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Act Now:
Future Scenarios and the Case for Equitable Climate Action

Baseline Assumptions Supplement

By Gabriel Kasper, Justin Marcoux, and Jen Holk
with Alegria Ruseler-Smith, Mario Zapata Encinas, and Vivek Mukherjee

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Baseline Assumptions

While there are many different perspectives and belief systems that underlie how people look at climate and equity, there are nevertheless a handful of critical "truths" that all organizations will need to begin to reckon with in order to make smart choices in the midst of great uncertainty.

Our research identified a set of ten baseline assumptions that we do have a good degree of certainty about. Together they form the essential foundation of understanding about what organizations will need to come to terms with—and hold onto—as they move ahead over the next decade. As they play out over the next decade, these ten assumptions provide important stakes in the ground for what will occur in any future scenario. They describe key trends related to the environment, the social and political landscape, the economy, and technology.

Even in the midst of these relative certainties, there is also much that is in flux, so we have also outlined some of the most critical factors that are still unclear about how the next decade will play out. How these factors resolve themselves over the coming years can lead to a range of very different futures.

By acknowledging a shared reality, being explicit about what to expect in the coming years, and recognizing key uncertainties, leaders can begin to get on their front foot in helping their organizations make smart choices about climate moving forward.

Below we provide an expanded, more detailed and data-driven version of the 10 baseline assumptions highlighted in our overview report, ***Act Now: Future Scenarios and the Case for Equitable Climate Action*****.** This “long-form” version of the assumptions is designed to provide greater context on climate change and its impact on social equity for interested readers. To go back to the summary view of the baseline assumptions, and to learn more about how the next decade of climate action and equity could unfold, you can return to the full report here.

Environment

1. The planet is likely on a path to reach at least 1.5°C global warming above pre-industrial levels by 2040, which will have significant consequences.

Average global temperatures reached 1.1°C above 19th century levels in 2020, and all IPCC forecasts—even the most optimistic ones—show a greater-than 50% chance of hitting 1.5°C by 2040.[1] Absent a concerted and transformational effort to manage emissions, global warming is likely to intensify beyond the 1.5°C threshold.[2]

Recognizing this reality will mean that leaders need to understand that a range of significant climate consequences are likely baked in and unavoidable over the coming 10-15 years. A world that is warmer by 1.5°C, for example, would have far greater risk for devastating droughts, fires, and hunger; heightened security and geopolitical threats; and hundreds of thousands of additional deaths annually.[3] And for certain ecosystems, these changes will be irreversible.[4]

What is still unclear:

The full effect of feedback loops and discontinuous change. Positive warming feedback loops, like the release of methane from the permafrost, could result in significant, less-predictable increases in greenhouse gases releasing into the atmosphere and, eventually, in temperatures.[5] Beyond human emissions, these effects—and other potential "tipping point" factors that create discontinuous changes that are hard to capture in modeling—could drive up temperatures beyond 1.5°C in unexpected ways.

2. The climate impacts of the next half degree Celsius of warming will be more severe than that of the preceding half degree increase.

Climate change disruptions are unlikely to unfold in a linear fashion: a marginal increase in temperature may lead to disproportionately larger increases in specific environmental (and social) impacts. The IPCC underscored the "non-linearity of risks and impacts as temperature rises from 2°C to 4°C of warming", particularly in relation to water availability, heat extremes, intensifying natural disasters, and mass displacement.[6] When looking at extreme heat, for example, the IPCC estimates that 14% of the world population will be exposed to extreme heat waves at 1.5°C degrees of warming. At 2°C, this share would rise to 37%.[7] As a result, climate-related disasters are likely to be more common and more severe as the Earth warms to 1.5 degrees and potentially beyond.

Additionally, there are tipping points, both known and unknown, after which some environmental damages will accelerate or become irreversible. For example, events like ocean current patterns, rainforest diebacks, or icesheet disintegration will also increase in likelihood as the planet warms and will be difficult or impossible to "undo."[8]

The past decade of warming isn't a good heuristic for the next decade. The environmental and social costs of the "next" half-degree of warming will likely be more severe and carry more risk of permanent change.[9] Leaders must quickly update their expectations away from the current status quo.

What is still unclear:

- **How and where climate impacts will happen**. It's uncertain exactly where and when climate impacts will occur, how severe they will be, and who they will affect. While we can predict some of these questions, leaders will need to be prepared for a wide array of potential impacts.

