Monetizing Location Data for Business Growth
Thinking Outside the Box…

1. Look _____ of your industry

2. Identify _____ and _____ surplus

3. Combine & connect _____ with _____

→ Realize Business Growth

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Identify unsatisfied scarcity

Changing Risk Landscape
Climate change, geopolitical tensions, supply chain disruptions, lacking NatCat insurance capacity
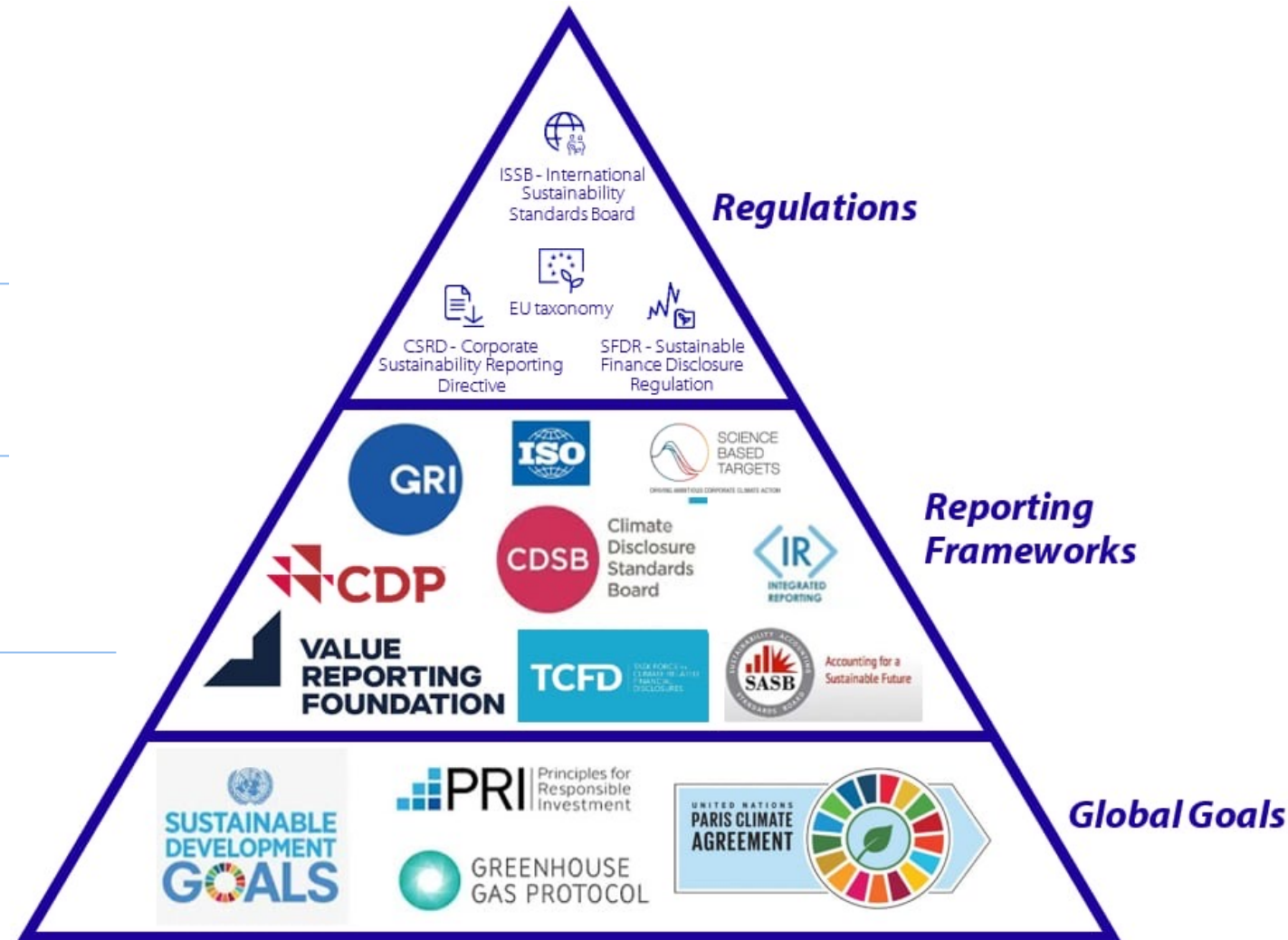
Risk needs quantification
Lacking quantitative and qualitative data foundation

