Germany's most important waterway, the Rhine, after record heat and drought in 2018.

The CORPORATE Climate

Brunswick's **PHIL DREW** examines the mounting pressures and costs businesses face from climate change, and highlights what leadership will look like in the "decisive decade."

For business, climate change is no longer a distant threat but a reality—one for which they are already paying a price. In 2015, Brazil suffered its worst drought in 86 years. No water and electricity led to blackouts and riots, and a direct hit to the bottom line of shampoo and ice-cream seller Unilever, which that year estimated losses of €400 million to climate-related impacts. This year, boat traffic was brought to a standstill on the Rhine river due to shrinking glaciers—a not-as-severe shallowing of the river in 2018 cost BASF SE, the world's largest chemical producer, almost €250 million in transportation expenses.

Few sectors have been spared. Brewers, insurers, fashion brands, carmakers, and consumer goods companies have all reported significant losses due to extreme climate events within the last decade. Those costs are expected to mount. A 2019 survey of 300 multinational companies found that seven out of ten had "already experienced climate-related supply disruptions" within the last 12 months. CDP, a non-profit that helps many of the world's largest companies disclose their environmental impact, found those businesses estimated about $970 billion of their assets were at risk. Almost a quarter of a trillion dollars, CDP's analysis found, could be written off altogether.

PRESSURE FROM ALL ANGLES

The World of Finance

"In the last two years, half the questions we now get are about ESG. Within that, they're mainly about E [Environment]; and 95 percent of those are on C [climate]," a senior investor relations figure at one of the world's biggest oil and gas companies recently told me.

Investor interest and capital are following a similar trajectory in other sectors, too. (See Pages 20–23

PHOTOGRAPH: ANDREAS RENTZ/GETTY IMAGES

for an analysis of how investors' rhetoric on climate change is aligning with their actions.)

More than 850 global businesses are now signed up to the Task Force on Climate-Related Financial Disclosures (TCFD), a framework initiated by the Financial Stability Board at the behest of the G20 Finance Ministers.

A number of investor alliances are forming to force companies to enhance the quality of climate reporting, set aggressive carbon reduction targets that align the business with the Paris Climate Agreement's goal of keeping global warming well below +2°C, and to tie executive remuneration with performance against progress on that pathway. In one of the boldest investor developments yet, last September a coalition of the world's largest pension funds announced a commitment to make their combined $2 trillion portfolio zero carbon within the next 30 years as part of the UN Net Zero Asset Owners Alliance.

Stock exchanges, credit-rating agencies, and even central banks are becoming greener as well. Euronext, which owns six stock exchanges across Europe, is developing products and indices for climate-focused investors. FTSE Russell, an index provider, briefly experimented with labeling companies as "renewable energy" or "non-renewable energy" in 2019. Moody's bought a controlling stake in a climate data firm in 2019, signaling that climate risks will more explicitly factor into the creditworthiness ratings it issues, while Fitch Ratings and S&P Global, two other major credit-rating agencies, have downgraded ratings of companies and countries within the last two years, citing environmental concerns. Central banks from five continents have partnered with financial organizations to create the Network for Greening the Financial System, publishing recommendations for banks and policymakers.

Consumers and Employees

Public concern about climate change has reached record levels around the world according to Ipsos MORI, a market research company that has tracked the subject for nearly 30 years. That concern is expressing itself commercially. A study by Yale University found Americans are more likely to engage in consumer activism than political activism to fight global warming, while a separate study from the university found one in three Americans is "rewarding" a company for its stance on climate. According to Swiss bank UBS, the rise of *flygskam* (Swedish for "flight shame") has led to one in four taking fewer flights this year, leading the bank to predict that US air traffic growth could fall by half as a result.

> Getting to net-zero carbon has become the new North Star for the climate agenda.

Employees increasingly share consumers' climate concerns. In April 2019, a group of more than 6,700 Amazon employees signed a letter to CEO Jeff Bezos asking the company to ramp up its environmental efforts, and then went on to file a shareholder resolution to compel him to do so. Six months later, Amazon announced one of the most ambitious climate goals in the industry. And it's not just Amazon. Last September, workers from a range of industries walked out of their jobs to join the Global Climate Strike, while a survey of Fortune 1000 employees found that an employer's "public environmental stance" was more important to them than flexible-working arrangements or career-advancement opportunities.

Governments and Regulators

Government action so far has been piecemeal and largely inadequate. Climate Action Tracker, an independent analysis of government climate action, found only two out of the 185 countries that have ratified the Paris Agreement are on track to meet those commitments (Morocco and the Gambia). A report by the research body United in Science concluded that those commitments, even if they were being met, wouldn't be sufficient: Countries must triple their greenhouse gas emission pledges if the world is to meet the Paris Agreement.

