



Sustainability in 2025

Building resilience and navigating risks

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Climate risks and geopolitics were both in the limelight, and often clashing, in 2024 as a myriad of questions were raised concerning the future of sustainability efforts. In 2025, there is likely to be much scrutiny around US President Donald Trump's anti-green agenda in particular. As widely expected, on his first day back in the White House, he signed an order to withdraw the US from the Paris Agreement and moved to scrap oil and gas exploration restrictions. But irrespective of the political impulse in Washington DC, we expect resilience to be a critical focus, transcending divides and spanning climate, social and environmental issues.

Navigating climate-related financial risks

Climate change's financial impact is becoming increasingly clear amid more extreme weather events—temperature rises, more frequent storms as well as increased droughts in some regions and rising precipitation in others. These dangers increase financial risk, causing damage to facilities and infrastructure, threatening supply chains and raising insurance costs. All of these endanger corporates' bottom lines and translate into systemic risks for financial institutions. They risk people's wealth, health and lives, and endanger political stability. In economic terms, climate change has caused over US\$3.6 trillion in damage since 2000, and without urgent action, it is thought that

global GDP could drop by up to 22% cumulatively by 2100.¹ By 2050, unprepared businesses could see physical risks alone costing them between 5% to 25% of earnings.² What's more, higher cost pressures from carbon pricing or comparable regulation could create additional costs equivalent to 50% of earnings in certain emission-intensive sectors.³

Unfortunately, the current global political environment appears more prone to delay than acceleration when it comes to regulatory action. While a simplification of regulation, in regions which are already quite advanced on these matters, could be in some cases warranted to avoid 'sustainability fatigue', a general backlash on climate action would be problematic.

Many companies might choose to focus more on short-term risks than on medium-term ones such as carbon pricing. Yet, growing climate-related operational and financial risks are already material, meaning that firms will increasingly be called upon to integrate this reality into their risk assessments and financial planning.

The cost of extreme weather

Extreme weather and the economic cost it incurs—alongside the human and social cost—is likely to gain traction in the political debate. Extreme weather events are becoming more and more frequent—and costly. A report commissioned by the International Chamber of Commerce (ICC) highlighted that extreme weather has cost the global economy more than US\$2 trillion over the last decade.⁴

Unsurprisingly, this impact is concentrated in countries with large populations, large economies and well-established institutions that report on climate-related events (though there is some uncertainty on the overall quantification). The US was the most impacted, at a cost of more than US\$930 billion over the 10-year period, which represents around 0.3% of its 2023 GDP.⁵

Globally, the most recent two years covered by the ICC report (2022 and 2023) point to an increase, costing a combined US\$451 billion—nearly a quarter of the US\$2 trillion total for the decade. Notably, it has been estimated that 2025's Los Angeles wildfires will cost more than \$250 billion in damages and economic loss.⁶

What does this mean for investors? They need to consider several key questions:

- How are corporates assessing the materiality of climate-related risks?
- What aspects are the most material?
- What geographies and activities are most at risk?
- How much capital is allocated to enhance business models' resilience, including the sourcing of raw materials?

Even early signals of heightened physical or transition risks could impact company valuations. Inaction would be unwise, even more as climate risks are not linear, often hard to predict and trigger tipping points. Businesses need to ramp up their scenario thinking and survival strategies—to be prepared for both a +3°C world and a future with accelerated decarbonisation.

While some companies may prefer to talk about their financial strategies than climate or environmental strategies, the two are, in our view, both sides of the same coin.

Health and urban resilience

Building resilience is essential to help mitigate the impact of climate change and to respond to related social needs. It must be activated in all fields, coastal areas, infrastructure, agriculture and populated cities across the world.

The World Economic Forum forecasts that investing just 2% to 3% of cumulative global GDP in mitigation and adaptation measures could prevent 10% to 15% in GDP losses over this century, while current adaptation investments could yield returns of between US\$2 and \$19 for every dollar invested.⁷

As previously outlined,⁸ global warming makes it urgent to build health resilience. Low- and middle-income countries are undoubtedly the most in need of finance to adapt to climate-related health impacts, requiring at least US\$11 billion per year this decade to tackle disease and improve healthcare systems and infrastructure, according to the United Nations (UN).⁹

Heat-related illnesses, respiratory issues and the spread of pandemics and vector-borne diseases, such as malaria, all highlight the inseparable link between health and climate change, requiring enhanced surveillance systems and cross-sector collaboration.