Regulatory pressure
ever-increasing number of disclosure requirements…

Regulations
- ISSB - International Sustainability Standards Board
- EU taxonomy
- CSRD - Corporate Sustainability Reporting Directive
- SFDR - Sustainable Finance Disclosure Regulation

Reporting Frameworks
- GRI
- ISO
- SCIENCE BASED TARGETS
- CDP
- CDSB Climate Disclosure Standards Board
- IR INTEGRATED REPORTING
- VALUE REPORTING FOUNDATION
- TCFD
- SASB Accounting for a Sustainable Future

Global Goals
- SUSTAINABLE DEVELOPMENT GOALS
- PRI Principles for Responsible Investment
- GREENHOUSE GAS PROTOCOL
- UNITED NATIONS PARIS CLIMATE AGREEMENT

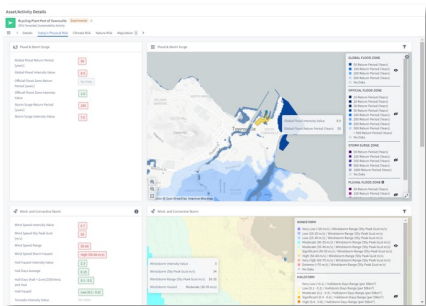# Identify unmonetized surplus

① Present NatCat Risk

NatCat Hazard Layers

Evaluate present day risk exposure based on Swiss Re's NatCat Models
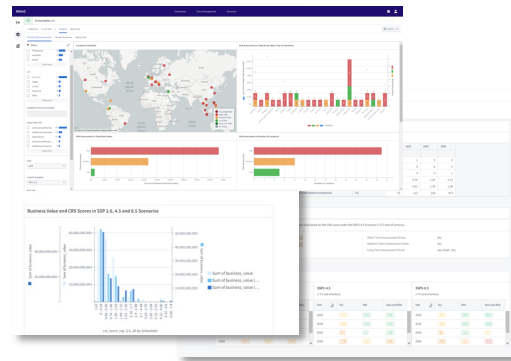
Understand today's risk profile

