

A WORLD MADE NEW

BEYOND COVID-19 TO A LOW-CARBON, RESILIENT AND INCLUSIVE WORLD

Edward Cameron | 8 May, 2020

*“Our Father, who hast set a restlessness in our hearts, and made us all seekers after that which we can never fully find; forbid us to be satisfied with what we make of life. Draw us from base content, and set our eyes on far-off goals. Keep us at tasks too hard for us, that we may be driven to Thee for strength. Deliver us from fretfulness and self-pity; make us sure of the goal we cannot see, and of the hidden good in the world. Open our eyes to simple beauty all around us, and our hearts to the loveliness men hide from us because we do not try enough to understand them. **Save us from ourselves and show us a vision of a world made new.**”*

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Eleanor Roosevelt (1940) “My Day, 6 March, 1940”.

EXECUTIVE SUMMARY

A global pandemic is reshaping our world. On the last day of 2019, China announced it had detected a “pneumonia of unknown cause” in the city of Wuhan. Four months later, COVID-19 – a new illness caused by a novel coronavirus – has spread to almost every country and resulted in billions of people now living under lockdown. At the time of writing, 3.8 million people are known to have been infected and, of these, approximately 270,000 people have died with COVID-19.

This public health emergency is part of a three-dimensional crisis that is now engulfing us. In addition to proliferation of the disease, an economic collapse unlike any since the Great Depression is spreading rapidly, with gross domestic product (GDP) and government revenues falling as unemployment and poverty rise. Investment is collapsing while fragile markets are exposed. At the same time, the pandemic is shining a spotlight on inequality as vulnerable groups including low-income communities, developing countries, and people of color are suffering disproportionate impacts due to intersecting inequities and structural discrimination.

In the midst of this public health emergency and economic crisis, as we yearn for the social contact and cultural activities that define our lives, it is perfectly understandable to wish for life to return to normal. However, engineering a return to the economy as it was in December 2019 would be a profound mistake. The pre-COVID economy was exacerbating poverty and hunger, driving a climate crisis, and generating exorbitant wealth for some while leaving

half the world's population eking out a bare existence. In the economy of December 2019, 820 million people suffered from hunger – 135 million of them in a state of acute food insecurity. More than 9 million people died prematurely from air pollution and over 6 million children died of preventable causes. Poverty, environmental degradation and conflict led to 79 million displaced people scattered across the globe. Instead of addressing the climate crisis, the economy of December 2019 was creating an unsustainable and uninhabitable Earth.

We cannot go back to that world. We must resist the temptation to “restart” or “reopen” and must instead “reinvent”. We must turn this moment of crisis into an opportunity to build a 21st century economy and society – one that is low-carbon, resilient and inclusive. Now is the time for a vision of a world made new.

This paper is a call to focus on the economic rescue and stimulus packages that are our best, and possibly last, chance to create a low-carbon and resilient world. It is also a call to all of us working on climate and development to get out of our lanes. Too many thinkers spend their professional lives focusing on emissions reductions without ever considering how structural discrimination amplifies climate risk. Too few of us working on climate change pause to think about how our work intersects with human rights and economics. It is time to break down our siloes and think in holistic, non-linear ways. We cannot afford to wait until this pandemic passes before turning our attention back to the chronic challenges that undermine our socio-ecological resilience.

The world's largest economies have begun to design and deploy new stimulus measures which, according to the Group of 20 leading economies (G20), will reach US\$ 5 trillion in expenditure and guarantees. This includes a US\$ 2.7 trillion package in the United States alone. Other countries will follow; and these initial efforts are expected to be the first steps in a longer sequence of stimulus measures.

While the scale of this spending is impressive and historic, the design is critical. This massive injection of public money into the global economy can either recreate a pattern of environmental destruction, social injustice and economic inequality, or provide a foundation for a just and sustainable world.

Four design principles (containing 15 practical recommendations) should be used to shape emerging stimulus and rescue packages:

1. Stimulus must be **guided by moral purpose**: Stimulus and rescue packages are typically designed to mobilize money quickly; ensure that expenditure is temporary; and target a specific economic problem (i.e. recapitalizing banks, stabilizing the stock market, and encouraging consumer spending). This time, we have an opportunity to address an even greater existential threat than COVID-19 – climate change. To do so requires a vision that speeds up efforts to hold global mean temperature rises to less than 1.5°C, which means net-zero greenhouse gas emissions by 2050 with a 45% reduction by 2030.

Investment in six areas – solar energy, wind energy, efficient appliances, efficient cars, afforestation and halting deforestation – would build a pathway towards net-zero emissions. At the same time, we need to enhance our resilience (the capacity to anticipate, avoid, accommodate, and recover from shocks) which requires investment in six capital assets – human, social, natural, physical, financial, and political. All of these actions need to focus on vulnerable people who experience intersecting political, economic, legal, social, and cultural inequalities that amplify their risk. In particular, gender equality must be at the heart of economic rescue as closing the gender gap is key to achieving all of the Sustainable Development Goals. Above all, we must begin to measure what we value and not just value what we price. Measuring well-being by economic performance based on GDP must end.

2. Public money must be used to **invest in a 21st century economy**. This begins with investments in jobs. The Nobel Laureate Professor Paul Krugman says that the rescue packages following the 2008 financial crisis failed on employment. He concludes that it took the United States nine years to reduce unemployment to its December 2007 level.

Low-carbon investment boosts employment and may yield up to 68% more jobs than under a ‘business as usual’ scenario. Research conducted for the Global Commission on the Economy and Climate shows that ‘green stimulus’ could deliver at least US\$ 26 trillion in net global economic benefits between now and 2030, while creating more than 65 million new low-carbon jobs by 2030. Governments should also invest in modern social protection systems, including social safety nets (cash and food transfers, public works programs, school food programs); social insurance (pensions, health, and unemployment benefits); labor market interventions (job benefits, labor standards); and social care services (for the elderly or disabled). Equally, governments must commit to research and development (R&D) by surpassing the goal of investing 3% of GDP in R&D projects every year, ensuring they take on high, early-stage risk and protect private investment in commercial projects. Finally, governments should create green infrastructure banks and rural development banks to transform our energy, transport and food systems; invest in entrepreneurs; accelerate the capital flowing to sustainable start-ups; and create the skilled workforce needed for a low-carbon and resilient economy.

