

perplexing disputes about vaccines generally.¹⁰ The last mile is long in every country.

Unequal, unjust access to Covid-19 vaccines is one of many inequalities that have weighed heavily throughout the pandemic. Indeed, those inequalities have helped fuel its spread. The groups most likely to be left behind have borne the brunt of its health and economic risks. Women and girls have shouldered even more household and caregiving responsibilities, while violence against them has worsened (see chapter 2 in the full Report).¹¹ Pre-existing digital divides have widened gaps in children’s education access and quality.¹² Some fear a “lost generation” of learners.¹³

For people everywhere the Covid-19 pandemic has generated questions without easy answers, foremost among them: When is this “over”? Answers have proved fleeting, often dashed by upticks in cases or the setting of new restrictions, forcing us back to square one. Global supply chains remain stubbornly knotted, contributing to inflation in all countries—and in some, at rates not seen in decades.¹⁴ The implications of unprecedented monetary and fiscal interventions aiming to rescue ravaged economies, many still scarred by the global financial crisis, remain largely uncertain. They unspool before us in real time and alongside resurgent geopolitical tensions. The pandemic is more than a virus, and it simply is not “over.”

With successive waves that have caught countries flat-footed time and time again, ongoing mutability and the seesawing of lockdowns, the Covid-19 pandemic and its seemingly endless twists and turns have—perhaps above all else—entrenched a climate of dogged uncertainty and unsettledness. And this is just one pandemic, having emerged seemingly out of nowhere, like a phantom that cannot be exorcised. We were long warned about the threat of novel respiratory pathogens.¹⁵ As we move deeper into the Anthropocene, we have been warned that there will be more.

A new uncertainty complex is emerging

The impacts of the Covid-19 pandemic on economies pale beside the upheavals expected by powerful new technologies and the hazards and transformations they pose. What do investments in people’s education and skills—a key part of human development—look

like in the face of the disorienting pace of technological change, including automation and artificial intelligence? Or in the face of deliberate, necessary energy transitions that would restructure societies? More broadly, amid unprecedented patterns of dangerous planetary change, what capabilities matter and how?

“The impacts of the Covid-19 pandemic on economies pale beside the upheavals expected by powerful new technologies and the hazards and transformations they pose

Recent years have seen more record temperatures, fires and storms around the world, alarming reminders that the climate crisis marches on, alongside other planetary-level changes wrought by the Anthropocene. Biodiversity collapse is one of them. More than 1 million plant and animal species face extinction.¹⁶ As much as the Covid-19 pandemic caught us by surprise, unprepared and fumbling for paths forward, we have even less of an idea of how to live in a world without, say, an abundance of insects. That has not been tried for about 500 million years, when the world’s first land plants appeared. This is not a coincidence. Without an abundance of insect pollinators, we face the mindboggling challenge of growing food and other agricultural products at scale.

Human societies and ecological systems have long influenced—and surprised—one another, but not at the scales and speeds of the Anthropocene. Humans are now shaping planetary trajectories,¹⁷ and the dramatically changing baselines—from global temperatures to species diversity—are altering the fundamental frame of reference humans have been operating under for millennia. It is as if the ground beneath our feet is shifting, introducing a new kind of planetary uncertainty for which we have no real guide.

Material cycles, for example, have been upended. For the first time in history, humanmade materials, such as concrete and asphalt, outweigh the Earth’s biomass. Microplastics are now everywhere: in country-sized garbage patches in the ocean, in protected forests and distant mountaintops and in people’s lungs and blood.¹⁸ Mass coral bleaching is now commonplace rather than extraordinary.¹⁹

The latest International Panel on Climate Change Report is a “code red for humanity.”²⁰ While we still

have the possibility to prevent excessive global warming and avoid the worst scenarios, human-induced changes to our planetary system are expected to continue well into the future. In essence, as science has advanced, the models are, with better precision than before, predicting more volatility.²¹

Any one of the rapid, planetary-level, human-induced changes of the Anthropocene would be enough on its own to inject frightening new uncertainties into the fate of not just individuals, communities or even nations, but of all humankind. Recall just a few decades ago when chlorofluorocarbons entered global consciousness. Or the insecticide known as DDT before that. Or nuclear proliferation before that (and, sadly, still today). The human-induced forces at work in the Anthropocene are not atomized or neatly sequenced. They are not islands of perturbations in a sea of relative stability. Instead, they are stacked on top of each other, interacting and amplifying in unpredictable ways. For the first time in human history, anthropogenic existential threats loom larger than those from natural hazards.²²

“The layering and interactions of multidimensional risks and the overlapping of threats give rise to new dimensions of uncertainty, if for no other reason than human choices have impacts well beyond our weakened socioecological systems’ capacities to absorb them

For this reason, in its portraiture of uncertainty, the Report does not build scenarios. Instead, it explores how three novel sources of uncertainty at the global level stack up to create a new uncertainty complex that is unsettling lives and dragging on human development (see chapter 1 in the full Report):

- The first novel uncertainty is associated with the Anthropocene’s dangerous planetary change and its interaction with human inequalities.
- The second is the purposeful if uncertain transition towards new ways of organizing industrial societies—purporting transformations similar to those in the transition from agricultural to industrial societies.²³
- The third is the intensification of political and social polarization across and within countries—and of misperceptions both about information and across groups of people—facilitated by how new digital technologies are often being used.²⁴

The layering and interactions of multidimensional risks and the overlapping of threats give rise to new dimensions of uncertainty, if for no other reason than human choices have impacts well beyond our weakened socioecological systems’ capacities to absorb them. In this new uncertainty complex shocks can amplify and interact rather than dissipate; they can be propagated in systems rather than stabilized by them.

