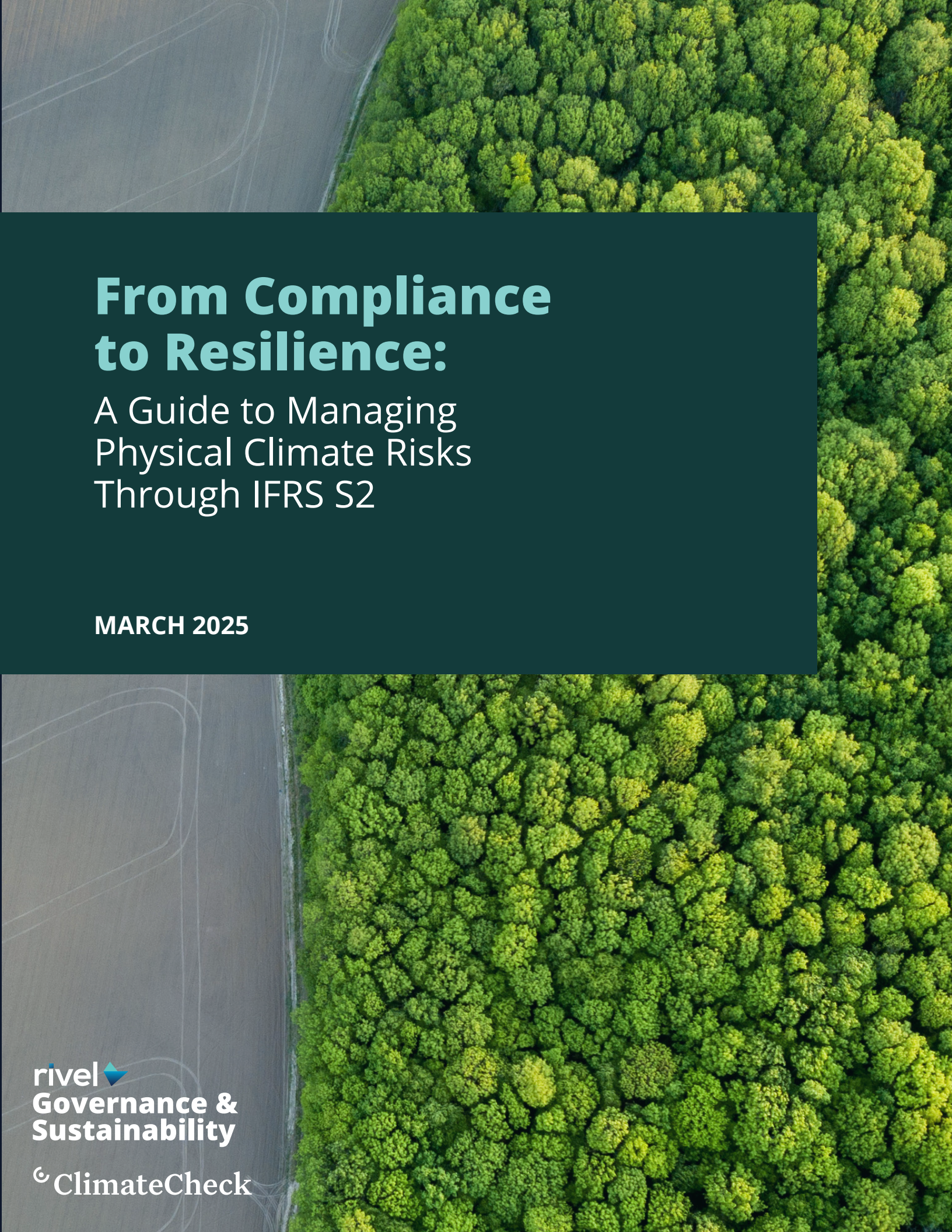

From Compliance to Resilience:

A Guide to Managing Physical Climate Risks Through IFRS S2

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ClimateCheck

Corporates face a wide range of climate-related questions that are compounded by the challenge of navigating evolving regulations, often across multiple jurisdictions. The International Financial Reporting Standards - Climate-related Disclosures, commonly known as IFRS S2, offers a practical integrated framework to identify, manage and communicate climate-related risks and opportunities to investors and other stakeholders.