② Future Climate Risk

Climate Risk Assessments & Scores

Build resilience by considering future uncertainties and possibilities
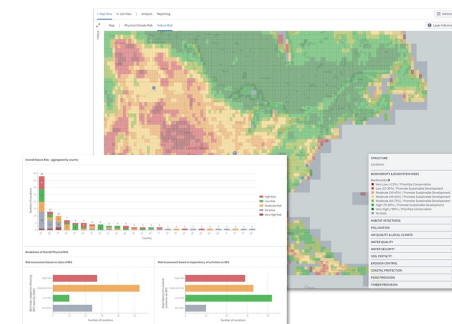
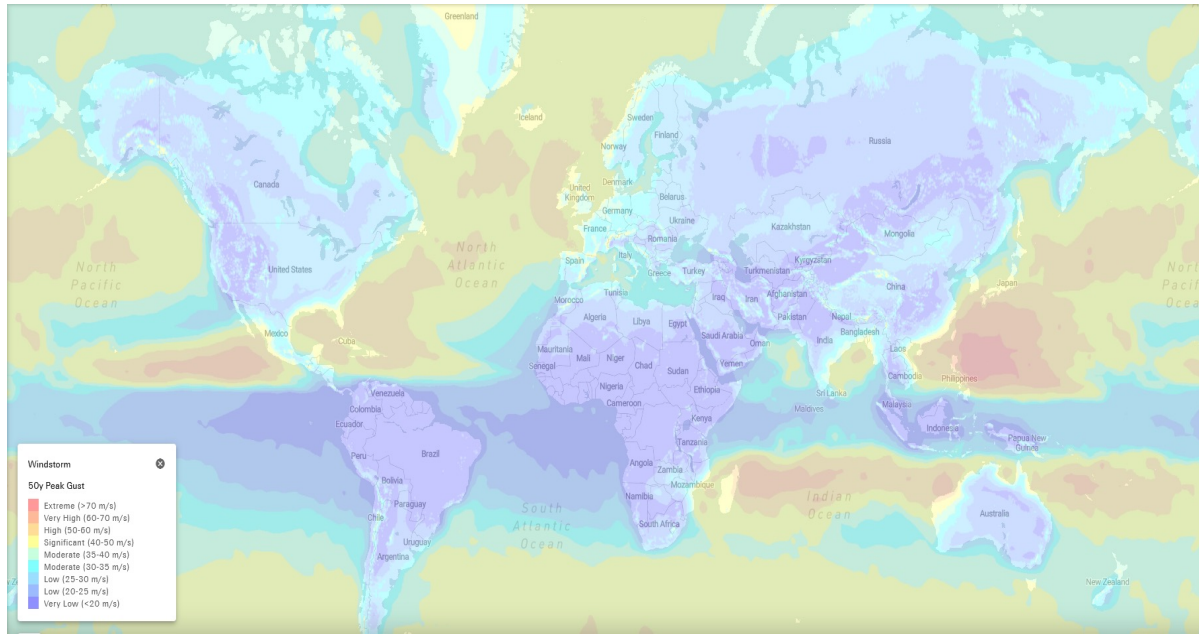#### Analyze forward-looking scenarios

③ Nature Risk

Biodiversity & Ecosystem Services

Understand the state of Biodiversity & Ecosystem Services (BES) at any location

