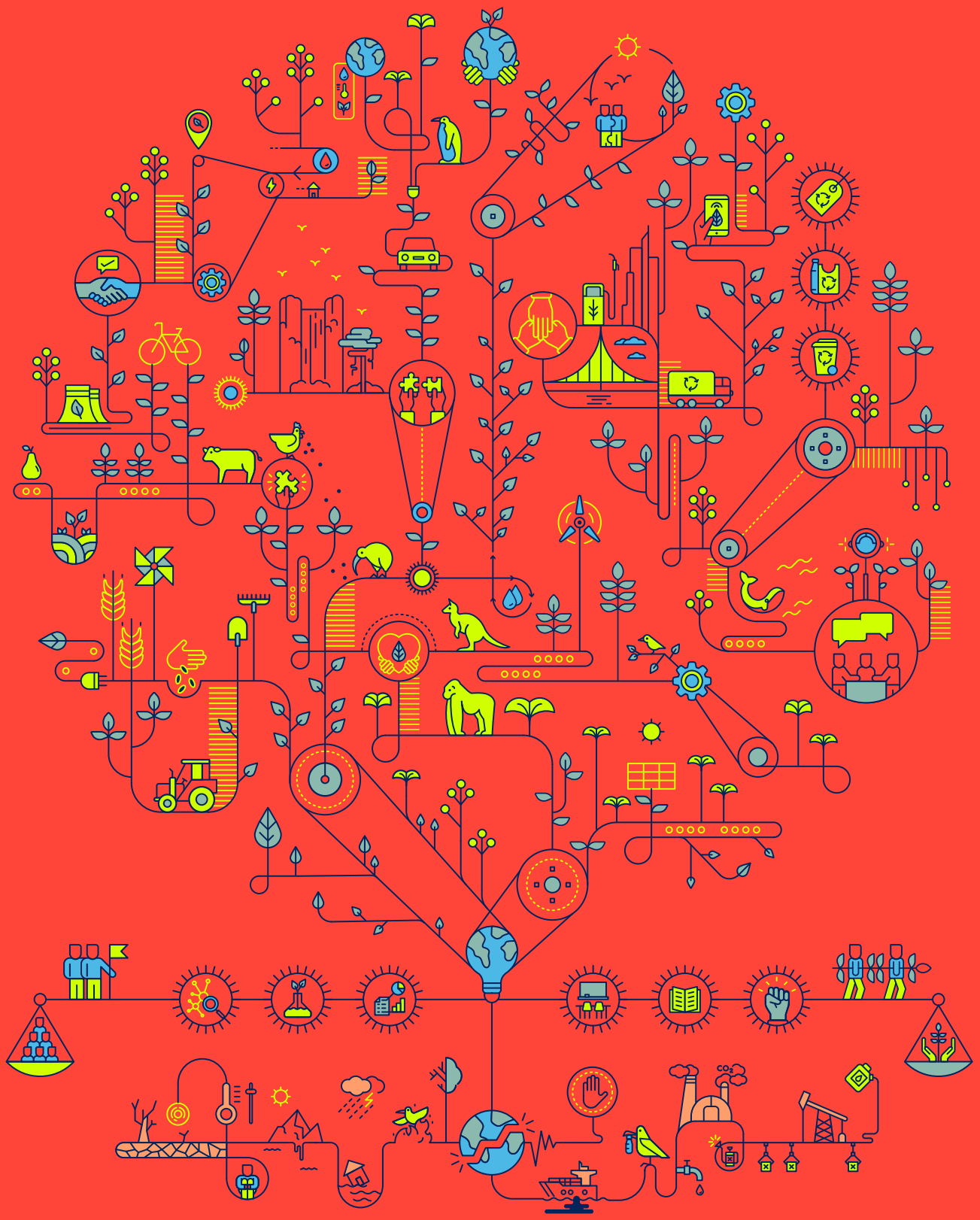
Overview

Human Development Report 2020

The next frontier

Human development and the Anthropocene



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The 2020 Human Development Report

The 30th Anniversary 2020 Human Development Report is the latest in the series of global Human Development Reports published by the United Nations Development Programme (UNDP) since 1990 as independent and analytically and empirically grounded discussions of major development issues, trends and policies.

Additional resources related to the 2020 Human Development Report can be found online at http://hdr.undp.org. Resources on the website include digital versions and translations of the Report and the overview in more than 10 languages, an interactive web version of the Report, a set of background papers and think pieces commissioned for the Report, interactive data visualizations and databases of human development indicators, full explanations of the sources and methodologies used in the Report's composite indices, country profiles and other background materials, and previous global, regional and national Human Development Reports. Corrections and addenda are also available online.

The cover conveys the complex connections between people and the planet, whose interdependence is a hallmark of the Anthropocene. The image evokes the many possibilities for people and planet to flourish if humanity makes different development choices, ones that aim to enhance equity, foster innovation and instill a sense of stewardship of nature.

HUMAN DEVELOPMENT
REPORT 2020

OVERVIEW

The next frontier

Human development and the Anthropocene

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Foreword

Hidden in the long shadow of Covid-19, 2020 has been a dark year. Scientists have been forewarning a pandemic like this for years, pointing to the rise in zoonotic pathogens—those that jump from animals to humans—as a reflection of the pressures people put on planet Earth.

Those pressures have grown exponentially over the past 100 years. Humans have achieved incredible things, but we have taken the Earth to the brink. Climate change, rupturing inequalities, record numbers of people forced from their homes by conflict and crisis—these are the results of societies that value what they measure instead of measuring what they value.

In fact, the pressures we exert on the planet have become so great that scientists are considering whether the Earth has entered an entirely new geological epoch: the Anthropocene, or the age of humans. It means that we are the first people to live in an age defined by human choice, in which the dominant risk to our survival is ourselves.

Advancing human development while erasing such planetary pressures is the next frontier for human development, and its exploration lies at the heart of this 30th anniversary edition of UNDP's Human Development Report.

To survive and thrive in this new age, we must redesign a path to progress that respects the intertwined fate of people and planet and recognizes that the carbon and material footprint of the people who have more is choking the opportunities of the people who have less.

For example, the actions of an indigenous person in the Amazon, whose stewardship helps protect much of the world's tropical forest, offsets the equivalent of the carbon emissions of a person in the richest 1 percent of people in the world. Yet indigenous peoples continue to face hardship, persecution and discrimination.

Four thousand generations could live and die before the carbon dioxide released from the Industrial Revolution to today is scrubbed from our atmosphere, and yet decisionmakers continue to subsidize fossil fuels, prolonging our carbon habit like a drug running through the economy's veins.

And while the world's richest countries could experience up to 18 fewer days of extreme weather each year within our lifetime because of the climate crisis, the poorest countries face up to 100 extra days of extreme weather. That number could still be cut in half if the Paris Agreement is fully implemented.

It is time to make a change. Our future is not a question of choosing between people or trees; it is neither or both.

When the Human Development Report first challenged the primacy of growth as the measure of progress in 1990, the Cold War still shaped geopolitics, the World Wide Web had just been invented and very few people had heard of climate change. In that moment UNDP offered a forward-looking alternative to GDP, ranking all countries by whether people had the freedom and opportunity to live a life they valued. In so doing, we gave voice to a new conversation on the meaning of a good life and the ways we could achieve it.

Thirty years on, much has changed, but hope and possibility have not. If people have the power to create an entirely new geological epoch, then people also have the power to choose to change. We are not the last generation of the Anthropocene; we are the first to recognize it. We are the explorers, the innovators who get to decide what this—the first generation of the Anthropocene—will be remembered for.

Will we be remembered by the fossils we leave behind: swaths of species, long extinct, sunken and fossilized in the mud alongside plastic toothbrushes and bottle caps, a legacy of loss and waste? Or will we leave a much more valuable imprint: balance between people and planet, a future that is fair and just?

The Next Frontier: Human Development and the Anthropocene sets out this choice, offering a thought-provoking, necessary alternative to paralysis in the face of rising poverty and inequalities alongside alarming planetary change. With its new, experimental Planetary pressures–adjusted Human Development Index, we hope to open a new conversation on the path ahead for each country—a path yet unexplored. The way forward from Covid-19 will be the journey of a generation. We hope it is one that all people will choose to travel together.

Achim Steiner
Administrator
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Acknowledgements

Every person, everywhere in the world, has been affected by the Covid-19 pandemic. Amidst untold suffering the process of producing a Human Development Report often appeared less urgent over the course of 2020. The Report team felt the need to document the unfolding and devastating impact of the pandemic on human development, supporting UNDP's response to the crisis. The well planned process of consultations and team meetings had to be scrapped or changed in unprecedented ways. This implied reinventing the Report's typical production process. At many points it seemed that the Report simply could not be finished on time. Doing so was possible only because of the conviction that the Report had something important to say that speaks to this year's crisis, the obligation to honour 30 years of Human Development Reports and the encouragement, generosity and contributions of so many, recognized only imperfectly and partially in these acknowledgments.

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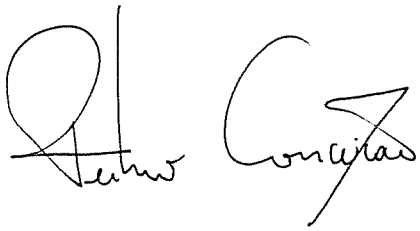

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Human development and the Anthropocene

Human development and the Anthropocene

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Renewing human development for the Anthropocene

We are destabilizing the planetary systems we rely on for survival.

The strain on our planet mirrors that in societies.

These imbalances reinforce each other, amplifying the challenges.

Mechanisms of change to catalyse action

We need a just transformation in the way we live, work and cooperate.

New social norms, improved incentives and working with—not against—nature can take us there.

Exploring new metrics

A new era requires new measures of human development.

The Report proposes the Planetary pressures–adjusted Human Development Index and a new generation of dashboards.

We are at an unprecedented moment in the history of humankind and in the history of our planet. Warning lights—for our societies and the planet—are flashing red. They have been for some time, as we well know. The Covid-19 pandemic is the latest harrowing consequence of imbalances writ large. Scientists have long warned that unfamiliar pathogens will emerge more frequently from interactions among humans, livestock and wildlife,[1] interactions that have steadily increased in scale and intensity, ultimately squeezing local ecosystems so hard that deadly viruses spill out. The novel coronavirus may be the latest to do so, and unless we relax our grip on nature, it will not be the last.

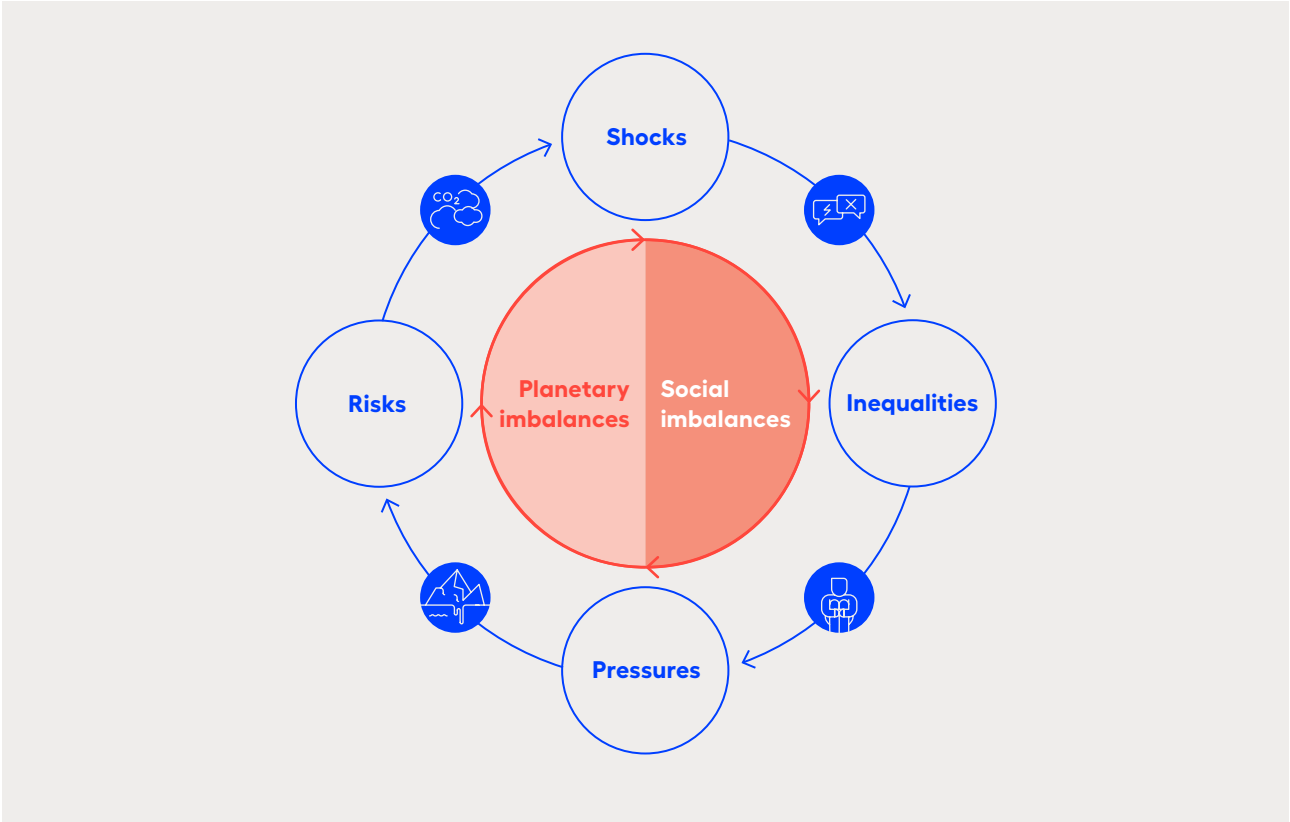
New pathogens do not fall from the sky, nor do the epidemics they may cause. Covid-19 has spread quickly around an interconnected world, taking root wherever it has landed and thriving especially in the cracks in societies, exploiting and exacerbating myriad inequalities in human development. In too many cases those cracks have hamstrung efforts to control the virus (chapter 2).