3. Conditionality must ensure that stimulus and rescue packages are used as a catalyst for change – that public money is spent with economic, social, and environmental conditions. Since the Paris Agreement of 2015, major banks have directed close to US\$2 trillion in finance to the fossil fuel industry. This trend needs to be reversed with financial institutions (FIs) divesting from these fossil fuel investments and reinvesting in a low-carbon, resilient and inclusive economy. FIs receiving public money should, for example, be compelled to offer relief and grace periods to families struggling to pay loans and facing housing foreclosure.

Companies receiving government support should also be headquartered – and pay their fair share of taxes – in the country that provides them with their rescue package. They should refrain from using this money for stock buybacks, which reward shareholders and increase executive pay but offer little to workers and the real economy. Companies should also reduce their

greenhouse gas emissions using a science-based target and commit to resilience by disclosing their climate risks, investing in adaptive capacity across their supply chain, and reporting progress through their annual reports. Governments should not shy away from assuming equity and voting shares in the major corporations that receive taxpayer-funded rescue packages. They should be prepared to vote against management teams that are not making progress on sustainability.

4. There must be solidarity as well as stimulus: COVID-19 is having a disproportionate impact on the developing world and vulnerable communities. Similarly, patterns of inequality both internationally and within countries have exacerbated risk for low-income populations and those who suffer from structural discrimination. While countries have been quick to initiate rescue packages, previous experience suggests that stimulus fatigue can set in, so governments need the foresight to design revenue models that sustain the stimulus, generate revenues for the public purse, and ensure that all within society pay their fair share.

Five actions would ensure there is solidarity within the stimulus: a global solidarity package to support developing countries; the repatriation of money evading the law in tax havens; the phasing out of fossil fuel subsidies; the expansion of carbon pricing to reflect the ‘polluter pays’ principle; and expanded estate tax to ensure the wealthiest in society pay their fair share.

We must use this moment to reinvent the economy, create a shared prosperity, and address structural discrimination – to create a world that enables everyone to realize their potential.

Now is the time for a vision of a world made new.

Cameron, E (2020) A World Made New: Beyond COVID-19 to a low-carbon, resilient and inclusive world.

STRUCTURE

The paper has three sections:

Part 1:

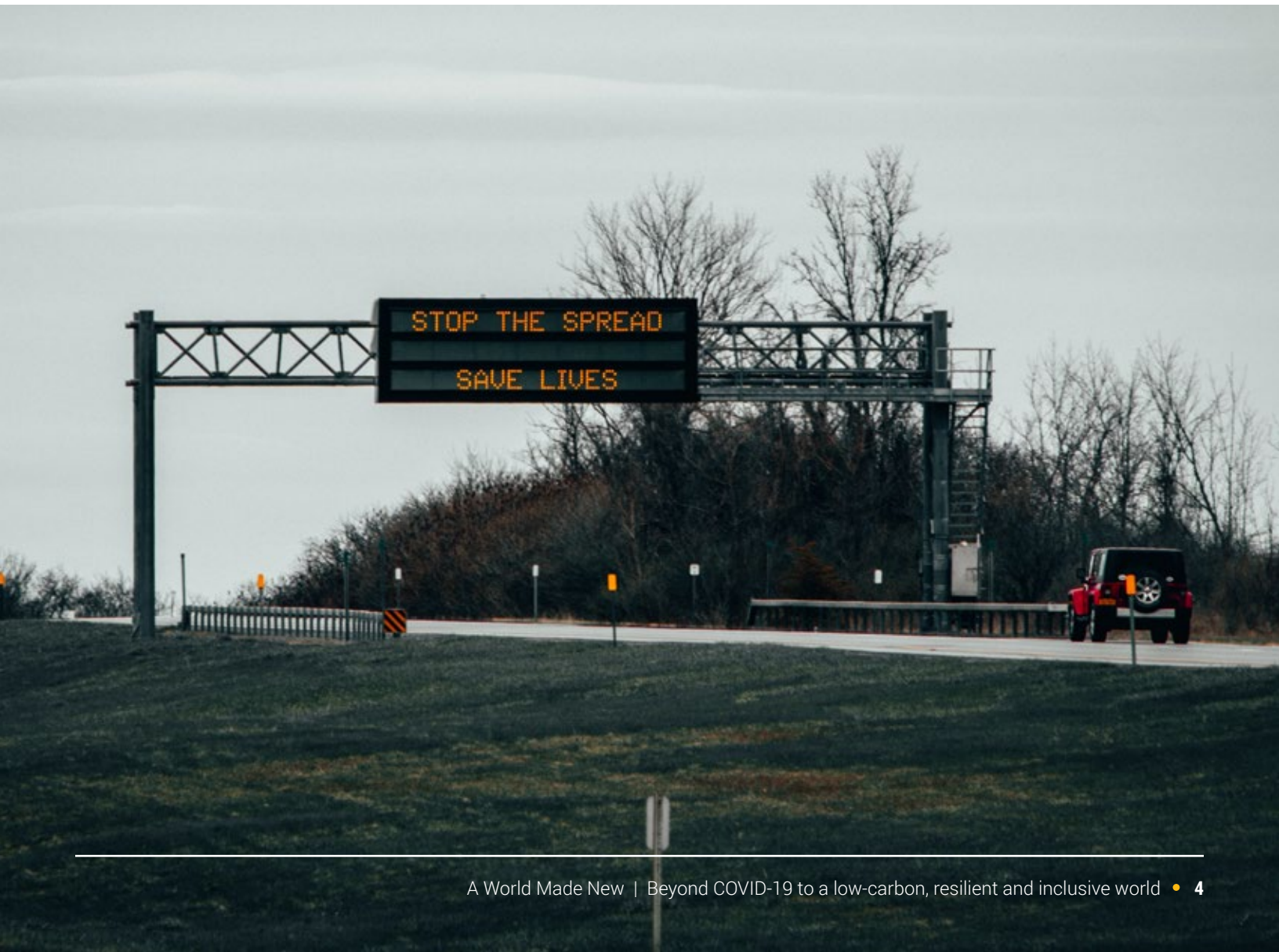
Presents the world as it was before COVID-19, illustrating why a return to the economy of December 2019 would be a profound mistake.

