PART ONE

TIME FOR A SHARED VISION

WE ENVISION A WORLD IN WHICH 9+ BILLION PEOPLE CAN LIVE WELL, WITHIN PLANETARY BOUNDARIES, BY MID-CENTURY.

We find ourselves at a time in history where an aspirational, shared vision is more important than ever before. To achieve sustainable development, we need a clear picture of where we want to go, and a path to set out on – even if we can't see all the twists and turns that lie ahead.

In 2010, we provided the original Vision 2050, calling for a world in which 9+ billion people can live well, within planetary boundaries, by mid-century. This vision is equally compelling today, and can serve as a powerful guiding star for the global business community.

However, it is important that we establish not only a shared vision, but also a common understanding of what it will look like in practice, against the backdrop of the progress we have made to date and grounded in science based realities. What constitutes "living well" and what does keeping "within planetary boundaries" really mean?

Perhaps more importantly, we also need to understand how these two prerequisites can be met in a way that is mutually reinforcing as, in reality, it is impossible to separate economic development issues from environmental ones.

Drawing from the latest science, a broad range of expert inputs, and close consultation of intergovernmental instruments and frameworks such as the Sustainable Development Goals and the UN Declaration of Human Rights, we have laid out a common view of the future we seek to create. We will describe this in detail over the next few pages.

9+ BILLION PEOPLE LIVING WELL...

Everyone's dignity and rights are respected, basic needs are met, and equal opportunities are available for all.

...WITHIN PLANETARY BOUNDARIES

Global warming is stabilized at no more than +1.5°C, and natural systems are protected, restored and used sustainably. Societies have developed sufficient adaptive capacity to build and maintain resilience in a healthy and regenerative Earth system.

PEOPLE LIVING WELL

A WORLD IN WHICH PEOPLE ARE LIVING WELL IS A WORLD IN WHICH EVERYONE'S DIGNITY AND RIGHTS ARE RESPECTED, BASIC NEEDS ARE MET, AND EQUAL OPPORTUNITIES ARE AVAILABLE FOR ALL.

BY 2050, WE ENVISION A SOCIETY IN WHICH:

PEOPLE ARE FREE AND EQUAL IN DIGNITY AND RIGHTS

- All human rights, including civil, cultural, economic, political and social rights, as laid out in the UN Declaration of Human Rights and its accompanying covenants and conventions, are fully recognized and embedded in societies globally.
- The UN Guiding Principles on Business and Human Rights are upheld, with all states and businesses fulfilling their respective duties and responsibilities to protect and respect human rights, and to provide access to effective remedy.
- Business models and strategies are developed with attention to the risks they may pose to vulnerable workers, communities and consumers, and are adapted to avoid harm.
- Multi-stakeholder coalitions have played a key role in helping to eradicate forced labor, modern slavery and human trafficking, eliminate child labor, and end sexual harassment in all workplaces
- Businesses work with suppliers, trade unions and other stakeholders to enable, incentivize and reward respect for workers across their value chains, including fair wages.
- Public and private sectors collaborate to ensure the safety of human rights defenders and advance regulatory frameworks that protect the human rights of all.

THERE IS HEALTH AND HAPPINESS FOR ALL

- The basic needs of all individuals are met, allowing them to live healthy, happy and self-determined lives.
- Food is sufficient, safe, affordable and nutritious, and the human right to water and sanitation is upheld.
- There is universal access to affordable and reliable energy, and human habitats are safe and resilient.
- The world enjoys universal access to quality education at all levels, as well as healthcare and social protection that assures physical, mental and social wellbeing.

COMMUNITIES ARE THRIVING AND CONNECTED

- Both urban and rural communities flourish. Rural communities' access to land and the livelihoods it supports is protected, and the particular rights of indigenous peoples are respected.
- Rural areas are attractive places to live, work and invest in, creating plentiful opportunities.
- Everyone has access to safe and affordable mobility solutions which connect communities to each other and to key goods and services.
- Universal access to digital and communication technologies connect individuals across geographic, cultural and socio-economic boundaries – thereby contributing to the development of fair, informed, prosperous and inclusive societies. Public policies and business practices ensure these technologies are not used in harmful ways.

NO ONE IS LEFT BEHIND

- People are not discriminated against on the basis of their race, origins, sexual orientation, gender identity, status or beliefs, and everyone has equal opportunities to advance their needs and interests.
- Society has achieved true gender equality through the empowerment of women and girls and the eradication of all forms of gender-based discrimination.
- The benefits of economic growth are distributed fairly, providing everyone with equitable access to public goods and essential products and services.
- The gap between rich and poor has been significantly reduced; poverty is ended in all its forms everywhere.