While Covid-19 has absorbed the world's attention, pre-existing crises continue. Consider climate change. The 2020 Atlantic hurricane season either set new records or was on the verge of doing so, both in the number of storms and how many rapidly intensified.[2] Within the past 12 months extraordinary fires scorched enormous swaths of Australia, the Brazilian Pantanal, eastern Siberia in the Russian Federation and the West Coast of the United States.[3] The planet's biodiversity is plunging, with a quarter of species facing extinction, many within decades.[4] Numerous experts believe we are living through, or on the cusp of, a mass species extinction event, the sixth in the history of the planet and the first to be caused by a single organism—us.[5]

> "Warning lights—for our societies and the planet—are flashing red.

The strain on the planet mirrors the strain facing many of our societies. This is not mere coincidence. Indeed, planetary imbalances (the dangerous

Figure 1 Planetary and social imbalances reinforce each other



Source: Human Development Report Office.

planetary change for people and all forms of life) and social imbalances exacerbate one another (figure 1).[6] As the 2019 Human Development Report made plain, many inequalities in human development have been increasing and continue to do so.[7] Climate change, among other dangerous planetary changes, will only make them worse (figure 2).[8] Social mobility is down; social instability is up.[9] Ominous signs of democratic backsliding and rising authoritarianism are worrying.[10] Collective action on anything from the Covid-19 pandemic to climate change becomes more difficult against a backdrop of social fragmentation (chapter 1).[11]

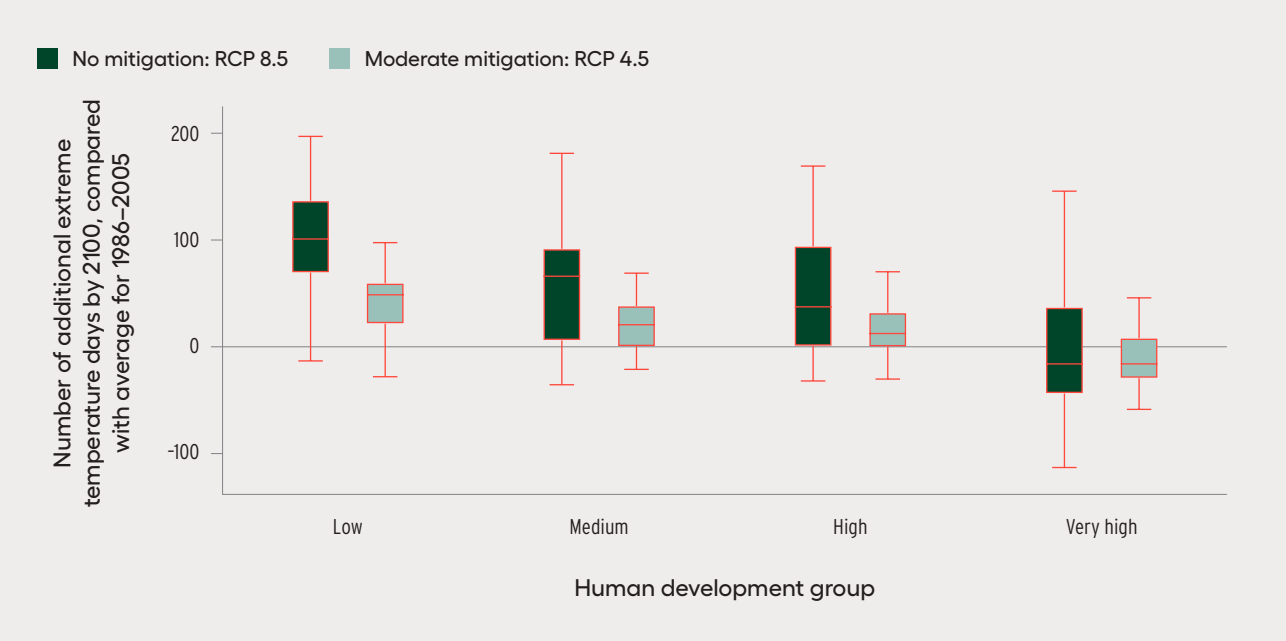
"A new normal is coming. Covid-19 is the tip of the spear.

There is talk of returning to "normal," as if some predetermined end date exists for the many crises gripping our societies and the planet, as if going back to normal is desirable or even possible. What or whose normal should that be? Lurching from crisis to crisis is one of the defining features of the present day, which has something to do with the "normalcy" of the past, a return to which would seemingly consign the future to endless crisis management, not to human development.

Whether we wish it or not, a new normal is coming. Covid-19 is just the tip of the spear. Scientists generally believe that we are exiting the Holocene, which spanned some 12,000 years, during which human civilization as we know it came to be. They propose that we are now entering a new geologic epoch—the Anthropocene—in which humans are a dominant force shaping the future of the planet.[12] The question is: What do we do with this new age? Do we choose in the face of uncertain futures to embark on bold new paths that expand human freedoms while easing planetary pressures? Or do we choose to try—and ultimately fail—to go back to business as usual and be swept away, ill equipped and rudderless, into a dangerous unknown?

This Human Development Report is firmly behind the first choice, and its arguments go beyond summarizing well known lists of what can be done to realize it. We know that carbon pricing can be an effective and efficient policy measure for reducing carbon emissions. We know that fossil fuel subsidies

Figure 2 Changes in the number of extreme temperature days—a result of climate change—will only worsen inequalities in human development



Note: Extreme temperature days are days during which the temperature is below 0 degrees Celsius or above 35 degrees Celsius. The figure shows the change between the actual number of extreme temperature days in 1986–2005 and the median projected number of extreme temperature days in 2080–2099.
Source: Human Development Report Office based on Carleton and others (2020).

encourage those very emissions and should be phased out (chapter 5). While the Report discusses various ways that societies can make different choices, its unique contribution is a human development lens, a lens that aims to unlock some of the deeper obstacles to advancing human flourishing while easing planetary pressures. It focuses on why much-discussed "solutions" are not being implemented fully—and in many cases not yet at the scale to make a difference.

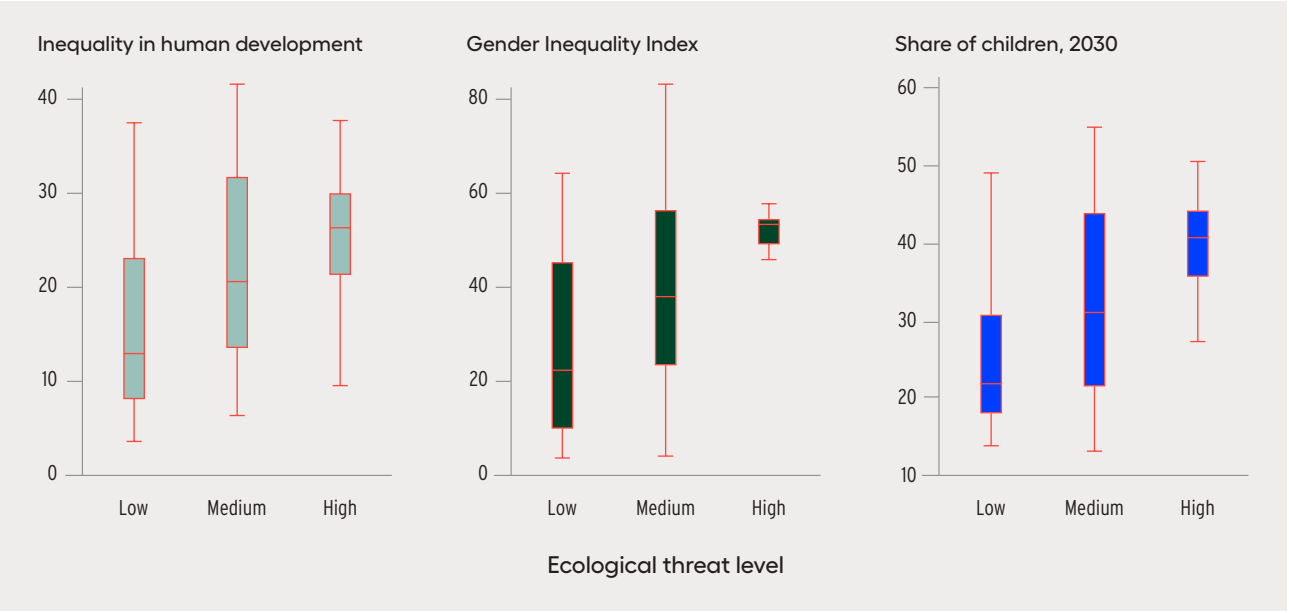
The Report questions the very narrative around "solutions to a problem," which frames solutions to discrete problems as somehow external, somewhere "out there," disconnected from ourselves and from one another. Once solutions are discovered, the storyline goes, we need only implement them as panaceas everywhere. Technology and innovation matter—and matter a lot, as the Report argues—but the picture is much more complex, much more nonlinear, much more dynamic than simple plug-and-play metaphors. There can be dangerous unintended consequences from any single seemingly promising solution. We must reorient our approach from solving discrete siloed problems to navigating multidimensional, interconnected and increasingly universal predicaments.

In the face of complexity, progress must take on an adaptive learning-by-doing quality, fuelled by broad innovations, anchored in deliberative shared decisionmaking and buttressed by appropriate mixes of carrots and sticks. Getting there will not be easy. Fundamental differences loom large—in interests and around the responsiveness and accountability of current institutions. So do various forms of inequality, which restrict participation in decisionmaking, limit the potential for innovation and increase vulnerability to climate change and ecological threats (figure 3).[13] Development choices are often framed as if confined to a set of narrow, well trod but ultimately unsustainable paths. Deeper still are questions about what we value and by how much.[14]

> "Human choices, shaped by values and institutions, have given rise to the interconnected planetary and social imbalances we face.

As Cassius famously remarks in Shakespeare's *Julius Caesar:* "The fault…is not in our stars/But in ourselves."[15] Consciously or not, human choices, shaped by values and institutions, have given rise to the interconnected planetary and social imbalances we face. Understanding and addressing them are impeded by

Figure 3 In countries with high ecological threats, there is also greater social vulnerability



Note: Excludes outliers. Ecological threats include water stress, food insecurity, droughts, floods, cyclones, temperature rise, sea level rise and population growth. Levels are defined by number of threats faced by each country: low (zero to one threat), medium (two to three threats) and high (four or more threats). See IEP (2020).
Source: Human Development Report Office based on data from the United Nations Department of Economic and Social Affairs and IEP (2020).

rigidities in the very same values and institutions, rigidities that lend inertia to our past choices. We must critically examine the crucible of human values and institutions—specifically the way power is distributed and wielded—to accelerate implementation of the 2030 Agenda for Sustainable Development for people and planet.