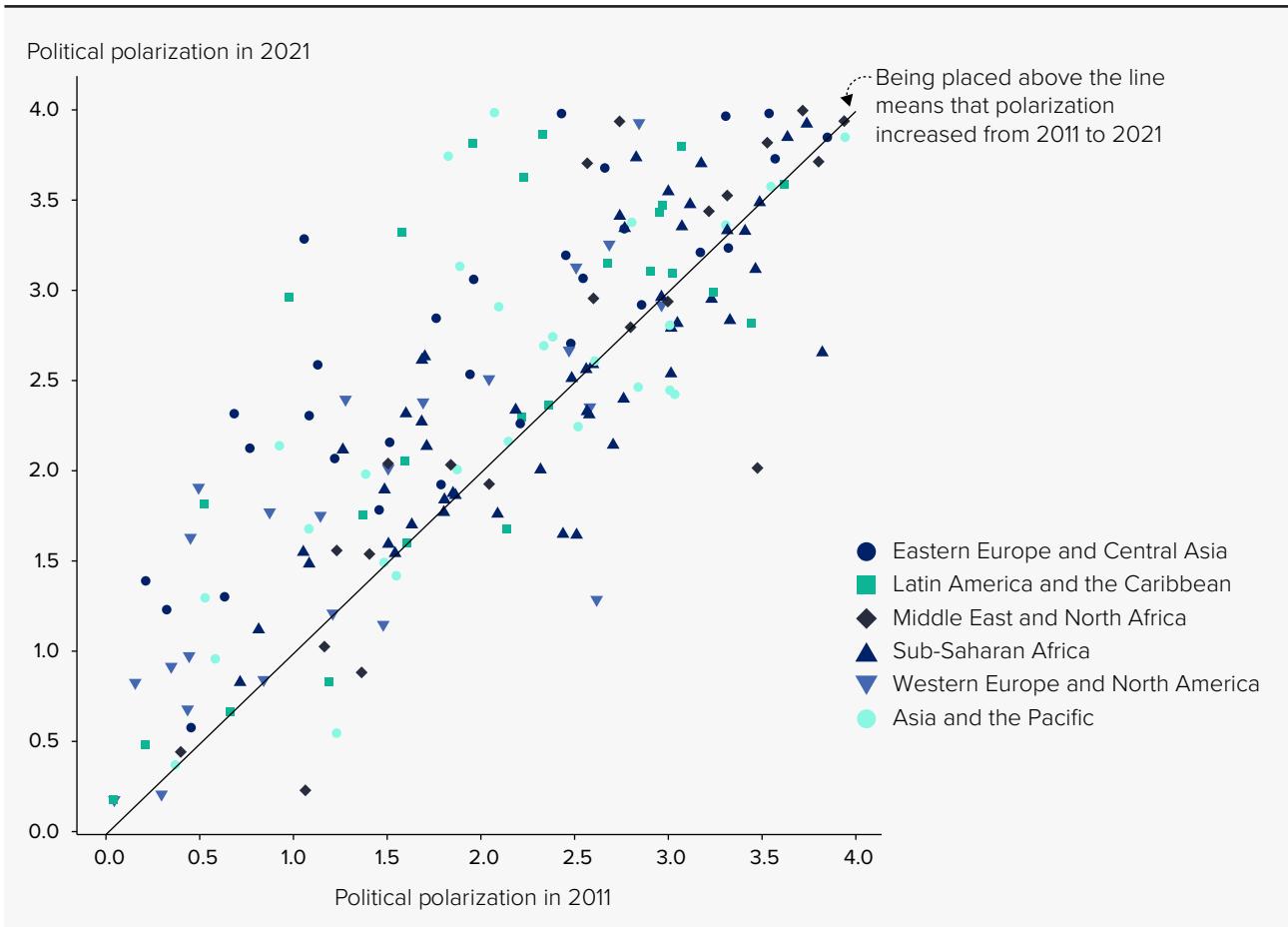
Human pulsing of natural systems at unprecedented intensities and scales is one side of the uncertainty coin. On the other are stubborn social deficits, including deficits in human development, which make it more difficult to navigate unpredictable outcomes and to dial down those pulses in the first place. Consider the Covid-19 pandemic, which has as much to do with inequalities, poor leadership and distrust as it does with variants and vaccines. Or competition for environmental resources, competition that does not typically break down into conflict. While stressed ecosystems can parallel grievances, grievances become conflicts due to social imbalances.²⁵ Political power, inequalities and marginalization contribute more to environmental conflict than does access to natural resources.

Political polarization complicates matters further (figure 4). It has been on the rise, and uncertainty makes it worse and is worsened by it (see chapter 4 in the full Report). Large numbers of people feel frustrated by and alienated from their political systems.²⁶ In a reversal from just 10 years ago, democratic backsliding is now the prevailing trend across countries.²⁷ This despite high support globally for democracy. Armed conflicts are also up, including outside so-called fragile contexts.²⁸ For the first time ever, more than 100 million people are forcibly displaced, most of them within their own countries.²⁹

The conjunction of uncertainty and polarization may be paralyzing—delaying action to curb human pressures on the planet. The real paradox of our time may be our inability to act, despite mounting evidence of the distress that human planetary pressures are causing ecological and social systems. Unless we get a handle on the worrying state of human affairs, we face the Anthropocene’s vicissitudes with one hand tied behind our backs.

Even when functioning properly, conventional crisis response and risk management mechanisms,

Figure 4 Political polarization is on the rise across the world



Source: Adapted from Boese and others (2022).

such as various forms of insurance, are not up to the task of global, interconnected disruption. The uncoordinated responses to the Covid-19 pandemic are a case in point. New strategies are needed for tail events synchronized at the global level. Addressing risk through diversification is difficult when volatility affects the entire system rather than only parts of it. Yet, numerous countries around the world have been steadily chipping away at risk sharing in many ways.³⁰ New forms of work and their uncertainties have become more important in technology-enabled gig economies. Altogether, insecurity has long been on the rise.

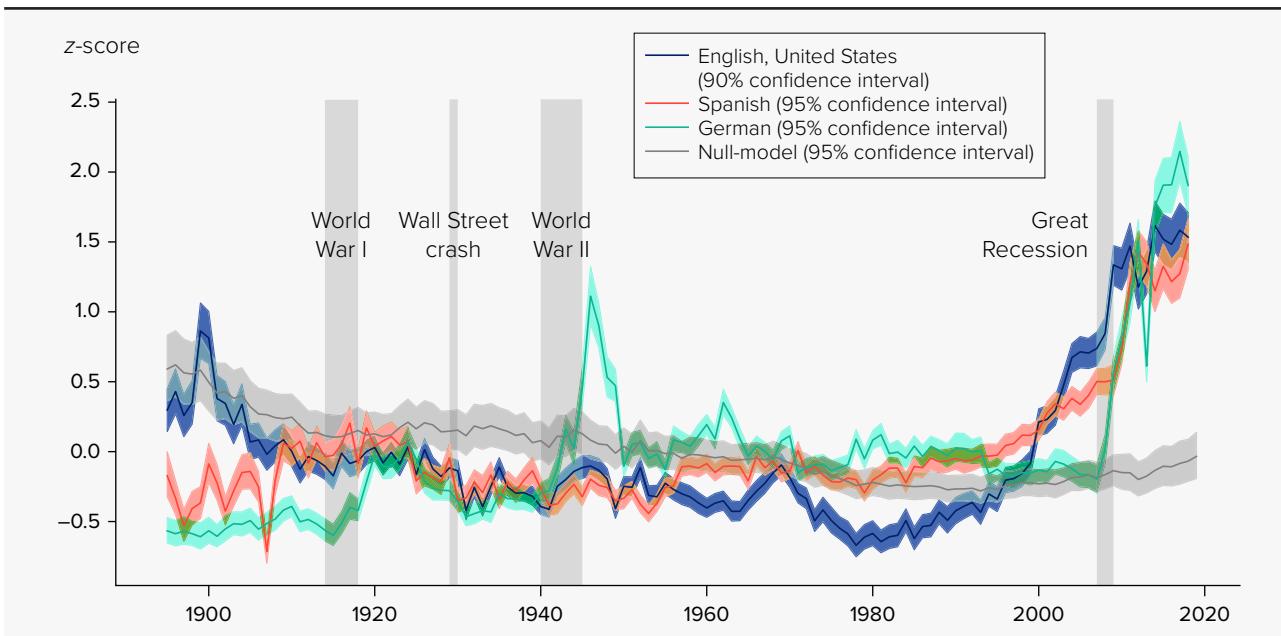
And it has been on the rise for some groups more than others. Against a backdrop of novel, interacting uncertainties, people with power, wealth or privilege have the means, to some degree, to protect themselves privately and to shift more of the burden on to others. The groups most likely to be left behind face a

world with complex new uncertainties in which most of those uncertainties are directed at them, heaped on persistent discrimination and human rights violations.³¹ It is not just that typhoons are getting bigger and deadlier through human impact on the environment; it is also as if, through our social choices, their destructive paths are being directed at the most vulnerable among us.