Social & Political

3. Humanity will likely face climate change alongside numerous other crises, and it stands to be one of several competing priorities on the global agenda.

Climate disruptions will unfold at the same time as—and even cause, or compound—other crises, such as economic contractions, health emergencies, social unrest, and global conflict. However, climate change will unfold differently from events like these. "Rather than being experienced as a big, singular emergency, climate change will be a chronic state punctuated with acute pains," shared by Deloitte's Global Climate and Sustainability Research Lead, Derek Pankratz. These 'acute pains' will happen across geographies, economic sectors, and social groups—likely becoming unavoidable no matter what issue or space an organization is working on.

As a result, climate change will regularly intersect with other social issues and priorities. Climate change will also increasingly become the cause of other crises and can "compound" existing crises, making them worse than they would otherwise be. The "second-order effects" of climate change—like migrants fleeing drought or conflicts arising over scarce water—will make it harder for climate change to be addressed as one stand-alone issue. For many who look to create a more equitable future, climate change is likely to become the context for their work.

Alongside and interwoven with these other crises, climate action will continue to be prioritized differently by different stakeholders. Organizations, political parties, activists, and incumbents will likely have different narratives about climate, about how much to prioritize climate relative to other goals, and about how to respond to multiple global crises.

Leaders should try to understand the different ways that climate could become more integral to their work—whatever that work is— and prepare to face climate crises alongside other economic, social, and political challenges.

What is still unclear:

- **Fatigue and fight**. It is unclear how those with resources will prioritize amongst a compounding number of crises. Our collective response could fall anywhere on a continuum from "crisis fatigue", that limits capacity for climate action, to renewed energy and creativity around solutions that address climate alongside other social crises.

4. Increased awareness of climate change will likely not be enough to reach alignment on climate action.

With the continued hard work of scientists, advocates, and community leaders, awareness of climate change has grown significantly over the past decade.[10] While there remains work to be done to increase awareness on climate change and how to take climate action, hastening the pace of climate action is not simply an information problem. Instead, greater climate action depends on public will and investment in taking it, as well as the critical, complex linkages between awareness and action.

One challenge is that individuals have a hard time engaging on the issue of climate change. Some see climate as so daunting that they are frozen into inaction. Clinically diagnosed anxiety due to climate-related issues are growing rapidly; and a recent global survey revealed that nearly 3 in 5 youth feel anxious, afraid, and/or powerless about climate change.[11] These feelings of anxiety can manifest into people taking renewed action to address climate change or, all too often, a sense of doom and resignation.

For others, climate is not viewed a top priority. Polling shows that much of the public views climate as an issue, but not one of their top priorities.[12] Another study suggested people see climate change as a problem, but not one they'd be personally willing to spend a lot of money to fix.[13] However certain groups, like young people, college graduates, and people exposed to environmental injustices do see climate change as a top priority.[14] In addition to decision paralysis and prioritization, a whole host of other barriers may hinder individual actions, including ineffective climate communication, difficulty in changing behavior, and concerns about higher costs.

Leaders will need to recognize that climate action is as much an alignment problem as a technical one. How organizations around the globe set priorities, finance climate action, and set the terms for collaboration and cooperation will drive critical climate action. Both individually and collectively, responding to climate change requires the willpower to do so. Individuals, organizations, and governments must continuously move from awareness to action.

What is still unclear:

- **Whether current mobilization and alignment practices are enough.** How to get people with different backgrounds and worldviews to align on climate action has been a difficult goal to accomplish thus far. Further, though individual action is critical, systemic levers will need to be pulled for meaningful emissions reductions to occur.

5. Climate impacts will disproportionately affect low-income and historically marginalized groups.

The consequences of climate change will increasingly be inescapable for everyone. These effects will also impact low-income and historically marginalized groups *first* and *worst*, widening many of the existing inequities, fissures, and flaws in our systems.

