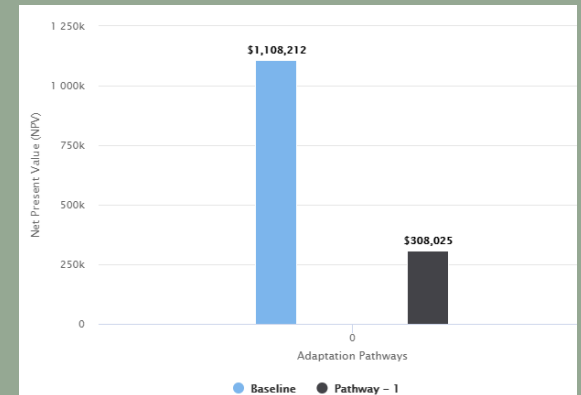
Pathway with Flood Protection



Technical Insurance Premium



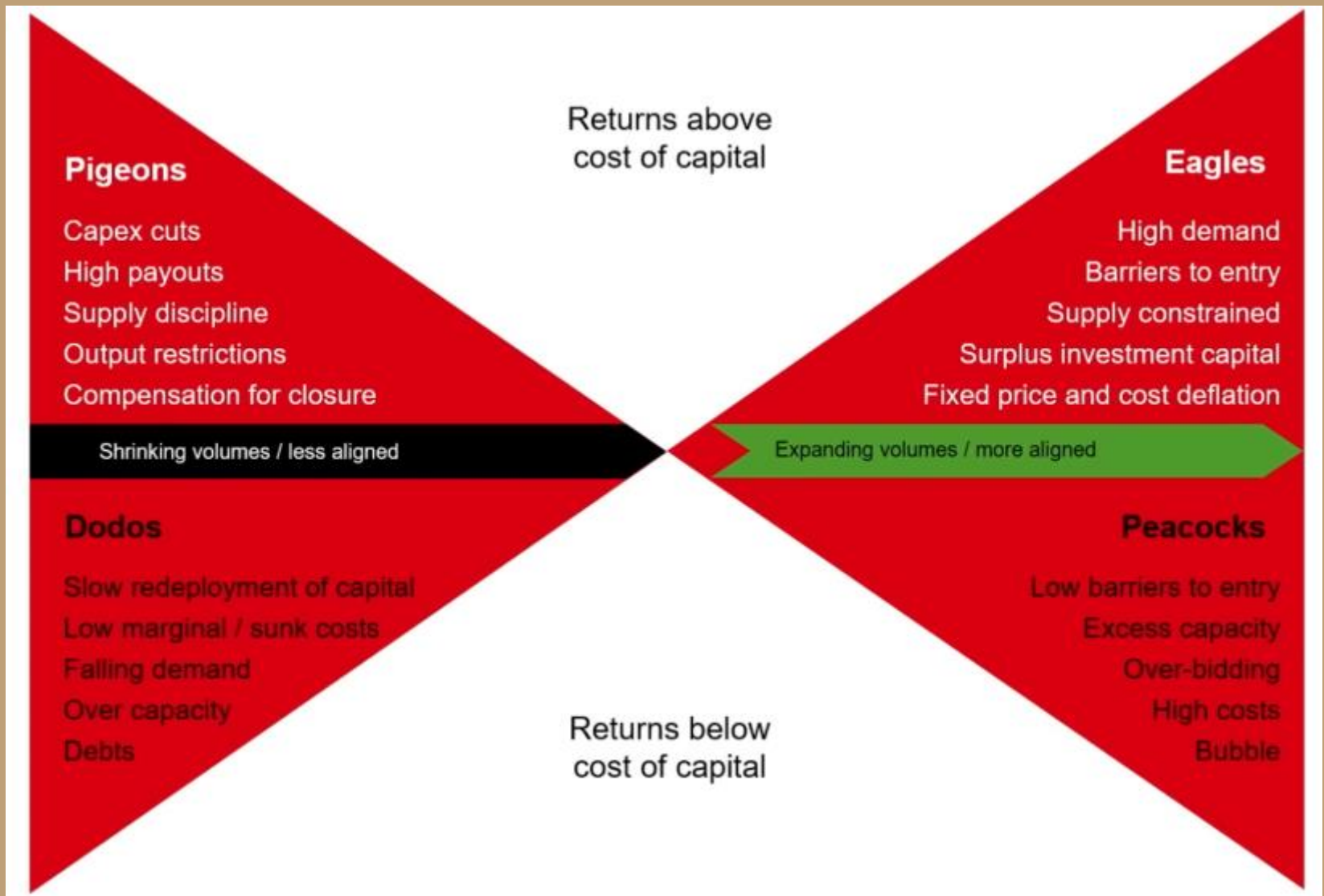
Cost Benefit of Expenditures



Clients Data & Insights

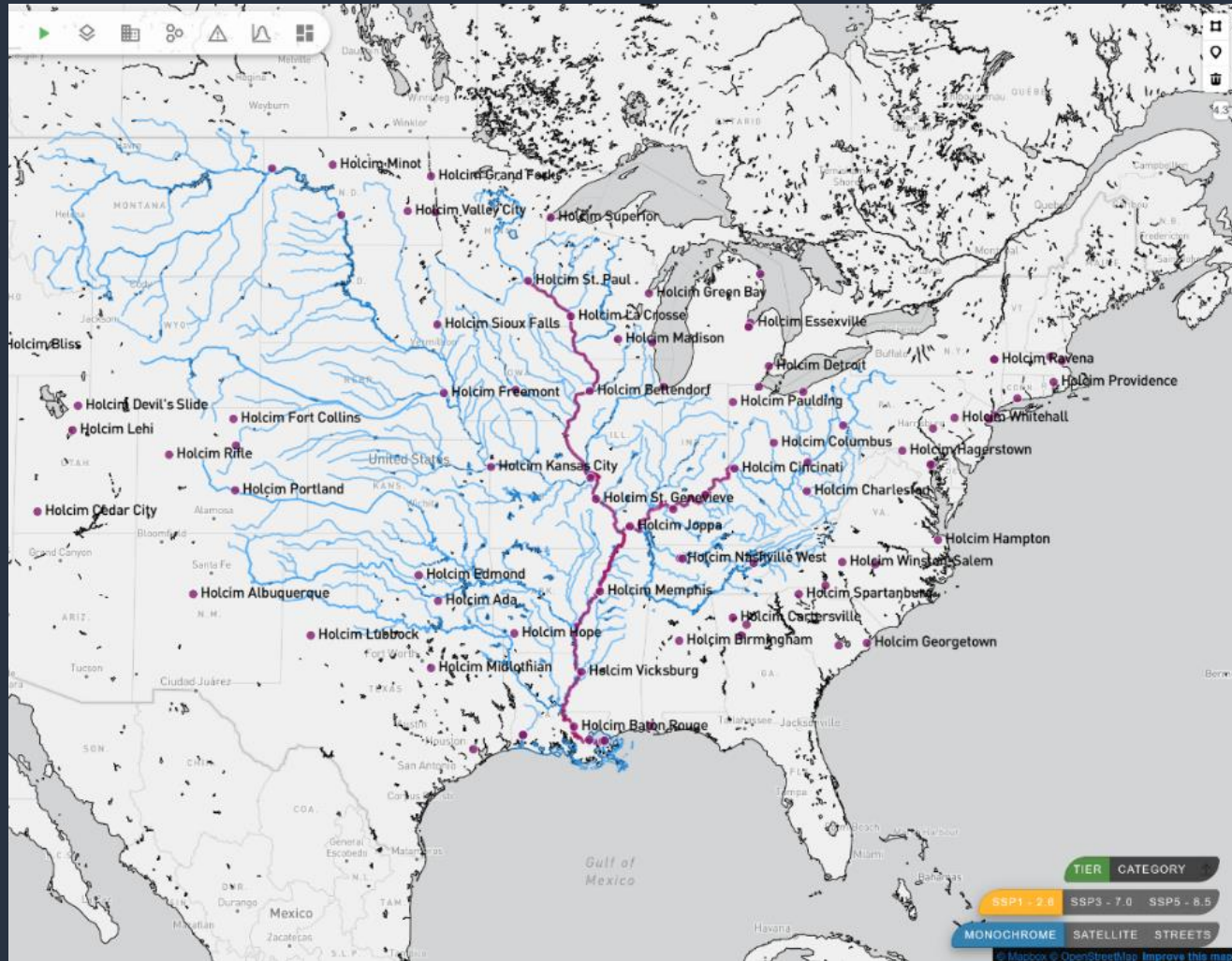
BUSINESS LINES	ANALYSIS PROVIDED	DATA NEEDED FROM CLIENTS
Corporations	Single Asset and Portfolio, Supply Chain	Lat/Lon, Archetype(Occupancy), Values
Real Estate	Single Asset and Portfolio	Lat/Lon, Archetype (Occupancy), Values