Yet, as the realities of climate change catch up, low carbon technologies get cheaper, and pressure from citizens becomes noisier, it is improbable that governments will be permitted to let the world glide to 3 degrees of warming.

Some form of forceful policy action is inevitable. The questions are: When will it happen, what form will it take, how will it impact the economy, and are businesses prepared?

The indicators suggest they are not. A survey by BNY Mellon found nine in 10 investors view climate change as a financial risk that has yet to be priced into markets, while analysis by Moody's found that although 80 percent of global companies said climate change was affecting strategic decisions, just two of the 28 companies the firm studied had linked their climate projections with an effect on cash flows and balance sheets.

In response, the UN Principles for Responsible Investment (UN PRI), a group of investors collectively worth $86 trillion, has set out with a consortium of partners to provide a comprehensive forecast of the most likely policy response to climate change and how this will reshape the global economy over the next three decades. It predicts there will be an

inevitable policy response by 2025, and forecasts that carbon-intensive firms are likely to lose 43 percent of their value due to policies designed to combat climate change. The most progressive companies, according to UN PRI, could see their value increase by nearly one-third.

BUSINESS LEADERSHIP on climate

In this leadership vacuum, ambitious action on climate change is being powered by business. A study of 1,000 business leaders across 99 countries by the United Nations Global Compact and Accenture found that 90 percent of CEOs said they were today "personally" driving their companies' climate and sustainability agenda.

What is also emerging is a clear model of what that corporate leadership on climate change looks like. We believe it has three dimensions:

1. **BUSINESS TRANSFORMATION. Aligning the business with net zero carbon emissions**
2. **SYSTEMS CHANGE. Acting with peers and partners to drive systems-level change**
3. **POLICY ADVOCACY. Advocating to create an enabling policy environment.**

1. BUSINESS TRANSFORMATION

Getting to net-zero carbon has become the new North Star for the climate agenda. At the 2019 UN Climate Action Summit, more than 100 cities and 77 countries pledged to achieve net-zero carbon emissions by 2050. A group of some of the world's largest businesses led the way: 87 companies, with a combined market capitalization of $2.3 trillion, committed to set science-based targets that align their business and value chain with limiting global temperature rise to 1.5°C above pre-industrial levels and reaching net-zero emissions by 2050 (more than 177 companies have made that pledge to date).

A business's value chain is on average five-and-a-half times larger than the business itself, incorporating how a company's products are sourced, made, moved and used. To achieve these targets companies are powering their operations with 100 percent renewable energy, pioneering breakthrough technologies, adopting circular manufacturing processes and reorienting their portfolios around lower-carbon products.

The pledges also reflect another key shift: companies setting their targets based on science, not regulation or voluntary commitments. A science-based target changes the question from "Are you doing something?" to "Are you doing enough?" Tied to a 2°C goal, it requires companies to work backward, considering both the role the sector plays in meeting that target as well as their business within the sector.

> A science-based target changes the question from "Are you doing something?" to "Are you doing enough?"

Research by BloombergNEF found that, even four years ago, 81 percent of S&P 500 companies had set emissions targets, but few were science-based. As of November 2019, more than 680 businesses had publicly shared science-based targets. This included leading companies in the world's largest-emitting sectors: Maersk, the world's largest shipping company; BHP, the world's largest in mining; Heidelberg, the world's second largest cement company, and ArcelorMittal, the world's largest steel producer. This level of ambition was unthinkable at the start of the year.

2. SYSTEM CHANGE

Leading companies look to drive action beyond their operational footprint. That means working with partners like NGOs, government bodies, private-sector peers, and academic institutions, to unlock change in the wider systems they're part of.

We Mean Business, a nonprofit coalition working with the world's most influential businesses, aims to accelerate business action across four systems critical to delivering a net zero economy: power, transport, land use and the built environment. And the coalition might just have the breadth to make a difference: We Mean Business counts more than 1,000 companies, accounting for 25 percent of global GDP, as well as nearly 75 nonprofit organizations as partners.

Take transportation, which accounts for nearly a quarter of CO2 emissions worldwide. The Climate Group, a founding partner of We Mean Business, has helped create EV 100, a coalition of more than 50 major multinationals—including DHL, UPS and IKEA—that uses its combined investment power to stimulate mass demand for electric vehicles, invest in the necessary charging infrastructure, and advocate for supportive policies that can boost EV uptake. It's an area where businesses can lead, as they account for half of all light vehicle purchases (essentially, all vehicles except heavy trucks).