For instance, in the US, people in poverty are more likely to live in floodplains, which are at a greater risk of extreme weather events.[15] And the people living in these kinds of regions—those at greater risk of heat, floods, or agriculture failure—usually aren't there by happenstance. As Vernice Miller-Travis, Executive Vice President of The Metropolitan Group explains, "In many places all over the world, people live in ecologically vulnerable places not because they want to, but because it is the only place they have access to due to current and historical oppressions." Climate change will also exacerbate many existing health disparities, such as increased asthma rates, exposure to heat stress, and mental health needs.[16]

Ultimately, those with fewer economic resources are at greater risk of climate change. "Not only are people within these contexts ill-equipped to adequately prepare for these extreme events, but they're also ill-equipped to recover from them afterwards," noted Eliot Levine, director of the environment technical support unit at Mercy Corps.[17]

Organizational leaders should consider how issues of inequality and social equity could play into potential climate solutions. When developing plans, leaders can listen to those groups and communities most affected in order to incorporate more inclusive climate solutions.

What is still unclear:

- **Will enough people listen.** Climate solutions can be driven from the "top-down," with little input from communities. But that process misses real insights from groups who are proximate to the issues of climate change and have strong ideas for how to deal with it.

Economic

6. Climate change will increasingly hit economies, businesses, and peoples' pocketbooks directly; it will be most acute for those that can afford it least.

Absent significant and system-wide transformations, climate impacts will affect a wide swath of the economy, including global crop yields, supply chains, insurance, and natural resource availability and affordability. The effects are expected to be so far reaching that even wealthier or more insulated groups will feel and see impacts in their daily lives.

For those with fewer resources, these economic challenges will be even more severe. For instance, those working in jobs outdoors are expected to lose weeks of labor as summer temperatures rise to unsafe levels, and these workers are more likely to have lower incomes and education levels.[18] And those with fewer assets that are concentrated in higher-risk areas—like low-lying coastal areas, flood plains, and fire- and drought-prone regions—are at a greater risk of financial ruin as climate impacts grow more severe.

The effects of climate change will happen around the world, leading to significant disruptions for global consumers, businesses, and national economies. The disruption will be greatest for those with the least financial resources.

What is still unclear:

- **Who will pay for the costs of climate impacts.** As these costs add up, there will be continued pressure on governments to help shoulder the costs of climate impacts, for instance by stabilizing consumers' energy costs, intervening in insurance markets to ensure that families can insure their homes, and financing large-scale adaptation and rebuilding projects. Wealthier countries that historically or currently emit large amounts of carbon are already facing pressure to provide financial support for loss and damage to low- and middle-income countries. Though "loss and damage" funds now exist, the resultant size and scale of these efforts remains to be seen.[19]

7. Organizations will be under increased pressure to incorporate climate-related issues in their strategies.

Given the scale of the first and second-hand impacts of climate change, integrating climate action into organizations' strategies and operations will increasingly become table stakes. For some businesses, leading the way on climate action will become a lever to attract talent and capital—particularly as private finance deployed with a lens towards climate solutions continues to increase, and as new generations continue to prioritize purpose-driven companies that align with their values. Some businesses are responding by evaluating executives on their Environmental, Social, and Governance (ESG) performance. In the UK, close to half executives at the largest organizations have an ESG component built into their bonus structure.[20]

For other companies, changes will happen as a risk mitigation strategy. Of the S&P Global 1200, 40% of companies hold assets at high risk of physical climate change impacts.[21] Organizations should also prepare for greater regulatory, consumer, and employee pressures. For instance, over 80% of employers expect a rise in employee activism, much of which is focused on environmental and other social justice causes.[22] As this trend grows, organizations will be looking for ways to proactively manage headline and talent risks, often by incorporating these issues into their broader strategies.

Within the public and social sectors, organizations and agencies will see the first-order effects of climate change, such as more severe droughts, as well and the second-order effects, like people migrating from drought-stricken regions. These effects and impacts to people's lives may overwhelm existing plans and strategies, requiring a thoughtful and nimble response, as well as a greater emphasis on climate action in future strategies.

What is still unclear:

- **Whether green initiatives will be performative "greenwashing" or real action.** While climate will increasingly be part of companies' strategies, the level of investment and commitment is unclear. The potential of ESG efforts to shape companies' climate action also remains an open question. Similarly for philanthropic funders, climate may be incorporated into existing effort at a surface level without deep changes in the flow of resources.

8. The transition to a low-carbon economy will be complex. It will require upfront investment but stands to produce clear long-term benefits.

Making the transition to a low-carbon economy will require compressing a large-scale industrial transformation into an unprecedented timeline. Because each region is starting from a different point, the speed, upfront costs, and contours of that transformation will vary.