PEOPLE HAVE ACCESS TO A WORLD OF OPPORTUNITIES AND ASPIRATIONS

- All people have access to decent and meaningful work that sustains them and their families.
- Work provides people globally with financial security, a sense of self-worth, and the opportunity for self-advancement as well as family time and leisure pursuits, and a means of contributing to society.
- Individuals are empowered to develop the skills they need for work, life, and future fulfillment and employability.
- People can access the education and training needed to perform their work well and build opportunities for both personal and professional growth.
- Workplace cultures are built on empathy and respect, and they encourage the discussion of challenges and mistakes as a means to learning and progress.
- Businesses provide opportunities for people and economies to grow and make a measurable contribution to society.
- Workplaces are safe spaces that protect and nurture people's physical and mental wellbeing and foster meaningful connections.

To define this desired future for "living well", we have drawn from a range of sources including the Universal Declaration of Human Rights, the Sustainable Development Goals, the UN Guiding Principles on Business and Human Rights, Maslow's pyramid of needs, the Social Progress Index Framework, and the Human Development Index.

LIVING WITHIN PLANETARY BOUNDARIES

THE EARTH'S REMARKABLE CLIMATE STABILITY OVER THE PAST 10,000 YEARS, ALONG WITH ITS RICH BIOLOGICAL DIVERSITY, HAVE ENABLED HUMAN SOCIETIES TO GROW AND THRIVE. HOWEVER, THE PLANET'S COMPLEX LIVING AND NON-LIVING SYSTEMS ARE DYNAMIC AND NON-LINEAR.

We now know that since the industrial revolution, and at increasing speed over the past decades, human activity has severely undermined the functioning of Earth's systems.

We have now entered a crisis period of greater volatility: climate emergency, ecological degradation and significant biodiversity loss. In the face of these threats, human societies must build sufficient capacity to adequately respond to these planetary emergencies. We must work to mitigate additional climate change and loss of nature while also learning to adapt to a dynamic and more volatile planet.

BY 2050, WE ENVISION A WORLD IN WHICH:

GLOBAL WARMING IS STABILIZED AT NO MORE THAN +1.5°C[1] AND CLEAN AIR IS AVAILABLE FOR EVERYONE[2]

- Global anthropogenic greenhouse gas emissions have reached net zero, allowing global warming to stabilize at 1.5°C above pre-industrial levels.[3]
- Improved air quality supports better health and environmental outcomes as pollutants including particles, ozone, lead, carbon monoxide, nitrogen dioxide and sulfur dioxide are reduced.
- Anthropogenic aerosol emissions to the atmosphere have been minimized, halting their impact on Earth's climate system.
- The ozone layer in the stratosphere has stabilized and is self-repairing.

THE BIOSPHERE IS PROTECTED AND RESTORED

- The biosphere, including all living organisms on land and below water and the relationships between them, is protected and restored such that – despite the unavoidable pressures on marine and terrestrial habitats from a +1.5°C world – its ecosystems are sufficiently resilient to sustain and regulate the environment.[4,5]
- The biosphere's regulatory services, such as pollination, seed dispersal, pest control, and mitigation of the impact of natural disasters are thriving.[6,7]
- Having achieved net-zero deforestation and habitat loss, by 2050 we live in a "nature positive" world which embraces afforestation and habitat creation.
- Human-induced nature loss is limited to only those impacts which cannot be prevented from a +1.5°C warmer world.
- Conservation plans for those species under threat from even limited climate change have been implemented, and initiatives are in place to limit the spread of invasive species.
- The integrity of living systems is safeguarded and regenerated through efforts to enhance habitats and improve the connections between ecosystems.

HEALTHY LAND AND SOILS ARE STEWARDED IN AN EQUITABLE AND SUSTAINABLE WAY

- Agricultural and food production is confined to an area no greater than that which it currently occupies, helping to conserve forests, grasslands, wetlands and peatlands.
- A strong emphasis is put on preserving and restoring global forests, as their critical role in controlling the linked dynamics of land use and climate is universally recognized.
- Land has been restored and human-induced degradation reversed. Innovative technologies, land management strategies, and land-resource stewardship approaches are widely practiced.[8]

THE OCEANS AND CRYOSPHERE ARE PROTECTED AND RESTORED[9]

- Transformative efforts to reduce greenhouse gas emissions have limited global warming to 1.5°C above pre-industrial temperatures. This may have prevented important tipping points from occurring, including the loss of Arctic summer sea ice and the destabilization of the continental ice sheets. It has also contained ocean temperature increase, ocean acidification, sea level rise, the frequency of marine heatwaves and other consequences, keeping them within manageable bounds.
- Loss from ice sheets and glaciers, reductions in snow cover and Arctic sea ice extent and thickness, and increases in permafrost temperature have all been limited to only that which cannot be avoided in a +1.5°C world. Black carbon emissions from heavy fuel use have been eliminated, preventing additional melting in the cryosphere.
- Ocean ecosystems regenerate and thrive. Marine species remain abundant and are fished sustainably.

