



Governance Challenges 2022

# CLIMATE GOVERNANCE

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For more information on these firms, see [About the Contributors](#) on page 27.

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# The State of Climate in US Boardrooms

By Ghita Alderman

Associate Director, ESG Content, NACD

The clock is ticking in the race against climate change, and many credible reports are warning of a “Code Red” for the planet, for societies, and for companies. Because climate is an ecosystem-wide issue, it requires an ecosystem approach, which will require every board to develop climate governance agendas focusing on what is at stake for their individual businesses.

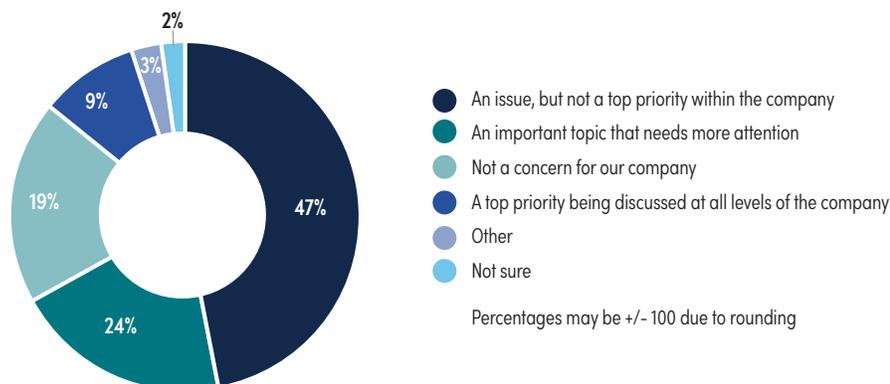
Where do directors stand on climate issues today, and what is the current state of climate governance in boardrooms? The *2022 Board Practices and Oversight Survey* (to be published in June 2022) sheds light on the perspectives of directors as the climate change discussion and requirements are quickly evolving. The following is a snapshot of what surveyed NACD members from a variety of companies of various sizes and from different sectors had to say about their approach to their climate oversight responsibilities and practices.

## CLIMATE IS NOT YET CONSIDERED A “TOP PRIORITY”

Although 47 percent of respondents see climate change as an issue, they do not consider it a “top priority” within their company. In fact, only 9 percent see climate as a top priority discussed at all levels of the company, while just under 19 percent state it is “not a concern” for their company. That said, the discussions around climate issues are gradually gaining importance on board agendas. As director awareness increases, climate change is becoming more of a key consideration in strategy, risk management, executive pay, accounting, and reporting of performance: 47 percent of respondents indicated that frequency of climate change discussions increased on the board agenda in the last two years.

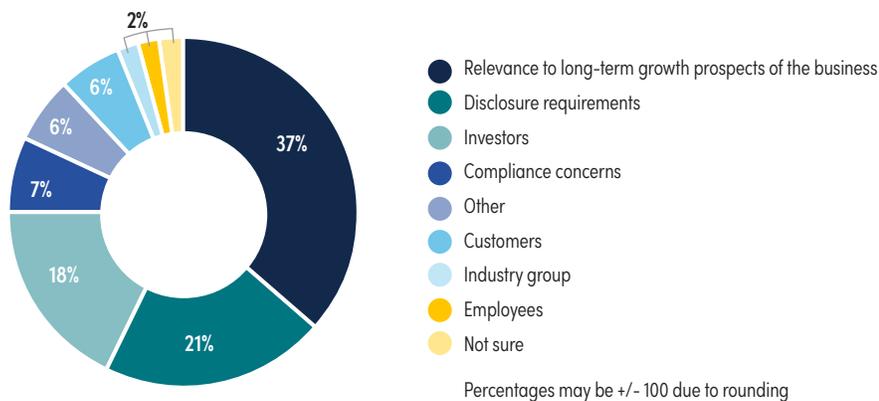
### EXHIBIT 1

#### How would you describe your board’s attitude in regard to climate change?



There are multiple forces that can contribute in elevating climate to the top of board consideration: NACD’s survey revealed that the main factor that led to more discussions about climate change on the board’s agenda is its relevance to long-term growth prospects of the business (37%), while 21 percent stated that its disclosure requirements were the primary driver. The majority of boards now consider climate not only from the perspective of compliance but also focus on its potential as a driver of opportunities for long-term value creation. In fact, this transition will likely be a significant growth driver for companies that are able and willing to adapt to this new reality.