A key element of IFRS S2 involves assessing the current and anticipated impacts of physical climate risks—particularly critical for companies with extensive property portfolios or global operations.

Communicating the company's resilience to climate risk has a real impact on how investors make investment decisions. In a recent Rivel investment community research report, 57% of surveyed investors are factoring climate risk into valuation models, and over half of these respondents (54%) leverage climate-related data to adjust cash flow or the growth rate of cash flows (43% of respondents).[1]

To answer the most common climate-related questions using a single framework, issuers can adopt the IFRS S2 standards. IFRS S2 is designed to deliver decision-useful information about a company's climate-related risks and opportunities. The standard builds on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), focusing on disclosures in four key areas: governance, strategy, risk management, and metrics and targets.

[1]Bridging the Gap: ESG Perspectives from Issuers and Investors, February 2023

In this document, we will focus on physical climate risk assessment and using its outputs strategically. Companies are encouraged to disclose information about the following climate-related risks and opportunities that could reasonably be expected to affect their cash flow, access to finance, or cost of capital over the short, medium or long term:

Climate-related physical risks:
Acute risks such as fires, floods and high wind events, and chronic risks such as extreme heat, precipitation and drought.

Climate-related transition risks:
Risks associated with the transition to a lower-carbon economy, such as policy, legal, technology and market changes.

Climate-related opportunities:
Potential positive financial impacts related to climate change mitigation and adaptation efforts.

Physical Risks In Focus

One of the most crucial aspects of climate change reporting is accounting for important physical risks and assessing their impact on the company and its value chain. It's no surprise that physical risks are among the most frequently cited risk factors in annual financial filings, given their potential to cause immediate and significant financial impacts. These risks may include shifts in water availability, sourcing and quality; disruptions to operations, supply chains and transportation caused by extreme temperature changes; property and asset damage; and threats to employee safety.

IFRS S2 defines two categories of physical risks: acute and chronic.

Having a more complete picture of the company's physical climate risks enables management to better mitigate them, delineate how their impacts can affect asset valuation and profitability, and make informed decisions about climate resilience and adaptation plans.

ACUTE PHYSICAL RISKS

Event-driven risks caused by extreme weather, which may increase in frequency and severity.

- Extreme heat
- Wildfires
- High Wind
- Floods (inland flooding and coastal flooding)

CHRONIC PHYSICAL RISKS

Risks stemming from long-term shifts in climatic patterns.

- Changes in temperature and precipitation
- Droughts and reduced water availability
- Biodiversity loss

Initial Steps for Assessing Physical Climate Risks

Physical climate risks will impact a company directly (own operations) and indirectly (supply chain, market forces, customers). In assessing risks, it's practical to start with direct physical climate risks. Companies should form cross-functional taskforces to discuss the array of physical risks and ways in which they believe it's applicable to operations and the business model. In this stage of more qualitative analysis, the nature and significance of the site matters to contextualize further evaluation and materiality for any deeper analysis.

For a more detailed understanding of the physical risks, corporates can assess common risk types using several methods:

1. **Historical impact analysis:**
   Identifying potential hazards starts with examining past climate-related events and their financial impacts on the company. This analysis leverages existing enterprise risk systems, historical data and insights from subject matters experts across the organization to assess both current and anticipated effects on operations.

2. **Scenario analysis:**
   Understanding risk exposure requires evaluating the vulnerability of specific operational locations to climate hazards. This includes acute risks such as storms, floods, sea level rise, droughts and heatwaves, as well as chronic risks like shifting precipitation patterns and rising temperatures. To prepare for a range of physical risks, companies can model outcomes across plausible future scenarios using different climate inputs. This strategic planning approach helps assess potential impacts and develop tailored responses. More details on this process are provided in the next section.

3. **Asset impairment testing:**
   Assessing asset sensitivities involves evaluating how physical climate risks impact the future economic benefits and cash flows from property, plant and equipment. This includes analyzing effects on maintenance costs and asset downtime, as well as useful life assumptions. If assets are deemed impaired, their reduced value results in a recordable loss on the income statement, directly affecting net income in that period. This process builds on insights from location-based risk assessments.