The human development approach has much to contribute in addressing our collective paralysis in the face of alarming planetary change. Human development is about expanding human freedoms and opening more choices for people to chart their own development paths according to their diverse values rather than about prescribing one or more particular paths. Too often, development choices pit people against trees because the environment has been systematically undervalued while economic growth has had top billing. The human development concept emerged 30 years ago precisely as a counterpoint to myopic definitions of development. Economic growth is important, especially for developing countries; raising income levels is crucial for those living in poverty, in every country. But as the 2019 Human Development Report emphasized, the increasingly important questions for many countries are not about the overall size of the pie but the relative size of its slices.[16] In this year's Report, though not for the first time in its history, we also worry about the oven.

The human development approach reminds us that economic growth is more means than end. More material resources matter, when fairly distributed and within planetary boundaries,[17] because they expand people's opportunities, from one generation to the next. Indeed, the income component of the original Human Development Index (HDI) was meant to serve as a proxy for material resources that enable a suite of basic capabilities that expand people's opportunities. Two capabilities—living a healthy life and having an education—are of such critical importance that they have been measured as part of the HDI since its inception. Unlike income or economic growth, they are not just means but ends in themselves.

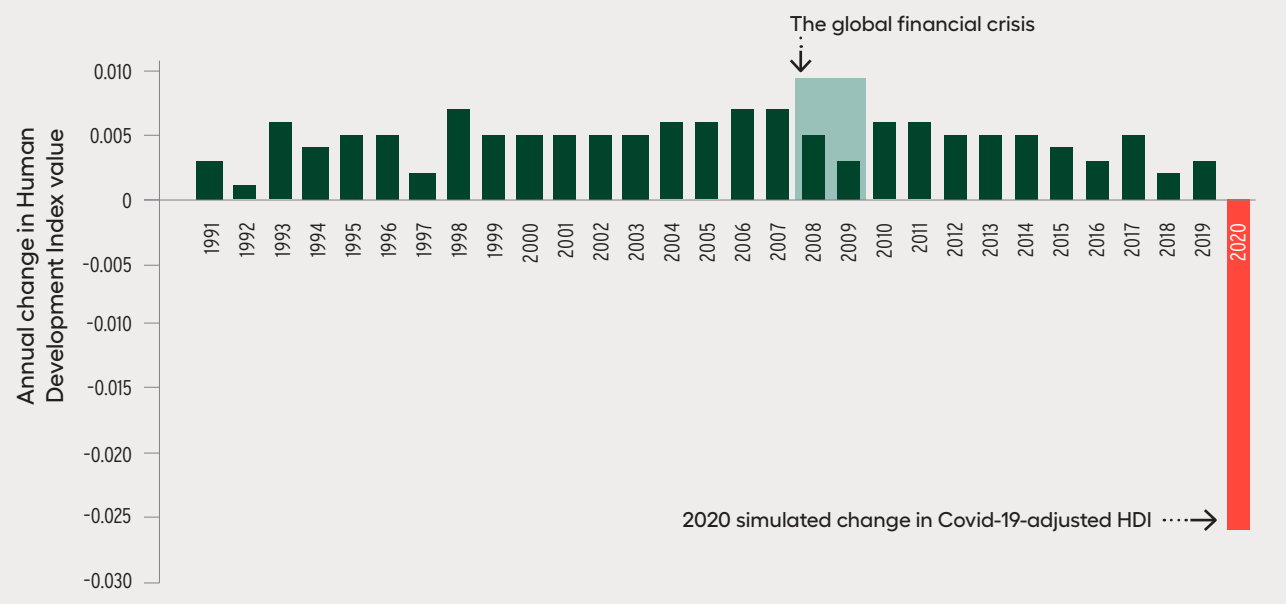
The 2019 Human Development Report argued that a new generation of enhanced capabilities is becoming more important for people to thrive in the digital age.[18] The central tenets of human development have not changed—its lodestar remains what people value. What has changed is the context. Consider that more than 1 billion people have been lifted out of extreme poverty within a generation,[19] unquestionably one of humanity's greatest accomplishments. But also consider that the Covid-19 pandemic may have pushed some 100 million people into extreme poverty, the worst setback in a generation.[20] Human development may have taken a big hit in 2020 (figure 4).[21] Eliminating poverty in all its forms—and keeping it eliminated in a dynamic world—remains central, but ambitions are continuously being raised, as they should be, alongside a firm commitment not to leave anyone behind in the process. Human development is an ongoing journey, not a destination. Its centre of gravity has always been about more than just meeting basic needs. It is about empowering people to identify and pursue their own paths for a meaningful life, one anchored in expanding freedoms. It challenges us to think of people as agents rather than as patients—a central theme of this year's Report.

The ground beneath us is shifting as we confront the unprecedented challenges of the apparent Anthropocene. This time, the way forward is not only about expanding people's capabilities to lead lives they value—that is, expanding choices available to people. We must also carefully consider two other critical dimensions of human development: agency (that is, the ability to participate in decisionmaking and to make one's desired choices) and values (that is, the choices that are most desired), with special attention to our interactions with nature, to our stewardship of the planet.

> "Human development is about empowering people to identify and pursue their own paths for a meaningful life, one anchored in expanding freedoms.

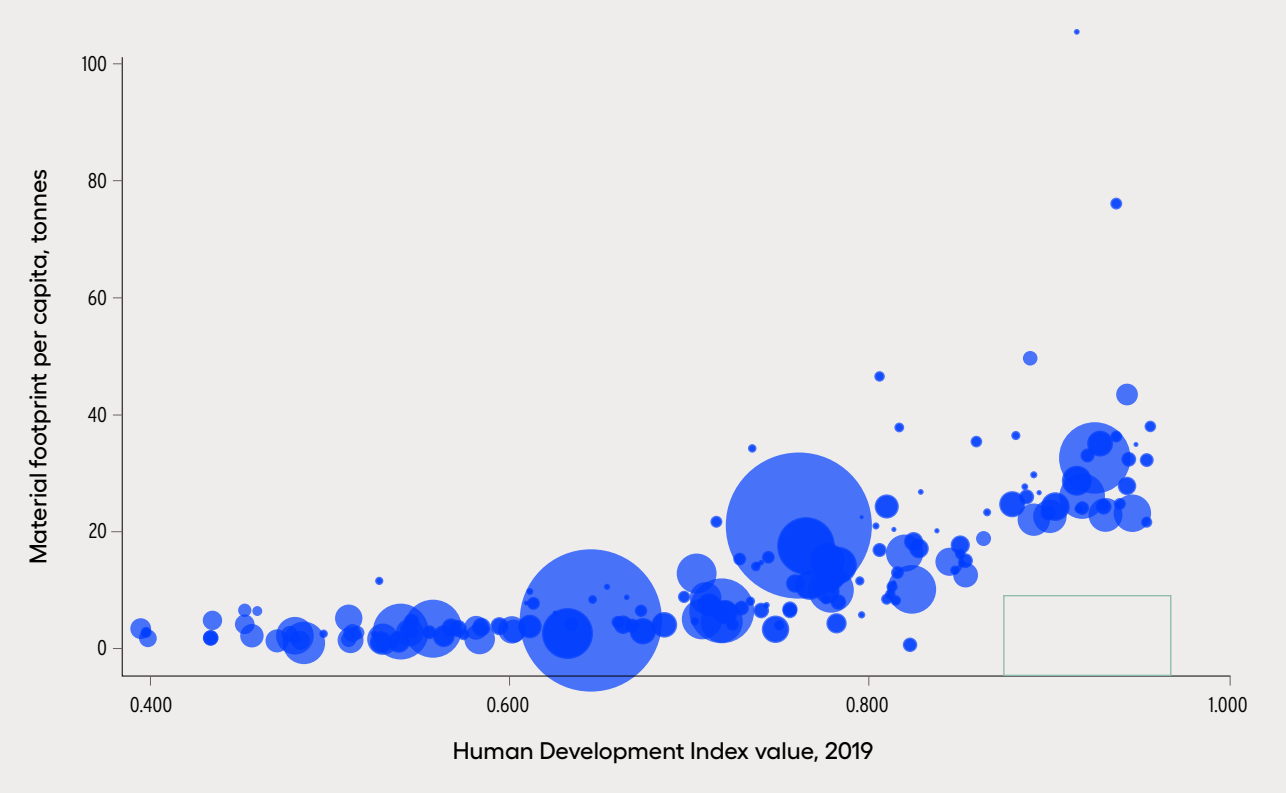
Like a three-legged stool, capabilities, agency and values are inseparable in how we think about human development in the context of the Anthropocene. We cannot assume that expanding people's capabilities will automatically ease planetary pressures. The HDI provides clear historical evidence to the contrary—countries at the highest levels of the HDI have tended to exert more pressure over greater scales on the planet (figure 5).

Figure 4 The Covid-19 pandemic's unprecedented shock to human development



Source: Updated version of figure 3 in UNDP (2020b).

Figure 5 Countries with higher human development tend to exert more pressure over greater scales on the planet



Note: Material footprint measures the amount of domestic and foreign extraction of materials (biomass, fossil fuels, metal ores and nonmetal ores) used to meet domestic final demand for goods and services within a country. Bubble size is proportional to country population. The green rectangle at the bottom right-hand corner represents the currently empty aspirational space for the human development journey in the Anthropocene (see box 1).
Source: Human Development Report Office based on data from the United Nations Environment Programme.

Nor can we simply assume that expanding agency on its own means that more empowered people will invariably choose, individually and collectively, to avoid dangerous planetary change. Values, especially how they stack up and interact, help provide the overall direction for the choices that empowered people make about their lives. Values are fundamental to our personal understanding of what it means to live a good life. But people cannot realize their values without having sufficient capabilities and agency.

The Report argues that to navigate the Anthropocene, humanity can develop the capabilities, agency and values to act by enhancing equity, fostering innovation and instilling a sense of stewardship of nature.[22] If these have greater weight within the ever widening choice sets that people create for themselves—if equity, innovation and stewardship become central to what it means to live a good life—then human flourishing can happen alongside easing planetary pressures.[23]

We have ample evidence that values can be changed purposefully and fairly quickly. Consider the sea change in many countries in tobacco-related social norms, regulations and behaviours.[24] Until recently, smoking tobacco commanded a coveted cultural position in countries around the world. Over the past decades, in varying degrees, smoking cigarettes has been reduced to junk status, though much work remains, especially in addressing residual inequalities in tobacco use, particularly in developing countries.[25] The first international health treaty negotiated under the auspices of the World Health Organization is dedicated exclusively to tobacco control—the Framework Convention on Tobacco Control. With 182 parties covering more than 90 percent of the world's people, the treaty is a testament to what science-based public health expertise, coupled with sustained and effective political leadership, can do to galvanize action on a globalized problem.[26]

> "If equity, innovation and stewardship become central to what it means to live a good life, human flourishing can happen alongside easing planetary pressures.

Environmental values have witnessed similar upheavals. Take the publication of Rachel Carson's landmark *Silent Spring,* widely considered to have marked the advent of the modern environmental movement, whose roots are centuries older.[27] Distributional concerns soon came to the fore with the environmental justice movement. Each was in no small part a practical reaction to new realities, such as air and water pollution, happening in unprecedented ways and at unprecedented scales and often disproportionately impacting marginalized groups. Each broadened the idea of what constituted a good life by creating space for environmental stewardship, social justice and intergenerational responsibilities, laying the foundations for the sustainable development era. And each must continue to evolve in response to global planetary challenges that it, in its original incarnation, did not set out to address.

Now, in the context of the Anthropocene, it is essential to do away with stark distinctions between people and planet. Earth system approaches increasingly point to our interconnectedness as socioecological systems, a notion highly relevant to the Anthropocene.[28] Human development aligns well with such thinking. It has always been about breaking down silos and making connections. How could a development perspective centred on human possibility be otherwise? Every one of us moves in and out of social, economic and environmental spaces. On any given day a farmer might be navigating roles as mother and wife, collecting firewood and fetching water, worrying about weather and pests, negotiating the marketplace, buying medicine and textbooks. People, place and environment are not only connected in rural contexts. City dwellers, too, interact with their environment, often on a much larger or more varied scale for food, water, air quality, recreation and mental and physical health. It is the lens centred on any individual's experience, rather than institutional structures organized in terms of sectors, that allows the human development approach to break free from disciplinary and sectoral shackles. It aims to be development as seen through any of our own eyes.