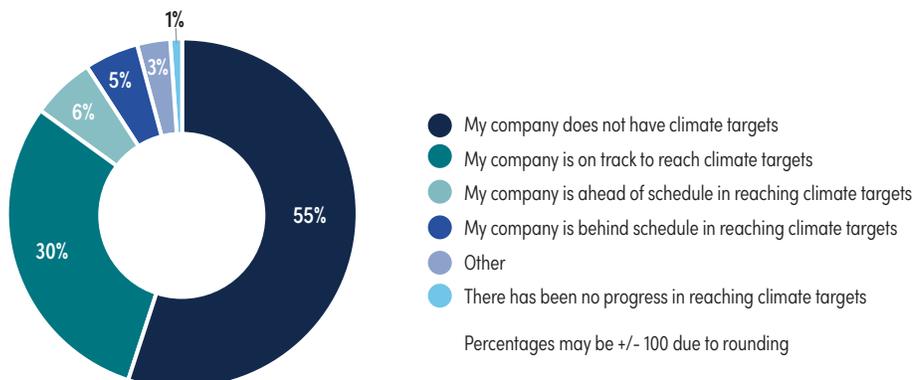
**EXHIBIT 2**  
**What inspired your board to add more discussions about climate change to its agenda?**



### NASCENT AND FRAGMENTED STANDARDS FOR CLIMATE REPORTING

In the midst of our survey, the US Securities and Exchange Commission (SEC) released its much-anticipated proposed rule on climate-related disclosure and accounting that would require registered companies to report aspects of their climate risk. Whether or not climate disclosures are ultimately mandated by the SEC, they are increasingly expected by stakeholders of both publicly and privately held companies. Our survey related that 55 percent of companies do not have any climate targets, and 42 percent of companies do not report on climate targets.

**EXHIBIT 3**  
**How would you describe your company’s progress in reaching its climate targets?**

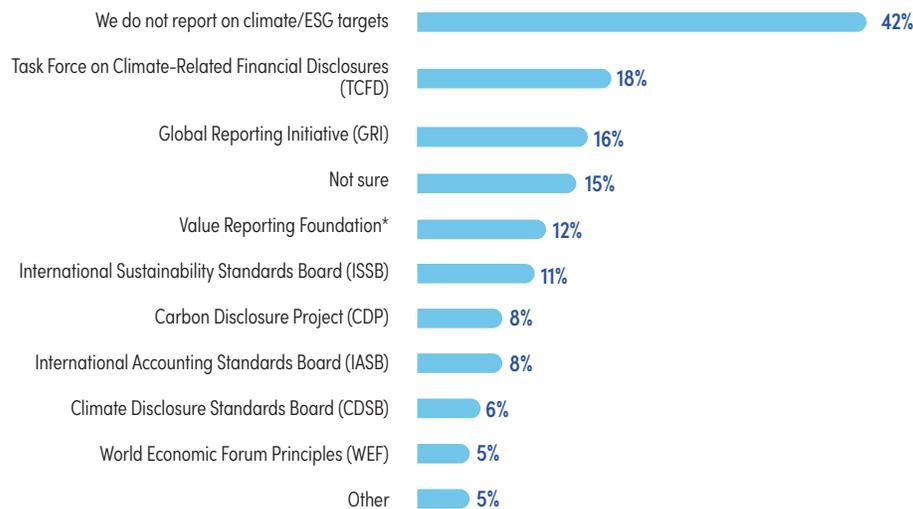


Multiple stakeholders are increasingly holding board directors accountable for oversight of their company’s climate strategies. Not reporting can lead to assumptions, including that the company has a climate problem, is failing to anticipate issues, or is lagging behind its peers. These perceptions can have considerable negative consequences on brand value, recruiting, and long-term value creation.

While the lack of uniform disclosure standards remains a principal obstacle to reporting, 18 percent of respondents reported that they have adopted the reporting framework from the [Task Force on Climate-related Financial Disclosures](#) (TCFD) as the metric they use. With increasing calls for coherence and harmonization, it should be viewed as a positive development that the SEC climate disclosure standards are being strongly informed and influenced by TCFD.

**EXHIBIT 4**

**Which climate principles and/or frameworks did your company adopt in the past two years?**



\*Merger of the International Integrated Reporting Council (IIRC) and the Sustainability Accounting Standards Board (SASB)

These survey responses lead to additional questions: How and when should boards raise climate as a priority? How do companies shift from rhetoric to reality? How can companies ensure that their current efforts won’t be frustrated by future SEC action? The following contributions by NACD’s strategic content partners are an attempt to provide practical tools and thought leadership to help board directors turn climate change aspirations into action.