THE FRESHWATER CYCLE IS SAFEGUARDED, AND CLEAN WATER IS AVAILABLE FOR ALL

- Water systems are managed efficiently and sustainably, ensuring that groundwater is restored.[10,11]
- Local water storage capacity is optimized for equitable and efficient use.
- Freshwater ecosystems, including wetlands, have been conserved and restored, helping to store carbon and restore nature.[12]

LAND, OCEANS, WATERWAYS AND COASTLINES ARE FREE FROM WASTE AND POLLUTION

- Plastic pollution has been eliminated.
- Emissions of other toxic, persistent, and bio-accumulative substances – organic pollutants, antibiotic and other pharmaceutical residues, heavy metal compounds, and radioactive materials – have also ceased.
- Biogeochemical cycles of nitrogen and phosphorus have been brought back to a sustainable balance, protecting waterways from eutrophication.

NATURAL RESOURCES ARE CONSUMED SUSTAINABLY

- Service-oriented and circular approaches to production and consumption have enabled people to sustainably use natural resources for food, energy, materials, medicines and other applications.[13]
- The ecological footprint of production and consumption has been reduced by more than half and the true value of resources is recognized.[14]
- Efficient and sustainable food systems ensure access to nutritious food and clean water.[15] Food waste has been minimized.
- Everyone has access to clean, affordable energy based on a decarbonized energy system.

NATURE IS VALUED

- People value nature in its own right, recognizing the intrinsic existential value of biological diversity and of the ecological, genetic, social, economic, scientific, educational, cultural, recreational, aesthetic and existential values of the natural world in its entirety.[16,17]
- Governments, companies, and financial institutions consider the value of nature in all their decision-making.
- Everyone enjoys access to nature and the physical and psychological benefits it brings. Nature continues to inspire human ingenuity and creativity.[18]

To expand upon our understanding of what it means to live "within planetary boundaries," we considered the latest science and thinking, drawing from a range of experts and sources including the Stockholm Resilience Centre's Planetary Boundaries Framework, UN Environment's Sixth Global Environmental Outlook Report, the IPBES 2019 Global Assessment, IIASA's The World in 2050 initiative's Transformations to Achieve the SDGs 2019, IUCN's Global Commons in the Anthropocene, the Convention on Biological Diversity, the SDGs, the IPCC's Special Report on 1.5°C ; the EAT Lancet report, and the Club of Rome and Potsdam Institute's Planetary Emergency Declaration and Action Plan.

THE URGENT NEED FOR ACTION

THE LAST 10 YEARS HAVE SEEN OUR BIGGEST CHALLENGES – CLIMATE CHANGE, BIODIVERSITY LOSS, INEQUALITY – GET WORSE, NOT BETTER. OUR VISION IS STILL WITHIN REACH – BUT THE DECADE AHEAD IS CRITICAL, AND EVERY DAY COUNTS.

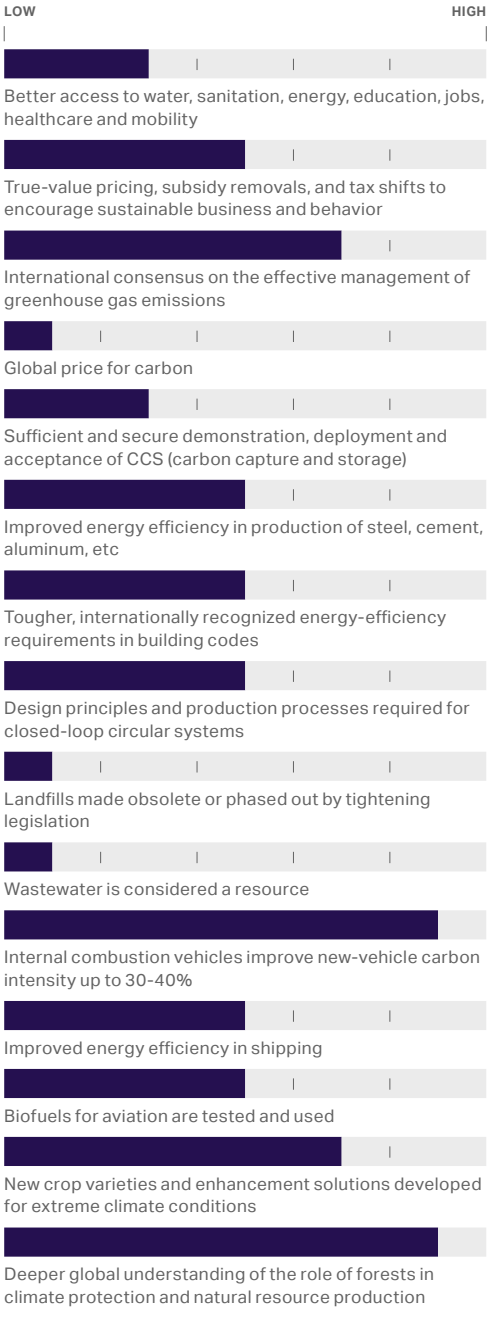
When the original Vision 2050 was launched, it identified a number of "must-haves" for the decade ahead: key building blocks that needed to be put in place by 2020 in order to make the vision of 9+ billion people living well, within planetary boundaries, possible by 2050. The report challenged businesses and other stakeholders to align their strategies in support of these must-haves, laying the foundations for what our original report called "transformation time" – a period from 2020-2050 in which hard-won ideas and relationships would transform our businesses, economies and societies at scale.