Feelings of distress are on the rise nearly everywhere

An analysis of more than 14 million books published over the last 125 years in three major languages shows a sharp increase in expressions of anxiety and worry in many parts of the world (figure 5).³² Other research on smaller time scales reports steady increases in concerns about uncertainty since 2012, well before the Covid-19 outbreak.³³

Figure 5 Negative news about the world surges to unprecedented highs



Note: Negative views are defined as textual analogues of cognitive distortions in one- to five-word sequences reflecting depression, anxiety and other distortions, published in 14 million books in English, Spanish and German over the past 125 years. The prevalence of these word sequences in publications are converted to z-scores for comparability. They are compared with a null-model that accounts for over-time changes in publication volumes and standards.

Source: Bollen and others 2021.

Earlier this year, the United Nations Development Programme's Special Report on Human Security found similarly troubling levels of perceived insecurity. Even before the Covid-19 pandemic, more than 6 in 7 people at the global level felt insecure.³⁴ Perceived human insecurity is high across all Human Development Index (HDI) groups, and it has increased, even in some very high HDI countries (figure 6). Polarization has moved in tandem in recent years. In parallel, there is a breakdown of trust: globally, fewer than 30 percent of people think that most people can be trusted, the lowest value on record (see chapter 4 in the full Report).

These and other data paint a puzzling picture in which people's perceptions about their lives and their societies stand in stark contrast to historically high measures of aggregate wellbeing, including long-standing multidimensional measures of wellbeing, such as the HDI and other indices that accompany this Report. In sum, twin paradoxes: progress with insecurity and progress with polarization.

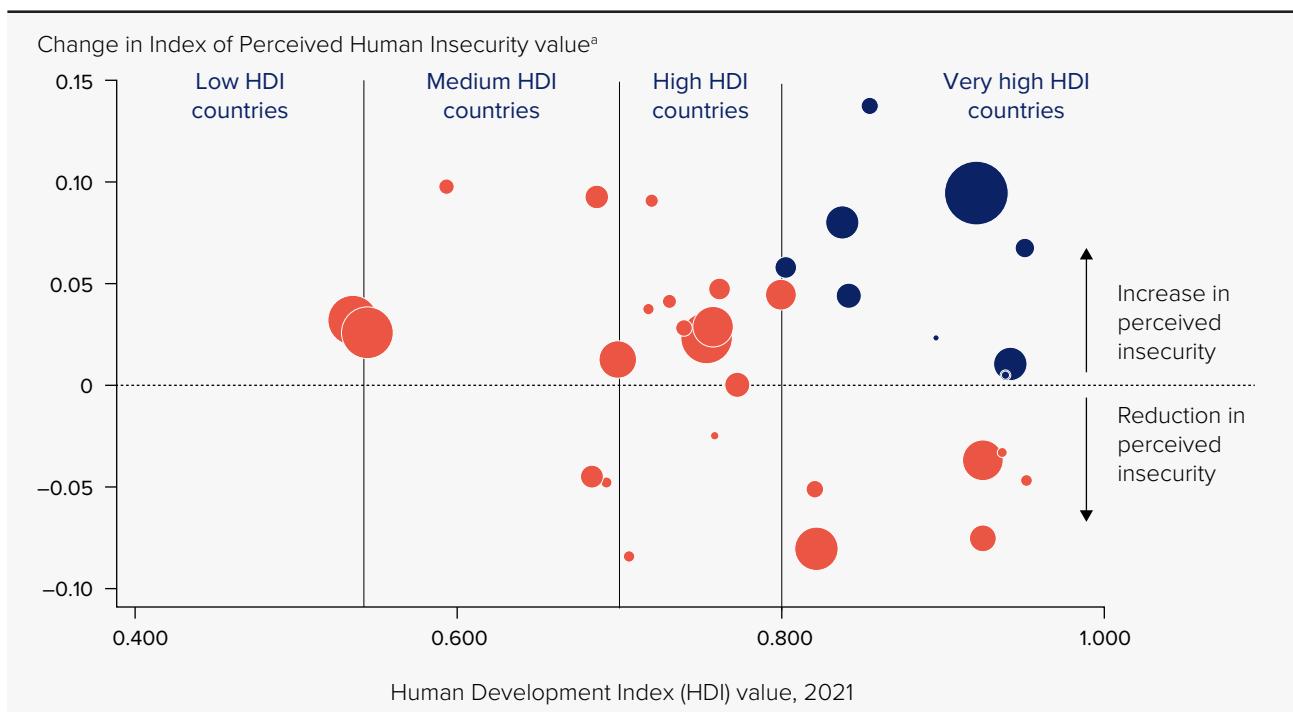
What is going on?

Too often the answer is reduced to fault-finding inquiries about whether the data or the people are wrong. Most likely, neither. Although people tend to express a holistic view of their lived experience, the questions

asked about their lives often focus on specific, measurable subsets of that experience: years of schooling, life expectancy, income. However important these metrics are—and they are—they do not capture the totality of a lived experience. Nor were they ever intended to reflect the full concept of human development, which goes well beyond achievements in wellbeing, such as reducing poverty or hunger, to include equally important notions of freedoms and agency, which together expand the sense of possibility in people's lives. Nor do individual achievements necessarily capture social cohesion and trust, which matter to people in their own right and for working together towards shared goals. In short, the twin paradoxes invite a hard look at narrow conceptions of "progress."

The 2019 Human Development Report emphasized going beyond averages to understand the wide and growing variation in capabilities within many countries. It identified widening gaps in enhanced capabilities, such as access to higher education and life expectancy at age 70, gaps that might also help explain the apparent disconnect between what people say about their lives and what we measure about them. These are not either-or explanations; all are possible, even probable.³⁵

Figure 6 Perceived human insecurity is increasing in most countries—even in some very high Human Development Index (HDI) countries



Note: Bubble size represents the country population.

a. Refers to the change in Index of Perceived Human Security value between waves 6 and 7 of the World Values Survey for countries with comparable data.

Source: UNDP 2022.

Capabilities face more volatile futures while becoming ever more important for helping people navigate the systemic uncertainties of a new epoch. Achieving gains may become harder, securing them harder still. Backsliding may become more sudden or common or both; it has already become evident during the Covid-19 pandemic. For the first time on record, the global HDI value declined, taking the world back to the time just after the adoption of the 2030 Agenda for Sustainable Development and the Paris Agreement. Every year a few different countries experience dips in their respective HDI values. But a whopping 90 percent of countries saw their HDI value drop in either 2020 or 2021 (figure 7), far exceeding the number that experienced reversals in the wake of the global financial crisis. Last year saw some recovery at the global level, but it was partial and uneven: most very high HDI countries notched improvements, while most of the rest experienced ongoing declines (figure 8).