# Board Oversight of Climate Scenario Analysis – Eight Factors for Consideration

Marsh McLennan

## A RISING FOCUS ON CLIMATE CHANGE AND PERFORMANCE

Organizations are facing increasing pressure to assess both their impact on the climate, and the impact of the changing climate on their business over the forthcoming decades. For example, in the United States, the US Securities and Exchange Commission (SEC) recently proposed rules on disclosures related to climate change governance, strategy, and risk management. If adopted, the rules would bring the United States into alignment with current or proposed climate disclosure requirements in Canada, the United Kingdom, and the European Union. Companies are also facing a rising focus on climate and sustainability performance by their lenders, investors, and insurance providers, who are analyzing client portfolios against their own carbon reduction targets (aligned to industry alliance initiatives) and climate reporting requirements.

To meet rising expectations, companies will need to assess the performance of their organization under future climate scenarios and establish processes for identifying, assessing, and managing climate-related risks and opportunities. This will include running climate scenario analysis along with establishing appropriate governance to provide effective oversight of the process. NACD survey data suggest that only 15 percent of boards have recently engaged in

### Climate Scenario Analysis

Scenario analysis is a process of examining and evaluating possible events or scenarios that could take place in the future and predicting the various feasible results or possible outcomes. Climate scenario analysis helps an organization to understand and forecast the key drivers of financial impacts and primary exposures—and opportunities—posed by climate change over time. It requires organizations to consider: (a) the physical impacts of chronic and acute climate perils including flooding and tropical cyclones as well as slower onset risks such as sea level rise and heat stress; and (b) the “transition” impacts as their organization or sector and the economy at large evolve to a low-carbon economy, such as shifting customer, market, technology, and regulatory environments. The models used in the analysis typically incorporate information on future warming levels, multiple time lines for decarbonization efforts, and short-, medium-, and long-term impacts capturing multiple discrete future scenarios presented by many binary risks such as sudden policy change.<sup>1</sup>

<sup>1</sup> See also, “A Framework to Assess and Disclose the Impact of Climate Change on Financial Performance,” by Marsh McLennan Companies, published in *Governance Challenges 2017: Board Oversight of ESG* (Washington, DC: NACD, 2017) pp. 11–15. Climate scenario analysis can be contrasted to stress testing or natural catastrophe modeling. “Stress testing” is typically conducted by financial institutions and focuses predominately on capital adequacy and liquidity. “Natural Catastrophe modeling” is widely undertaken by insurers to price the risk of losses arising from a subset of climate perils (including flooding, hurricane, and wildfire) over a short-term horizon of 1–3 years only.

oversight on the analysis of climate change.<sup>2</sup> As climate change oversight is a relatively new discipline, organizations face important choices to ensure that their approach is fit for purpose, produces actionable information for business decision making, and lays the foundations for future activities and goals. Rising public scrutiny, and the potential for reputational damage or even litigation around this process, add to the pressure to thoughtfully consider the organization's approach.

Oversight of climate scenario analysis can be viewed as an extension of prudent risk management and board oversight into a new field of expertise. There are many similarities with effective governance and oversight practices for other risk and opportunity analysis conducted by the organization. However, there are some specific issues that should be considered when assessing the adequacy of management's approach to the process. Eight interrelated elements are listed below.

**1. Determine goals and ambition of process and align with chosen reporting frameworks:**

The board and management should consider the purpose, goals, and requirements around the organization's climate scenario analysis and a road map for year 1, year 2, and so on. Such decisions drive critical choices around the scope of the modeling process and the climate model's core capabilities and approach. This can be partially determined by the organization's sector, regulatory requirements (in the United States and other relevant countries), stakeholders, and the organization's climate performance goals and targets.

Along with this, the organization should consider which reporting frameworks are being used to guide the process, such as the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) or the Science Based Target Initiative (SBTi) with a view as to how these complement each other and prepare the organization for potential future requirements.<sup>3</sup> The Task Force on Nature-related Financial Disclosures (TNFD) is one such example.<sup>4</sup>

**2. Define responsibilities within the board and senior management:** The board should establish and define the role of the full board and its committees for oversight of the climate risk and opportunity assessment, including the scenario analysis process. There needs to be careful consideration of the climate knowledge base and the roles of the audit committee and other board committees, such as an ESG, sustainability, or risk committee.