There have been significant advances since the original Vision 2050 was launched. Perhaps the most notable developments have been global inter-governmental agreements to tackle the world's greatest challenges. Chief among these are the Sustainable Development Goals (SDGs), a set of 17 goals and 169 targets that provide a unified global framework for realizing a better world for all, and the Paris Agreement under the United Nations Framework Convention on Climate Change, both of which have provided a shared focus that has helped to empower collaborative action toward sustainable development.

Business has also contributed to important progress. Its innovations and technologies have begun to pave the way for the transition to a low-carbon economy. Companies around the world have set science-based net-zero carbon targets, in line with the Paris Agreement. Beyond emissions reductions, there have been significant investments in nature-based solutions that mitigate climate change while protecting biodiversity and livelihoods, and in important new circular business models that drastically cut waste. Trillions of dollars of assets are now being managed with consideration of environmental, social and governance criteria. And companies continue to work with a broad range of stakeholders throughout global value chains to operationalize the UN Guiding Principles on Business and Human Rights. Business is increasingly aware of the direct link between progress on sustainable development challenges and long-term value generation.

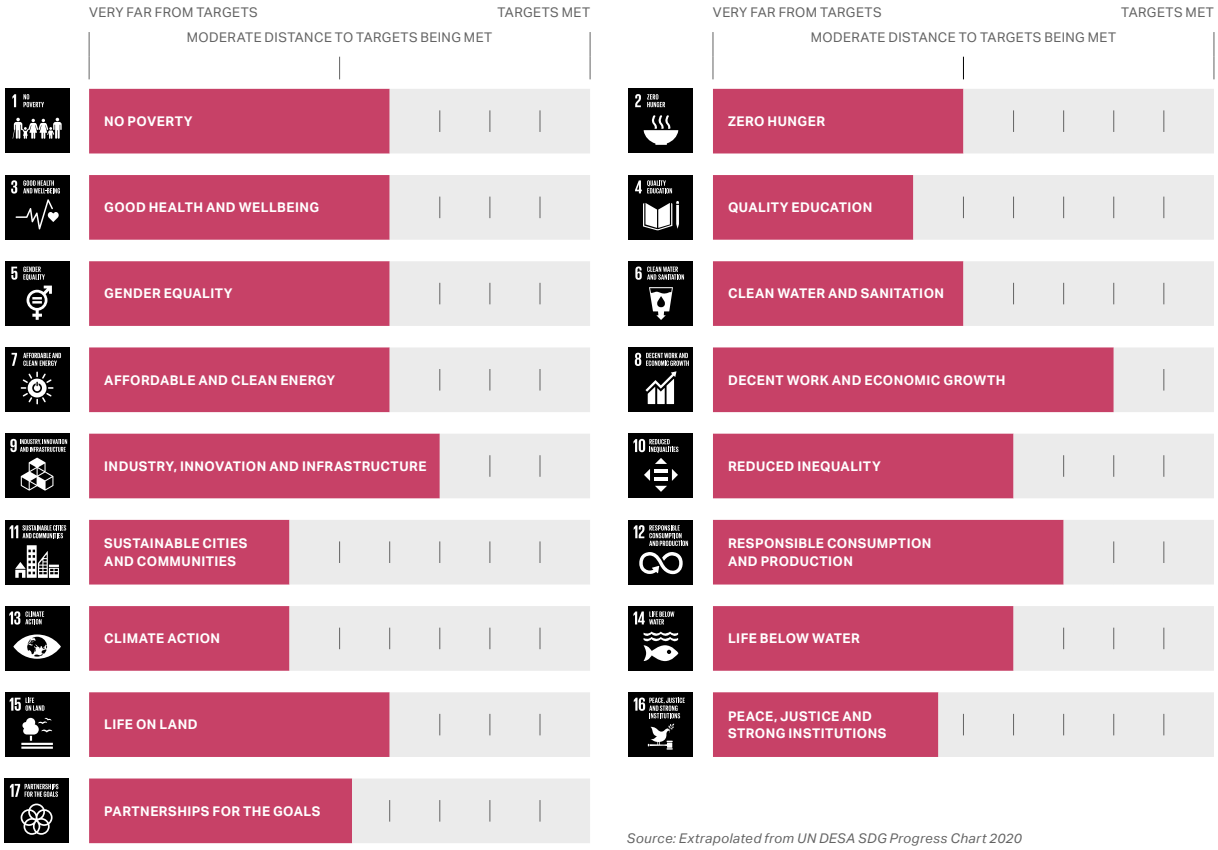
Despite advances in many areas, however, it is clear today that we have largely fallen short of turning our original Vision 2050 "must haves" into "haves," as highlighted in Fig. 1, below. Fig. 2 underlines how global progress on the SDGs remains significantly off-track,[19] and while 189 countries have become parties to the Paris Agreement, recent calculations suggest that even if all countries meet their current carbon reduction commitments, temperatures are still expected to rise to a catastrophic 3.2°C above pre-industrial levels within this century.[20]