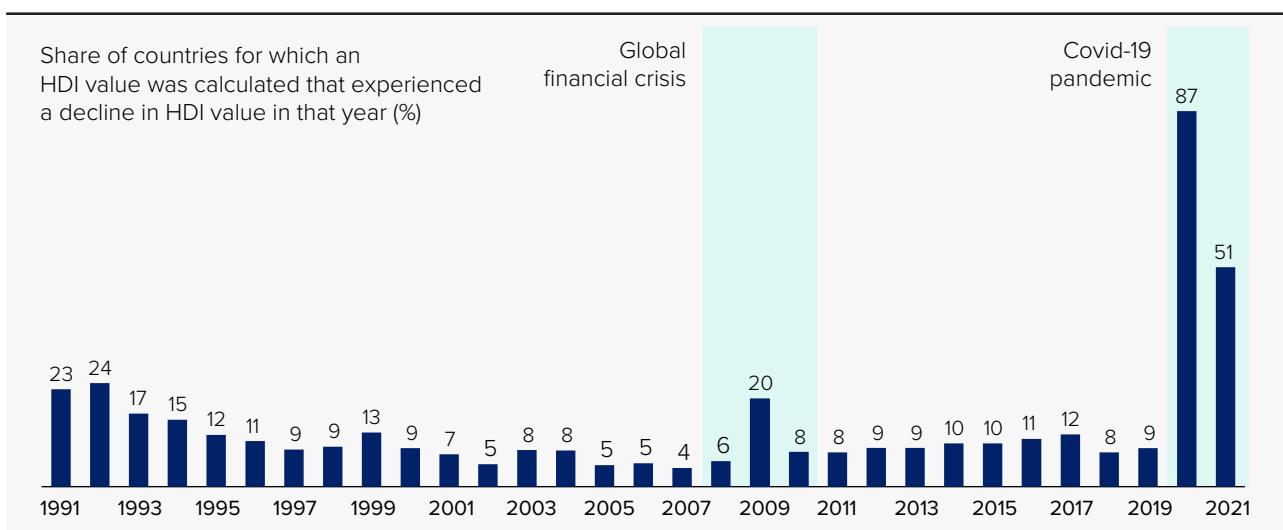
The goal of human development is to help people lead lives they value by expanding their capabilities, which go beyond wellbeing achievements to include

agency and freedoms. If uncertainty forms storm clouds over all aspects of human development, then it hurls lightning bolts at the idea of agency. It can disempower. Choices mediate the translation of one's values and commitments into achievements, but the idea of choice becomes ever more abstract, no matter how formally educated or healthy we may be, if we doubt that the choices we make will yield the outcomes we desire. Losing perceived control rather than simply not having it in the first place has its own negative consequences, as do the knock-on effects: a tendency to identify culprits or villains, a distrust of institutions and elites, and greater insularity, nationalism and social discord. Uncertainty can turn up the heat on a toxic brew.

Technology use is a double-edged sword

Powerful new technologies turn it up further. From the news, products and advertisements served up to us to the relationships we build online and in real life, more and more of our lives are being determined

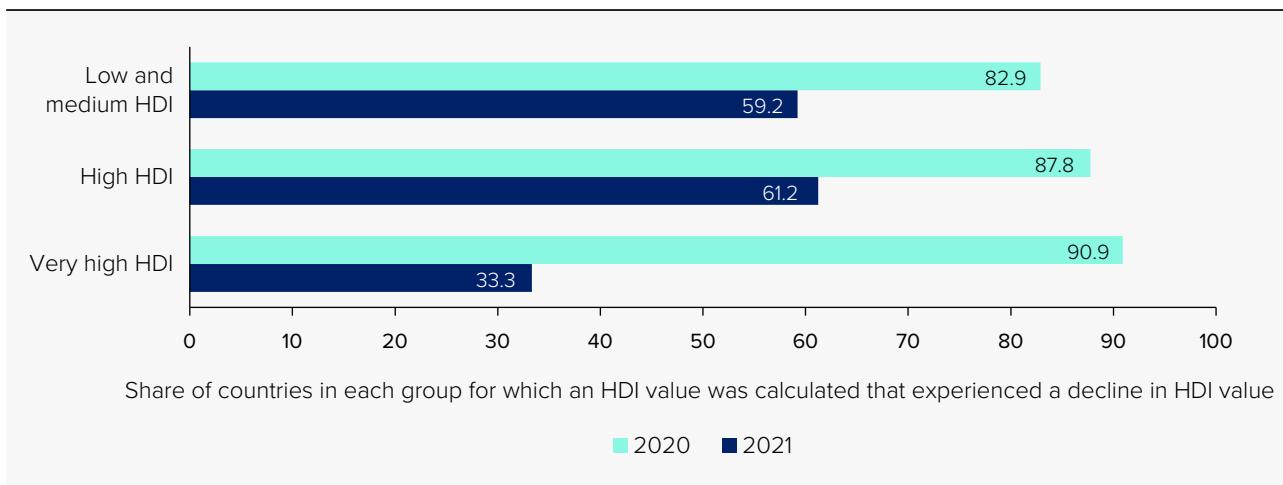
Figure 7 Recent declines on the Human Development Index (HDI) are widespread, with over 90 percent of countries enduring a decline in 2020 or 2021



Note: The period of the global financial crisis is indicative.

Source: Human Development Report Office calculations based on data from Barro and Lee (2018), IMF (2021b, 2022), UNDESA (2022a, 2022b), UNESCO Institute for Statistics (2022), UNSD (2022) and World Bank (2022).

Figure 8 Almost all countries saw reversals in human development in the first year of the Covid-19 pandemic, most low, medium and high Human Development Index (HDI) countries saw continued declines in the second year



Source: Human Development Report Office calculations based on data from Barro and Lee (2018), IMF (2021b, 2022), UNDESA (2022a, 2022b), UNESCO Institute for Statistics (2022), UNSD (2022) and World Bank (2022).

by algorithms and, in particular, by artificial intelligence. For people who are online, every aspect of their lives becomes commodifiable data, raising worrying questions about who has access to what information, especially sensitive personal information, and how it is being used.³⁶

The political, commercial and personal all get mixed together in social media, which is full of loud echo chambers because they draw eyeballs, which draws

advertising and other revenues. At least half the online noise is from bots designed to stir the pot.³⁷ Misinformation moves faster and farther than information that has been subjected to reasoned scrutiny, sowing distrust and fanning perhaps the gravest kind of uncertainty: not knowing how to distinguish between the two. Making the distinction goes beyond clear-cut objectivism or the reliance on an agreed set of universal facts, scientific or otherwise. Motivated reasoning,

in which people select facts, experts and other trusted sources of information that confirm their already-held beliefs, is widespread across political spectra and education levels (see chapter 3 in the full Report). Polarization can take dangerous forms when different groups operate with entirely different sets of facts and, thus, realities, especially when those realities are bound up with group identities. Technologies then turn mere disagreements into pitched battles for survival (see chapter 4 in the full Report).