Part 2:

Offers an analysis of the impacts, real and potential, of COVID-19.

Part 3:

Offers a vision of a world made new, with four strategic design principles and 15 practical recommendations to inform the development of stimulus and rescue packages.



Strategic Design Principle

Practical Recommendation

Moral Purpose

1. Stimulus should accelerate the transition to a net-zero greenhouse gas economy by 2050.
2. Stimulus should be focused on minimizing risk by building resilient and inclusive societies with an emphasis on vulnerable populations and a focus on gender equality.
3. Government should move to replace gross domestic product (GDP) – a metric that prizes growth above all else – with a metric that assesses our well-being.

Investments in a 21st Century Economy

4. Governments need to focus on jobs.
5. Governments and companies should work together to create viable social protection systems.
6. Governments must commit to research and development (R&D).
7. Governments should create green infrastructure banks and rural development banks.

Conditionality

8. Governments should require Financial Institutions (FIs) to invest in a just and sustainable economy.
9. Governments should require companies to pay their taxes and refrain from stock buybacks.
10. Governments should require companies receiving stimulus to adopt climate targets for both greenhouse gas emissions reductions and resilience.

Solidarity as well as Stimulus

11. The international community should create a global solidarity package.
12. Governments should repatriate money avoiding tax liabilities in tax havens.
13. Governments should phase out fossil fuel subsidies.
14. Carbon pricing should be expanded to reflect the 'polluter pays' principle.
15. The wealthiest in society ought to pay their fair share through an expanded estate tax.

PART 1: THE WORLD BEFORE COVID-19

In the midst of this public health emergency and economic crisis, as we yearn for the social contact and cultural activities that define our lives, it is perfectly understandable to wish for life to return to normal. However, engineering a return to the economy as it was in December 2019 would be a profound mistake. The pre-COVID economy was exacerbating poverty and hunger, driving a climate crisis, and generating exorbitant wealth for some while leaving half the world's population eking out a bare existence. This section explores some of the critical and systemic failures of the pre-COVID economy:

A silent public health emergency

Before COVID-19, the world was already suffering a series of silent public health emergencies, ranging from food insecurity, malnutrition and obesity to fossil fuel pollution and extreme climate events. These emergencies represented real drains on the world's economies.

Food security requires a consistent, available and accessible source of food of sufficient quantity and quality to satisfy nutritional needs. The World Food Programme (WFP) defines acute food insecurity as the lack of secure access to sufficient amounts of safe and nutritious food for normal human growth and development and an active and healthy life; while chronic food insecurity is a long-term or persistent inability to meet dietary energy requirements (WFP 2020).

Separate research conducted by the World Food Programme, Food and Agriculture Organization (FAO) and UNICEF during the past two years reveals a world suffering from substantial food insecurity. WFP estimates that 135 million people were in a state of acute food insecurity in 2019, with an additional 183 million people at risk of slipping into acute food insecurity. This included an estimated 75 million children under five years old with limited access to nutrition (WFP 2020). FAO has concluded that more than 820 million people suffer from hunger (FAO 2019). What's more, when the organization broadens its horizon to consider those suffering even moderate levels of food insecurity, the FAO concludes that over 2 billion people do not have regular access to safe, nutritious and sufficient food, including 8% of the population in Northern America and Europe (FAO 2019). At the same time, changes in consumption patterns have contributed to about two billion adults now being overweight or obese (IPCC 2019a), contributing to 4 million deaths globally every year (FAO 2019). Moreover, 25–30% of total food produced is lost or wasted (IPCC 2019a).

In a report for UNICEF, Development Initiatives found that, beyond health, slow progress on malnutrition could cost society up to US\$ 3.5 trillion per year, with weight and obesity issues alone costing US\$ 500 billion per year (Development Initiatives 2018) – almost twice the price of the COVID-19 stimulus package deployed by the US Federal government. FAO estimates that undernutrition reduces gross domestic product (GDP) by up to 11% in Africa and Asia, while obesity costs US\$ 2 trillion annually (FAO 2019).

According to UNICEF, an estimated 6.3 million children under 15 years of age died in 2017, mostly of preventable causes such as lack of access to water, sanitation, proper nutrition or basic health services. The majority of these deaths – 5.4 million – occur in the first five years of life, due to preventable or treatable causes such as complications during birth, pneumonia, diarrhea, neonatal sepsis and malaria (UNICEF 2018).

The Lancet Commission estimates that fossil fuel pollution is the largest environmental cause of disease and premature death in the world, responsible for an estimated 9 million premature deaths in 2015 or 16% of all deaths worldwide. People in more than 90% of cities breathe polluted air that is toxic to their cardiovascular and respiratory health (Lancet Commission 2018).

Extreme events have also taken a human toll. The International Federation of Red Cross and Red Crescent Societies (IFRC) calculates that between 1996 and 2015 extreme weather killed 528,000 people worldwide; while 92% of natural hazards were climate related and the total damage came to US\$ 3.08 trillion.

Some elements of this silent public health emergency were barely noticed by Western media. In Burundi, the World Health Organization (WHO) recorded almost 2,000 malaria deaths in the first six months of the year. By mid-year almost 6 million cases were recorded, meaning half the population was infected.

The evidence is clear – a pandemic of hunger, poverty and preventable deaths was already driving a public health emergency and economic crisis that was largely ignored within our economic system in December 2019.

In addition, the combination of poverty, hunger, health stressors and conflict forced an estimated 79 million people to be displaced globally as of mid-2019 – 44 million of them were internally displaced while 20 million were refugees under the UN's protection. More than half of these refugees were hosted in countries with high numbers of acutely food-insecure people (WFP 2020).