FIG. 1: QUALITATIVE ASSESSMENT BY WBCSD AND ITS MEMBERS ON PROGRESS AGAINST A SELECTION OF ORIGINAL VISION 2050 "MUST HAVES"



Source: Based on analysis by WBCSD and its members, 2019

FIG. 2: OVERVIEW OF SDG PROGRESS (EXTRAPOLATED FROM UN DESA SDG PROGRESS CHART 2020)



Source: Extrapolated from UN DESA SDG Progress Chart 2020

This lack of progress to advance the capacity of people to live well, within planetary boundaries can be seen clearly by layering the Global Footprint Network's Ecological Footprint over the UN's Human Development Index, as depicted in Fig. 3 on the next page. This same chart was included in our original Vision 2050 report; however since then we have not seen a shift of countries into the bottom right sustainable development quadrant, where a high level of human development is achieved within planetary boundaries.

The problem is that we are currently seeing incremental change when exponential change is needed. And in several areas, trends are still heading in the wrong direction. The United Nation's landmark 2019 Global Sustainable Development Report highlighted four particular trends that are threatening all aspects of sustainable development:[21]

CLIMATE CHANGE

When we released the original Vision 2050 report 10 years ago the latest scientific evidence suggested that one climate tipping point was at risk. Today, nine out of the 15 major biophysical systems that regulate climate are on the move, showing signs of decline and potentially approaching tipping points.[22] Human activities have already warmed the planet by an average of 1.0°C above pre-industrial levels,[23] and past and present emissions are adding 0.2°C per decade.[24] At this rate, global warming is likely to reach 1.5°C between 2030 and 2052.[25] Heat-related events, heavy precipitation and droughts are worsening,[26] and food security is suffering.[27] For example, in 2019, the Greenland ice sheet suffered its greatest loss in centuries – possibly even millennia – at 255 billion tons or approximately one million tons per minute.[28] Despite growing awareness, emissions keep on rising. Global decarbonization rates remain radically off-course to limit warming to 1.5°C. The latest science indicates that we have just eight years at current emissions rates before we use up our 1.5°C budget.

BIODIVERSITY LOSS

While the United Nations declared that 2011-2020 would be the Decade of Biodiversity,[29] species have continued to go extinct tens to hundreds of times faster than has been the average over the past 10 million years. The world has failed to meet almost all of the conservation targets in the decade-long Strategic Plan for Biodiversity. The tragic reality is that global wildlife populations shrank by 68% between 1970 and 2016, and we are currently on course to lose nearly one million species to extinction by 2050.[30] Failure to halt biodiversity loss will have grave consequences for our livelihoods, economies, health and security. Taken together, the risks from biodiversity loss and climate change have shifted us into a state the Club of Rome and the Potsdam Institute describe as a "planetary emergency".

RISING MATERIAL EXTRACTION AND WASTE PRODUCTION

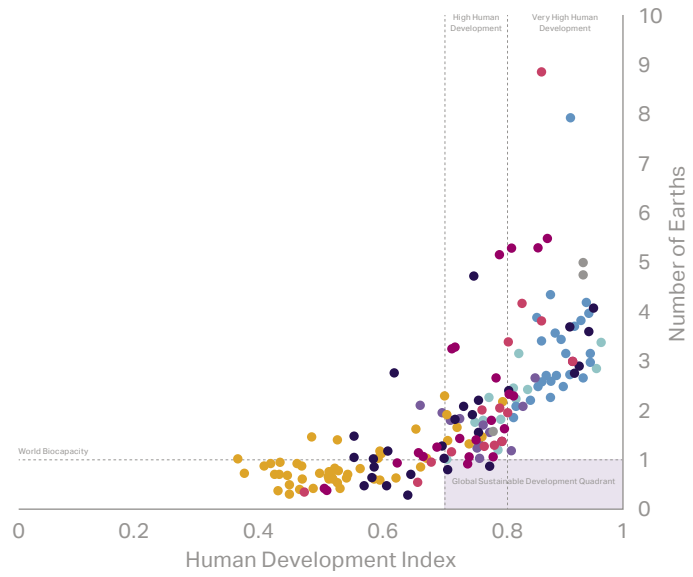
Our global material footprint has more than tripled since 1979, growing by 67% from 2000 to 2017.[31] At the same time material productivity started to decline around 2000, and has stagnated in recent years. Meanwhile, waste has also significantly increased. Electronic waste is growing fastest, having increased by 8% to 43 million tons from 2014 to 2016 alone, and it is now expected to reach 52 million tonnes by 2021. Despite a recent increase in awareness and action, plastic waste is also still expected to grow from 260 million tons per year in 2016 to 460 million tons by 2030 – nearly half of that from packaging.[32] Of all the minerals, fossil fuels, metals and biomass that enter the world each year, just 8.6% are currently cycled back.[33]

RISING INEQUALITY

Income inequality has risen sharply since 1980 – both between and within countries. The richest 1% of the global population has captured 27% of economic gains, while the poorest 50% has captured only 12%.[34] The richest 1% now own 44% of global wealth. The poorest 50% own a mere 2%.[35] Meanwhile women remain nearly 100 years away from equality with men,[36] discrimination remains rife in many corners of society and more than 40 million people are estimated to be trapped in modern slavery.