More broadly, studies have shown that health-specific climate action remains underfunded, with only around

6% of adaptation funding and 0.5% of multilateral climate funding currently allocated to projects that protect or improve human health.¹⁰

Stepping up health funding in low-to middle-income countries is not a simple task, given there are sometimes high debt levels and governance issues. A multi-stakeholder system articulating regional and multilateral collaboration and public-private partnerships is needed to deploy funding. There are already initiatives like the Rockefeller Foundation looking at the challenges, including what is working and where the gaps are, advocating for local actors to be part of the projects from the onset to ensure more fit-for-purpose projects.¹¹

With more than half of the world's population living in urban areas,¹² cities have a key role to play in building resilience, planning and responding to the health emergency caused by climate change.

The issue is they are in many cases ill-prepared, with governments often constrained by budgets. Fewer than one city in four has a climate resilience plan, and 70% lack reliable access to early warning systems for climate threats.¹³

Thus, institutional investors have a role to play, stepping up advocacy efforts with governments and city leaders, pushing the latter to collaborate with meteorological agencies to gather data, assess the impact of weather events locally, and build local coordination for early action in prevention and response plans.

Catastrophic parametric insurance [a non-traditional insurance product that pays a prespecified amount in relation to a trigger event such as a natural disaster] can contribute to building climate resilience, triggering payouts when specific extreme weather conditions are met. Not only does it accelerate payments, but it allows for coverage of previously uninsured risks, helping to strengthen the resilience of vulnerable communities and helping corporates adapt to climate change.

Valuing water

The climate crisis has also exacerbated the twofold water crisis—the problem is of quantity (too little or too much water) as well as quality—and both issues involve developing and developed countries although to different extents and implications. In developing countries, water is a vital issue, and an intrinsic part of building health resilience as well as food security.

Moving beyond emergency programs to structural financing is an imperative but still challenging. An estimated 4.4 billion people lack safe drinking water in low-and middle-income countries, according to a recent study,¹⁴ an estimate that is twice the figure calculated by the UN.¹⁵

If water scarcity is a prominent issue in developing countries, it is also an increasing feature in developed markets where some regions experience prolonged droughts. While recent winter wildfires in California demonstrate the impact and the evolving pattern of droughts, water scarcity is also becoming a key risk in other states such as Texas and Nevada.



The quote

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The quote

The elephant in the room with AI is of course energy demand.

In some regions, the impact on water from the energy sector could accordingly become more and more scrutinised, to ensure it does not jeopardise agricultural needs for instance.

Beyond water scarcity, water quality is the other major topical issue to address. In developing countries for instance, infrastructure and waste systems are particularly impacted by floods, playing a key role in the spread of diseases.

However, water quality is starting to be more and more at stake in developed markets as well, from both pollution and ageing waste system infrastructures. Today, it is estimated that nearly a quarter of US households have contaminants in their water, including arsenic or E. coli bacteria—and more than two million Americans lack access to clean drinking water at home.¹⁶

Valuing water must accordingly rise up investors' agendas, via financing access to water and sanitation in developing countries, setting up infrastructure projects and waste systems. There are potential opportunities both for equity and fixed income investors, the latter including green bonds issuance.¹⁷

In developed markets, we believe that the value of water is still underappreciated. Public advocacy also needs to develop further, as overall, policies and pressure to address water risk remain limited. Industry and energy together use approximately 19% of the world's freshwater withdrawal,¹⁸ and average 17% of total water use in high-income countries, versus 2% in low-income countries.¹⁹

Seven sectors in particular—food, textile, energy, industry, chemicals, pharmaceuticals and mining—have enormous influence over freshwater use and pollution globally,²⁰ with around 80% of wastewater being released back into the environment untreated.²¹ This has direct implication for investors and stewardship strategies tackling water withdrawals, water usage and waste treatment.

Addressing ocean risks

Addressing ocean risks is imperative, as we are seeing the consequences of global warming and biodiversity loss. As previously explained,²² the oceans' role as a major carbon sink, absorbing up to 30% of human-induced carbon dioxide emissions is well documented,²³ alongside their role as a biodiversity reservoir.

The increasing demand for marine resources, whether food or minerals, means sustainably minded investors should include the ocean in their agendas and stewardship efforts. This must be done through policy advocacy, research financing and engagement, with priority topics being ocean pollution, waste and overfishing. Unsurprisingly, plastic pollution ranks high in ocean pollutants, making up around 80% of all marine waste,²⁴ translating into another clear engagement objective for investors.