Roles should also be defined at the management level with clarity on which function will drive and own the process and which areas of the business will be involved in the design, execution, and debrief of the analysis. For example, the board should ensure that the organization has considered the role of the finance function, the ERM committee or risk management group, and sustainability teams, procurement and supply chain functions, human resources, and public

There needs to be careful consideration of the climate knowledge base and the roles of the audit committee and other board committees, such as an ESG, sustainability, or risk committee.

<sup>2</sup> NACD, *2021 Board Practices and Oversight Survey* (Arlington, VA: NACD, 2021), p. 12.

<sup>3</sup> See the websites of the [Task Force on Climate-related Financial Disclosures](#) and [CDP Worldwide](#); the ["ESG Disclosure Guidance Database"](#); and [The Climate Risk Tool Landscape, 2022 Supplement](#), United Nations Environment Programme Finance Initiative, for more information on reporting frameworks.

affairs officers. In some organizations, the responsibility for assessing climate risks is shifting from corporate social responsibility (CSR) or sustainability functions to risk functions.

**3. Ensure that the process has sufficient resourcing and skills:** The board should assess if the organization has adequate resources and expertise within its risk, finance, and sustainability / environmental functions. Each organization comes to this process with different degrees of “readiness.”

The process and choices around climate scenario analysis and integration into existing business processes may be daunting where there is limited prior scenario analysis experience and a lack of in-house climate expertise. While larger organizations may be in the process of developing capabilities and data structures, many companies may elect to work in partnership with external providers and subject-matter experts for support on the nuances of climate modeling techniques, interpretation of complex results, and development of climate resilience and net-zero plans. All organizations also need to factor in the time necessary to develop their approach and process, address data availability and quality issues, and analyze and review model outputs.

The organization should also identify preexisting knowledge to draw upon. For example, the insurance team often understand natural hazard and natural catastrophe impacts which can augment insights from climate models. For transition risks, finance and legal teams who understand the value chain are well positioned to think through and comment on the likely impacts of nearer-term potential climate transition shocks such as a carbon tax, shifts in consumer demand, litigation risks, and policy and regulatory changes.

**4. Consider the climate analysis use and integration:** The proposed SEC rules call on companies to outline how climate risk analysis will integrate into enterprise risk management. However, thought should be given as to whether the chosen model and approach is sufficiently robust to support broader business decision making and to enhance existing processes and analysis, including strategic and financial planning, strategy, operations, and product development, as well as climate resilience measures, adaptation, and net-zero plans.

Given the potential value of the overall scenario development process, it is important to avoid an approach of “checking the box for reporting purposes” with an exercise isolated from existing decision processes. While scenarios and models do not provide perfect foresight, they are nevertheless useful processes and tools that can support debate and ensure that the company addresses critical questions across a range of strategic and operational issues.

**5. Understand data needs and acquisition:** The organization needs to consider what data is needed, the data quality and granularity required, how much bespoke data is required by the organization, the degree to which data can be generated internally, and what may need to be purchased or obtained from third parties within the supply chain or external agencies. For example, physical risk assessments require detailed inputs that are often highly localized and require robust data not only on the location of a physical asset but may also require aspects such as building height or community adaptation planning to help contextualise outputs. Organizations may also need to capture data from their supply chain—for example, for Scope 3 emissions data.

**All organizations also need to factor in the time necessary to develop their approach and process, address data availability and quality issues, and analyze and review model outputs.**

Organizations need an approach to address potential challenges in consistently capturing the data required for climate scenarios. Data may not be actively collected by the organization or may be in the early stages of collection, may not be stored or used systematically, may rest in unstructured environments, or there may be key gaps, given nonsystemic usage.

The organization should also consider their engagement with the new and rapidly evolving landscape of data vendors specializing in the physical and transition data needed to run scenario analysis. Each provider has different strengths (for example, by peril or by geographic scope), and the organization should consider current and future needs when selecting a vendor and avoid being “locked-in” to a single model provider. It is important to consider the limitations of “off-the-shelf” or “black box” models whose processes cannot be investigated, customized, or challenged fully.

**6. Review the scenario assumptions:** The board should review the core assumptions built into the scenarios, such as policy developments; physical variables included (for example, rising temperatures and sea levels); and time horizon and scope (for example, the degree to which the organization’s supply chain is included). Most organizations choose a selection of representative climate scenarios based on the materiality to the business. With a comprehensive view of the most-material risks, adequate methodical approaches for scenario analysis and the corresponding data requirements can then be defined.