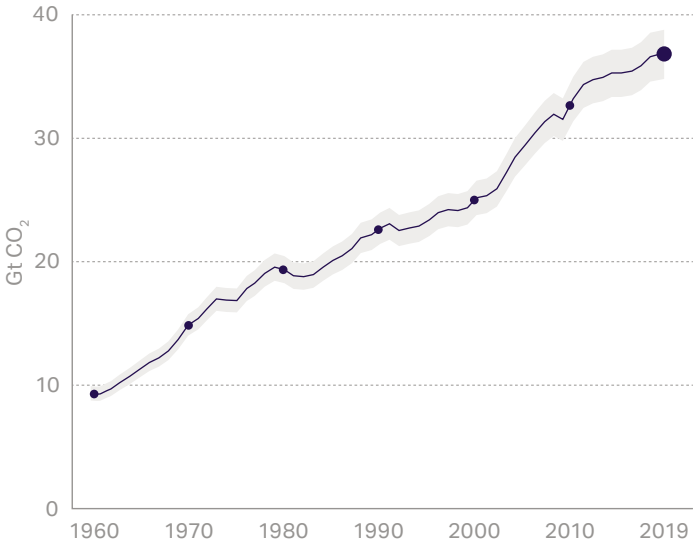
The fact that the 2020s have begun with the world facing of one of the worst public health crises and deepest economic downturns of the modern era has only compounded these inequality challenges. The COVID-19 pandemic has brought important vulnerabilities to the surface and underscored just how far away we are from realizing our vision of a world in everyone can *live well*, let alone within planetary boundaries. The world's ten richest men have seen their combined wealth increase by half a trillion dollars since the pandemic began; meanwhile the World Bank estimates that between 143 and 163 million people will have been pushed into extreme poverty as a result of COVID-19 by the end of 2021.

FIG. 3: ECOLOGICAL FOOTPRINT AND HUMAN DEVELOPMENT INDEX OF COUNTRIES



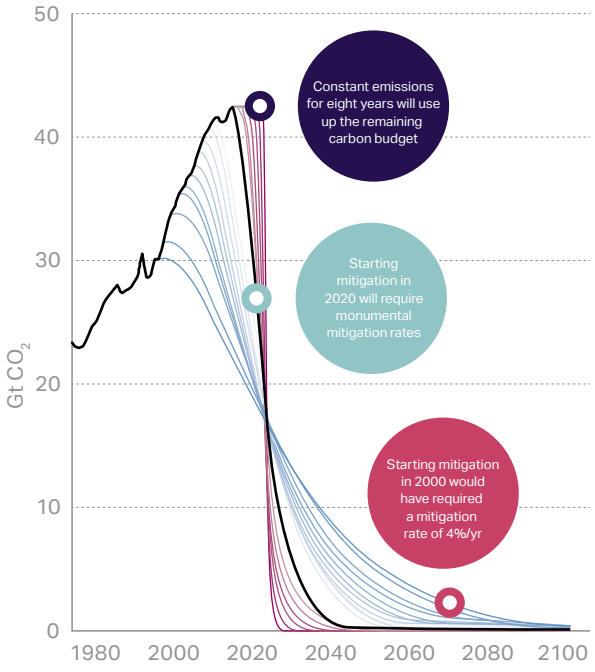
Source: Global Footprint Network (2019). Data from Global Footprint Network National Footprint Accounts, 2019 Edition; UNDP Human Development Report, 2018