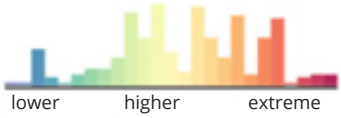
Climate Risks Scenario Analysis

IFRS encourages the use of scenario analysis in order to enhance financial reporting and inform strategic planning. Scenario analysis involves the evaluation of identified climate-related risks across hypothetical, plausible futures. Scenarios are built on a number of considerations including environmental metrics, policies, technological advances, social changes, economic trends, etc. While a scenario analysis can feel like a daunting task—with many factors to choose from and scope and boundaries to set, companies should start with practical, qualitative descriptions as a foundation. These efforts provide useful insights before advancing to more quantitative metrics, which can be more time and resource intensive for companies to assess.

Quantitative location-based analysis could encompass evaluating a set of physical climate risks against historical trends and current events. Through scenario analysis, evaluation could deepen by exploring physical risk exposure for sites in various potential futures. An example is shown below for heat, flood, and precipitation and how current properties are positioned in these low, moderate, and extreme scenarios.

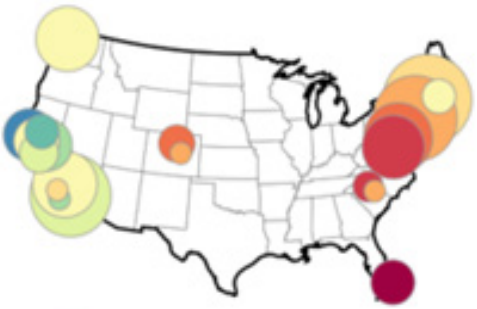
Sample Portfolio

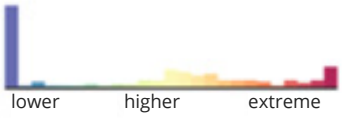
Climate Change Risk Analysis



HEAT

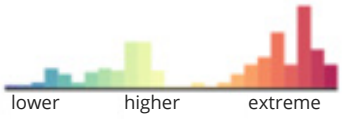
RISK	PROPERTIES	
Lower	36	13%
Higher	149	56%
Extreme	82	31%





FLOOD

RISK	PROPERTIES	
Lower	109	41%
Higher	90	34%
Extreme	68	25%



PRECIPITATION

RISK	PROPERTIES	
Lower	42	16%
Higher	74	28%
Extreme	151	57%

Source: Excerpt of ClimateCheck property-level data for a US consumer goods company, 2024

The goal of scenario analysis isn't to predict the future perfectly, but to prepare for a range of potential outcomes. As a critical component of IFRS S2, scenario analysis supports the following:

Risk identification and management:
Helps uncover climate-related risks and opportunities that may not be immediately apparent. By identifying uncertainties, companies can develop strategies to address them effectively.

Opportunity recognition:
Enables businesses to anticipate challenges, capitalize on emerging trends, and make informed decisions about strategic investments and capital allocation.

Strategic planning:
Guides long-term decision-making by considering various possible climate futures. This helps businesses identify tactical options, enhance resilience, and improve adaptability through sensitivity analyses and scenario-based insights.

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About Rivel

Since 1991, Rivel has been advising management teams and boards on how aligning attitudes and behaviors of key stakeholders can make the difference between success and failure in their business. Rivel works with **two-thirds of the S&P 100** and **over half of the S&P 500**, and **companies across six continents**.

Rivel Governance and Sustainability assists companies in navigating and complying with various regulations and reporting frameworks, such as IFRS/SASB, TCFD, TNFD, UN SDGs, GRI, and CDP. They also help businesses stay updated with evolving global regulations, including the EU's CSRD. We help companies understand and communicate their corporate governance and sustainability value proposition, embed structure, develop strategies, provide directional guidance and create disclosures for internal and external audiences.

About ClimateCheck

ClimateCheck® was founded in 2019 to empower companies, real estate owners and lenders to identify and quantify their climate related risks. Our team of experts uses data from government, academic and other public and institutional sources to rank drought, heat, cold, fire, flood, wind and precipitation risk for individual property locations. Our clients include leading financial services companies, public and private companies and real estate investors and lenders. We also make a subset of our data publicly available for use by consumers, journalists, academics and others.

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