The climate crisis

Climate change is common across all these intersecting public health emergencies, and its impacts are going to increase over the coming decades. Changes in climate are expected to lead to increased displacement, disrupted food chains, threatened livelihoods, and further conflict. The humanitarian implications of a changing climate are very serious. Climate impacts are already widespread, consequential and expected to increase in intensity and frequency. According to the Intergovernmental Panel on Climate Change (IPCC), chief among these are an increase in the

intensity, frequency and uncertainty of extreme-weather events; an increase in both heavy precipitation and severe drought; changes in the availability of fresh water; dramatic changes in both terrestrial and marine biodiversity and ecosystem services; and sea level rises (IPCC 2018).

Climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase even with global warming limited to the target of 1.5°C above preindustrial levels (IPCC 2018). Crop and economic models project an increase in cereal prices of up to 29% in 2050 due to climate change. Increases may expose up to 183 million additional people to hunger (IPCC 2019).

According to the World Meteorological Organization (WMO), in 2018 weather and climate events impacted nearly 62 million people, with floods affecting more than 35 million people and over 9 million people affected by drought (WMO 2019). To give just one example of the impact of our changing climate from the Natural Resources Defense Council (NRDC): more than 163 million people live in Bangladesh; by 2050 rising sea-levels are expected submerge 17% of the land, displacing 20 million people. However, 10 million people may be displaced earlier as rice paddies are inundated with seawater (NRDC 2018).

Research published in the science journal *Nature* suggests that the cost of climate change will be significant, with the impact on the market value of global financial assets to be US\$ 2.5 trillion but possibly as high as US\$ 24.2 trillion under worst-case scenarios (Dietz et al 2016). The Task Force on Climate-related Financial Disclosures commissioned by the Financial Stability Board estimated the global stock of manageable assets at risk from climate change to be as high as US\$ 43 trillion between now and the end of the century (TCFD 2016).

The economy of December 2019 was failing to address the climate crisis. The United Nations Environment Programme (UNEP) has described “a decade lost” in a recent assessment of climate policies. Describing the findings as “sobering”, the analysis reveals that global greenhouse gas (GHG) emissions in 2018 were almost exactly at the level of emissions projected for 2020 under the ‘business as usual’ or ‘no policy’ scenarios used in the Emissions Gap Report of 2011. In other words, there

has been no real change in the global emissions pathway over the last decade (Christensen and Olhoff 2019). This is remarkable given that 140 countries endorsed the Copenhagen Accord in 2009, with 85 of them pledging to reduce their emissions through national policies. The unprecedented Paris Agreement of 2015 was subsequently adopted by 195 countries, 184 of which have so-called nationally determined contributions (or national climate plans) designed to limit global warming to well below 2°C. The analysis goes on to report that because GHG emissions continue to grow, governments must now triple the level of ambition reflected in their current and planned climate policies to get on track towards limiting warming to below 2°C, while at least a fivefold increase is needed to align global climate action and emissions with limiting warming to 1.5°C by the end of this century (Christensen and Olhoff 2019).

Going forward, overcoming the challenges created by the lost decade will now require additional annual energy-related investments of between US\$ 830 billion and US\$ 2.4 trillion – about 2.5% of the world GDP (IPCC 2018). That investment must start with the global stimulus and rescue packages for COVID-19.

A deeply unequal world

Nicholas Kristof – an American journalist and political commentator – has written of the tragic irony surrounding some of the health advice provided to stem the tide of COVID-19. He notes, “we instruct people to protect themselves from the coronavirus by washing their hands with soap and water, but more people worldwide have a cell-phone (5 billion) than have the ability to wash their hands at home (4.8 billion). Almost 4 out of 10 people worldwide, a total of 3 billion people, don't have hand-washing options at home, according to U.N. estimates” (Kristof 2020).

Inequality manifests itself in a variety of forms. Intersecting economic, political, social, cultural and legal inequalities are experienced by communities across the globe, with structural discrimination often based on income or class, race, ethnicity, religion, or nationality. The Human Development Report 2019 published by the

United Nations Development Programme (UNDP) is one of the most comprehensive assessments of global inequality. Launched on 12 December 2019, weeks before the COVID-19 outbreak in Wuhan, the Report looks at inequality from multiple lenses. Its key findings reveal inequalities impacting health, life expectancy, education, social mobility, economic prospects, and even the transfer of inequality from one generation to the next:

- 600 million people live in extreme income poverty, defined as earning less than US\$ 1.90 per day. When the UNDP considers issues beyond income-based poverty – such as deprivations in with health, education and standard of living – it concludes that about 1.3 billion people or 23% of the world's population lived in a state of “multidimensional poverty” between 2006 and 2017.
- The difference in life expectancy at birth between someone born in an industrialized country and someone born in a low human development country is 19 years.
- 42% of adults in low human development countries have a primary education, compared with 94% in industrialized countries. Only 3.2% of adults in low human development countries have a college or university level education compared with 29% in developed countries.
- Looking to the future, UNDP expects 'business as usual' approaches to development and poverty alleviation to still result in 3 million children under five years old dying every year from preventable causes; while 225 million children are expected to be out of school.(UNDP 2020)

Gender inequality is a glaring example of how the world of December 2019 failed to deliver on the promise of universal human rights. Across the globe, women lack access to financial services including savings, insurance, credit, and investments and are restricted in their ownership of productive assets such as property, farms, and inheritance. Women are concentrated in informal and unprotected work. Nearly 90% of African women are not covered by labor relations laws; they have no minimum wage or social protection and no maternity benefits or old age pension (Aguilar et al 2015).

Women are both under-paid and unpaid: on average women earn 10–30% less than men for work of equal value (ActionAid 2015). The International Labour Organization (ILO) found that women devote one to four hours less a day to market activities; and, while 72% of men are employed, only 47% of women are (ILO 2014). In 2014, the Social Institutions and Gender Index (SIGI) of the Organisation for Economic Co-operation and Development (OECD) found that women had the same legal rights as men to own and access land in only 28 of the world's countries (OECD 2014). Women account for only 12.8 % of agricultural landholders in the world, despite forming up to 80% of the workforce across the food and agriculture value chain (Trócaire 2020). One in three women is likely to experience physical and sexual violence at some point in her lifetime. The economic costs to the global economy of discriminatory social institutions and violence against women is estimated to be approximately US\$ 12 trillion annually (Trócaire 2020).