Respected organizations, such as the International Energy Agency (IEA), the Network for Greening the Financial System (NGFS), and the Intergovernmental Panel on Climate Change (IPCC), have developed reference climate scenarios used by many organizations as the basis for their modeling. Emerging practices suggest that entities examine 3–5 reference scenarios to ensure a robust scan of possibilities.

Other factors to consider are the physical and transition risks included in the scenarios. In terms of physical risks, these can include perils such as flood, water stress, heatwave or windstorms, and the shifts in patterns that may occur over longer time frames, such as 20 or 30 years. Companies may perform a multi-peril analysis on key facilities to understand short- and long-term impacts under a variety of potential climate and warming pathways. In terms of transition scenario analysis, where a risk may evolve over a shorter time frame, the company should consider outputs such as projected financial impacts broken down by climate scenario and by policy, market, technology, reputation, customer preference, and liability risks. This will allow the company to consider events such as the potential impact of carbon taxation and government policy under an early-policy-action scenario, for example.

**7. Consider the climate model and methodology:** Climate models provide the linkage between scenarios and key variables, including climate projections, climate impacts, and socio-economics. Selecting the appropriate physical climate risk assessment methodology is particularly challenging since catastrophe and hazard models are highly complex and require deep understanding of exposures, hazards, and vulnerabilities to enable translation into risk assessments and financially relevant outputs to support business decisions. Many climate models and data may have been developed and captured for other uses, such as catastrophe mapping or for use in insurance assessments and may be a “forced fit” for assessment of business performance under various climate scenarios.

All organizations also need to factor in the time necessary to develop their approach and process, address data availability and quality issues, and analyze and review model outputs.

The appropriate model for physical risks can be informed with consideration of aspects such as the range of scenarios available, applicability to the organization's sector, granularity/resolution of the model, the model's flexibility and transparency, and the output metrics produced. It is also important to understand the limitations of the model—for example, how the model considers the compound effect of extreme weather events (e.g., the combination of wind stress and storm surge), the range of climate risks covered, and how indirect impacts such as business interruption are considered. Currently, models for acute risks such as flooding are highly developed by risk-assessment firms in the insurance industry, while “slow moving” or chronic risks (for example, the knock-on impacts of drought or water scarcity) are less well developed. Climate models should include both acute and chronic risks.

Transition risks analysis remains an evolving space. A spectrum of approaches can be applied with various trade-offs in terms of granularity, data needs, methodological complexity, and the ability to evaluate the merits of different business adaptation strategies. To choose the right models, it is critical to identify which transition risks are most likely to be material to the organization, including technological disruption, shifting regulatory environments, and changing commodity prices.

**8. Build in a road map for evolution:** The approach to climate scenario analysis should include a road map to reflect the evolution of the organization and the data and models available. For example, the company may start with a model that captures selected physical risks, Scope 1 and Scope 2 emissions, and a static view of the organization and its balance sheet. Over time, the process and model may evolve to include additional perils and transition risks such as litigation risk, as well as more complex scenarios. These could include consideration of the organization and its supply chain's ability to adapt to new business strategies as well as embedding resilience metrics into physical risk models to reflect reduced exposures to climate risks.

To enable effective evolution, management needs to define the controls around the process, data, and model to ensure a repeatable, comparable, yet dynamic approach to climate scenario analysis.

Finally, the organization should be aware of the growing focus on environmental impacts not directly linked to carbon emissions. This will present risk analytics and risk management challenges and organizations should start to consider approaches to modeling these risks as the Task Force on Nature-related Financial Disclosures gains momentum.<sup>5</sup>

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<sup>4</sup> The website of the [Task Force on Nature-related Financial Disclosures](#) for more information.

<sup>5</sup> See “[The Business Case for Nature](#),” posted on the Oliver Wyman Forum, May 8, 2022.

## CONCLUSION

Organizations' approaches to climate modeling will continue to evolve due to internal capability developments and a rapidly changing set of external factors, including increased development of sectoral guidelines, new policy and regulatory obligations, and model advancement.

But those changes and an uncertain disclosure regime should not impede boards' focus on the critical role that physical and transition climate scenario analysis can play in an organization's strategic approach to climate change. By focusing on key elements of the exercise, boards can play a critical and constructive role in assessing the pros and cons of adaptation actions and enabling companies to seize opportunities and mitigate risks.

## About the Contributors



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