Identify dependencies & harm

NatCat Hazards – Present NatCat Risks: Some examples

Wind Storm

(Includes Tropical Cyclone and Winter Storm).

3 seconds peak gust with a return period of 50 years based on Swiss Re's proprietary wind loss models.

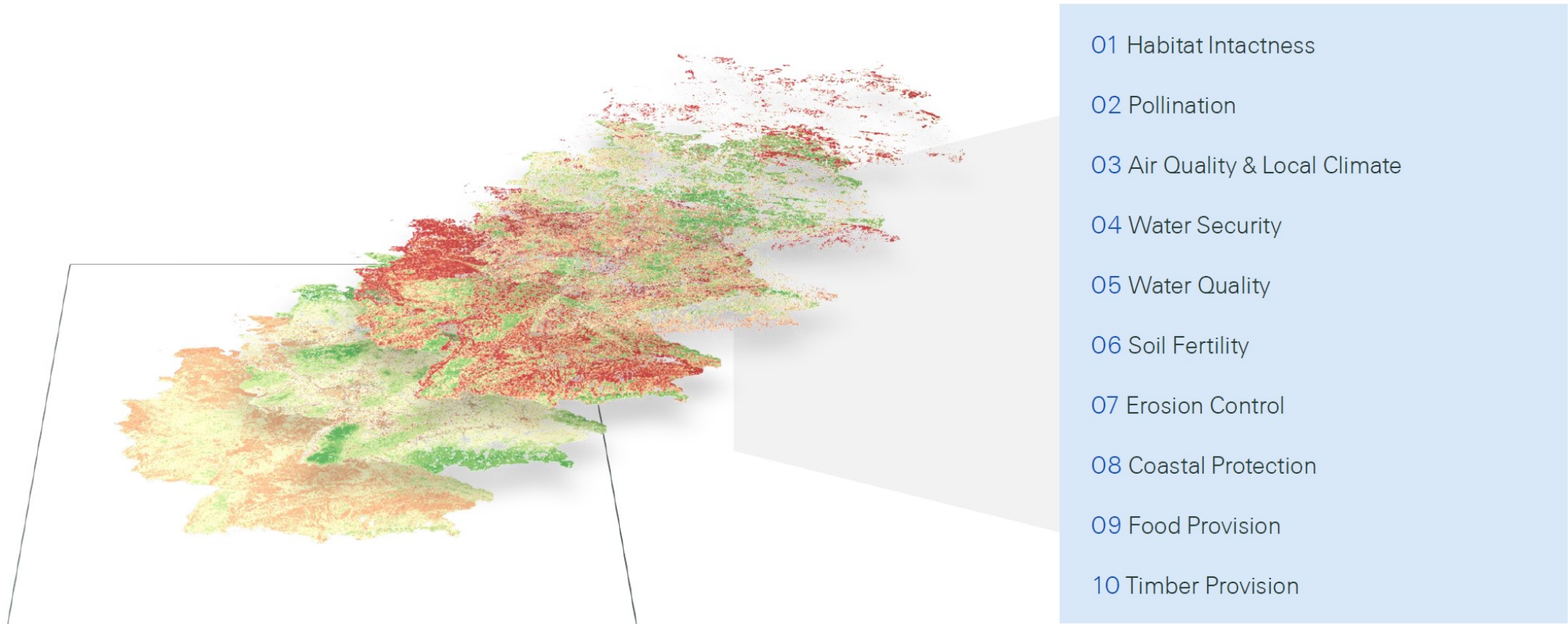Hazard severity: 50yr peak gust wind speed in m/s