Climate change has a disproportionate impact on women too. A 2007 study of 141 natural disasters found that when the socioeconomic status of women is low, more women died as a result of a natural disaster; and, post-disaster, women and girls suffered a disproportionate lack of access to food and economic resources (Neumayer and Plümpert 2007). Women died because they stayed behind to look for their children and other relatives. They often can't swim or climb trees, which meant that they couldn't escape. Some cultural differences between men and women also contributed to the disproportionate death toll. Recurring natural disasters also lead to further violations of women's rights and dignity, such as human trafficking, child marriage, sexual exploitation and forced labor. While the emphasis is often on natural disasters such as floods, cyclones and earthquakes that strike quickly, slow onset disasters such as prolonged droughts in parts of South Asia, notably India, are resulting in growing numbers of farmer suicides that are placing women in vulnerable positions due to being saddled with crippling debt and having to provide for the family (Cameron 2019).



PART 2: OUR WORLD HAS CHANGED

“Mr. President, this is your holy shit moment”

Christina Romer, chairwoman of the Council of economic advisors opening a briefing for President-elect Barack Obama held in Chicago on December 16, 2008. (Hundt 2019, p155)

On 16 December 2008, Christina Romer, the incoming chairwoman of the President’s Council of Economic Advisors, chose a blunt opening statement to begin a briefing for Barack Obama. The President-elect was gathering with his economics transition team, including those who would become cabinet secretaries, principal White House advisors, and the key architects of the economic recovery program that would aim to address the immediate aftermath of the financial crisis. This was the meeting when the sheer scale and urgency of the crisis became clear, and the contours of the recovery process were initially agreed.

My “holy shit” moment came on 2 April 2020 when the United States Department of Labor (DOL) announced that during the last week of March claims for unemployment benefits rose to 6.65 million nationwide (DOL, 2020a). That number now seems small compared to what has followed and what is still to come.

A global pandemic is reshaping our world in ways we could have barely imagined. On the last day of 2019, China announced it had detected a “pneumonia of unknown cause” in the city of Wuhan. Four months later, COVID-19 – a new illness caused by a novel coronavirus – has spread to almost every country and resulted in billions of people now living under lockdown. At the time of writing, more than 3.8 million people are known to have been infected and more than 270,000 people have died with COVID-19 (Johns Hopkins University 2020). The economic consequences are unprecedented and are already drawing comparisons with the worst dislocations in modern human history. This section looks at the COVID-19 crisis and explores the impact it is having around the globe:

The public health emergency is both acute and chronic

The actual number of people dying around the world today is likely to be considerably higher as COVID 19 figures do not account for those who died at home, or who lost their lives to other illnesses because they could not, or were reluctant to, access treatment from overburdened healthcare systems. Although the virus that causes COVID-19 was active in 185 countries, close to 60% of the confirmed deaths so far have been in Italy, Spain, France, the United Kingdom and the State of New York in the United States.

Although the developing world does not currently feature among those most affected, a wave of infections is expected. About 900,000 people are predicted to die with COVID-19 in Asia and a further 300,000 in Africa, according to estimates from Imperial College London; with demographics, income status, and healthcare availability the key drivers elevating the number of fatalities (Walker et al 2020). Africa may have just 20,000 beds in intensive care units (ICU), with Uganda having only 55 intensive care beds for 43 million citizens (Jayaram et al, 2020). The United Nations Economic Commission for Africa (UNECA) reports that there are five intensive care beds available for every 1 million people in most African countries, compared with around 4,000 beds for every 1 million people in

Europe, (UNECA 2020). UN projections suggest the pandemic will also push nearly 30 million people into poverty.

Beyond Africa, Ecuador has experienced one of the most startling outbreaks, with authorities in Guayaquil – the country's commercial capital – forced to hand out thousands of cardboard coffins to families who need the bodies of loved ones removed from their homes (Collyns 2020). In India, a combination of jobs losses and uncertainty over food has caused an estimated 500,000 people to leave cities and walk home, setting off the nation's largest mass migration since partition with Pakistan in 1947 (Dahir 2020).

While the acute threat of COVID-19 is an immediate concern, the pandemic is also likely to cause chronic health problems leading to premature death, notably through an increase in hunger. In the developing world, the WFP estimates that COVID-19 will push more than a quarter of a billion people to the brink of starvation unless swift action is taken to provide food and humanitarian relief to the most at-risk regions (WFP 2020). Around the world, national lockdowns and social distancing measures are drying up work and incomes; are likely to disrupt agricultural production and supply routes; and are restricting access to food for families who depend on public services for their daily nutrition. For example, 196 countries have mandated some form of school closure, leading to 369 million children missing out on daily meals provided by school systems (WFP et al 2020).

GDP and government revenues are falling as unemployment and poverty rise

The International Monetary Fund (IMF) is projecting GDP to contract by 3% this year (IMF 2020a). By contrast, during the peak of the Great Depression between 1929 and 1932, worldwide GDP fell by an estimated 15%; and the global GDP decline was less than 1% in 2008–2009 during the Great Recession (Lowenstein, 2015). Public deficits are expected to rise by substantial amounts, as governments experience falling revenues as well as strains on public services and social safety nets, and are required to initiate unprecedented stimulus and rescue packages. The United States is projected to run a budget deficit of 15.4% of GDP, with deficits in the OECD countries reaching 10.7%, and emerging markets approaching 9% (IMF 2020b).