And the system-level crises we are increasingly seeing are cause for alarm (chapter 2). We no longer have the luxury, if we ever really did, of solving problems as isolated, quasi-independent points in separate social and ecological spheres. Instead, they are nodes in an interdependent socioecological network that, as a whole, is flashing red.[29] The resilience of the system has been taken for granted, especially when only

one part of it was under strain at a given time.[30] The homogenizing effect of our predominant models of production and consumption, which have been busy knitting the world together, have eroded the diversity —in all its forms, from biological to cultural—that is so vital to resilience.[31] Diversity increases redundancy, and while redundancy may not be good for business, it is good for system resilience in the face of shocks, which travel along the lines that connect people and nations.[32]

> "In the Anthropocene, it is essential to do away with stark distinctions between people and planet.

Now, in little more than a decade, the global financial crisis, the climate crisis, the inequality crisis and the Covid-19 crisis have all shown that the resilience of the system itself is breaking down. Buffering systems are maxing out. Once-supple connections can become brittle, leaving them more inclined to break than to bend, further destabilizing the Earth system.[33] The result is that perturbations more easily become contagion—whether economic, environmental or viral—that slips indifferently through the porous borders of nation-states and scales illusory walls that divide people from planet.

Business as usual simply will not work. The same applies to the human development concept, which must be continually refreshed to respond to the challenges of our time. It is not about throwing out its central tenets, which remain vital to the many challenges of today, but rather drawing on them to help navigate a turbulent new geologic epoch. The goal of human development is as relevant as ever—for people to live lives they value. And within that goal lies the potential to navigate our predicament, if for no other reason than business as usual means that people, including future generations, will face ever narrowing instead of ever expanding sets of choices in their lives.

Easing planetary pressures implies understanding how all life on the planet—the biosphere—underpins so much of what we take for granted, like the air we breathe. This puts in sharp relief the importance of a biosphere that is regenerated, not depleted. It also implies understanding how societies use energy and materials. To what extent are sources of energy renewable indefinitely—as from the sun—and to what extent are materials recycled rather than outcycled in waste and pollution? The accumulating carbon dioxide in the atmosphere and plastic in the oceans are just two of many examples that illustrate the risks of relying on fossil fuels and open material cycles. So is biodiversity loss, which often parallels loss of cultural and language diversity, impoverishing societies culturally.[34]

The Earth has gone through periods of instability before, evolving into new states. Planetary processes normally unfold over hundreds of thousands to millions of years, a timescale well beyond the reach of our species. For us, ancient is measured in thousands of years; our recorded history is a mere speck against the vastness of geologic time. Complicating matters is a backdrop of intrinsic climate instability. The Holocene, despite its apparent stability, is a warm blip within a changing climate regime, one in which oscillations between cooler glacial periods and warmer ones have become deeper and stronger. If the Earth's climate has already been characterized by abrupt change, then greenhouse gas emissions, along with other human-caused planetary disruptions to material cycles, add fuel to the fire, layering new instabilities on top of existing ones.

The Report calls for a just transformation that expands human freedoms while easing planetary pressures. It organizes its recommendations not around actors but around mechanisms for change—social norms and values, incentives and regulation, and nature-based human development. Each mechanism of change specifies multiple potential roles for each of us, for governments, for financial markets, for political and civil society leaders. It is not about pitting people against trees or about doing away with markets simply because they sometimes fail. Instead, it is about seeing how different approaches—using norms and values, using incentives and regulation, using nature itself—can be brought together in concert to expand human freedoms while mitigating planetary pressures.

Systems and complexity thinking applies equally to social norms, which are generated and reinforced across society, from what children learn in school, what people do online, what leaders say and enact by way of policy. Norms exhibit properties of stability and resilience, but they can be—and have

been—nudged enough at critical points into new states, sometimes desirably, sometimes less so. Positive feedback loops can help accelerate change and stabilize new normative states, sometimes swiftly, as we have seen with tobacco norms. But, of course, reversion is possible. How do norms, as nebulous as they are powerful, change? What levers and mechanisms are available to policymakers and everyday citizens? This question animates chapter 4 of the Report. A first step is to expand choices available to people. Expanding choice—such as renewable energy sources and multimodal transportation networks—is in line with helping people realize their values. It is also in line with competitive well functioning markets.

"The Report calls for a just transformation that expands human freedoms while easing planetary pressures.

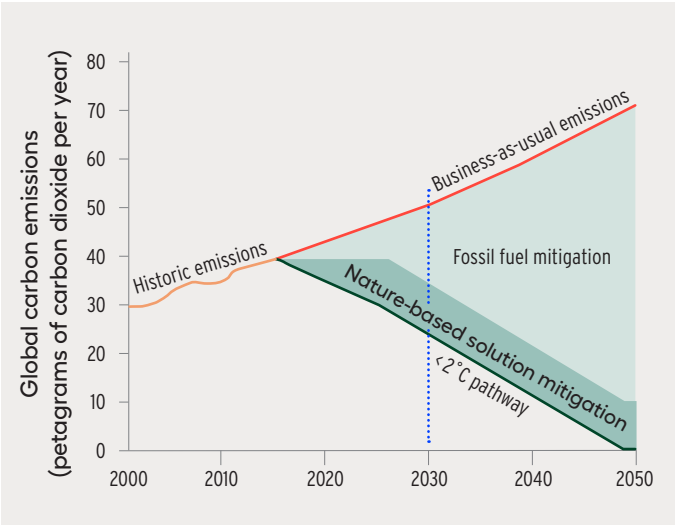
At the same time, moments of crisis can move systems closer to critical change thresholds. Consider many countries' experience in their progress towards universal health coverage, one of the Sustainable Development Goals. A recent analysis found that among 49 countries spanning different incomes, most moved towards universal health coverage as a result of disruption in the status quo, including when recovering from episodes of social instability.[35] Moreover, countries' transitions to universal health coverage have typically been easier when neighbours and peers have already achieved it—an example of both incentives and positive feedback effects. The overlapping crises we are facing now and facing most immediately in the Covid-19 pandemic give a chance for societies to re-evaluate norms and for policymakers to take spirited steps towards social and economic recoveries that invest in healthier, greener, more equitable futures—ones that expand human freedoms while easing planetary pressures.

Today almost 80 percent of the world's people believe that it is important to protect the planet. But only about half say they are likely to take concrete action to save it. There is a gap between people's values and their behaviour (see chapter 4). To help bridge the gap, to help empower people, the Report also looks at the ways incentives and regulation can prevent or promote people taking action based on their values (chapter 5). Incentives matter, even when individuals do not change their minds or their values. Incentives—from fossil fuel subsidies to carbon prices, or a lack thereof—help explain current patterns of consumption, production and investment and other choices that lead to planetary and social imbalances. Take fossil fuel subsidies, which result in direct and indirect costs of over $5 trillion a year. Eliminating those subsidies in 2015 would have reduced global carbon emissions by 28 percent and fossil fuel air pollution deaths by 46 percent.[36]

The Report goes on to document how incentives and regulation could evolve in ways that would ease planetary pressures and move societies towards the transformative changes required to advance human development in the Anthropocene. It considers three domains shaped by incentives. The first is finance, which includes the incentives within financial firms as well as the regulatory authorities that oversee them. The second is prices, which rarely fully reflect social and environmental costs, thus distorting behaviour. The third is incentives for collective action, including at the international level.

Nature-based human development helps tackle three central challenges of the Anthropocene together—mitigating and adapting to climate change, protecting biodiversity and ensuring human wellbeing for all. Nature-based human development is about nesting human development—including social and economic systems—into ecosystems and the biosphere, building on a systemic approach to nature-based solutions that puts people's agency at the core. The potential is huge, with benefits ranging from climate change mitigation and disaster risk reduction to improving food security and increasing water availability and quality. A set of 20 cost-effective actions across global forests, wetlands, grasslands and agricultural lands could provide 37 percent of the mitigation needed through 2030 to keep global warming below 2 degrees Celsius above preindustrial levels and 20 percent of the mitigation needed through 2050 (figure 6).[37] About two-thirds of that mitigation potential (equivalent to one-fourth of total mitigation needs) is linked to forest pathways, mainly reforestation. The contribution per capita of indigenous peoples in the Amazon to climate change mitigation through their actions to preserve forests amounts to as much as the emissions per capita of the top 1 percent of the global income distribution (see chapter 6).

Figure 6 Twenty nature-based solutions could provide much of the mitigation needed to restrain global warming



Source: Griscom and others 2017.

While the term "nature-based solutions" suffers from solutions-oriented language, it is not of that ilk. On the contrary, nature-based solutions, or approaches, are often rooted in socioecological system perspectives that recognize the many benefits and values of a healthy ecosystem for both people and planet. Yet it is the very complexity, and the multidimensionality of their benefits, that tend to make them the exception rather than the rule. It is admittedly difficult for their benefits to be properly aggregated and accounted for using traditional economic metrics and when benefits are dispersed across ministries of agriculture, environment, transport and infrastructure, development, tourism, health, finance—the list goes on. The problem, then, is not with nature-based solutions but with the inadequacy of our prevailing metrics and models of governance, and not recognizing people's agency in their implementation. Joined-up thinking and policymaking must become the norm for countries and people to succeed in the Anthropocene.

The Report focuses on mechanisms of action, rather than on specific actors, partly because human development in the Anthropocene will require whole-of-society responses. Even so, one set of actors plays a uniquely important leadership role: governments, especially national governments. Only governments have the formal authority and power to marshal collective action towards shared challenges, whether that is enacting and enforcing a carbon price, removing laws that marginalize and disenfranchise or setting up the policy and institutional frameworks, backed by public investment, to spur ongoing broadly shared innovation. Power goes hand-in-hand with responsibility and accountability.

But governments cannot go it alone. The challenges of the Anthropocene are too complex for white knights or for technological fixes only. Nor can we ignore the opportunity for and importance of social mobilization from the bottom up. Individuals, communities and social movements demand, pressure and support government action. But if government leadership and action are insufficient on their own, they are certainly necessary. Leadership by example matters. When governments subsidize fossil fuels, they send powerful signals beyond the obvious economic and environmental implications. They also send powerful messages about values. Several countries—including Chile, China, Japan and the Republic of Korea—have recently sent strong messages in the other direction by announcing bold new commitments to carbon neutrality.[38] The European Union has as well.[39] More government commitments—as well as commitments from the private sector that are picking up renewed interest in sustainable investment and in business practices that are mindful of environmental, social and governance impacts (chapter 5)—backed by action, can facilitate the normative changes needed to advance human development in the Anthropocene.

Development is dynamic; priorities and values shift. So should metrics. That is why the human development measurement toolkit has constantly evolved. The past decade has seen the launch of a suite of new dashboards and composite indices dedicated to measuring gender inequalities and women's empowerment. Since the 2010 Human Development Report, the Inequality-adjusted HDI has accounted for the distribution of human development within countries. A global Multidimensional Poverty Index was also introduced then to shift our attention from traditional income-based poverty measures towards a more holistic view of lived poverty.