Storm Surge

Storm surge zones (unprotected) based on Swiss Re's proprietary in-house modelling.

Hazard severity: described as return period of event (50 year, 100 year, 250 year, 500 year, 1000 year)
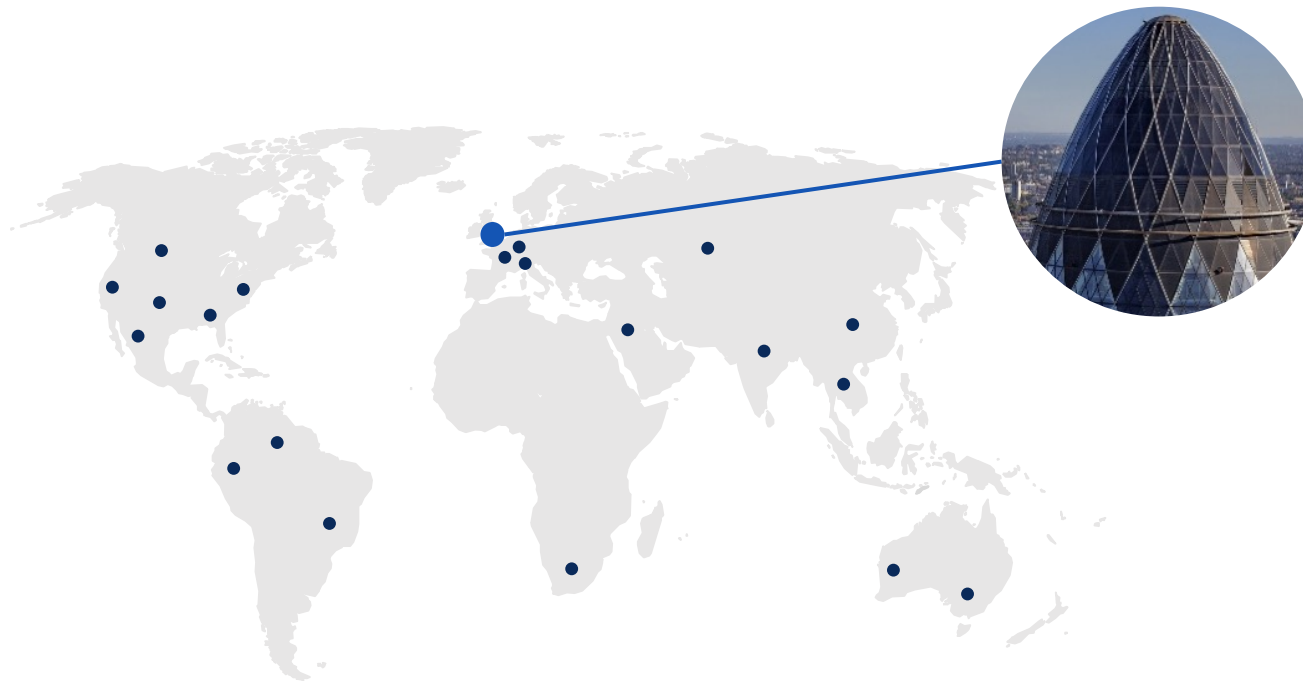
Greater Bay Area, China
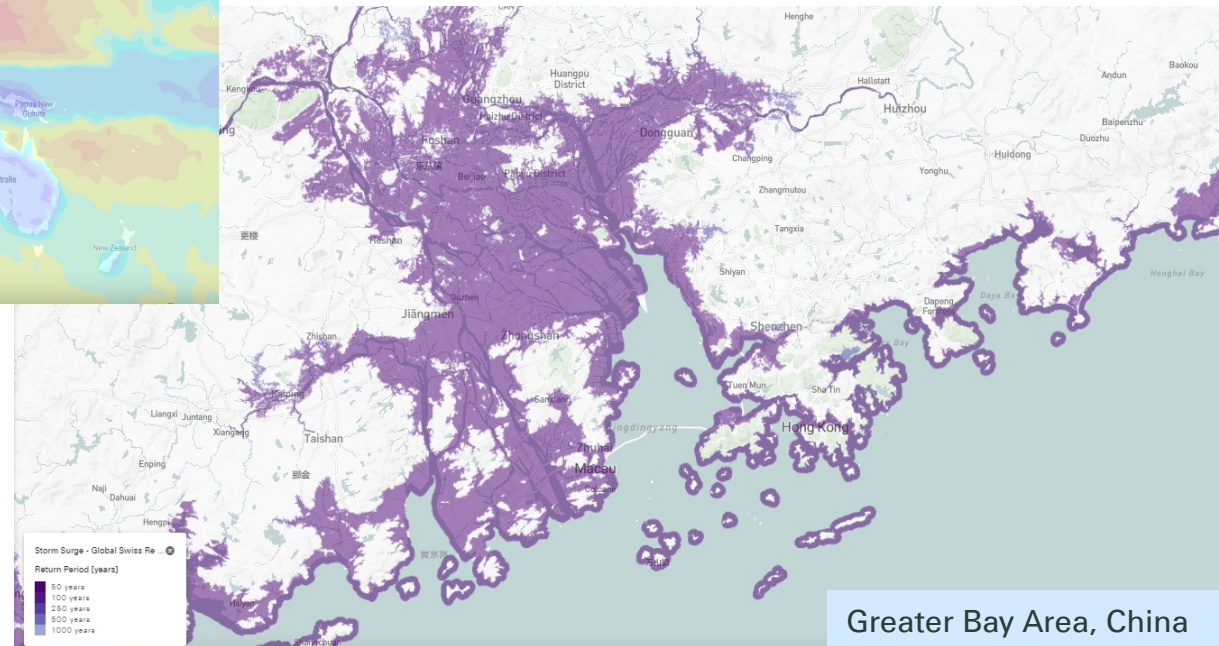
The BES index can be broken down to individual ecosystem service components that are relevant for economic activities

01 Habitat Intactness

02 Pollination

03 Air Quality & Local Climate

04 Water Security

05 Water Quality

06 Soil Fertility

07 Erosion Control

08 Coastal Protection

09 Food Provision

10 Timber Provision

Source: Swiss Re Institute, Swiss Re analysis

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Combine location and context data in a unique way to add value