The decline of economic activity has already had substantial impacts on jobs. According to the ILO, a total of 81% of the global workforce of 3.3 billion people have had their workplace fully or partly closed due to the COVID-19 pandemic (ILO 2020). GDP and government revenues falling while unemployment rises is a global pattern:

- Goldman Sachs is projecting the United States' GDP to decline by up to 34% (Shahine 2020). The Federal Reserve estimates nearly 67 million Americans are working in jobs that are at a high risk of layoffs and, consequently, predicts job losses to reach 47 million, sending the unemployment rate past 32% (Cox 2020). The numbers are already climbing with record speed. In the eight weeks to 8 May 2020, 33 million US workers filed for jobless benefits. The unemployment rate has risen to 14.7%, with 20.5 million jobs lost in April alone, a jobless rate is worse than at any time since the Great Depression of the 1930s (Schwartz et al, 2020).
- China experienced a first quarter contraction of 6.8% – its first GDP decline since 1992. Beyond the headline GDP figure, industrial production dropped 8.4% and retail sales fell 19% (Tan and Cheng 2020).
- The eurozone economy fell by 3.8% in the first quarter – the sharpest pace on record. This included a 5.8% decline in France, a 5.1% contraction in Spain, and a fall of 4.7% in Italy (Walker 2020). The European Commission is projecting a 7.5% drop in growth this year with unemployment rising to at least 9% (Walker, 2020).
- The Bank of England has warned that British GDP could plunge by 14% during 2020, marking the deepest recession since 1706 (Partington, 2020). The Office for Budget Responsibility (OBR) expects unemployment to soar to 10% and borrowing rising to GBP 273 billion – or 14% of GDP – to cover lost revenues and fund the economic recovery measures (Office for Budget Responsibility, 2020). Illustrating the difficult choices facing governments, OBR further warns that each additional month of lockdown would cost the British government as much as GBP 45 billion of additional borrowing (OBR 2020).



- Spain's unemployment figure in March was the highest monthly jobless rise ever recorded in the country, totaling 900,000 lost jobs since the start of the lockdown with another 620,000 people temporarily laid off (BBC 2020a).
- In Ireland, the Minister for Finance indicated that the potential loss of taxation this year could be higher than € 8 billion. That would be on top of the estimated € 8 billion cost of the government's spending plans to tackle pandemic. Moreover, with 31% of Irish exports going to the United States, it is clear the combination of revenues falling, export markets closing, and the cost of stimulus measures present a complex multi-dimensional problem (Goodbody 2020).
- According to the UNECA, Africa's small and medium enterprises risk complete closure in the absence of a substantial stimulus and rescue package. A number of factors are at play. The price of oil has crashed, diminishing the value of 40% of Africa's exports. Tourism, which accounts for up to 38% of some African countries' GDP has also crashed due to travel restrictions. And other exports such as textiles, and fresh-cut flowers are immobile as logistics and supply chains ground to a halt (UNECA 2020).
- Analysis by McKinsey suggests as many as 18 million formal jobs in Africa could be lost due to the pandemic; with an additional 35 million formal jobs at risk of reductions in wage and working hours. This puts the jobs of one-third of Africa's formal-sector workers at risk of significant upheaval. (Jayaram et al 2020). The same analysis highlights that the vast majority of people living in sub-Saharan Africa are employed in the informal sector and receive no unemployment, sickness or other benefits, and these jobs are also at risk (Jayaram et al 2020).
- According to the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), more than a million Bangladeshi garment workers – one-quarter of the workers in that sector – have been sent home without pay or have lost their jobs after western clothing brands cancelled or suspended US\$ 3 billion of existing orders, offering little or no financial assistance in covering the cost of furloughing workers or helping to pay severance costs (BGMEA 2020). A survey conducted by Building Resilience Across

Communities (BRAC) – a respected non-profit group in Bangladesh – suggests that extreme poverty has risen by 60%, while 14% of people do not have sufficient food. Household incomes have declined by an average of 75% since the COVID-19 outbreak began, with factory workers (79%), drivers (80%) and day laborers (82%) particularly hardest hit (BRAC 2020).

Unemployment of this magnitude translates into a dramatic increase in poverty. For example, according to research conducted by the Center on Poverty and Social Policy at Columbia University, unemployment rates of 30% would increase the poverty rate in the United States from pre-crisis levels of 12.4% of the population to 18.9% – an expansion of more than 21 million people in poverty and the highest recorded rate of poverty since at least 1967 (Parolin and Wimer 2020).

Investment is collapsing while fragile markets are exposed

Worldwide, foreign direct investment (FDI) is on track to decline by 40% this year, according to the United Nations Conference on Trade and Development (UNCTAD), causing lasting damage to global production networks and supply chains (UNCTAD 2020). Until last year, a group of 24 emerging markets including China, India, South Africa, and Brazil saw net inflows of US\$ 79 billion in investment, according to the Institute of International Finance. Over the last two months, a net US\$ 70 billion in investment has exited those countries (Lowery 2020).

Meanwhile, global stocks have seen a downturn of at least 25% during the crash, and 30% in most G20 nations. It took the S&P 500 only 22 trading days to fall 30% from its record high reached on 19 February 2020, making it the fastest drop of this magnitude in history, according to data from Bank of America Securities (Li 2020). Although markets have since rebounded, they remain fragile and turbulent.

Fitch Ratings – a credit rating agency – estimates that one-quarter of the corporate bonds it tracks in Europe have been issued by companies operating under lockdown (Goodman 2020). The result, according to UNCTAD, is that 61% of the top 100 multinational enterprises (MNEs) have issued earnings revisions that confirm the rapid

deterioration of global prospects. The top 5,000 MNEs, which account for a significant share of global FDI, have now seen downward revisions of 30% on average for 2020 earnings estimates (UNCTAD 2020).

This problem is exacerbated by an accumulated level of fragility in the economy caused by spiraling corporate debt. By the end of 2019, total outstanding debt among corporations had surged to a record US\$ 13.5 trillion worldwide, according to a recent report by Serdar Çelik and Mats Isaksson for the OECD (Çelik 2020). This led the IMF to conclude that a shock only half as severe as the global financial crisis of 2007–2008 would put nearly 40% of total corporate debt at risk, meaning that companies would not be able cover payments and interest expenses totaling US\$ 19 trillion (IMF 2020a). The COVID-19 pandemic cleared that hurdle within 100 days.

Developing countries face the highest risk

In developing countries, the consequences are already severe, driven by the flight of capital, the collapse of currencies, the fall in commodity prices, the burden of existing debt, and the fragility of global supply chains. Portfolio outflows from main emerging economies surged to US\$ 59 billion in a month between February and March 2020 – more than double the outflows experienced by the same countries in the immediate aftermath of the global financial crisis. The values of their currencies against the US dollar have fallen 5–25% since the beginning of this year. For example, South Africa's currency has fallen by more than 20%, increasing prices for cash-strapped consumers. The prices of commodities, on which many developing countries depend heavily for their foreign exchange, has dropped by 37% this year (UNCTAD 2020b).