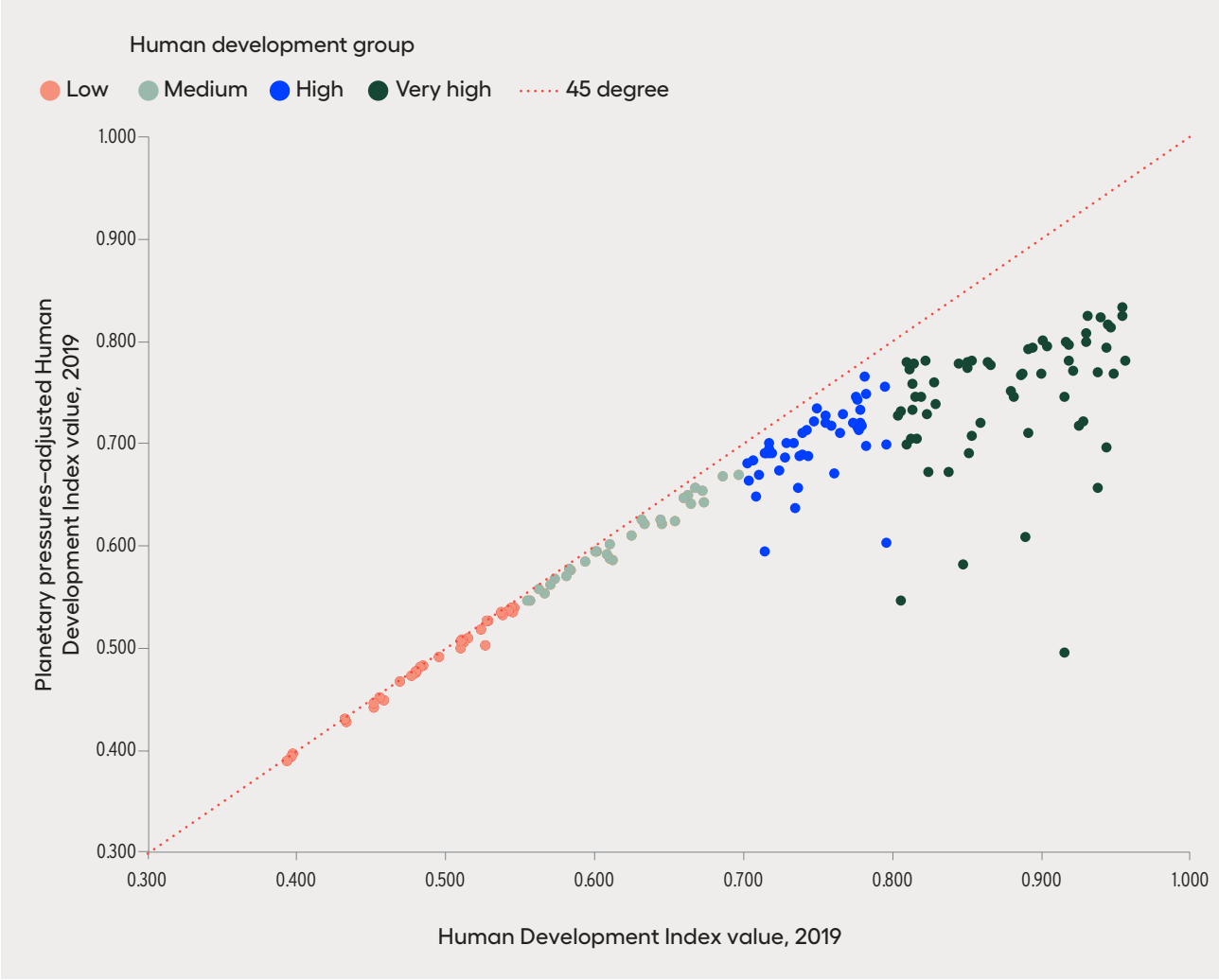
The HDI remains useful for measuring a set of basic capabilities, but clearly we have moved beyond one indicator to rule them all. Indeed, the HDI never claimed to reflect the totality of human development. The challenges we face, and the possibilities before

us, have always been more complex, much more multidimensional and interconnected than a single metric—or even a handful of metrics, no matter how good—could ever capture on its own. Complexity requires more lenses. New metrics help construct them.

> "The Report presents an adjustment to the Human Development Index for planetary pressures, ushering it into a new geologic epoch.

What does the Report explore by way of new metrics? Among them is a new generation of dashboards, as well as metrics that adjust the income component of the HDI to account for the social costs of carbon or for natural wealth. Together they do not aim to make normative judgements about countries. Instead, as with all the other human development metrics, they help countries understand their own progress broadly over time, learn from other countries' experiences and raise their ambitions in advancing human development while accounting for people's interactions with the planet. They also help people and civil society organizations hold countries accountable for their commitments. While composite metrics, especially at the global level, are inherently unable to capture national and local complexities, such metrics nonetheless offer broad high-level and directional perspectives. At their best they can contribute to but do not substitute for the nitty-gritty of dialogue and policymaking, which must happen in every society.

Figure 7 The adjustment to standard Human Development Index values by the Planetary pressures–adjusted Human Development Index widens as human development levels increase

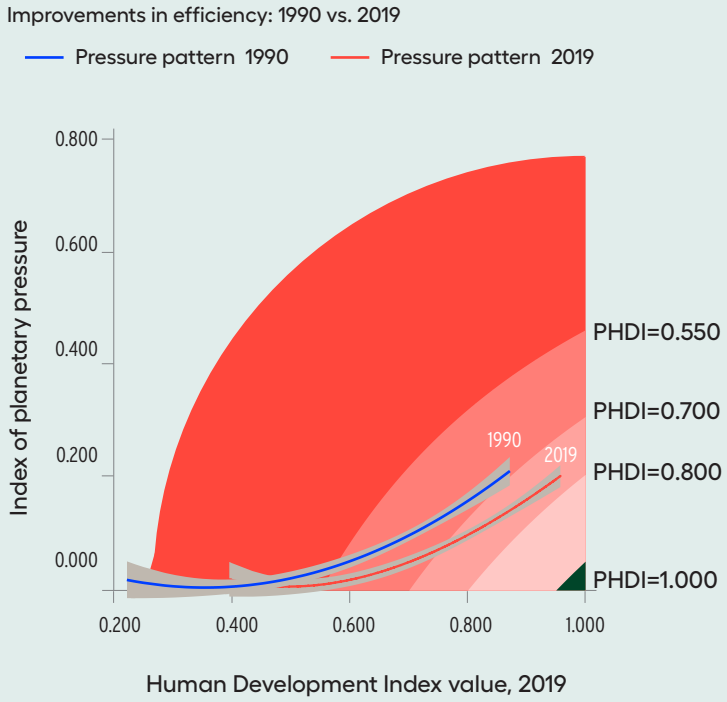


Source: Human Development Report Office.

Box 1 The planetary pressures–adjusted Human Development Index: Signposts to navigate the Anthropocene

The PHDI provides a guiding metric towards advancing human development while easing planetary pressures—a combination that today corresponds to an "empty corner" when human development is contrasted with indicators of planetary pressure (the green rectangle in figure 5).[1] In the figure below the horizontal axis is HDI value, and the vertical axis is the index of pressures on the planet.[2] The contours of the shaded areas represent constant PHDI values that result from different combinations of HDI values and index of planetary pressures values. PHDI values increase as these lines move towards the bottom right corner, which corresponds to expanded capabilities and reduced planetary pressures. That corner, highlighted in green, is the aspirational destination of the human development journey in the Anthropocene. The curve corresponding to the average performance on the two indices for all countries moved towards that corner between 1990 and 2019.[3] But that movement was far too slow and modest. Further progress will require all countries to shift rapidly and substantially towards the bottom right corner. The PHDI and the HDI can help in assessing and, more importantly, in encouraging choices towards a human development journey in the Anthropocene that move us all in the direction of advancing human development while easing planetary pressures.

The world is moving far too slowly towards advancing human development while easing planetary pressures



Note: Cross-sectional pressure patterns for 1990 and 2019 were calculated using polynomial regression models. Shaded areas are confidence intervals.
Source: Human Development Report Office.

Notes
1. See similar analysis in Lin and others (2018). As an image of aspirational space in development, it is also reminiscent of the idea of "casillero vacío" in Fajnzylber (1990). **2.** That is, one minus the adjustment factor for planetary pressures that is multiplied by the HDI to generate the PHDI. **3.** We thank Marina Fischer-Kowalski for insights on this pattern.

The Report presents an adjustment to the HDI for planetary pressures. The planetary pressures–adjusted HDI (PHDI) retains the simplicity and clarity of the original HDI while accounting for some of the complex system-level dynamics discussed throughout the Report. By accounting for key planetary pressures, it ushers the HDI into a new geologic epoch.

> "There are many opportunities for countries to expand capabilities-based human development while reducing planetary pressures. When agency and values are added to the mix, the opportunities become even greater.

The PHDI adjusts the standard HDI by a country's level of carbon dioxide emissions and material footprint, each on a per capita basis. For countries on the lower end of the human development spectrum, the impact of the adjustment is generally small. For high and very high human development countries the impact tends to become large, reflecting the various ways that their development paths impact the planet (figure 7 and box 1).

The good news is that there are many options and opportunities for countries to maintain and even expand traditional, capabilities-based notions of human development while reducing planetary pressures. When agency and values are added to the mix, as the Report demonstrates, the opportunities for expanding human freedoms while easing those pressures become even greater.

In his great postwar novel *The Plague,* Albert Camus wrote, "everyone has it inside himself, this plague, because no one in the world, no one, is immune."[40] If he were writing today, he could have easily been commenting on Covid-19 or climate change, though of course we understand that while everyone is affected, they are not affected equally. But while the stakes for humanity may unfortunately be much higher today than they were some 70 years ago, there is cause for hope—we need no longer be passive recipients of plagues or of development. Fate has been usurped by choice, which in turn is predicated on power. In this brave new geologic epoch of the Anthropocene—in this age of humans—inside our species, and our species uniquely, is the power to reimagine and rebuild our world, to choose justice and sustainability. This 2020 Human Development Report, coming at the close of a tumultuous year of layered global crises, helps signpost the way.

Notes

1 Berger 2020; Carroll and others 2018; Cheng and others 2007; Johnson and others 2020; Morse and others 2012.

2 Dolce 2020; Guzman 2020; Lam 2020; Norman 2020.

3 Bloch 2020; Guy 2020; Mega 2020; Witze 2020.

4 Díaz and others 2019a. See also Díaz and others 2019b.

5 As argued in Kolbert (2014). See also Ceballos, Ehrlich and Raven (2020) and Torres-Romero and others (2020) .

6 Social imbalances refer to asymmetries in opportunities, wealth and power across groups of people. The term "balance" is used recognizing that the Earth system has displayed many different states over time and that the planet and its subsystems (including the biosphere, which comprises all life on Earth) are dynamic and constantly evolving. So it should not be seen as aiming to capture a "balance of nature" concept or a return to some prior state of a more desirable equilibrium. It is meant simply as shorthand for dangerous planetary change for life on Earth, including for people. We are grateful to Victor Galaz of the Stockholm Resilience Centre and Erle C. Ellis of the University of Maryland for help clarifying this concept and terminology.

7 UNDP 2019.

8 Carleton and others 2020.

9 For the interaction between equity and sustainability, see Leach and others (2018).

10 Hyde 2020.

11 See also the discussion in the 2019 Human Development Report (UNDP 2019) on how inequalities make acting on climate change more difficult.

12 As a compelling symbolic characterization of the Anthropocene, by the end of 2020 the mass material output of human activities (which has doubled every 20 years in the recent past) will for the first time ever overtake natural biomass (Elhacham and others 2020). See the discussion in chapter 2 of the Report. For an early framing of the concept of the Anthropocene, see (Steffen, Crutzen and McNeill 2007). The original proposal was made by Crutzen (2002) and Crutzen and Stoermer (2000). See also Steffen and others (2016). Zalasiewicz and others (2008) raised the possibility of formalizing a new geological epoch, and Zalasiewicz came to lead the Working Group on the Anthropocene that formally provisionally recommended in August 2016 to the International Union of Geological Sciences the designation of the Anthropocene as the new geological epoch, with a start date in the mid-20th century. This was followed by a binding vote of the working group affirming these recommendations in May 2019 (http://quaternary.stratigraphy.org/working-groups/anthropocene/). For a recent review, see Ellis (2018a).

13 IEP 2020.

14 And how to work together towards a better future when our values and perspectives differ. See Ellis (2018b, 2019a).

15 This observation is also relevant in the context of narratives of societal collapse, as discussed in chapter 4 of the Report. See Butzer and Endfield (2012).

16 UNDP 2019.

17 Steffen and others 2015.

18 UNDP 2019.

19 United Nations 2020.

20 World Bank 2020. In addition, countries might experience a setback equivalent to 9 years of progress on the Multidimensional Poverty Index (UNDP and OPHI 2020).

21 UNDP 2020.

22 Amartya Sen (Sen 2013., p. 7) emphasized the importance of this shift in seeing people as agents, rather than patients, as we confront the challenges of the Anthropocene: "The quandary of unsustainability may be our predicament, but the task of solving it is ours as well. The nature of the problem, its fuller appreciation and the ways and means of solving it all belong to us—humanity as a whole. If there is a subject on which collaboration and non-divisive commitments are needed, this surely is it. But in order to make this possible and effective, we need a vision of mankind not as patients whose interests have to be looked after, but as agents who can do effective things—both individually and jointly."

