

NAVIGATING SUSTAINABLE FUTURES



A leadership imperative.

By Franziska Zimmermann

In 2023, global headlines alluded to corporates and financial institutions turning their focus away from climate and ESG (Environmental, Social, and Governance); some even suggested that sustainability was only a fad that was due to end. But as we enter 2024, it is becoming clear that these narratives were headline-grabbing at best. While corporate action may have garnered less public attention, this is mainly because a number of companies have been intentionally regulating their climate communications¹ to minimise reputational and litigation risks, often due to the lack of clarity and changing regulations. The fact is, beneath the surface, many corporate leaders remain acutely concerned about the current and future threats of climate change, ecosystem degradation, and social instability. And they are (and must be) ready to act.

In this article, I will highlight how climate change continues to occupy mindshare and ranks high on corporate leaders' agenda, and how organisations can facilitate and lead the way to help everyone navigate this crisis. Specifically, I will discuss pressing issues concerning decarbonisation and net zero emissions, and draw our attention to the promise of emerging technologies and involvement of the youth in our journey to address climate change.

CLIMATE CHANGE AND OTHER ENVIRONMENTAL RISKS REMAIN TOP OF MIND

Building on the findings of the World Economic Forum (WEF)'s latest Global Risks Perception Survey (GRPS)², the 2024 edition of the WEF *Global Risks Report*³ drew attention to environmental risks approaching their tipping points, and those that were close (refer to Figure 1).⁴ Two out of three GRPS respondents chose extreme weather events as the number one risk to trigger "a material crisis on a global scale" this year.⁵ In fact, what is more eye-opening is that environmental risks (highlighted in green) occupy four out of the top five spots over the 10-year horizon.

GLOBAL RISKS RANKED BY SEVERITY OVER 2-YEAR AND 10-YEAR HORIZONS



FIGURE 1

Source: Adapted from Figure C in WEF, "Global Risks Report 2024", January 10, 2024.

The first Global Stocktake (GST) under the Paris Agreement was a detailed stocktake of global action on climate change so far, trawling through some 1,600 documents from diverse sources and building on consultations among stakeholders.



Interestingly, different stakeholders had divergent views on the urgency of these risks, such as ecosystem collapse, biodiversity loss, and critical change to Earth systems. These risks are ranked more highly over a two-year time frame by younger respondents, as compared to their more senior counterparts. That dichotomy is mirrored by respondents in the private sector vis-à-vis those in civil society and government, with the former paying more attention to risks over the longer 10-year term, while the latter group prioritised these risks over shorter time frames.

The difference in assessment, and perhaps worldview, implies a lack of alignment amongst decision-makers. This heightens the risk of missing key moments of intervention, which would result in long-term changes to planetary systems. It is therefore critical that corporate leadership, while taking a long-term perspective, acts with the necessary urgency today.

ACTION ON CLIMATE REMAINS HIGH ON CORPORATE AGENDA

Against this backdrop, it was encouraging to see the level of engagement of businesses at the Conference of the Parties (COP28), also known as the United Nations (UN) Climate

Change Conference, held in Dubai in late 2023. The conference drew over 80,000 delegates representing almost every country, and included more than 160 heads of state and 700 CEOs, making it the largest such assembly to date. For the first time, COP28 also included the Business & Philanthropy Climate Forum, which brought together some 1,200 private-sector and philanthropic leaders to drive climate action.

Major announcements from the summit marked the growing shift across sectors and an increasing focus on collaborating across organisational boundaries. Initiatives that were symbolic of the breadth and pace of change were, for example, the launch of the Industrial Transition Accelerator for Heavy-Emitting Industries that focused on catalysing decarbonisation across heavy-emitting sectors, including energy, industry, and transportation; and the acceleration of the delivery of Paris Agreement-aligned targets⁶. Following a similar initiative in industry, the First Movers Coalition for Food was launched. It represents a global coalition of companies leveraging their combined purchasing power for sustainably-produced farming products to speed up the adoption of sustainable farming, innovations, and transitional funding.

Temasek, a global investment company headquartered in Singapore, also took part in several initiatives. For instance, to address climate finance gaps in Asia, Temasek partnered Allied Climate Partners, the Monetary Authority of Singapore (MAS), and the International Finance Corporation to establish a green investments partnership to mobilise capital, and increase the bankability of green and sustainable projects in Asia.