We Mean Business's hope is that this kind of system-level approach, applied across other heavy-emitting sectors, may unlock effective business action at scale.

3. POLICY ADVOCACY

As well as aligning their businesses to net-zero emissions and working to create systems change, businesses also have a role in creating an enabling policy environment for action on climate. Research from Climate Action 100+ suggests this isn't happening yet: Although companies in most sectors are starting to set emissions targets, far fewer are aligning their lobbying activities (see chart below).

The idea of meaningful advocacy on climate coming from business may evoke a cynical response. "Winds of change or unchanged windiness?" the FT asked after a flurry of bold pledges from companies and countries at the 2019 UN General Assembly. Such skepticism stems partly from companies having pledged support for a range of social issues in the past, yet continued lobbying—or remaining members of trade associations that lobby—for policies at odds with those public pronouncements.

Climate-focused investors and activists are calling out this dissonance when they see it. They're increasingly impatient with companies that they believe use their voice only to claim public credit rather than inform public policy. Eleven leading environmental and sustainable business organizations published an open letter in The New York Times in October 2019 urging CEOs to sincerely engage on climate policy, while 200 institutional investors, with a combined $6.5 trillion in assets under management, recently called on publicly traded corporations to align their climate lobbying with the goals of the Paris Agreement. The New York Times letter called for businesses to take three specific steps:

1. **Advocate for policies at the national, subnational and/or sectoral level that are consistent with achieving net-zero emissions by 2050;**
2. **Align their trade associations' climate policy advocacy to be consistent with the goal of net-zero emissions by 2050; and**
3. **Allocate advocacy spending to advance climate policies, not obstruct them.**

Some businesses are heeding the call. The following day, the Sustainable Food Policy Alliance—which includes food and consumer products giants Nestle, Unilever, Mars and Danone—ran the same letter in Roll Call, a US news organization, with the message "we agree."

ARE COMPANIES LISTENING TO INVESTORS?

Research by the investor coalition Climate Action 100+ found that companies were responding to some investor demands, like making climate a board responsibility. But very few companies had aligned their lobbying with their climate positions.

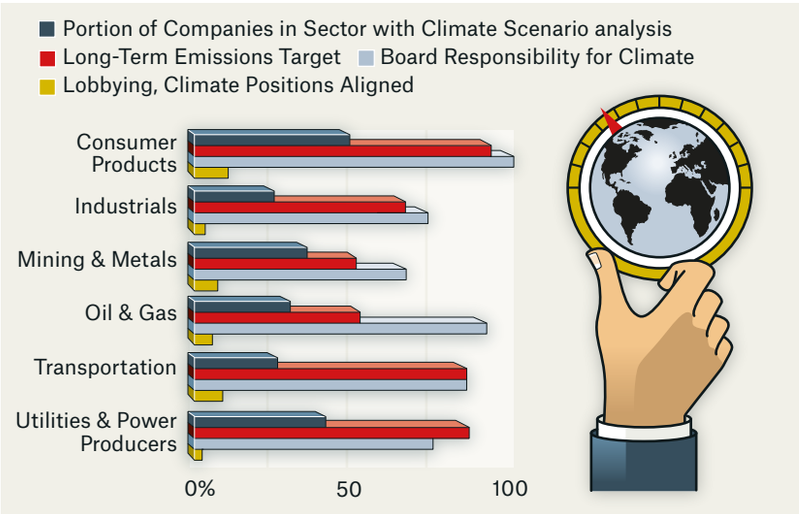

CHART: PETER HOEY

THE "SUSTAINABILITY REVOLUTION" AND DECISIVE DECADE

Last year, former US Vice President Al Gore and former Goldman Sachs Asset Management CEO David Blood wrote that the world was in "the early stages of a global 'Sustainability Revolution' that has the magnitude of Industrial Revolution and the speed of the Digital Revolution."

The momentum is clear. Five years ago, science-based targets didn't exist; now almost 700 companies have set them. Within the space of a single election cycle, we have also seen climate-focused investments move from the margins to the mainstream and coalitions now measure their collective investment power in tens of trillions of dollars.

The coming year will be more significant still. The heat will be especially high for companies listed in the UK. COP26, billed as "the most important gathering on climate change since the Paris agreement," will be hosted in Glasgow in 2020. This when a 2019 survey found that climate is a bigger concern in Britain than immigration, the economy, or crime.

Already 2020 is being called the start of the decisive decade for climate change. What chance we have of keeping warming at 1.5°C will be determined in the next few years. And though the answer is complex and demands leadership, the question companies face from society will be simple: Are you part of the problem, or part of the solution? And why should we believe you? ◆

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