While the transition would require significant up-front investment, the Deloitte Economics Institute estimates that the global economy could see a net gain of $43 trillion (USD) by 2070, even after accounting for the required investment. But, if left unchecked, the economic costs of climate change are estimated at $178 trillion over the same time frame.[23] The alternative to investing in a low-carbon transition is not the current status quo, but rather a more pessimistic economic future and a weaker global economy.

As former CEO of ClimateWorks Foundation, Chris DeCardy shared, "Climate change is the epitome of a tragedy of the commons problem at a global scale. It has negative impacts that are far into the future and distributed, and costs that are close in and targeted." This will pose significant short-term challenges and require major investments across stakeholders—but, based on the data, these issues pale in comparison to the long-term costs of inaction.

While short-term metrics and key performance indicators often drive decisions, leaders will need to incorporate these longer-term benefits and risks as much as possible into their framing and decision making.

What is still unclear:

- **How the upfront investments are financed.** It remains uncertain how these upfront investments will be financed and at what level. Policy makers are looking toward a range of taxes, government debt, carbon fees, global agreements, and private investment to finance the transition and ensure fairness in the benefits and costs.

Technological

9. While widespread adoption remains low, we already have many of the core technologies needed to fight climate change.

While renewable energy sources only account for about one tenth of the world's energy consumption, these existing technologies can play a big role in reducing emissions.[24] Renewables like solar and wind have become even more cost-competitive and are already a cheaper energy source compared to conventional alternatives in many regions.[25] Nuclear power remains a potentially viable alternative as well but is currently politically contentious.

There have already been sustained decreases in costs of up to 85% for solar, wind, and batteries since 2010, which is a faster pace than many forecasts estimated. Correspondingly, adoption for solar technology has increased by a factor of 10 and for electric vehicles by a factor of 100 over the past decade as well, albeit from a low base.[26] Over the next decade, improvements in these technologies that raise efficiency and lower costs and investments in finding new technologies to accelerate a green transition are key to fighting climate change. Scaling existing and novel renewable and other carbon neutral technologies presents a viable path to meaningful emissions reduction.

Leaders can choose from a wide range of existing technologies and solutions available today to address climate change.

What is still unclear:

- **How attractive renewable technologies become relative to alternatives.** Choices about energy consumption aren't made in a vacuum—how competitive renewables are compared to higher-emissions counterparts will significantly influence behavior. The International Energy Agency says that new government policy and fiscal support are necessary to incentivize cleaner energy and infrastructure. [27] Relative levels of subsidy, for both renewable and traditional energy, will play a significant role in adoption.
- **How technology will be shared and financed.** The extent to which technology transfers and subsidies support marginalized communities in adopting renewable energy and other low- and no-carbon technologies remains uncertain.

10. Technological silver bullets won't solve climate change over the next decade, especially for the most marginalized populations.

Technologies that would precipitate a rapid transition to a low-carbon economy don't appear likely to reach commercialization and scale in the next decade. In fact, several of the most popularly discussed technologies (e.g., nuclear fusion, direct air carbon capture) are unlikely to reach scale before major climate-related hardships and permanent ecosystem loss occur.[28] A senior director of an academic lab studying the future of energy, affirmed that "we won't have a silver bullet by 2035. We need to keep building the technologies we do have and work on the systems for the future."

Even if advancements are faster than expected, newer technology solutions, like most innovations, will be expensive at first. Those with means will be early adopters, but most will only see the benefits of advancement once they become more affordable and accessible over time.

Leaders considering different climate solutions should be wary of waiting for breakthrough technology to "solve" climate change. While important advancements are possible and certainly worth developing, leaders shouldn't overlook current solutions that can address climate change today.

What is still unclear:

- **What new, transformative technological solutions may become viable over the long term.** New breakthrough technologies may emerge as a result of the investments that we make today, but relying on them to address climate impacts will result significant costs to ecosystems and societies in the interim.

Together these 10 baseline assumptions build the essential foundation of understanding that organizations will need to come to terms with—and hold onto—as they move ahead over the next decade. Thinking through how they will play out, provides important stakes in the ground to build scenarios that bring to life what climate action and social equity will look like through 2030. To read our four scenarios and additional content on equitable climate action, return to the full report here.

Endnotes

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