NAVIGATING NEW REALTIES REQUIRES DECISIVE LEADERSHIP

COP28 was also the time for the first Global Stocktake (GST) under the Paris Agreement. The GST assesses humankind's progress on cutting down greenhouse gas (GHG) emissions, building resilience to climate impacts, and securing finance and support to address the climate crisis. It represented the most detailed stocktake of global action on climate change so far, trawling through some 1,600 documents from diverse sources and building on consultations not just with governments and scientists, but also varied stakeholder groups including farmers, indigenous people, businesses, civil society, cities, and others.

The key findings of the first GST, released in a Synthesis Report⁷ in September 2023, made clear two things: the goals of the Paris Agreement were a long way to being met, and the window of opportunity to do so was getting smaller by the

day. Without decisive action before the next GST in 2028, the unpleasant prospect of global temperatures repeatedly soaring by 1.5°C or more could soon be reality. But the report also laid out a course of action that governments should follow to combat the climate crisis. It pinpointed key areas where immediate action must be taken and provided a roadmap for the systems transformations needed to dramatically reduce emissions, build resilience, and safeguard our future.

As corporate leaders are looking to navigate the possible climate futures, there are a few areas emerging from COP28 and the subsequent conversations at the WEF Annual Meeting 2024 that are worth taking note of. The key highlights are listed below.

Getting ready for a post-fossil fuel world

Following tense final negotiations at the close of COP28, a historic agreement to 'transition away' from fossil fuels made headlines around the world. Leaders also committed to tripling renewables by 2030, doubling energy-efficiency improvement rates and establishing new standards to unlock global trade in hydrogen. These key agreements provide critical directional guidance.

It is paramount for corporate leaders to understand the implications of the evolving climate policies, actively monitor and adapt to new regulations, and strategically align their organisations with the directional momentum created through these international agreements. Many organisations may delegate the task to their legal and regulatory teams to ensure compliance with any new requirements. While this is a sound approach to remain abreast with the evolving practices, corporate leaders also need to adopt a mindset beyond compliance, take a longer-term perspective and set the tone for strategic sustainability initiatives and business transformation.

The urgency of climate action requires corporate leaders to embrace proactive climate leadership and reposition businesses for success in tomorrow's world. Initiatives such as the WEF First Movers Coalition that seek to decarbonise heavy-emitting sectors make it clear that companies not standing at the forefront of climate action may find it increasingly difficult to remain relevant as suppliers and partners in global value chains.

Speed up mitigation while preparing for adaptation

The 2024 Global Risks Report also drew attention to another unpleasant and inescapable scenario: Earth will likely reach the point-of-no-return by the early 2030s or earlier,

when another 1.5°C of global warming has been tagged on to the thermometer. Potentially irreversible and self-perpetuating changes to some planetary systems will take place at this point, unleashing ‘non-linear’ impacts that many economies will be largely unprepared for. Several related socioenvironmental risks could be triggered, which could in turn accelerate the climate crisis through the release of carbon emissions and amplifying related impacts, threatening climate-vulnerable populations. The collective ability of societies to adapt could be overwhelmed, considering the sheer scale of potential impacts and infrastructure investment requirements, leaving some communities and countries unable to absorb both the acute and chronic effects of rapid climate change.

Similarly, many large companies around the world may still have a blind spot when it comes to climate adaptation. This gap in building resilience to hazards from climate change, such as from extreme weather events to increasingly frequent and severe stretches of hot and dry spells, is emerging as one of the crucial risks affecting the global economy.⁸

Adaptation is and must be a critical component of climate action—both at the country and business level. Climate hazards can have profound impacts on supply chains and business operations, for example, in locations which face life-threatening heat and humidity spikes in the coming years. Singapore’s Third National Climate Change Study (V3), which was released in January 2024, provides the required high-resolution climate change projections for Singapore and the wider Southeast Asian region by dynamically downscaling the coarse resolution of global climate model simulations.⁹ This new data set can be readily used for adaptation planning.

Building resilience across regions, sectors, and value chains requires collective action. COP28 saw significant agreements on nature, health, food, and water systems, and further negotiations on adaptation are expected to be a focus at COP29 in Baku, Azerbaijan.

Drive business innovation and transformation from the top

It is estimated that half of the reductions required for net-zero emissions by 2050 must be delivered by technologies not yet available at scale, such as carbon capture and storage technologies, hydrogen to produce low-emission steel, and sustainable aviation fuel. This technological gap provides opportunities for businesses in such industries to innovate, lead sector transformation, and thereby capture value. It also provides opportunities for new forms of collaboration among

the different players in a value chain to collectively accelerate the development and adoption of climate solutions, drive cost reductions, and secure favourable policy environments.