FIG. 4: GLOBAL FOSSIL FUEL EMISSIONS – 1960 TO 2019



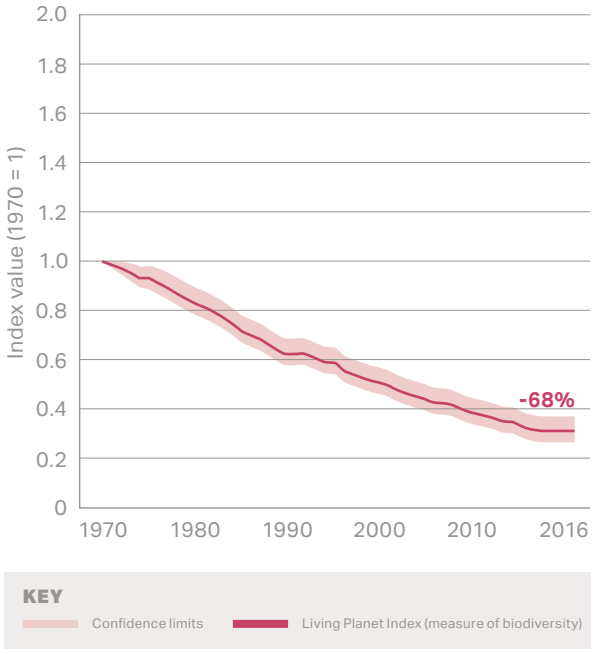
Source: Global Carbon Project, 2020

FIG. 5: CO_2 MITIGATION CURVES FOR 1.5°C



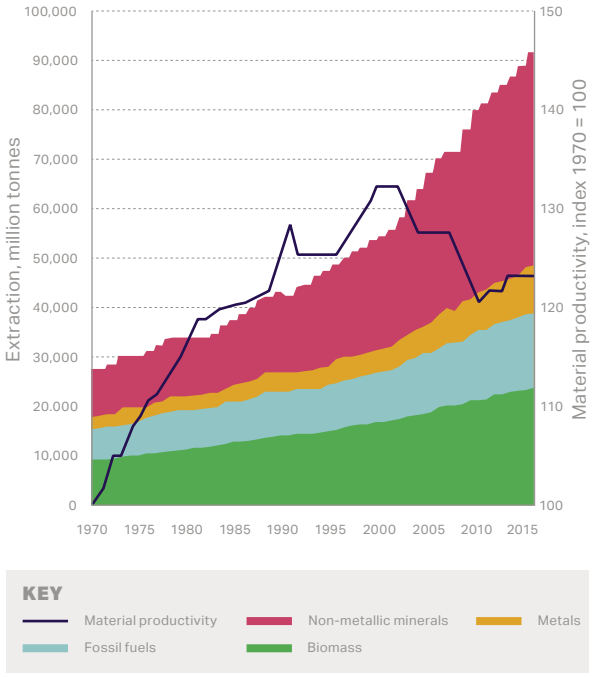
Source: Global Carbon Project, 2020

FIG. 6: GLOBAL BIODIVERSITY LOSS 1970 TO 2016



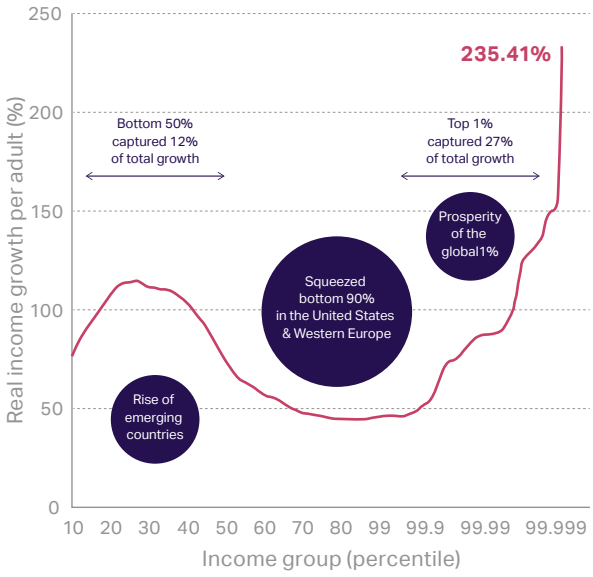
Source: WWF/ ZSL, 2020

FIG. 7: GLOBAL MATERIAL EXTRACTION AND MATERIAL PRODUCTIVITY – 1970 TO 2017



Source: International Resource Panel, 2019

FIG. 8: GLOBAL INEQUALITY AND GROWTH – 1980 TO 2016



Source: The Future is Now: Science for Achieving Sustainable Development, United Nations, 2019

OUR VISION IS STILL WITHIN REACH – BUT WE NEED TO TRANSFORM NOW

Unprecedented global risks continue to build: we are facing a perfect storm of challenges in the form of a climate emergency, nature in a state of crisis, and mounting levels of inequality and social unrest. At the same time however, we still have a unique window of opportunity.

Despite its enormous human and financial cost, the COVID-19 pandemic has created an opportunity to drive and accelerate change at a completely different pace than we may have previously imagined to be possible. It has given us new reasons to acknowledge our vulnerabilities, adopt radically different mindsets, implement innovative practices, and make bold new investments that can fundamentally change the trajectory of business and society toward a world in which 9+ billion people can live well, within planetary boundaries, by mid-century.

This window of opportunity is finite. We have less than 10 years to halve global carbon emissions if we want to limit global warming to 1.5°C, in line with the Paris Agreement; turning the tide on biodiversity loss requires immediate action; and the events of recent years have underlined just how close social order is to breaking down in numerous countries around the world, rich and poor, unless we address dangerous and still mounting levels of inequality.

The United Nations has declared the 2020s the Decade of Action. As business, we must take this declaration seriously: we cannot afford to miss this final chance to act and transform our world for the better. An important part of this is facing up to what has held us back so far. We need to acknowledge why we were unable to realize the "must haves" from our original vision (see Past Barriers to Systems Transformation pp.92-93), if we are to be clear about the business opportunities and critical actions that will drive progress in the decade ahead.

EMBRACING OPPORTUNITIES AND RECOGNIZING COSTS

Tackling these critical challenges represents potentially historic opportunities for the global business community. We need to embrace these opportunities in a manner that matches the urgency of the challenges we face.