23 See also Ellis (2019b).

24 As discussed in WHO (2019) and Wipfli and Samet (2016).

25 Bilano and others 2015.

26 World Health Organization 2018, 2020.

27 See Carson (1962), Turner and Isenberg (2020) and Wills (2020).

28 Fischer-Kowalski and Weisz 1999; Leach and others 2018; Weisz and Clark 2011.

29 Downing and others 2020; Lele 2020; Steffen and others 2018.

30 Cai, Lenton and Lontzek 2016; Lenton 2013.

31 Nyström and others 2019.

32 On the importance of biocultural diversity, see Merçon and others (2019) and (Maffi 2005). On broader perspectives on resilience, see Folke (2016), Lenton (2020) and Reyers and others (2018).

33 Lenton and others 2008; Steffen and others 2018.

34 Galaz, Collste and Moore 2020. See also Maffi (2005).

35 McDonnell 2019.

36 Coady and others 2019. Jewell and others (2018) found a smaller impact on emissions than that reported by Coady and others (2017), but Parry (2018) explains the discrepancy in terms of the scope of the consideration of the impact of subsidies in the two studies, with Coady and others (2019) having a broader perspective, and reiterates the large impact of subsidies on emissions .

37 Griscom and others 2017.

38 Climate Action Tracker 2020, McCurry 2020a, b; Sengupta 2020.

39 European Commission 2019 .

40 de Botton 2020.

Human development indices

HDI rank		Human Development Index (HDI)	Inequality-adjusted HDI (IHDI)			Gender Development Index		Gender Inequality Index		Multidimensional Poverty Index[a]			
		Value	Value	Overall loss (%)	Difference from HDI rank[b]	Value	Group[c]	Value	Rank	Value	Headcount (%)	Intensity of deprivation (%)	Year and survey[d]
		2019	2019	2019	2019	2019	2019	2019	2019	2008-2019	2008-2019	2008-2019	2008-2019
Very high human development													
1	Norway	0.957	0.899	6.1	0	0.990	1	0.045	6	..	..	..	..
2	Ireland	0.955	0.885	7.4	-3	0.981	1	0.093	23	..	..	..	..
2	Switzerland	0.955	0.889	6.9	-1	0.968	2	0.025	1	..	..	..	..
4	Hong Kong, China (SAR)	0.949	0.824	13.2	-17	0.972	2	..	..	..	..	..	..
4	Iceland	0.949	0.894	5.8	2	0.969	2	0.058	9	..	..	..	..
6	Germany	0.947	0.869	8.2	-4	0.972	2	0.084	20	..	..	..	..
7	Sweden	0.945	0.882	6.6	0	0.983	1	0.039	3	..	..	..	..
8	Australia	0.944	0.867	8.1	-3	0.976	1	0.097	25	..	..	..	..
8	Netherlands	0.944	0.878	7.0	0	0.966	2	0.043	4	..	..	..	..
10	Denmark	0.940	0.883	6.1	4	0.983	1	0.038	2	..	..	..	..
11	Finland	0.938	0.888	5.4	7	0.990	1	0.047	7	..	..	..	..
11	Singapore	0.938	0.813	13.3	-15	0.985	1	0.065	12	..	..	..	..
13	United Kingdom	0.932	0.856	8.1	-3	0.970	2	0.118	31	..	..	..	..
14	Belgium	0.931	0.859	7.7	1	0.974	2	0.043	4	..	..	..	..
14	New Zealand	0.931	0.859	7.8	0	0.964	2	0.123	33	..	..	..	..
16	Canada	0.929	0.848	8.7	-1	0.986	1	0.080	19	..	..	..	..
17	United States	0.926	0.808	12.7	-11	0.994	1	0.204	46	..	..	..	..
18	Austria	0.922	0.857	7.1	3	0.964	2	0.069	14	..	..	..	..
19	Israel	0.919	0.814	11.4	-6	0.973	2	0.109	26	..	..	..	..
19	Japan	0.919	0.843	8.3	1	0.978	1	0.094	24	..	..	..	..
19	Liechtenstein	0.919	..	..	..	..	..	..	..	..	..	..	..
22	Slovenia	0.917	0.875	4.6	12	1.001	1	0.063	10	..	..	..	..
23	Korea (Republic of)	0.916	0.815	11.0	-2	0.936	3	0.064	11	..	..	..	..
23	Luxembourg	0.916	0.826	9.8	2	0.976	1	0.065	12	..	..	..	..
25	Spain	0.904	0.783	13.4	-13	0.986	1	0.070	16	..	..	..	..
26	France	0.901	0.820	9.0	2	0.987	1	0.049	8	..	..	..	..
27	Czechia	0.900	0.860	4.4	14	0.985	1	0.136	36	..	..	..	..
28	Malta	0.895	0.823	8.0	5	0.966	2	0.175	40	..	..	..	..
29	Estonia	0.892	0.829	7.1	9	1.017	1	0.086	21	..	..	..	..
29	Italy	0.892	0.783	12.2	-7	0.968	2	0.069	14	..	..	..	..
31	United Arab Emirates	0.890	..	..	..	0.931	3	0.079	18	..	..	..	..
32	Greece	0.888	0.791	10.9	-3	0.963	2	0.116	29	..	..	..	..
33	Cyprus	0.887	0.805	9.2	1	0.979	1	0.086	21	..	..	..	..
34	Lithuania	0.882	0.791	10.3	0	1.030	2	0.124	34	..	..	..	..
35	Poland	0.880	0.813	7.6	6	1.007	1	0.115	28	..	..	..	..
36	Andorra	0.868	..	..	..	..	..	..	..	..	..	..	..
37	Latvia	0.866	0.783	9.5	0	1.036	2	0.176	41	..	..	..	..
38	Portugal	0.864	0.761	12.0	-5	0.988	1	0.075	17	..	..	..	..
39	Slovakia	0.860	0.807	6.1	7	0.992	1	0.191	45	..	..	..	..
40	Hungary	0.854	0.791	7.4	6	0.981	1	0.233	51	..	..	..	..
40	Saudi Arabia	0.854	..	..	..	0.896	5	0.252	56	..	..	..	..
42	Bahrain	0.852	..	..	..	0.922	4	0.212	49	..	..	..	..
43	Chile	0.851	0.709	16.7	-12	0.963	2	0.247	55	..	..	..	..
43	Croatia	0.851	0.783	8.0	2	0.990	1	0.116	29	..	..	..	..
45	Qatar	0.848	..	..	..	1.030	2	0.185	43	..	..	..	..
46	Argentina	0.845	0.729	13.7	-4	0.993	1	0.328	75	..	..	..	..
47	Brunei Darussalam	0.838	..	..	..	0.981	1	0.255	60	..	..	..	..
48	Montenegro	0.829	0.749	9.6	0	0.966	2	0.109	26	0.005	1.2	39.6	2018 M
49	Romania	0.828	0.730	11.9	-1	0.991	1	0.276	61	..	..	..	..
50	Palau	0.826	..	..	..	..	..	..	..	..	..	..	..
51	Kazakhstan	0.825	0.766	7.1	4	0.980	1	0.190	44	0.002[e]	0.5[e]	35.6[e]	2015 M
52	Russian Federation	0.824	0.740	10.2	2	1.007	1	0.225	50	..	..	..	..
53	Belarus	0.823	0.771	6.4	7	1.007	1	0.118	31	..	..	..	..
54	Turkey	0.820	0.683	16.8	-11	0.924	4	0.306	68	..	..	..	..
55	Uruguay	0.817	0.712	12.9	-2	1.016	1	0.288	62	..	..	..	..
56	Bulgaria	0.816	0.721	11.6	2	0.995	1	0.206	48	..	..	..	..
57	Panama	0.815	0.643	21.1	-17	1.019	1	0.407	94	..	..	..	..
58	Bahamas	0.814	..	..	..	..	..	0.341	77	..	..	..	..
58	Barbados	0.814	0.676	17.0	-9	1.008	1	0.252	56	0.009[f]	2.5[f]	34.2[f]	2012 M
60	Oman	0.813	0.714	12.2	3	0.936	3	0.306	68	..	..	..	..
61	Georgia	0.812	0.716	11.9	5	0.980	1	0.331	76	0.001[e]	0.3[e]	36.6[e]	2018 M
62	Costa Rica	0.810	0.661	18.5	-11	0.981	1	0.288	62	..	..	..	..