This crisis is unfolding just as many governments are burdened by debt that limits their ability to help those in need. Since 2007, total public and private debt in emerging markets has multiplied from about 70% of annual economic output to 165% (Goodman et al 2020).

As a result, UNCTAD estimates that these vulnerabilities will lead to a US\$ 2–3 trillion financing gap in developing countries over the next two years (UNCTAD 2020b).

Vulnerable communities face disproportionate impacts

As is typical in times of crisis, the marginalized and vulnerable are hit first and hardest. Structural discrimination and intersecting economic, social, cultural, political and legal inequalities tend to exacerbate risk. This dynamic is present again in the COVID-19 crisis.

Research confirms that domestic and gender-based violence is increasing linked to the global lockdown. In Spain, the emergency number for domestic violence received 18% more calls in the first two weeks of lockdown than in the same period a month earlier. The French police report a nationwide spike of about 30% in domestic violence (Taub 2020).

In the United States, African Americans are experiencing far higher mortality rates linked to COVID-19. 70% of the people who died in Chicago and New Orleans were African Americans, despite that community making up only 30% of the population. In Michigan, where COVID-19 hit early and hard, African Americans make up just 14% of the state's population but 40% of the people who died of the disease. In Georgia, as of 17 April 2020, white people accounted for 40% of COVID-19 cases where race was reported, although they represent 58% of the state. A similar pattern has emerged in the United Kingdom, where a study of the first 2,000 patients with confirmed COVID-19 revealed that 35% were non-white, despite the proportion of non-whites in the general population being 14% (BBC 2020b).

As the virus that causes COVID-19 spreads, informal settlements and slums are expected to become new hotspots due to overcrowding; the undernutrition of children; the high prevalence of chronic medical conditions; limited access to sanitation; a lack of access to clean water; and indoor air pollution caused by cooking with biomass fuel in poorly ventilated or windowless homes.

PART 3: A WORLD MADE NEW

“Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next. We can choose to walk through it, dragging the carcasses of our prejudice and hatred, our avarice, our data banks and dead ideas, our dead rivers and smoky skies behind us. Or we can walk through lightly, with little luggage, ready to imagine another world. And ready to fight for it.” (Roy, 2020)

This quote from the Indian novelist Arundhati Roy hit me like a bolt from the blue. Perhaps it was her call to “reinvent” rather than “reopen” or “restart”? Maybe it was her blunt assessment of how the acute shock of COVID-19 had masked the chronic calamities that affect large swathes of the global population, but somehow remain outside our field of vision. In contrast to other assessments of the current pandemic, her skill as a novelist conjured up images in my mind – the most striking of which is an iconic photograph of Eleanor Roosevelt carrying her own small suitcase at LaGuardia Airport in New York in 1960. Mrs Roosevelt has always been my hero – a tireless advocate of marginalized communities, despite being the daughter of privilege; the conscience within her husband’s Presidency, always encouraging him to do the right thing; the diplomat who helped to forge the Universal Declaration of Human Rights: the common standard of achievement for all peoples that helped rebuild our shattered world after the catastrophe of World War II. According to her son, Eleanor Roosevelt said the same prayer every night and closed with this wish: “save us from ourselves and show us a vision of a world made new” (Glendon 2001).

Every crisis is an inflection point, and this one is no different. Just as the world of the late 1940s could not return to the conditions that gave rise to two World Wars, so we cannot return to the world that existed in December 2019. We must use this moment to create “a world made new”.

There will be many building blocks to this new world, and we must work diligently and with patience over many years to lay them down block by block. A ready-made framework already exists. The Sustainable Development Goals are a collection of 17 global goals designed to be a “blueprint to achieve a better and more sustainable future for all” by 2030. The Goals build upon a vast legacy of international conventions on human rights, the most robust scientific understanding of socio-ecological systems, and both policy and financial measures that can enable a more just and sustainable world.

Meeting these goals over the mid- to long-term will involve public policy, the mobilization of finance, evolving cultural norms, enhanced public education and activism – virtually every tool in the social change toolkit. However, the central argument of this paper is that the immediate foundations and, therefore, the longer term viability of the Sustainable Development Goals rest upon how we respond to this crisis in this moment. This, in turn, rests squarely on how we design and deploy the economic rescue and stimulus packages that are already being built and will likely involve spending tens of trillions of dollars of public money over the coming 36 months.

In economics, ‘stimulus’ refers to attempts to use monetary or fiscal policy to stimulate the economy. ‘Monetary stimulus’ refers to lowering interest rates, quantitative easing, or other ways of increasing the amount of money or credit. ‘Fiscal policy’ is the use of

government revenue collection (taxes or tax cuts) and expenditure (spending) to influence a country's economy. Most economists believe we have almost exhausted the range of options available to us through monetary policy in the decade-long response to the global financial crisis of 2007–2008. Consequently, the bulk of stimulus in response to COVID-19 rests on the creativity and imagination we can bring to bear through fiscal measures.

The rest of this section concentrates on design elements and specific proposals around taxation and expenditures that should guide our fiscal response to COVID-19, enabling us to overcome the current crisis while accelerating the transition to a low-carbon and resilient world.

Stimulus guided by a moral purpose

Many of the principal architects agree that the rescue and stimulus measures that helped to resuscitate the global economy after the global financial crisis of 2007–2008 lacked coherence – what some have described as a “moral focus”. Reed Hundt has written that the US stimulus was “described as something in economics textbooks for people who had taken economics, but it had no counterpart in the real world. There was no project associated with it that was capable of commanding widespread assent. We were not going to the moon, we were not going to tackle climate change, we were not going to build new highways, we were going to stimulate. That didn't carry meaning to people” (Hundt 2019).

The first design principle of the global stimulus to respond to COVID-19 is that it must have a moral purpose above and beyond a return to normal. In her groundbreaking book proposing seven ways to create a 21st century economy, Kate Raworth suggests that the first step is to “change our goal” (Raworth 2018). Today, we need to change our goal from economic recovery to transformation, based on the moral purpose of creating a low-carbon, resilient and inclusive world.