The development of an Ocean Benchmark by the World Benchmarking Alliance provides a basis for the identification and assessment of 125 companies across a wide range of industries,²⁵ including maritime transport,

offshore wind energy, marine equipment and construction, port operation, and chemicals. This can help inform investors' efforts—though we would also include some companies in the food industry for overfishing risks.

The UN Ocean Conference²⁶ that will be held in June 2025 in Nice, France, could be an important milestone preserving and supporting more sustainable life under water (one of the UN's Sustainable Development Goals²⁷) and will be closely watched for its outcomes, including scientific research progress.

Artificial intelligence: Regulation and robust policies are vital

Artificial intelligence (AI) technologies are constantly developing, from disease detection to new AI assistants executing complex instructions. AI has the potential to enhance productivity across various sectors, albeit with some conditions and with an uncertain timeline, and it can also—if properly dealt with—foster innovation.

AI can also contribute to the field of climate change, for example, enhancing models, gathering, structuring and aggregating data, helping make connections and correlations. This would better inform central banks, commercial banks and insurers and drive refined and more appropriate actions.

There are of course concerns over the use of technology in unscrupulous hands. For example, Romania's 2024 presidential election was annulled over concerns that foreign interference via social media had propelled the right-wing candidate, Călin Georgescu, to success in the first round.

How content can be amplified is something that the European regulator is closely looking at as part of the *Digital Services Act*, while issues around mental health, in particular involving young people, should be on investors' radar.

AI is also critical to defence and diplomacy and is therefore a matter of influence and sovereignty. As such, there is a need for a comprehensive policy approach to mitigate the potential negative impact of new technologies such as AI and allow it to achieve its full potential.

The elephant in the room with AI is of course energy demand. Increasing use of AI will require more data centres and more energy to process data. Already, data centres account for 1% to 2% of global energy demand, similar to the airline industry²⁸ and it is estimated this could reach 21% by 2030.²⁹

Emissions are also increasing—for example in its 2024 *Environmental Sustainability Report*, technology giant Microsoft disclosed that its Scope 3 carbon dioxide emissions had risen by roughly 30% between 2020 and 2023, primarily due to the construction of more data centres.³⁰

When put in a broader context of total electricity consumption growth globally, the contribution of data centres and AI is modest compared to the combined effect of continued economic growth, electric vehicles adoption and to a greater extent, air conditioners.³¹

While it appears that indeed, more frequent heatwaves have a bigger impact on electricity demand sensitivity,³² the increased use of AI also poses bigger challenges at a local level. In large economies like the US, China and the European Union, data centres account for around 2%–4% of total electricity consumption today. But because they tend to be spatially concentrated, their local impact can be more pronounced, at above 10% of electricity consumption in at least five US states and over 20% in Ireland.³³

How AI is used by households and businesses has also significant implications for energy demand. For example, video is far more energy-intensive than text, but we do not believe that households necessarily need the most computing power-heavy version of AI-based chat tools. Whatever the sector, household or business, AI's energy use and emissions must be balanced with its benefits. This requires a multi-stakeholder approach.

Water needed for cooling is another element to factor in, even more so when drawn from already stretched watershed areas [basins or catchments that drain water, for instance, rain, into a particular body of water such a river or ocean]. Google stated in its 2024 sustainability report that in 2023, its data centres consumed 6.1 billion gallons [23.09 litres] of water—17% more than the previous year, mirroring similar growth in electricity use.³⁴

Intertwined risks creating opportunities

The operational, social and financial risks driven by climate change are already materialising and only likely to increase, harming corporates, financial institutions and people. While in some geographies there has been a backlash against environmental and social issues, we believe that such risks will continue to be tackled as they also constitute financial risks. There is no other choice; these threats must be addressed by all, including financial institutions and regulators.

Addressing such risks can also create potential opportunities, for corporates and for investors, in both equity, fixed income, and infrastructure.

Challenges do need to be addressed realistically though. At times, the path to net zero has put too much focus on words and communication as well as long-term ambitions and not enough on tangible actions and short-term measures.