Landmark research published by the Business and Sustainable Development Commission in 2017 points to at least US$12 trillion of market opportunities that could be opened up annually by 2030 if the ambitions of the SDGs are realized. Research conducted by the Global Commission on the Economy and Climate has highlighted how transitioning to a low-carbon, sustainable growth path could deliver a direct economic gain of US$26 trillion through to 2030 as compared to business-as-usual. An Accenture study on the circular economy identifies US$4.5 trillion of additional economic output that could be unlocked by 2030 (rising to US$25 trillion by 2050) through circular business models that decouple economic growth and natural resource consumption.

Delivering on the SDGs and realizing Vision 2050 offer a compelling growth strategy for the private sector and the global economy. Today, it also offers a sustainable route to generating the demand that many economies desperately need to recover from the damage the COVID-19 pandemic has caused. However, we also have to recognize that shifting toward sustainable growth will inevitably bring about short- and medium-term costs. Existing business models will be disrupted; whole sectors will need to transition away from unsustainable product offerings; and although the creation of new infrastructure can be a source of demand, it will nonetheless need to be financed by governments, investors and businesses, all aligned on the long-term value they are pursuing. In short, to reap the rewards of transformation we must invest in our future and carefully manage the transition risk.

COVID-19 HAS REVEALED JUST HOW FRAGILE SEVERAL ASPECTS OF OUR SYSTEMS AND SOCIETIES HAVE BECOME.

The COVID-19 pandemic was both predictable and predicted.[37] Yet it took most of the world by surprise before ballooning into one of the biggest crises of the last hundred years. The pandemic brought a series of vulnerabilities in social and economic systems to the surface in a way that cannot be ignored:

1. DEPENDENCE ON ECONOMIC GROWTH

From the beginning, the trade-off between the effective control of COVID-19 and the resulting economic impacts has been a key factor and tension influencing the response of policymakers and societies all over the world. The longer the pandemic is with us, the less affordable (politically and economically) this trade-off becomes. Despite the rescue and stimulus packages, most countries have not been able to avoid an economic downturn. Businesses have had to shut. Huge numbers of people have lost jobs and income. Many are unable to pay rent, buy food, and in some countries, rich as well as poor, they struggle to access health insurance or even routine healthcare (a significant number of people struggled to cover their basic needs even before this crisis). Without the economy, society atrophies and governments gradually lose their authority and their ability to care for their citizens. The degree to which social stability and welfare depend on constant economic growth is a source of vulnerability.

2. HIGH LEVELS OF INEQUALITY

COVID-19 has played an important role in highlighting growing inequalities and has exposed the myth that everyone is in the same boat. We're all in the same storm, but not the same boat. How people experience the pandemic is partly determined by where they sit on the global wealth and income spectrum. From gig economy workers to migrant laborers, members of the so-called "precariat" and the most vulnerable members of our society are among those being hit the hardest. Even in the roll out of vaccines, both between countries and within them, we are seeing entrenched inequalities being painfully exposed.

3. WEAKNESS OF NORMS AND INSTITUTIONS THAT ENABLE COORDINATION AND COLLABORATION

Governments responded to the pandemic with a lack of coordination that demonstrates just how badly norms and institutions designed to facilitate collaboration have been eroded in recent years. For example, transnational institutions from the G20 to the EU were largely sidelined, medical equipment was fought over both between and within countries, and richer countries mostly failed to support poorer ones. This inability to coordinate a pandemic response effectively foreshadows how we will react to future or developing disruptions, without real changes to our collaborative capability.

4. UNDER-INVESTMENT IN HEALTHCARE SYSTEMS, SCIENTIFIC RESEARCH, AND PREPAREDNESS

The risk of zoonotic epidemics and pandemics is increasing as a result of deforestation, climate change, urbanization and global connectedness. We have largely ignored this threat. Despite its predictability, COVID-19 was able to overwhelm the health systems of even the world's richest countries rapidly (and repeatedly). It exposed how far from achieving universal health coverage many societies are. The rate of growth in public health spending has fallen significantly since 2010 as a result of austerity programs adopted by many governments in the wake of the 2007-8 financial crisis.[38] Scientific research that could inform better risk assessment and planning has also struggled to attract adequate investment and has often not been heeded.

5. OVER-EMPHASIS BY BUSINESS ON EFFICIENCY AND SHORT-TERM VALUE

As noted in a 2019 Harvard Business Review article, "resilient systems are typically characterized by the very features – diversity and redundancy or slack – that efficiency seeks to destroy."[39] Much of the corporate world has been fine-tuned to maximize efficiency. In addition, a relentless focus on maximizing short-term financial value, coupled with an excessive build-up of corporate debt during an era of low interest rates, has left many companies ill-prepared to deal with an economic shock such as the one triggered by COVID-19.

We explore the longer-term impacts of the pandemic in our Vision 2050 Issue brief: The consequences of COVID-19 for the decade ahead (released May 2020).