Private Equity	Single Company Analysis incl. Supply Chain Analysis, Portfolio Analysis	Name, Lat/Lon, Archetype (Occupancy), Values
Infrastructure	Large Asset or Linear Asset Asset	Spatial Extent, Archetype (Occupancy), Value

Clients Data & Insights



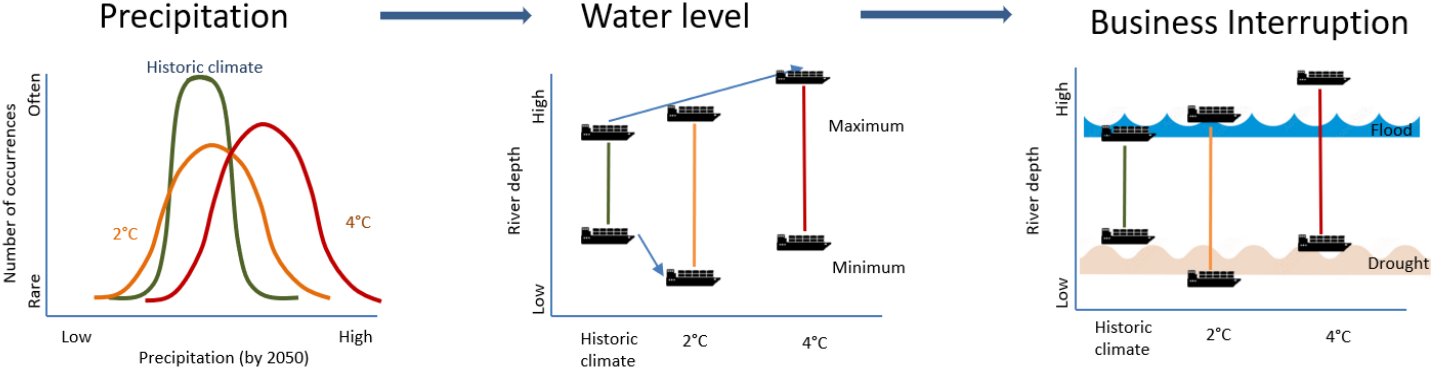
Mississippi River

Scope



Mississippi River

Business Interruption Scenario Assessment



Mississippi	2° C	4° C
Low Water Extremes	↗	↘
High Water Extremes	↗	↗