Having a clear view of the pathways towards decarbonisation and a compelling plan to transition the business is increasingly vital for any company operating in a high-emission sector. Considering the potential for stranded asset risk, investors, including Temasek, are increasingly seeing the climate transition readiness of companies as an important investment consideration. This was underscored by the breadth of activities that took place at COP28, including transition plan-related events hosted by MAS, the UN Secretary-General, the City of London, and more. Similar momentum can be observed in the European Union (EU), UK, US, Japan, Singapore, Australia, and many other countries.

Taking a strategic view on how to develop and drive decarbonisation through the business and dealing with risks and opportunities are crucial roles corporate leaders must play. In the last decade, deployment of various climate technologies has accelerated significantly, often outpacing expectations—for example, solar and wind power now account for more than 10 percent of electricity generation and over 80 percent of new electricity-generating capacity.¹⁰ But greater acceleration is needed, both for renewables and for a range of other climate technologies. Each critical technology must grow at more than 20 percent per year over the coming decade to achieve commercial viability and technological readiness.¹¹

By fostering a culture of continuous improvement and investment in sustainable technologies, corporate leaders can position their organisations as innovators and front runners in the race to net-zero and in the competition to build and scale the next generation of green businesses.

Get ready for increased levels of accountability and scrutiny

One year ago, the UN Secretary-General’s High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities (HLEG) set out 10 practical recommendations to “bring integrity, transparency, and accountability to ensure that net-zero pledges are fully aligned with limiting global temperature rise to 1.5°C above pre-industrial levels by establishing clear standards and criteria”.¹² These recommendations serve as a tool to hold non-state actors accountable to their net-zero pledges, as detailed transition pathways set out by the International Energy Agency (IEA) and UN Intergovernmental Panel on Climate Change (IPCC) function as roadmaps and instruction manuals.

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Consumers, investors, and regulators are actively seeking effective ways to hold companies accountable for their GHG emissions. This heightened focus is fuelled by the alarming disparity between current emission reduction efforts and ambitious net-zero targets set in recent years. This is one of the reasons why regulators and standard-setters globally have stepped up their activity.

Most notable is the work of the International Sustainability Standards Board (ISSB). Nearly 400 organisations from 64 jurisdictions have committed to its standards for climate-related reporting ahead of COP28, thanks, in no small part, to the common language for sustainability information that enables comparable and consistent sustainability disclosures across global capital markets. This groundswell of support from non-governmental organisations (NGOs), companies, investors, stock exchanges, accountants, multilaterals, academia, data analytics providers, corporate advisors, and others comes as ISSB puts its standards into action. In Singapore, the Sustainability Reporting Advisory Committee (SRAC) proposes to mandate listed issuers to report climate-related disclosures in line with the requirements of the ISSB climate disclosure standards starting from financial year 2025 (FY2025). Large non-listed companies with annual revenue of at least S\$1 billion will follow suit in FY2027.¹³

Transparency about environmental impact, climate-related risks, and sustainability initiatives is crucial. Corporate leaders bear the responsibility for establishing robust disclosures and they should drive the adoption of best practices, including those outlined by ISSB. Beyond providing climate-related financial information to capital markets, corporate leaders should lead in adopting a stakeholder-centric approach. Transparent communication and active engagement with diverse stakeholders are essential for gaining support, fostering collaboration, ensuring the success of sustainability initiatives and, ultimately, for retaining a business’ social licence to operate.

This is particularly relevant given that in today’s age of digital platforms and tools, including Artificial Intelligence, there is no place to hide. Various stakeholder groups are working to curate, connect, and analyse relevant data sets. At COP28, a new swathe of tools was launched to further scrutinise corporate actions. One example is the Net-Zero Data Public Utility, an open repository backed by the UN, ISSB, and IEA. Its database of consistent company-level GHG emissions facilitates analysis and comparison of company climate data, which is invaluable for interested parties: investors, regulators, analysts, NGOs, and the media. Another example is Climate TRACE, a satellite-based inventory of GHG emissions sources and locations.

There is no net zero without nature

Action on climate alone is insufficient without also addressing nature. COP28 dedicated an entire day to nature, and, for the first time, another day to food and agriculture. The message that nature-based solutions (NbS) are critical to climate action has well and truly experienced a breakthrough. Take Living Carbon for example. It is a biotechnology company that Temasek has invested in that enhances CO₂ absorption and storage in trees through photosynthesis enhancement and the shortening of tree-growing cycles.