However, the current political context could rebalance the picture, bringing greater pragmatism and greater focus on the here and now. While the new US administration's climate policy is worrying, we believe the reasons we have outlined above should help maintain the direction of travel for the rest of the world. **FS**

Notes

1. World Economic Forum, *The cost of inaction: A CEO Guide to Navigating Climate Risk, Annual Report, December 2024*. Available from <https://www.weforum.org/publications/the-cost-of-inaction-a-ceo-guide-to-navigating-climate-risk/> [accessed 22 April 2025].
2. Earnings before interest, tax, depreciation and amortisation. *The Cost of Inaction: A CEO Guide to Navigating Climate Risk*, World Economic Forum. Available from <https://www.weforum.org/publications/the-cost-of-inaction-a-ceo-guide-to-navigating-climate-risk/> [accessed 22 April 2025].
3. Earnings before interest, tax, depreciation and amortisation. *The Cost of Inaction: A CEO Guide to Navigating Climate Risk*, Available from <https://www.weforum.org/publications/the-cost-of-inaction-a-ceo-guide-to-navigating-climate-risk/> [accessed 22 April 2025].
4. In 2023 prices; *The Economic Cost of Extreme Weather Events*, Oxera Consulting, 7 November 2024. Available from <https://iccwbo.org/wp-content/uploads/sites/3/2024/11/2024-ICC-Oxera-The-economic-cost-of-extreme-weather-events.pdf> [accessed 22 April 2025].
5. Oxera Consulting, *The Economic Cost of Extreme Weather Events*, 7 November 2024, AXA IM calculations. Available from <https://iccwbo.org/wp-content/uploads/sites/3/2024/11/2024-ICC-Oxera-The-economic-cost-of-extreme-weather-events.pdf> [accessed 22 April 2025].
6. Danielle M, 'AccuWeather estimates more than \$250 billion in damages and economic loss from LA wildfires', AccuWeather, Darlinghurst, Sydney, Australia, January 2025. Available from <https://www.accuweather.com/en/weather-news/accuweather-estimates-more-than-250-billion-in-damages-and-economic-loss-from-la-wildfires/1733821> [accessed 22 April 2025].
7. World Economic Forum, *The Cost of Inaction: A CEO Guide to Navigating Climate Risk, Annual Report, December 2024*. Available from <https://www.weforum.org/publications/the-cost-of-inaction-a-ceo-guide-to-navigating-climate-risk/> [accessed 22 April 2025].
8. Firmian M, 'Climate change: How global warming is stressing people and the economy', AXA Investment Managers, 2024. Available from <https://www.axa-im.com/our-stories/climate-change-how-global-warming-stressing-people-and-economy> [accessed 22 April 2025].
9. United Nations Environment Programme, *Adaptation Finance Gap Update 2023*, Available from https://unfccc.int/sites/default/files/resource/Finance_Gap_Update.pdf [accessed 22 April 2025].
10. Gitonga P, 'Bridging the climate-health gap', Green Climate Fund, Republic of Korea, 29 May 2024. Available from <https://www.greenclimate.fund/insights/bridging-climate-health-gap#footnote-3> [accessed 22 April 2025].
11. The Rockefeller Foundation, *Urban Climate-Health Action: A New Approach to Protecting Health in the Era of Climate Change*, 26 September 2024. Available from <https://www.rockefellerfoundation.org/reports/urban-climate-health-action-a-new-approach-to-protecting-health-in-the-era-of-climate-change/> [accessed 22 April 2025].
12. United Nations, '68% of the world population projected to live in urban areas by 2050, says UN', United Nations Department of Economic and Social Affairs, n.d. Available from <https://www.un.org/uk/desa/68-world-population-projected-live-urban-areas-2050-says-un> [accessed 22 April 2025].
13. Resilient Cities Network & Yale School of Public Health, *Urban Pulse: Identifying Resilience Solutions at the Intersection of Climate, Health and Equity*, Resilient Cities Network (R-Cities), September 2024. Available from <https://resilientcitiesnetwork.org/urban-pulse-resilience-solutions-intersection-climate-health-equity/> [accessed 22 April 2025].
14. Greenwood E, Lauber T, Van Den Hoogen J, et al. 'Mapping safe drinking water use in low- and middle-income countries', *Science*, vol. 386, issue 6710, pp.784–790, American Association for the Advancement of Science, 15 August 2024. Available from <https://www.science.org/doi/10.1126/science.adh9578> [accessed 22 April 2025].
15. UNICEF, 'Universal access to safe drinking water is a fundamental need and human right', webpage, July 2023. Available from <https://data.unicef.org/topic/water-and-sanitation/drinking-water/> [accessed 22 April 2025].
16. United States Mission to the United Nations, 'Fact sheet: United States announces \$49 billion in commitments to global water security and sanitation', March 2023. Available from <https://usun.usmission.gov/fact-sheet-united-states-announces-49-billion-in-commitments-to-global-water-security-and-sanitation/> [accessed 22 April 2025].
17. Green bonds are bonds where the proceeds are earmarked for environmental projects, such as renewable energy, clean transportation or biodiversity.
18. UNESCO, *The United Nations World Water Development Report 2023: Partnerships and cooperation for water*, UNESCO World Water Assessment Programme, 22 March 2023. Available from <https://www.unwater.org/publications/un-world-water-development-report-2023> [accessed 22 April 2025].
19. UNESCO, *The United Nations World Water Development Report 2023: Partnerships and cooperation for water*, UNESCO World Water Assessment Programme, 22 March 2023. Available from <https://www.unwater.org/publications/un-world-water-development-report-2023> [accessed 22 April 2025].