Given the ways technology use can aggravate at the societal level, its harmful effects at the community and individual levels may come as no surprise. As it is in so many parts of our lives, technology is a double-edged sword. Artificial intelligence will both create and destroy tasks, causing tremendous disruption. Synthetic biology opens new frontiers in health and medicine while raising fundamental questions about what it means to be human. From the invention of writing to Gutenberg's printing press to Marconi's first radio transmissions, technologies have been connecting people ever faster in new ways, now instantaneously and across great distances. Today, telemedicine is especially valuable in digitally connected rural areas and has been vital for mental and physical health during the pandemic.³⁸

At the same time, rather paradoxically, technology can isolate. Internet use has been found to reduce offline interaction, political participation and various forms of civic and cultural engagement.³⁹ The consequences of substituting the digital for the real are complex and will be made more so as virtual worlds—the metaverse—take up more real estate. Cyberbullying is an issue on social media, and angry Twitter mobs, mobilized sometimes by disinformation, can digitally tar and feather someone faster than in real life. Sometimes that spills over into real-life violence or into real-life policy. Digital addiction is a real concern. Random rewards in the form of likes on Instagram or TikTok or the adrenaline rush of clickbait are essentially cognitive hacks that lie at the heart of most real-life casinos (see chapter 2 in the full Report).⁴⁰

Mental wellbeing is under assault

Mental wellbeing is an important, complex issue globally without any single driver, technological or otherwise. Mental distress, whose prevention is a

critical aspect of overall mental wellbeing, is aggravated by uncertainties and insecurities of all stripes: by major Anthropocene phenomena, such as climate change; by age-old scourges of discrimination, exclusion, conflict and violence; and by relatively newer entrants, such as social media and other technologies.

The uncertainties of the Anthropocene are expected to undermine people's mental wellbeing through four main pathways: traumatizing events, physical illness, general climate anxiety and food insecurity (see chapter 2 in the full Report). The effects these and other pathways have on children in particular are profound, altering brain and body development, especially in families on lower social rungs, potentially diminishing what children can achieve in life. The 2019 Human Development Report explored how inequalities in human development are perpetuated across generations;⁴¹ it is not difficult to see how the confluence of mental distress, inequality and insecurity foment a similarly injurious intergenerational cycle that drags on human development.

“The uncertainties of the Anthropocene are expected to undermine people's mental wellbeing through four main pathways: traumatizing events, physical illness, general climate anxiety and food insecurity”

Violence—even the threat of violence, its uncertainty—is a major driver of mental distress. Some survivors of and witnesses to violence suffer trauma, which if not addressed properly can develop into post-traumatic stress disorder, among other chronic health conditions, that can weigh heavily on the choices available to them. Violence may be directed at one person or group of people, but it affects everybody in its blast radius. Even perpetrators of violence can suffer trauma due to the violent setting that often surrounds them, as with organized crime or gang violence.⁴²

The losses exacted by violence extend well beyond direct physical, mental and emotional injury or trauma. Violence can cause and exacerbate all kinds of insecurities—food, economic and so forth—that are themselves major drivers of mental distress. Many kinds of violence, from interpersonal violence to organized crime to armed conflict, perniciously undermine trust in people we know and in people we do not

know. Breakdowns in trust may then beget more instability, more violence.

“Mental disorders weigh on human development in many ways. A health issue themselves, they are often linked to other health challenges. They can impede school attendance and learning, as well as the ability to find a job and be fully productive at it. The stigma that often accompanies mental disorders makes matters worse

Then there is the loss of agency due to violence. The complex interplay of forces, rooted in asymmetries of power, is powerfully at work in intimate partner violence, whose survivors are predominately women and which is correlated with some measures of women’s economic dependence (see chapter 2 in the full Report). Channels of dominance at the societal and institutional levels can take concentrated, wicked forms—especially for women, children and older people—behind what are meant to be the safe walls of a home, leaving those subjected to domestic abuse with either the perception or the reality of no escape. The ensuing entrapment of people violates human rights, constrains agency and ultimately undercuts our collective ability to navigate a turbulent new era.

As it has been in so many ways, the Covid-19 pandemic is ominously illustrative. During the first year of the pandemic, the global prevalence of depression and anxiety increased by more than 25 percent.⁴³ Low-income people, especially those who struggle to afford basic needs such as rent and food, suffered disproportionately in several countries.⁴⁴ Women, who assumed most of the additional domestic and care work that emerged during school closures and lockdowns,⁴⁵ faced much higher mental distress than before the crisis.⁴⁶

Stressors need not reach the level of globalized trauma to cause mental distress. In fact, one of the most serious economic threats to mental wellbeing seems to stem from repeated financial shocks, such as income loss, especially for poor people and for men.⁴⁷ Economic insecurity—or just the perception of such insecurity, even if transitory—is a major factor. Mental distress is one reason why economic dislocations, whether from globalization or automation or phasing out fossil fuels, carry some large, underappreciated risks.

Mental disorders, such as post-traumatic stress disorder and depression, can develop when mental distress is severe and untreated. Almost 1 billion people—roughly one in eight of us—live with a mental disorder,⁴⁸ providing a lower-bound estimate of the broader problem of mental distress. Globally, mental health issues are the leading cause of disability. Yet, of those who need mental health attention or treatment, only about 10 percent receive it.⁴⁹ On average, countries spend less than 2 percent of their healthcare budgets on mental health.⁵⁰

Mental disorders weigh on human development in many ways. A health issue themselves, they are often linked to other health challenges. They can impede school attendance and learning, as well as the ability to find a job and be fully productive at it. The stigma that often accompanies mental disorders makes matters worse. Mental disorders are uniquely challenging because the primary instrument to navigate life’s challenges—the mind—is precisely the thing that people living with a mental disorder may not be able to rely on. The other thing we tend to rely on is relationships. If those also suffer, people are left even more isolated and vulnerable.

Purposeful transformations introduce their own uncertainties

Today’s new uncertainty complex is not just about the planetary pressures of the Anthropocene and political and social polarization; it is also about purposeful societal transformations that seek to ease planetary pressures and leverage the positive potential of new technologies (see chapter 1 in the full Report). From energy systems to food production to transportation, easing planetary pressures demands fundamental changes to much of the way the world currently operates. It is a necessary, wildly worthwhile investment—ethically, environmentally, economically—but it comes with its own significant uncertainties, especially for economies, livelihoods and pocketbooks.⁵¹

The energy transitions required to confront the climate crisis would be challenging even in the best of times. They become more so when stacked on top of inequalities and social fragmentation, the rapid clip of technological disruption and dangerous planetary change. The backlash in some countries to various

forms of energy taxation or carbon pricing is a case in point. However welcome new renewable energy technologies may be at competitive market prices, they carry their own environmental costs and risks, including those related to mining to supply the materials for the world's solar panels and wind turbines.⁵²

People rightly worry about winners and losers when big change is on the horizon. Yes, the green economy could add more than 24 million jobs worldwide by 2030.⁵³ This is an exciting opportunity for people and planet. But these jobs will not necessarily be in the same regions that stand to lose jobs as fossil fuel industries shut down. Nor will they require the same skills as a fossil fuel-based economy. No one seems especially interested in a bigger overall pie if his or her piece is feared to be getting much smaller.

Nor do people need forecasts or history books to know that societal transformations—however well planned or not, however “good” or not—can radically reshape the communities they live in, often in unexpected ways where “do-overs” are not possible if things go wrong. Many around the world have lived through transformations, some ongoing, in their lifetimes. They see them with their own eyes. The transformations in energy and materials required now in the Anthropocene portend even more upheavals, which some believe to be as large as the shift from agricultural to industrial societies.⁵⁴

Whether it is the advent of agriculture or the Industrial Revolution, previous tectonic shifts have typically stretched across multiple generations. Now, they can happen within a generation, in a matter of years, introducing a new kind of uncertainty or worry. Whether through foresight or experience, that will influence how people think about and invest in their lives, families and communities and hold their leaders accountable. These are not reasons to give up on a green economy; we cannot afford to throw in the towel. But if we do not understand people’s present and future anxieties and address the underlying drivers, if we do not build trust and the promise of a better future, progress towards purposeful, just, sustainable transformations is going to be even harder.