Connect and power your risk universe by creating a digital twin of assets and economic activities

Nature Risk Exposure
Biodiversity & Ecosystem Services (BES)

- ✓ Location-based exposure analysis of a corporate's economic dependency on nature and impact on nature; available to roughly 600 sectors on a 4-digit NACE or GICS (systems for classification of commercial activities)

- ✓ A holistic, comparative view of the state of BES globally

- ✓ Data from ten different ecosystem services: water security, water quality, timber provision, food provision, habitat intactness, pollination, soil fertility, regulation of air quality & local climate, erosion control and coastal protection

- ✓ A resolution of 1 square kilometer, covering all terrestrial ecosystems in a global comparison

Output Example

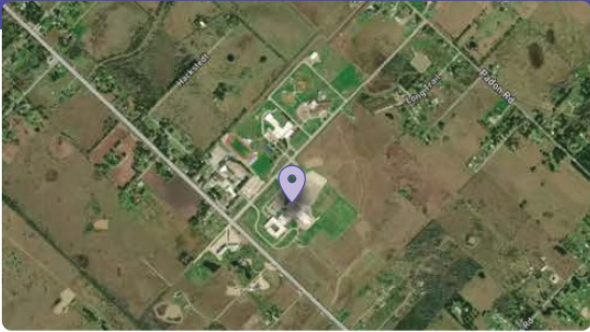Water Availability across the EMEA region
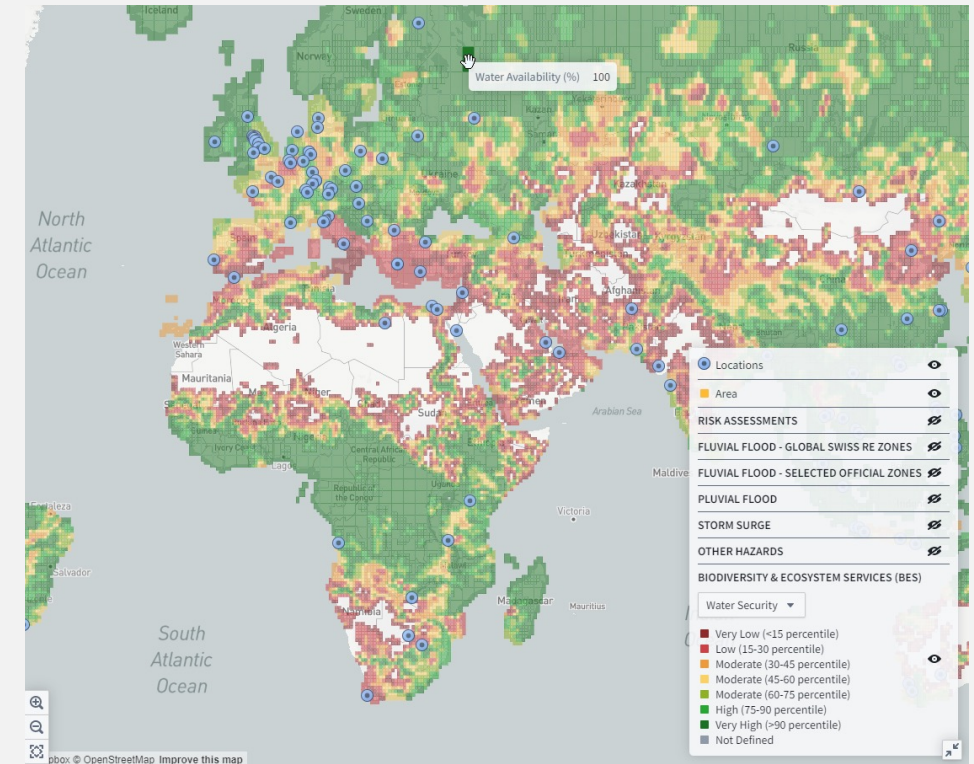
Please note data on screenshots is purely illustrative and specifically created for demo purposes.