20. CDP, *Cleaning up their act: Are companies responding to the risks and opportunities posed by water pollution?*, CDP Worldwide, London, 2020. Available from https://cdn.cdp.net/cdp-production/cms/reports/documents/000/005/165/original/CDP_Global_Water_Report_2019.pdf?1591106445 [accessed 22 April 2025].
21. United Nations, *UN World Water Development Report 2017: Wastewater, the Untapped Resource*, Available from <https://www.unwater.org/publications/un-world-water-development-report-2017> [accessed 22 April 2025].
22. Derue V, 'Dark oxygen: A step towards increased climate and nature alignment?', AXA Investment Managers, September 2024. Available from <https://www.axa-im.com/our-stories/dark-oxygen-step-towards-increased-climate-and-nature-alignment> [accessed 22 April 2025].
23. United Nations Environment Programme, 'Ocean, Seas and Coasts', webpage, 20 January 2025. Available from <https://www.unep.org/topics/ocean-seas-and-coasts> [accessed 22 April 2025].
24. UN Environment Programme—Finance Initiative, *Turning the Tide: How to Finance a Sustainable Ocean Recovery*, March 2021. Available from <https://www.unepfi.org/publications/turning-the-tide/#:~:text=A%20practical%20guide%20for%20financial%20institutions%20to%20lead%20a%20sustainable> [accessed 22 April 2025].
25. World Benchmarking Alliance, *Methodology for the 2026 Ocean-Benchmark*, December 2024. Available from https://assets.worldbenchmarkingalliance.org/app/uploads/2025/01/Methodology-for-the-Ocean-Benchmark_FINAL.pdf [accessed 22 April 2025].
26. 2025 UN Ocean Conference, Nice, France, 9 June–13 June 2025. Available from <https://sdgs.un.org/conferences/ocean2025> [accessed 22 April 2025].
27. The UN Sustainable Development Goals (SDGs) consist of 17 goals that form part of the 2030 Agenda for Sustainable Development. Each SDG is a call for action, providing a framework for addressing some of the most critical issues facing people and the planet today.
28. Pearce F, 'Energy Hogs: Can World's Huge Data Centers Be Made More Efficient?', *Yale Environment 360*, Yale School of the Environment, New Haven, Connecticut, USA. Available from <https://e360.yale.edu/features/energy-hogs-can-huge-data-centers-be-made-more-efficient> [accessed 22 April 2025].
29. Stackpole B, 'AI has high data center energy costs—but there are solutions', MIT Sloan School of Management, Cambridge, Massachusetts, 7 January 2025. Available from <https://mitsloan.mit.edu/ideas-made-to-matter/ai-has-high-data-center-energy-costs-there-are-solutions> [accessed 22 April 2025].
30. Scope 3 emissions are indirect emissions found along the value chain, before and after a company; Microsoft, *2024 Environmental Sustainability Report*. Available from <https://www.microsoft.com/en-us/corporate-responsibility/sustainability/report> [accessed 22 April 2025].
31. Spencer T, & Singh S, 'What the data centre and AI boom could mean for the energy sector', International Energy, Paris, France, 18 October 2024. Available from <https://www.iea.org/commentaries/what-the-data-centre-and-ai-boom-could-mean-for-the-energy-sector> [accessed 22 April 2025].
32. International Energy Agency (IEA), *World Energy Outlook 2024*, IEA, Paris, France, October 2024. Available from <https://www.iea.org/reports/world-energy-outlook-2024> [accessed 22 April 2025].
33. Spencer T, & Singh S, 'What the data centre and AI boom could mean for the energy sector', International Energy, Paris, France, 18 October 2024. Available from <https://www.iea.org/commentaries/what-the-data-centre-and-ai-boom-could-mean-for-the-energy-sector> [accessed 22 April 2025].
34. Google Sustainability, *Environmental Report 2024*, July 2024. Available from <https://sustainability.google/reports/google-2024-environmental-report/> [accessed 22 April 2025].