The net result of today’s uncertainty complex on development is profound. We might be facing a growing mismatch between what is needed to navigate novel, interacting uncertainties and the current state of affairs, categorized by social arrangements (what to

do—in terms of policies, institutions) and the behaviours shaped by social context, culture and narratives (how to do it—in terms of prevalent identities, values and beliefs). The interplay of forces—their scales, speeds, unknown interactions and consequences—have made development pathways simultaneously far less obvious and far more open. What should happen next can no longer be taken for granted. A linear march of progress in which low-income countries chase higher income ones is less relevant. In a sense all countries are developing countries, charting a new planetary course together, regardless of whether they work together to do so.

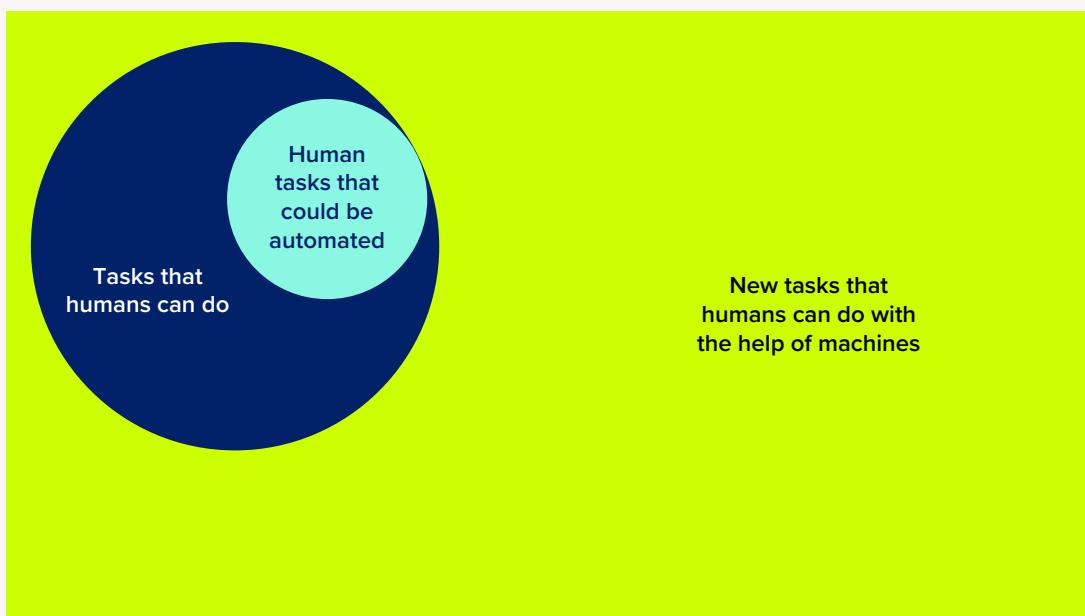
“In a sense all countries are developing countries, charting a new planetary course together, regardless of whether they work together to do so

The question is no longer simply how some countries get from point A to point B; instead, it is how all countries start moving from wherever they are to points N, T or W—or letters in some new alphabet—and then course correct along the way. Development is perhaps better seen as a process characterized both by adapting to an unfolding unknown reality and by purposefully transforming economies and societies to ease planetary pressures and advance inclusion.⁵⁵

There is promise and opportunity in uncertainty

If necessity is the mother of invention, then the very forces that give rise to today’s uncertainties also offer the means to navigate them. Uncertainty engenders the possibility of change, also for the better. Consider artificial intelligence, a disruptive opportunity at least as much as a disruptive threat. Its potential for enhancing labour is bigger than its potential for automating it. New tasks, new jobs, new industries are all possible (figure 9). Recall that most jobs came into being in part through the task-creating effects of new technologies: around 60 percent of people in the United States are now employed in occupations that did not exist in 1940.⁵⁶ We do not, however, have the luxury to wait around for the long run. The negative displacement impacts of artificial intelligence are too big, too likely and too fast, especially if labour-replacing incentives dominate its development. Policies and institutions

Figure 9 There is much more scope for artificial intelligence to augment human activity than to automate existing tasks



Note: Figure is illustrative.

Source: Human Development Report Office based on Brynjolfsson (2022).

must be put into place that nudge artificial intelligence towards people rather than away from them, to unlock and frontload its potential for positive transformation.

We are already witnessing artificial intelligence's upside in many areas (see chapter 5 in the full Report). Among its many climate-related applications, it aids in modelling climate change impacts and in predicting disasters. In education it can facilitate individualized learning and enhance accessibility. In biology it has revolutionized protein folding prediction, a huge boon for medicine.⁵⁷

Among the many things the Covid-19 pandemic broke open was our imaginations. It expanded the reference points for what is possible (see chapter 5 in the full Report). Consider the rapid development and distribution in many (but not all) countries of safe, effective Covid-19 vaccines, some based on new mRNA technologies that hold promise for preventing and treating many other diseases. The pandemic normalized paid sick leave, voluntary social distancing and self-isolation, all important for our response to future pandemics.

The interventions by central banks over the past two years dwarf their interventions in the wake of the global financial crisis about a decade earlier. Fiscal

policy saw a sea change, too. Social protection has surged, protecting many people from even worse impacts of the Covid-19 pandemic while providing large-scale test cases of innovative ideas: linking national registries and databases for eligibility determination; expanding coverage to previously uncovered beneficiaries, such as refugees, migrants and informal workers; and adopting digital verification and delivery systems, among other pathbreaking steps.⁵⁸

Civil society has been breaking new ground, too. In many places the Covid-19 pandemic galvanized civil society organizations to deliver emergency responses, in some cases taking on new functions.⁵⁹ In response to expanded emergency government powers, some civil society entities have beefed up watchdog activities, and still others are pushing to address social, economic and political imbalances laid bare by the pandemic.

As the Covid-19 pandemic has shown, the growing mismatch between the world as it is (or is becoming) and conventional ways of understanding and doing things, such that more and more of life lacks an obvious compass or structure, can be seen as an opportunity to do something new. It can be an opportunity to imagine, experiment and create, in ways similar to

the work of a scientist or artist. Existing institutions can be transformed, and new ones created, alongside new leaders, social movements and norms. Much like many scientists and artists, who are often responding to practical personal and societal concerns, this process of ongoing, creative reconstruction at all levels is a practical response to today's uncertainty complex. We will have to find ways to renew, adapt and create institutions in the face of their inevitable shortcomings in an unpredictably changing world. We will have to experiment, to cooperate, in order to thrive.

If we do not—if we reinforce the status quo, when the status quo is part of the problem, or limit our aspirations to a “return to normal”—the gap between a changing world and intractable norms and institutions will widen to a chasm. Opportunities for innovation and good leadership then increasingly become dangerous vacuums in power where the allure of simple recipes and the easy gratifications of finger pointing combine to make the problem worse. There is promise and peril in uncertainty and disruption; tipping the scales towards promise—towards hope—is up to us.