However, it is equally true that NbS as an approach is not a silver bullet that can excuse delayed action on decarbonisation. In fact, for NbS to deliver their full potential, they must be deployed alongside decisive action on climate mitigation, including the transition to low-emission energy sources. These two must go hand in hand. Because the science is clear that, in many instances, the warming climate has negative impacts on nature’s ability to serve as a carbon sink.

The most recent *State of Finance for Nature* report by the UN Environment Programme (UNEP) and partners found that in 2022, investments in NbS came to about US\$200 billion, but finance flows to nature-harming activities were

more than 30 times larger.¹⁴ This exposes a significant disparity between the volumes of finance to NbS and nature-negative finance flows.

Carbon markets can play a vital role in driving down GHG emissions and spurring climate ambition, but only when it is done right. An effective and trusted carbon market will help accelerate decarbonisation by providing a mechanism to fund decarbonisation technologies and NbS, while a credible ecosystem and market will be critical to enhance transparency and confidence. While COP28 may not have landed on an outcome on carbon markets, important signals were sent to re-confirm the commitment and re-establish trust in the voluntary carbon markets. Temasek-owned investment firm GenZero, for instance, has released its inaugural white paper to address common misconceptions around carbon markets and highlight ways to drive climate mitigation at scale.¹⁵ The paper explored the state of the carbon markets today, along with obstacles from both the demand and supply sides. GenZero also offered eight recommendations to “unleash the full potential of carbon markets”, including refining carbon credit taxonomies and incentivising corporate participation.

Harnessing the next generation: digital technologies and youth

Digital technologies are altering the way climate change is addressed, be it emissions reduction, greening transport networks, or mitigating impacts with early warning systems. The WEF estimates that such technologies could eliminate GHG emissions by some 20 percent by 2050 in three of the high-emitting sectors: mobility, materials, and energy.¹⁶

The increased demand for data from various stakeholders—including regulators, value chain partners and investors—provides clear use cases for a focus on the implementation and acceleration of the digital transformation of businesses, also when it comes to sustainability performance. And the good news is that any sustainability-related efficiency typically translates into improved financial performance.

Climate change already affects, and is poised to alter, the lives of various generations. The latest *IPCC Sixth Assessment Report* carried a striking visualisation that shows the observed and possible projected global temperature trends, and how they would impact different generations born in 1950, 1980, and 2020 (refer to Figure 2). It underscores the responsibility

that people currently have to correct the course of GHG emissions in the decades and centuries ahead. It also brings home the need for a robust dialogue among generations, be they grandparents, parents, or children.

In a study published by medical journal *The Lancet Planetary Health*, nearly 70 percent of the 10,000 16-25-year-olds surveyed in 10 countries reported being extremely or very worried about climate change.¹⁷ This number was even higher on average in developing countries in the Global South that are expected to be most vulnerable to climate change-related destruction. Yet, rather than seeing young people as only victims of climate change, they can instead be regarded as agents of change, entrepreneurs, and innovators. Be it through education, science or technology, we are encouraged to see many young people globally ramping up efforts to address the climate crisis.

Progressive corporate leaders should find ways to regularly consult and engage with future generations, seek their views, and harness their energy and potential, to help fuel the innovation pipeline or shape the future direction of the corporate world. The need to include next-generation leaders was recognised in the official COP28 negotiated text. The role of the Presidency Youth Climate Champion (YCC) was instituted within the United Nations Framework Convention on Climate Change (UNFCCC) process, enhancing the meaningful participation and representation of youth in future COPs. A total of 110 young people from around the world, including a delegation from Singapore, were empowered to drive climate action and participate in the COP negotiations as part of the COP28 Youth Climate Delegate Program, the largest initiative to date to expand youth participation in the COP process.

CONCLUSION

COP28 emphasised that the role and active involvement of corporate leadership are pivotal in steering organisations towards sustainable futures. By considering the above takeaways, corporate leaders can proactively lead their organisations in navigating the complexities of climate action, and fostering a resilient, socially responsible, and environmentally-conscious business environment. **AM**