Continued →

HDI rank		Human Development Index (HDI)	Inequality-adjusted HDI (IHDI)			Gender Development Index		Gender Inequality Index		Multidimensional Poverty Index[a]			
		Value	Value	Overall loss (%)	Difference from HDI rank[b]	Value	Group[c]	Value	Rank	Value	Headcount (%)	Intensity of deprivation (%)	Year and survey[d]
		2019	2019	2019	2019	2019	2019	2019	2019	2008-2019	2008-2019	2008-2019	2008-2019
62	Malaysia	0.810	..	..	..	0.972	2	0.253	59	..	..	..	..
64	Kuwait	0.806	..	..	..	0.983	1	0.242	53	..	..	..	..
64	Serbia	0.806	0.705	12.5	2	0.977	1	0.132	35	0.001[e]	0.3[e]	42.5[e]	2014 M
66	Mauritius	0.804	0.694	13.6	1	0.976	1	0.347	78	..	..	..	..
High human development													
67	Seychelles	0.796	0.670	15.8	-6	..	..	..	..	0.003[g,h]	0.9[g,h]	34.2[g,h]	2019 N
67	Trinidad and Tobago	0.796	..	..	..	1.003	1	0.323	73	0.002[e]	0.6[e]	38.0[e]	2011 M
69	Albania	0.795	0.708	11.0	6	0.967	2	0.181	42	0.003	0.7	39.1	2017/2018 D
70	Cuba	0.783	..	..	..	0.944	3	0.304	67	0.002[i]	0.4[i]	36.8[i]	2017 N
70	Iran (Islamic Republic of)	0.783	0.693	11.5	3	0.866	5	0.459	113	..	..	..	..
72	Sri Lanka	0.782	0.673	14.0	-1	0.955	2	0.401	90	0.011	2.9	38.3	2016 N
73	Bosnia and Herzegovina	0.780	0.667	14.5	-3	0.937	3	0.149	38	0.008[f]	2.2[f]	37.9[f]	2011/2012 M
74	Grenada	0.779	..	..	..	..	..	..	..	..	..	..	..
74	Mexico	0.779	0.613	21.3	-13	0.960	2	0.322	71	0.026[f]	6.6[f]	39.0[f]	2016 N[j]
74	Saint Kitts and Nevis	0.779	..	..	..	..	..	..	..	..	..	..	..
74	Ukraine	0.779	0.728	6.6	16	1.000	1	0.234	52	0.001[i]	0.2[i]	34.5[i]	2012 M
78	Antigua and Barbuda	0.778	..	..	..	..	..	..	..	..	..	..	..
79	Peru	0.777	0.628	19.1	-8	0.957	2	0.395	87	0.029	7.4	39.6	2018 N
79	Thailand	0.777	0.646	16.9	-2	1.008	1	0.359	80	0.003[e]	0.8[e]	39.1[e]	2015/2016 M
81	Armenia	0.776	0.699	9.9	12	0.982	1	0.245	54	0.001	0.2	36.2	2015/2016 D
82	North Macedonia	0.774	0.681	12.0	8	0.952	2	0.143	37	0.010[f]	2.5[f]	37.7[f]	2011 M
83	Colombia	0.767	0.595	22.4	-12	0.989	1	0.428	101	0.020[i]	4.8[i]	40.6[i]	2015/2016 D
84	Brazil	0.765	0.570	25.5	-20	0.993	1	0.408	95	0.016[e,i,k]	3.8[e,i,k]	42.5[e,i,k]	2015 N[k]
85	China	0.761	0.639	16.1	2	0.957	2	0.168	39	0.016[l,m]	3.9[l,m]	41.4[l,m]	2014 N[n]
86	Ecuador	0.759	0.616	18.8	-3	0.967	2	0.384	86	0.018[e]	4.6[e]	39.9[e]	2013/2014 N
86	Saint Lucia	0.759	0.629	17.2	0	0.985	1	0.401	90	0.007[f]	1.9[f]	37.5[f]	2012 M
88	Azerbaijan	0.756	0.684	9.5	16	0.943	3	0.323	73	..	..	..	..
88	Dominican Republic	0.756	0.595	21.3	-8	0.999	1	0.455	112	0.015[i]	3.9[i]	38.9[i]	2014 M
90	Moldova (Republic of)	0.750	0.672	10.4	13	1.014	1	0.204	46	0.004	0.9	37.4	2012 M
91	Algeria	0.748	0.596	20.4	-3	0.858	5	0.429	103	0.008	2.1	38.8	2012/2013 M
92	Lebanon	0.744	..	..	..	0.892	5	0.411	96	..	..	..	..
93	Fiji	0.743	..	..	..	..	..	0.370	84	..	..	..	..
94	Dominica	0.742	..	..	..	..	..	..	..	..	..	..	..
95	Maldives	0.740	0.584	21.0	-10	0.923	4	0.369	82	0.003	0.8	34.4	2016/2017 D
95	Tunisia	0.740	0.596	19.4	-1	0.900	4	0.296	65	0.003	0.8	36.5	2018 M
97	Saint Vincent and the Grenadines	0.738	..	..	..	0.965	2	..	..	..	..	..	..
97	Suriname	0.738	0.535	27.6	-18	0.985	1	0.436	105	0.011	2.9	39.4	2018 M
99	Mongolia	0.737	0.634	14.0	11	1.023	1	0.322	71	0.028[o]	7.3[o]	38.8[o]	2018 M
100	Botswana	0.735	..	..	..	0.998	1	0.465	116	0.073[p]	17.2[p]	42.2[p]	2015/2016 N
101	Jamaica	0.734	0.612	16.7	4	0.994	1	0.396	88	0.018[f]	4.7[f]	38.7[f]	2014 N
102	Jordan	0.729	0.622	14.7	9	0.875	5	0.450	109	0.002	0.4	35.4	2017/2018 D
103	Paraguay	0.728	0.557	23.5	-7	0.966	2	0.446	107	0.019	4.5	41.9	2016 M
104	Tonga	0.725	..	..	..	0.950	3	0.354	79	..	..	..	..
105	Libya	0.724	..	..	..	0.976	1	0.252	56	0.007	2.0	37.1	2014 P
106	Uzbekistan	0.720	..	..	..	0.939	3	0.288	62	..	..	..	..
107	Bolivia (Plurinational State of)	0.718	0.546	24.0	-9	0.945	3	0.417	98	0.094	20.4	46.0	2008 D
107	Indonesia	0.718	0.590	17.8	2	0.940	3	0.480	121	0.014[i]	3.6[i]	38.7[i]	2017 D
107	Philippines	0.718	0.587	18.2	-1	1.007	1	0.430	104	0.024[i]	5.8[i]	41.8[i]	2017 D
110	Belize	0.716	0.554	22.6	-5	0.976	1	0.415	97	0.017	4.3	39.8	2015/2016 M
111	Samoa	0.715	..	..	..	..	..	0.360	81	..	..	..	..
111	Turkmenistan	0.715	0.586	18.1	2	..	..	..	..	0.001	0.4	36.1	2015/2016 M
113	Venezuela (Bolivarian Republic of)	0.711	0.588	17.3	6	1.009	1	0.479	119	..	..	..	..
114	South Africa	0.709	0.468	34.0	-18	0.986	1	0.406	93	0.025	6.3	39.8	2016 D
115	Palestine, State of	0.708	0.613	13.5	15	0.870	5	..	..	0.004	1.0	37.5	2014 M
116	Egypt	0.707	0.497	29.7	-10	0.882	5	0.449	108	0.019[h]	5.2[h]	37.6[h]	2014 D
117	Marshall Islands	0.704	..	..	..	..	..	..	..	..	..	..	..
117	Viet Nam	0.704	0.588	16.5	9	0.997	1	0.296	65	0.019[i]	4.9[i]	39.5[i]	2013/2014 M
119	Gabon	0.703	0.544	22.6	0	0.916	4	0.525	128	0.066	14.8	44.3	2012 D
Medium human development													
120	Kyrgyzstan	0.697	0.630	9.6	25	0.957	2	0.369	82	0.001	0.4	36.3	2018 M
121	Morocco	0.686	..	..	..	0.835	5	0.454	111	0.085[e]	18.6[e]	45.7[e]	2011 P
122	Guyana	0.682	0.556	18.5	5	0.961	2	0.462	115	0.014	3.4	41.8	2014 M
123	Iraq	0.674	0.541	19.7	2	0.774	5	0.577	146	0.033	8.6	37.9	2018 M

Continued →

HDI rank		Human Development Index (HDI)	Inequality-adjusted HDI (IHDI)			Gender Development Index		Gender Inequality Index		Multidimensional Poverty Index[a]			
		Value	Value	Overall loss (%)	Difference from HDI rank[b]	Value	Group[c]	Value	Rank	Value	Headcount (%)	Intensity of deprivation (%)	Year and survey[d]
		2019	2019	2019	2019	2019	2019	2019	2019	2008-2019	2008-2019	2008-2019	2008-2019
124	El Salvador	0.673	0.529	21.5	0	0.975	2	0.383	85	0.032	7.9	41.3	2014 M
125	Tajikistan	0.668	0.584	12.6	11	0.823	5	0.314	70	0.029	7.4	39.0	2017 D
126	Cabo Verde	0.665	..	..	..	0.974	2	0.397	89	..	..	..	..
127	Guatemala	0.663	0.481	27.5	-3	0.941	3	0.479	119	0.134	28.9	46.2	2014/2015 D
128	Nicaragua	0.660	0.505	23.5	0	1.012	1	0.428	101	0.074	16.3	45.2	2011/2012 D
129	Bhutan	0.654	0.476	27.2	-3	0.921	4	0.421	99	0.175[e]	37.3[e]	46.8[e]	2010 M
130	Namibia	0.646	0.418	35.3	-14	1.007	1	0.440	106	0.171	38.0	45.1	2013 D
131	India	0.645	0.537	16.8	8	0.820	5	0.488	123	0.123	27.9	43.9	2015/2016 D
132	Honduras	0.634	0.472	25.6	-2	0.978	1	0.423	100	0.090[q]	19.3[q]	46.4[q]	2011/2012 D
133	Bangladesh	0.632	0.478	24.3	2	0.904	4	0.537	133	0.104	24.6	42.2	2019 M
134	Kiribati	0.630	0.516	18.1	7	..	..	..	..	0.080	19.8	40.5	2018/2019 M
135	Sao Tome and Principe	0.625	0.520	16.7	9	0.906	4	0.537	133	0.092	22.1	41.7	2014 M
136	Micronesia (Federated States of)	0.620	..	..	..	..	..	..	..	..	..	..	..
137	Lao People's Democratic Republic	0.613	0.461	24.8	0	0.927	3	0.459	113	0.108	23.1	47.0	2017 M
138	Eswatini (Kingdom of)	0.611	0.432	29.4	-5	0.996	1	0.567	143	0.081	19.2	42.3	2014 M
138	Ghana	0.611	0.440	28.0	-3	0.911	4	0.538	135	0.138	30.1	45.8	2014 D
140	Vanuatu	0.609	..	..	..	..	..	..	..	..[e]	..[e]	..[e]	..
141	Timor-Leste	0.606	0.436	28.0	-2	0.942	3	..	..	0.210	45.8	45.7	2016 D
142	Nepal	0.602	0.446	25.8	3	0.933	3	0.452	110	0.148	34.0	43.6	2016 D
143	Kenya	0.601	0.443	26.3	3	0.937	3	0.518	126	0.178	38.7	46.0	2014 D
144	Cambodia	0.594	0.475	20.0	9	0.922	4	0.474	117	0.170	37.2	45.8	2014 D
145	Equatorial Guinea	0.592	..	..	..	..	..	..	..	..	..	..	..
146	Zambia	0.584	0.401	31.4	-2	0.958	2	0.539	137	0.232	47.9	48.4	2018 D
147	Myanmar	0.583	..	..	..	0.954	2	0.478	118	0.176	38.3	45.9	2015/2016 D
148	Angola	0.581	0.397	31.7	-4	0.903	4	0.536	132	0.282	51.1	55.3	2015/2016 D
149	Congo	0.574	0.430	25.1	2	0.929	3	0.570	144	0.112	24.3	46.0	2014/2015 M
150	Zimbabwe	0.571	0.441	22.8	7	0.931	3	0.527	129	0.110	25.8	42.6	2019 M
151	Solomon Islands	0.567	..	..	..	..	..	..	..	..	..	..	..
151	Syrian Arab Republic	0.567	..	..	..	0.829	5	0.482	122	0.029[e]	7.4[e]	38.9[e]	2009 P
153	Cameroon	0.563	0.375	33.4	-7	0.864	5	0.560	141	0.243	45.3	53.5	2014 M
154	Pakistan	0.557	0.384	31.1	-4	0.745	5	0.538	135	0.198	38.3	51.7	2017/2018 D
155	Papua New Guinea	0.555	0.390	29.8	-1	..	..	0.725	161	0.263[i]	56.6[i]	46.5[i]	2016/2018 D
156	Comoros	0.554	0.303	45.2	-21	0.891	5	..	..	0.181	37.3	48.5	2012 D
	Low human development												
157	Mauritania	0.546	0.371	32.1	-4	0.864	5	0.634	151	0.261	50.6	51.5	2015 M
158	Benin	0.545	0.343	37.1	-10	0.855	5	0.612	148	0.368	66.8	55.0	2017/2018 D
159	Uganda	0.544	0.399	26.7	7	0.863	5	0.535	131	0.269	55.1	48.8	2016 D
160	Rwanda	0.543	0.387	28.7	3	0.945	3	0.402	92	0.259	54.4	47.5	2014/2015 D
161	Nigeria	0.539	0.348	35.4	-3	0.881	5	..	..	0.254	46.4	54.8	2018 D
162	Côte d'Ivoire	0.538	0.350	34.9	-1	0.811	5	0.638	153	0.236	46.1	51.2	2016 M
163	Tanzania (United Republic of)	0.529	0.397	25.0	10	0.948	3	0.556	140	0.273	55.4	49.3	2015/2016 D
164	Madagascar	0.528	0.390	26.1	9	0.952	2	..	..	0.384	69.1	55.6	2018 M
165	Lesotho	0.527	0.382	27.6	6	1.014	1	0.553	139	0.084[h]	19.6[h]	43.0[h]	2018 M
166	Djibouti	0.524	..	..	..	..	..	..	..	..	..	..	..
167	Togo	0.515	0.351	31.8	4	0.822	5	0.573	145	0.180	37.6	47.8	2017 M
168	Senegal	0.512	0.348	32.1	2	0.870	5	0.533	130	0.288	53.2	54.2	2017 D
169	Afghanistan	0.511	..	..	..	0.659	5	0.655	157	0.272[i]	55.9[i]	48.6[i]	2015/2016 D
170	Haiti	0.510	0.303	40.5	-10	0.875	5	0.636	152	0.200	41.3	48.4	2016/2017 D
170	Sudan	0.510	0.333	34.7	-3	0.860	5	0.545	138	0.279	52.3	53.4	2014 M
172	Gambia	0.496	0.335	32.4	1	0.846	5	0.612	148	0.204	41.6	49.0	2018 M
173	Ethiopia	0.485	0.348	28.3	5	0.837	5	0.517	125	0.489	83.5	58.5	2016 D
174	Malawi	0.483	0.345	28.6	5	0.986	1	0.565	142	0.243	52.6	46.2	2015/2016 D
175	Congo (Democratic Republic of the)	0.480	0.335	30.3	3	0.845	5	0.617	150	0.331	64.5	51.3	2017/2018 M
175	Guinea-Bissau	0.480	0.300	37.5	-7	..	..	..	..	0.372	67.3	55.3	2014 M
175	Liberia	0.480	0.325	32.3	1	0.890	5	0.650	156	0.320	62.9	50.8	2013 D
178	Guinea	0.477	0.313	34.4	0	0.817	5	..	..	0.373	66.2	56.4	2018 D
179	Yemen	0.470	0.321	31.8	4	0.488	5	0.795	162	0.241	47.7	50.5	2013 D
180	Eritrea	0.459	..	..	..	..	..	..	..	..	..	..	..
181	Mozambique	0.456	0.316	30.7	3	0.912	4	0.523	127	0.411	72.5	56.7	2011 D
182	Burkina Faso	0.452	0.316	30.1	5	0.867	5	0.594	147	0.519	83.8	61.9	2010 D
182	Sierra Leone	0.452	0.291	35.7	-2	0.884	5	0.644	155	0.297	57.9	51.2	2017 M
184	Mali	0.434	0.289	33.4	-1	0.821	5	0.671	158	0.376	68.3	55.0	2018 D
185	Burundi	0.433	0.303	30.0	3	0.999	1	0.504	124	0.403	74.3	54.3	2016/2017 D
185	South Sudan	0.433	0.276	36.2	-2	0.842	5	..	..	0.580	91.9	63.2	2010 M
187	Chad	0.398	0.248	37.8	-1	0.764	5	0.710	160	0.533	85.7	62.3	2014/2015 D
188	Central African Republic	0.397	0.232	41.6	-1	0.801	5	0.680	159	0.465[e]	79.4[e]	58.6[e]	2010 M
189	Niger	0.394	0.284	27.9	3	0.724	5	0.642	154	0.590	90.5	65.2	2012 D
	Other countries or territories												
..	Korea (Democratic People's Rep. of)	..	..	..	..	..	..	..	..	..	..	..	..
..	Monaco	..	..	..	..	..	..	..	..	..	..	..	..
..	Nauru	..	..	..	..	..	..	..	..	..	..	..	..