An evolving portfolio of perspectives helps in a world of worry

Tipping the scales towards promise requires that we keep testing the fences of conventional thinking, to embrace an evolving portfolio of perspectives from which to draw, mixing and matching as emerging contexts require. For instance, policies and institutions at all levels need to go beyond assuming that people are only, or even predominantly, self-interested (see chapter 3 in the full Report). This assumption remains highly relevant, but it does not encompass the totality of human behaviour. Its limitations have been highlighted and addressed, at least partially, by complementary and pioneering work in behavioural economics. Still, we must reach for broader perspectives of human decisionmaking, ones that consider the roles of emotions and culture and that explore how people weave together and change value-infused narratives about themselves and the various communities they belong to. For example, our relationship with nature needs renovation, and cultural narratives are the foundation.

“To respond creatively and nimbly to today's uncertainty complex, we need to bring down barriers to people's imaginations, identities and networks, to expand the idea of what is possible in people's lives

Just as we must widen the vista on human behaviour, notions of human development must go beyond a focus on wellbeing achievements, however important they still are, to include the vital roles of agency and freedoms in helping people live lives that they value (see chapter 3 in the full Report). Doing so illuminates the apparent paradoxes of our age: progress with insecurity and progress with polarization. A comprehensive embrace of human development can act as a lodestar through turbulent times when cookie-cutter policy lists simply will not do. To respond creatively and nimbly to today's uncertainty complex, we need to bring down barriers to people's imaginations, identities and networks, to expand the idea of what is possible in people's lives. While crises can present opportunities for pathbreaking action, we will be better off operating deliberately and proactively rather than in a chronic state of emergency response. In an age of layered and interacting uncertainties, freedoms may not translate reliably into desired achievements or outcomes. That is the unfortunate news. But individuals, families and communities can be empowered to experiment, to try new things, for their benefit and for others, without fear of being trapped in poverty, in a single identity or in one cultural narrative.

Rigidities in their many dimensions—in ideas, in networks, in narratives—act as a vise on human creativity; they constrain the generation of new ideas in response to a changing world. Agency and freedoms are antidotes. Policies, institutions and cultural change that promote them tend to be fostered by cultivating four motivating principles: flexibility, solidarity, creativity and inclusion (see also chapter 6 in the full Report). These principles, which can reinforce one another, will go a long way in making policies and institutions more fit for purpose.

The four principles can also have their own internal tensions. Building systems with some stabilizing redundancies, for example, needs to be balanced against nimble response capacities. Still, it is hard to be quick on one's feet if one is constantly getting knocked over by a financial meltdown, novel virus or

monster hurricane. Similarly, there is a give and take to creative exploration and concerted, purposeful action anchored in human rights. Striking the right balance among the four motivating principles will be key, and trust is essential to doing so. People will be suspicious of the negotiation table if they fear that the chair will be constantly jerked out from under them. Policy development will be an iterative, trial-and-error process in which we must all learn from each other.

Policies and institutions to invest, insure and innovate

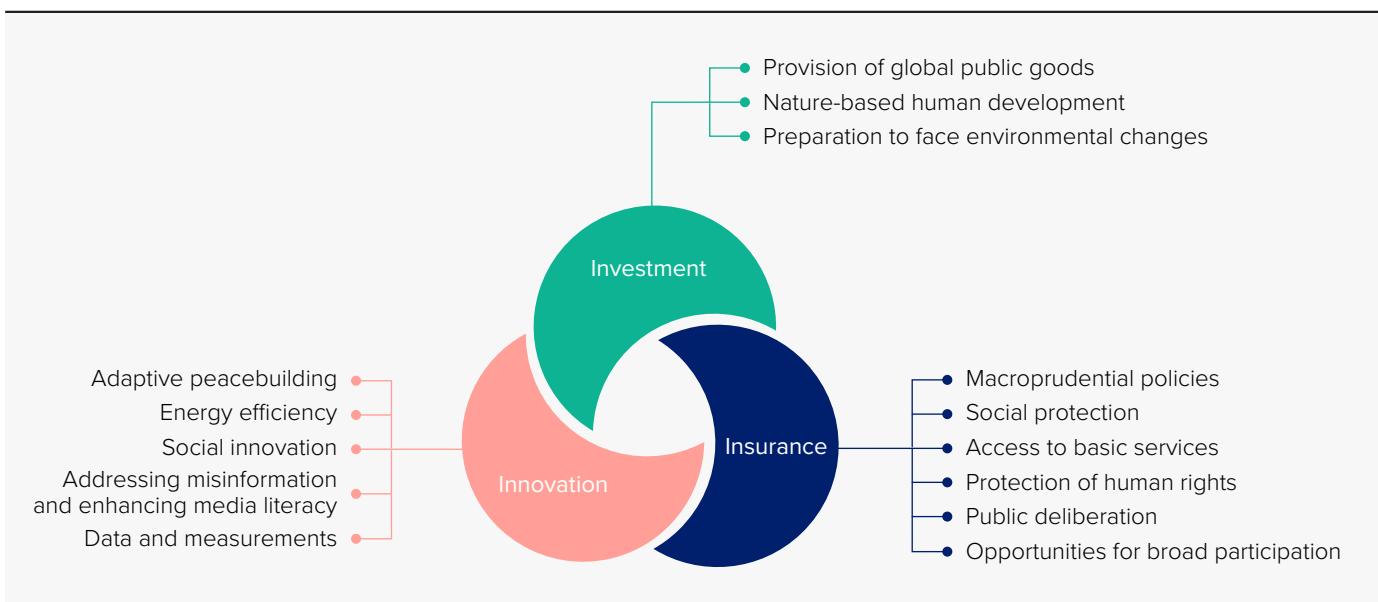
There are no policy panaceas, no one-size-fits-all approaches. Even so, some policies form the building blocks for countries and communities as they navigate today's uncertainty complex towards more hopeful futures. They fall into three overlapping, mutually reinforcing categories: investment, insurance and innovation—the Three I's (figure 10; see also chapter 6 in the full Report).

Investment should connect the dots. Nature-based human development can protect and enhance natural resources while protecting people from shocks, promoting economic and food security and expanding the choices available to them. Such investments are especially relevant at the local level, speaking to the

need for investing in governance that is connected to people on the ground, that builds bridges among policy and institutional silos and that ensures all voices are heard. Investments are needed, too, on the other end—in global public goods. The new uncertainty complex is often driven by global phenomena, so responding to it can require global cooperation. The additional investment to avoid future pandemics is estimated to be only \$15 billion a year.⁶⁰ This is a tiny fraction of the economic cost of the Covid-19 pandemic, a cost that exceeds \$7 trillion in lost production and \$16.9 trillion in emergency fiscal responses.⁶¹ Investments in global pandemic preparedness make good sense, given the devastating human costs.

Insurance provides an essential stabilizing force in the face of uncertainty. To start, structures that manage a variety of risk in people's lives, primarily in various forms of social protection, need to be revitalized and modernized, including for people in informal or other precarious employment, such as gig workers. We need to reverse course away from risk segmentation and move towards a broader sharing of risk. More countercyclical social protection measures can be automatically triggered by certain indicators, such as the loss of a job or a drop in income, while ensuring their inclusivity. Such measures played important roles in many countries in protecting people from some of the worst impacts of the global financial

Figure 10 Making people more secure through investment, insurance and innovation



Source: Human Development Report Office.

crisis and the Covid-19 pandemic. One of the benefits of automatic triggers is that they require less political wrangling at already stressful moments, helping target political capital to the unique features of a new challenge rather than continually plugging holes in leaky safety nets.