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Endnotes

- ¹ South Pole, “Survey Finds that Most Companies across Nearly All Sectors are Going Quiet on Green Goals”, January 17, 2024.
- ² The GRPS is the World Economic Forum’s (WEF) source of original risks data, and it harnesses the expertise of the Forum’s network of academic, business, government, civil society, and thought leaders. The survey responses for its 2023-2024 edition were collected from the WEF’s multistakeholder communities from September 4 to October 9, 2023.
- ³ The *Global Risks Report* is an annual publication by the WEF that looks at the most serious risks facing the world in the coming decade.
- ⁴ WEF, “Global Risks Report 2024”, January 10, 2024.
- ⁵ Ibid.
- ⁶ This refers to targets that are aligned with the Paris Agreement that was adopted in 2015.
- ⁷ United Nations Framework Convention on Climate Change (UNFCCC), “Views on the Elements for the Consideration of Outputs Component of the First Global Stocktake”, October 4, 2023.
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- ⁹ Meteorological Service Singapore, “High-Resolution Climate Futures for a Climate-Resilient Singapore and Southeast Asia”.
- ¹⁰ International Energy Agency, “Renewables 2022: Analysis and Forecast to 2027”, January 2023.
- ¹¹ McKinsey & Company, “What Would It Take to Scale Critical Climate Technologies?”, December 1, 2023.
- ¹² High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities, “Integrity Matters: Net-Zero Commitments by Businesses, Financial Institutions, Cities and Regions”, United Nations, November 8, 2022.
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- ¹⁵ Anshari Rahman and Edmund Siau, “Carbon Markets 2.0—Addressing Pain Points, Scaling Impact”, GenZero, December 2023.
- ¹⁶ WEF, “Digital for Climate Scenarios”.
- ¹⁷ Caroline Hickman, Elizabeth Marks, Panu Pihkala, et al., “Climate Anxiety in Children and Young People and Their Beliefs about Government Responses to Climate Change: A Global Survey”, *The Lancet Planetary Health*, Vol. 5, December 2021.

THE EXTENT TO WHICH CURRENT AND FUTURE GENERATIONS WILL EXPERIENCE A HOTTER AND DIFFERENT WORLD DEPENDS ON CHOICES NOW AND IN THE NEAR TERM

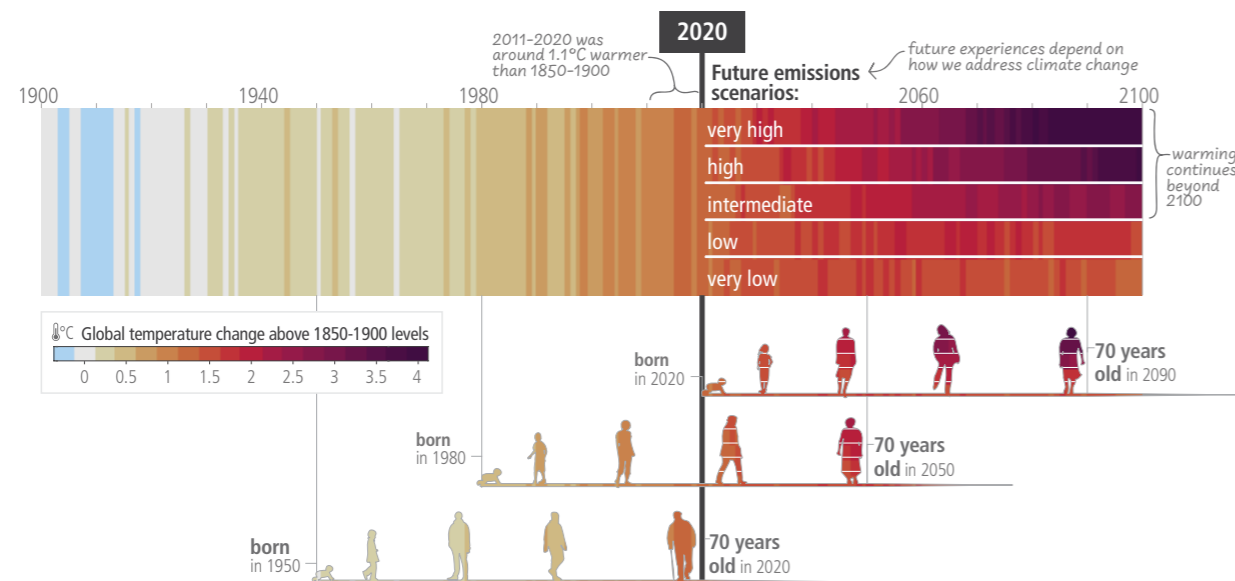


FIGURE 2 Source: Figure SPM.1 (c) from Hoesung Lee and José Romero (eds.), ‘IPCC, 2023: Summary for Policymakers’, in “Climate Change 2023: Synthesis Report”, Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), Geneva, Switzerland. Reproduced with permission from IPCC.