Example Climate, NatCat and Nature Risk Location Report

RDS
Automated Report

Risk Analysis for Thurman Solar Power Plant

Carswell Energy Renewables

16 January, 2023

Asset location

Location name	Thurman Solar Power Plant
Latitude	79.368103
Longitude	−55.744753
Address	321 Allen Road
	78645 Point Venture
	Texas
	United States
Structure ID	C_SPP_2
Business ID	676228

Asset values

Combined Total Asset Value (TAV)	$56.6M
Material damage total	$37.7M
Building value	$32.5M
Content value	$5.2M
Reference year	2023

The data used for this report has been last updated on: 9 Jan 2023, 5:33 PM.

Executive Summary

The purpose of this report is to provide an overview of the physical impacts of climate change on the selected asset. The current risk situation is assessed for a variety of perils. The future risk is identified using Climate Risk Scores that indicate the change in the frequency and intensity of the peril. Future Hazard Risk categories combine the current risk assessment with the Climate Risk Scores to a holistic risk category for future decades. Three climate change scenarios are used, namely SSP1-2.6, SSP2-4.5, and SSP5-8.5.

Risk overview (SSP2-4.5)

Peril	Current Risk	2030	2050	2080
Fluvial flood	Low	→	↗	↑
Pluvial flood	Low	→	↗	↑
Extreme precipitation	Very low	→	↗	↑
Storm surge	Moderate	→	→	↗
Earthquake	High	-	-	-
Windstorm	Moderate	→	→	↗
Tornado	Low	-	-	-
Hailstorm	Low	-	-	-
Lightning	Low	-	-	-
Wildfire	Very low	→	→	↗
Volcanic ashfall	No data	-	-	-
Landslide	No data	-	-	-
Drought	Very High	→	→	↗
Heat wave	High	→	→	↗

Risk levels: Very low | Low | Moderate | High | Very high

Future risk development: → Stable development | ↗ Moderate increase | ↑ Significant increase

Classification of climate-related hazards (SSP2-4.5)

Category	Mode	Peril	Swiss Re Indicator	Present	2030	2050	2080
Temperature	Chronic	Changing air temperature	Mean annual temperature	20.84°C	21.70°C	22.20°C	20.70°C
		Heat stress	Present exposure combined with Heat Stress Score	None	None	None	None
		Temperature variability	Extreme daily mean temperature change	28.79°C	0.88°C	1.50°C	1.82°C
	Acute	Heat wave	Present exposure combined with Heat Wave Score	Very high	Very high	Very high	Very high
		Cold wave/frost	Present exposure combined with Cold Stress Score	None	None	None	None
Wind	Chronic	Changing wind patterns	Daily extreme wind speed	4.89m/s	−0.70%	−0.25%	0.78%
	Acute	Cyclone, hurricane, typhoon	Wind Speed Hazard Rating	Very low	Very low	Very low	Very low
		Tornado	Tornado Hazard Rating	Moderate	No data	No data	No data
Water	Chronic	Changing precipitation patterns	Present exposure combined with Summer Precipitation (Apr. - Oct.) Score	High	High	High	High
		Changing precipitation patterns	Present exposure combined with Inter Precipitation (Nov. - Mar.) Score	High	High	High	High
		Precipitation or hydrological variability	Mean change in wettest month	107mm	0.35%	5.38%	7.41%
		Sea level rise (coastal)	Present exposure combined with Storm Surge Score	None	None	None	None
		Water stress	(Fresh) Water availability	Very high	No data	No data	No data
	Acute	Drought	Present exposure combined with Drought Score	Hight	Hight	Hight	Very high
		Heavy precipitation	Present exposure combined with Extreme Precipitation Score	High	High	High	High
		Fluvial flood	Present exposure combined with Fluvial Flood Score	None	None	None	None

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