Continued →

HDI rank	Human Development Index (HDI) Value 2019	Inequality-adjusted HDI (IHDI) Value 2019	Overall loss (%) 2019	Difference from HDI rank[b] 2019	Gender Development Index Value 2019	Group[c] 2019	Gender Inequality Index Value 2019	Rank 2019	Multidimensional Poverty Index[a] Value 2008-2019	Headcount (%) 2008-2019	Intensity of deprivation (%) 2008-2019	Year and survey[d] 2008-2019
.. San Marino	..	..	..	..	..	..	..	..	..	..	..	..
.. Somalia	..	..	..	..	..	..	..	..	..	..	..	..
.. Tuvalu	..	..	..	..	..	..	..	..	..	..	..	..
Human development groups												
Very high human development	0.898	0.800	10.9	–	0.981	–	0.173	–	0.002	0.4	37.3	–
High human development	0.753	0.618	17.9	–	0.961	–	0.340	–	0.017	4.1	40.7	–
Medium human development	0.631	0.503	20.2	–	0.835	–	0.501	–	0.133	29.2	45.5	–
Low human development	0.513	0.352	31.4	–	0.861	–	0.592	–	0.333	61.0	54.7	–
Developing countries	0.689	0.549	20.3	–	0.919	–	0.463	–	0.108	22.0	49.0	–
Regions												
Arab States	0.705	0.531	24.6	–	0.856	–	0.518	–	0.077	15.8	48.5	–
East Asia and the Pacific	0.747	0.621	16.8	–	0.961	–	0.324	–	0.023	5.4	42.5	–
Europe and Central Asia	0.791	0.697	11.8	–	0.953	–	0.256	–	0.004	1.0	38.1	–
Latin America and the Caribbean	0.766	0.596	22.1	–	0.978	–	0.389	–	0.031	7.2	43.0	–
South Asia	0.641	0.519	19.1	–	0.824	–	0.505	–	0.132	29.2	45.2	–
Sub-Saharan Africa	0.547	0.381	30.4	–	0.894	–	0.570	–	0.299	55.0	54.3	–
Least developed countries	0.538	0.384	28.6	–	0.874	–	0.559	–	0.292	55.0	53.1	–
Small island developing states	0.728	0.549	24.5	–	0.959	–	0.458	–	0.111	23.3	47.6	–
Organisation for Economic Co-operation and Development	0.900	0.791	12.1	–	0.978	–	0.205	–	0.024	6.1	39.4	–
World	0.737	0.599	18.7	–	0.943	–	0.436	–	0.108	22.0	49.0	–

Notes

a Not all indicators were available for all countries, so caution should be used in cross-country comparisons. When an indicator is missing, weights of available indicators are adjusted to total 100 percent. See *Technical note 5* at http://hdr.undp.org/sites/default/files/hdr2020_technical_notes.pdf for details.

b Based on countries for which an Inequality-adjusted Human Development Index value is calculated.

c Countries are divided into five groups by absolute deviation from gender parity in HDI values.

d *D* indicates data from Demographic and Health Surveys, *M* indicates data from Multiple Indicator Cluster Surveys, *N* indicates data from national surveys and *P* indicates data from Pan Arab Population and Family Health Surveys (see http://hdr.undp.org/en/mpi-2020-faq for the list of national surveys).

e Considers child deaths that occurred at any time because the survey did not collect the date of child deaths.

f Missing indicator on child mortality.

g Missing indicator on school attendance.

h Missing indicator on cooking fuel.

i Missing indicator on nutrition.

j Multidimensional Poverty Index estimates are based on the 2016 National Health and Nutrition Survey. Estimates based on the 2015 Multiple Indicator Cluster Survey are 0.010 for Multidimensional Poverty Index value, 2.6 for multidimensional poverty headcount (%), 3,207,000 for multidimensional poverty headcount in year of survey, 3,281,000 for projected multidimensional poverty headcount in 2018, 40.2 for intensity of deprivation, 0.4 for population in severe multidimensional poverty, 6.1 for population vulnerable to multidimensional poverty, 39.9 for contribution of deprivation in health, 23.8 for contribution of deprivation in education and 36.3 for contribution of deprivation in standard of living.

k The methodology was adjusted to account for missing indicator on nutrition and incomplete indicator on child mortality (the survey did not collect the date of child deaths).

l Given the information available in the data, child mortality was constructed based on deaths that occurred between surveys—that is, between 2012 and 2014. Child deaths reported by an adult man in the household were taken into account because the date of death was reported.

m Missing indicator on housing.

n Based on the version of data accessed on 7 June 2016.

o Indicator on sanitation follows the national classification in which pit latrine with slab is considered unimproved.

p Indicator on child mortality captures only deaths of children under age 5 who died in the last five years and deaths of children ages 12–18 who died in the last two years.

q Missing indicator on electricity.

Definitions

Human Development Index (HDI): A composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge and a decent standard of living. See *Technical note 1* at http://hdr.undp.org/sites/default/files/hdr2020_technical_notes.pdf for details on how the HDI is calculated.

Inequality-adjusted HDI (IHDI): HDI value adjusted for inequalities in the three basic dimensions of human development. See *Technical note 2* at http://hdr.undp.org/sites/default/files/hdr2020_technical_notes.pdf for details on how the IHDI is calculated.

Overall loss: Percentage difference between the IHDI value and the HDI value.

Difference from HDI rank: Difference in ranks on the IHDI and the HDI, calculated only for countries for which an IHDI value is calculated.

Gender Development Index: Ratio of female to male HDI values. See *Technical note 3* at http://hdr.undp.org/sites/default/files/hdr2020_technical_notes.pdf for details on how the Gender Development Index is calculated.

Gender Development Index groups: Countries are divided into five groups by absolute deviation from gender parity in HDI values. Group 1 comprises countries with high equality in HDI achievements between women and men (absolute deviation of less than 2.5 percent), group 2 comprises countries with medium to high equality in HDI achievements between women and men (absolute deviation of 2.5–5 percent), group 3 comprises countries with medium equality in HDI achievements between women and men (absolute deviation of 5–7.5 percent), group 4 comprises countries with medium to low equality in HDI achievements between women and men (absolute deviation of 7.5–10 percent) and group 5 comprises countries with low equality in HDI achievements between women and men (absolute deviation from gender parity of more than 10 percent).

Gender Inequality Index: A composite measure reflecting inequality in achievement between women and men in three dimensions: reproductive health, empowerment and the labour market. See *Technical note 4* at http://hdr.undp.org/sites/default/files/hdr2020_technical_notes.pdf for details on how the Gender Inequality Index is calculated.

Multidimensional Poverty Index: Percentage of the population that is multidimensionally poor adjusted by the intensity of the deprivations. See *Technical note 5* at http://hdr.undp.org/sites/default/files/hdr2020_technical_notes.pdf for details on how the Multidimensional Poverty Index is calculated.

Multidimensional poverty headcount: Population with a deprivation score of at least 33 percent. It is expressed as a share of the population in the survey year, the number of multidimensionally poor people in the survey year and the projected number of multidimensionally poor people in 2018.

Intensity of deprivation of multidimensional poverty: Average deprivation score experienced by people in multidimensional poverty.

Main data sources

Columns 1 and 7: HDRO calculations based on data from UNDESA (2019a), UNESCO Institute for Statistics (2020), United Nations Statistics Division (2020b), World Bank (2020a), Barro and Lee (2018) and IMF (2020).

Column 1: HDRO calculations based on data from UNDESA (2019), UNESCO Institute for Statistics (2020), United Nations Statistics Division (2020), World Bank (2020), Barro and Lee (2018) and IMF (2020).

Column 2: Calculated as the geometric mean of the values in inequality-adjusted life expectancy index, inequality-adjusted education index and inequality-adjusted income index using the methodology in *Technical note 2* (available at http://hdr.undp.org/sites/default/files/hdr2020_technical_notes.pdf).

Column 3: Calculated based on data in columns 1 and 2.

Column 4: Calculated based on IHDI values and recalculated HDI ranks for countries for which an IHDI value is calculated.

Column 5: HDRO calculations based on data from UNDESA (2019), UNESCO Institute for Statistics (2020), Barro and Lee (2018), World Bank (2020), ILO (2020) and IMF (2020).

Column 6: Calculated based on data in column 5.

Column 7: HDRO calculations based on data from WHO, UNICEF, UNFPA, World Bank Group and United Nations Population Division (2019).

Column 8: Calculated based on data in column 7.

Columns 9–11: HDRO and OPHI calculations based on data on household deprivations in health, education, and standard of living from various household surveys listed in column 12 using a revised methodology described in *Technical note 5* (available at http://hdr.undp.org/sites/default/files/hdr2020_technical_notes.pdf).

Column 12: Refers to the year and the survey whose data were used to calculate the country's Multidimensional Poverty Index value and its components.

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We may be entering a new geologic age called the Anthropocene in which humans are a dominant force shaping the planet's future. That future is already taking frightening shape in many ways, from climate change to plunging biodiversity to the epidemic of plastics in our oceans.

The strain on the planet mirrors the strain facing many societies. Indeed, planetary and social imbalances reinforce one another. As the 2019 Human Development Report made plain, many inequalities in human development continue to increase. Climate change, among other dangerous planetary changes, will only make them worse.

The Covid-19 pandemic may be the latest harrowing consequence of imbalance writ large. Scientists have long warned that unfamiliar pathogens will emerge more frequently from interactions among humans, livestock and wildlife, squeezing ecosystems so hard that deadly viruses spill out. Collective action on anything from the Covid-19 pandemic to climate change becomes more difficult against a backdrop of social fragmentation.

Consciously or not, human choices, shaped by values and institutions, have given rise to the interconnected planetary and social imbalances we face. The good news, then, is that we can make different choices. We have the power to embark on bold new development paths that allow for the continuing expansion of human freedoms in balance with the planet.

That is what the concept of human development, celebrating its 30th anniversary this year, can contribute to the complex predicaments that this new age poses to each of us. And that is the central message of this year's global Human Development Report. Human development is not just possible in the context of easing planetary pressures; it is instrumental to doing so.

The Report calls for a just transformation that expands human freedoms while easing planetary pressures. For people to thrive in the Anthropocene, new development trajectories must do three things: enhance equity, foster innovation and instil a sense of stewardship of the planet. These outcomes matter in their own right, and they matter for our shared future on our planet. All countries have a stake in them.

The Report organizes its recommendations around mechanisms for change: social norms and values, incentives and regulation, and nature-based human development. Each mechanism of change specifies multiple potential roles for each of us, for governments, for firms and for political and civil society leaders.

The Report goes on to explore new metrics for a new age. Among them is a planetary pressures-adjusted Human Development Index, which adjusts the standard Human Development Index (HDI) by a country's per capita carbon dioxide emissions and material footprint. The Report also introduces a next generation of dashboards, as well as metrics that adjust the HDI to account for the social costs of carbon or for natural wealth.

A new normal is coming, one that is more than uncertain; it is unknown. And it cannot be "solved" neatly. The Covid-19 pandemic is just the tip of the spear. Nothing short of a wholesale shift in mindsets, translated into reality by policy, is needed to navigate the brave new world of the Anthropocene, to ensure that all people flourish while easing planetary pressures. This year's 2020 Human Development Report helps signpost the way.