Universal basic services, such as health and education, are important investments in their own right, as evidenced in the Sustainable Development Goals, and for inclusively expanding human development. They also afford an important insurance function, helping stabilize people in the face of seemingly relentless shocks. This can encourage experimentation. People are loath to try new things if doing so risks their or their family's health and education and threatens to yank them irreversibly down a yawning socioeconomic ladder.

“Innovation will be at the heart of successfully navigating the many unforeseen, unknowable challenges ahead

Investments in preparedness, not just for shocks but also for societal transitions, can be well worth the cost. Equally important are investments in promoting and protecting human rights and in deliberative mechanisms that enable public reasoning in a participatory, inclusive way. Together they help insure against polarization.

Innovation will be at the heart of successfully navigating the many unforeseen, unknowable challenges ahead. Some readymade tools will help, others will be modified and updated for new contexts and still others will be built from scratch. In part, innovation has to do with new technologies and ensuring that they reach everyone. Computational capacities amounting to millions of Apollo missions to the moon are now in the hands of everyone with a smartphone, which is just about everybody.⁶² In developing countries mobile phones have reshaped financial transfers and access to information, such as weather forecasts and wholesale market prices. New insurance models are needed that respond to complex new risk paradigms: risks that are increasingly synchronized across geographies and sectors, that span generations and that harm natural resources.

The “right” role for governments in innovation is an important question, and governments have big

roles in fostering climates for innovation. There was widespread support when governments threw their full weight behind Covid-19 vaccines, committing to staggering prepurchase orders of then-unproven technologies. Governments were a driving force and active development and distribution partner throughout, ushering in and deploying a lifesaving new technology at astonishing speed. (The contrast with the relatively anaemic action on climate change, no less an emergency than Covid-19, is stark.) Innovation policy frameworks, which are intimately tied to other areas such as competition and patent laws, have enormous implications across sectors, from access to medicines and energy to food and water security.

Innovation does not have to be big to produce big results. Major social media platforms have enacted policies such as notices, warnings and links to resources in a bid to combat misinformation. For example, links to official information by the World Health Organization are suggested under posts mentioning Covid-19 on Instagram, Facebook, YouTube and TikTok. Twitter reminds users when they are sharing an article without opening the link first (see chapter 4 in the full Report). Fact-checking initiatives have been created by users on these same platforms, and media plurality has been strengthened through new and independent outlets that could not exist or have the means to inform in the traditional media landscape, often at the local and grassroots levels. Governments can also take prudent steps to combat misinformation while respecting and promoting people’s human rights and freedoms.

Sometimes the answer might not be complex. The simple addition of the retweet button on Twitter has enabled information, including misinformation, to go viral. Modifying its use, as some have argued, could go a long way in curbing some of the more troubling features of social media.⁶³ Course correcting in this way—practical solutions to practical problems—will be key to navigating the new uncertainty complex.

Innovation is more than technologies as we understand them conventionally in terms of vaccines or smartphones. Equally important is social innovation, which is a whole-of-society endeavour. Adaptive peacebuilding, which focuses on emergent bottom-up, participatory processes rather than adhering to a set recipe, is a case in point.⁶⁴ Much can be

learned from its application in Rwanda for healing, transitional justice and conflict resolution (see chapter 6 in the full Report).

Cultural change opens opportunities for collective action

Policies and institutions are embedded in social contexts, so aspects such as narratives matter a lot, too. Everyone is immersed in social contexts, with culture understood not as a fixed variable working in the background but as a toolkit that changes over time and that individuals and groups use strategically in society.

When it comes to choices about the future, people appear to be motivated less by accurate scenarios of what the future may hold than by collectively held narratives.⁶⁵ Much of the current information about the future, in the form of assessments, such as those issued by the Intergovernmental Panel on Climate Change or Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services,⁶⁶ are anticipatory. As crucial as they are, it is important to consider also having assessments towards imagining more desirable futures.⁶⁷

The importance of culture is finding its way into many other areas, including economics and law. The work of Robert Shiller explains dynamics in asset prices as well as business cycles in terms of “narrative economics.”⁶⁸ Karla Hoff and James Walsh suggest that law affects behaviour not only by changing incentives and information (a coordination function) or through its expressive role (as a guidepost for social norms) but also with the potential to change cultural categories.⁶⁹

Shifting culture, for good or ill, is possible and can happen quickly. Education can be a powerful tool to open the potential for new perspectives in younger generations, not just through curricula but also by envisaging schools as spaces of inclusion and diversity. Social recognition by elites of all types, from politicians and celebrities to social media influencers and community leaders, is an important mechanism for cultural change. Media in its many forms plays a big role here. In Bangladesh a popular animated television show reduced the cultural and religious stigma of girls going to school in rural areas and increased their attendance.⁷⁰ In Ghana and Kenya the Time to

Change campaign made inroads into reducing mental health stigma.⁷¹

The issue is not just about recipients of programmes or target audiences but also about who is deciding on and delivering the messages. For example, women’s representation in political bodies shifts policy priorities and expands aspirations for other women and girls. Social movements have important roles as well in advancing human rights and changing cultural norms and narratives to expand agency and freedoms (see chapter 6 in the full Report).

“Walls between our social connections are perhaps more insidiously damaging and polarizing than walls between nations

Essential to flexible and adaptable narratives, in building trust and social cohesion for more hopeful futures, is the freedom for each person to have and move among different identities in different social contexts (see chapter 4 in the full Report).⁷² Walls between our social connections are perhaps more insidiously damaging and polarizing than walls between nations. The bridges that connect different groups are among our most important assets. Good leaders rehabilitate and strengthen them and help us use them—especially in the face of unknowns. Demagogues try to burn them down, replacing fluid connection, exchange and learning with zero-sum, us-versus-them narratives. Instead of trying out cultural scripts precisely when experimentation matters most, people become trapped by them.

Where we go from here is up to us

We must learn to live with today’s uncertainty complex, just as we must learn to live with Covid-19. This year’s Human Development Report challenges us to aspire to more than mere accommodation, however. By unlocking our human potential, by tapping into our creativity and diversity anchored in trust and solidarity, it challenges us to imagine and create futures in which we thrive. The encouraging words of the late, great poet and civil rights activist Maya Angelou ring as true as ever, reminding us “to bring all our energies to each encounter, to remain flexible enough to notice and admit when what we expected to happen

did not happen. We need to remember that we are created creative and can invent new scenarios as frequently as they are needed.”⁷³

Where we go from here is up to us. One of the great lessons of our species’ history is that we can accomplish a lot with very little if we work together towards shared goals. If there is a secret ingredient to human magic, that must be it. The challenges in the Anthropocene and in sweeping societal transformations are huge, even daunting, all the more so for countries and communities struggling with the most dramatic and unjust deprivations. Insecurity and polarization make

things worse. Amid so much uncertainty, the truth is that we are not going to get it right, maybe not even most of the time. In this turbulent new era we can set the direction but cannot guarantee the outcome. The good news is that we have more tools than ever to help us navigate and course correct. But no amount of technological wizardry is a substitute for good leadership, collective action or trust. If we can start fixing the human side of the planetary ledger—and this Report tries to highlight how—then the future, however uncertain, will be more promise than peril, just as it should be.