1. Net-zero greenhouse gas emissions by 2050.

To avoid unmanageable climate change, and safeguard both human and natural systems, we must hold global mean temperature rises to less than 1.5°C. This means a net zero GHG emissions economy by 2050 following reductions of 45% by 2030. The concept of net-zero involves addressing both ‘sources’ and ‘sinks’ of carbon dioxide (CO₂). We will achieve net-zero emissions when any remaining human-caused GHG emissions are balanced out by removing GHGs from the atmosphere. Human-caused emissions should be reduced as close to zero as possible. Any remaining GHGs would be addressed through carbon removal, for example, by restoring forests. In scenarios that limit warming to 1.5°C, CO₂ reaches net-zero by 2050. Total GHG emissions reach net-zero between 2063 and 2068. (IPCC 2018).

Achieving this goal is a massive political and financial undertaking and it will require greater political will and the level of public consensus that we have not previously seen. However, all of the innovations and technology necessary to achieve this goal are already available to us. Analysis from the UNEP reveals that this is within reach. Investments in just six areas – solar energy, wind energy, efficient appliances, efficient cars, afforestation and halting deforestation – would build a pathway to net-zero (UNEP 2018). Project Drawdown – an unprecedented study of emissions reductions measures to stop GHGs in the atmosphere climbing and start to steadily decline – has identified 80 solutions that are available today that could deliver emissions reductions in these six areas while driving economic development, job creation, the democratization of energy access, and food sovereignty. Consider the following examples from the energy sector:

- **Wind:** The wind energy potential of just three states – Kansas, North Dakota, and Texas – would be enough to meet US electricity demands from coast to coast. Ongoing cost reduction will make wind energy the least expensive source of installed electricity capacity within a decade.
- **Micro-grids:** An estimated 67% of all energy is wasted in the US, much of it lost in transmission. Micro-grids reduce energy loss, are more resilient and responsive to local demand, and can provide access to the more than 1 billion people around the world who lack access to energy.



- **Solar:** Some estimates project solar can meet 20% of global energy needs by the end of the next decade. In Bangladesh, more than 3.6 million home solar systems have been installed, creating up to 170,000 jobs (Hawken et al 2017).

Similarly, the IPCC as identified 60 so-called response options that can reduce GHG emissions from land-use, enhance adaptive capacity, minimize land degradation, and increase food security. For example, reducing food waste by 50% would generate net emissions reductions in the range of 20–30% of total food-sourced GHGs. Shifting to diets that are lower in emissions-intensive foods like beef delivers a mitigation potential equivalent to the emissions of the whole of North America (IPCC 2019).

2. Resilient and inclusive with an emphasis on vulnerable populations and a focus on gender equality.

We must also invest in resilience, meaning our capacity to anticipate, avoid, accommodate, and recover from shocks. This, in turn, requires investment in six capital assets – human, social, natural, physical, financial, and political – with a focus on vulnerable populations who experience intersecting political, economic, legal, social, and cultural inequalities that amplify their risk; and those who require a just transition to move away from high-carbon pathways. The six capital assets are described below. In particular, gender equality must be at the heart of economic rescue as closing the gender gap is key to achieving all of the Sustainable Development Goals.

- **Natural capital** refers to the full range of services provided by biodiversity and ecosystem services, including land and water.
- **Human capital** refers to the skills and knowledge of available human resources, particularly in the workforce.
- **Social capital** refers to strong relationships, collaborations, and bonds of mutual support and cooperation that are essential for addressing a systematic global challenge. When reciprocal claims for support can be made within communities in times of stress, this adds considerably to adaptive capacity.
- **Physical capital** refers to infrastructure, equipment, facilities, logistics, communications, utilities, and even genetic agricultural resources.
- **Financial capital** refers to the volume of available financial resources and access to financial goods and services.
- **Political capital** refers to access to decision-making that shapes policy environments to enable resilience.

To be truly resilient, we must build an inclusive economy to advance the realization of human rights – all rights including civil, political, economic and social. The body of international human rights law, dating back to the Universal Declaration of Human Rights in 1948, provides the enabling conditions to achieve this goal. We must double down on the so-called “procedural rights” that facilitate advocacy and accountability and are critical to building climate resilience. These include:

- **Access to information** provides opportunities for individuals to understand and develop agency to mitigate the impacts of climate change. Access to information is anchored in the human rights that guarantee access to education, free assembly and association, and free opinion and expression. It allows otherwise marginalized and vulnerable groups to gain insight into what inputs are shaping policy-making, and to remain informed on how policy is being implemented and enforced.
- **Access to decision-making** is anchored in rights to shape governing political systems, access a free press to be informed by and to inform decision-making, access fair and open public administrative and judicial hearings, and access decision-making to promote participatory policy-making. Importantly, vulnerable populations should be counted among those shaping climate change interventions.
- **Access to justice** through various tribunals provides the scope for dispute settlement and redress when policies are poorly conceived, processes are not respected, or outcomes are harmful. Access to justice enables communities to hold the public- and private-sector accountable for failures to build resilience in a manner that is proportional. (Cameron and Nestor 2018)

The focus on rights should, again, be explicitly aimed at addressing gender inequalities. Measures to improve gender equality should include:

- **Improving women's access to financial services** including savings, insurance, and credit, and expanding ownership of productive assets such as property, farms, and inheritance.
- **Expanding labor relations law and social safeguards** including minimum wage, maternity benefits, and old age pensions to women concentrated in informal and unprotected work.
- **Ensuring that women are neither under-paid nor unpaid:** On average women earn 10–30% less than men for work of equal value. In addition, women devote one to four hours less a day to market activities, and while 72% of men are employed only 47% of women are.
- **Expanding educational opportunities for women** and access to agricultural extension and rural advisory services.

A growing body of evidence suggests that women's full and equal participation and empowerment, and their access to and control of spaces and resources, leads to multiple benefits including:

- **Educating girls**, often referred to as the single best investment for development, leads to better employment opportunities for those girls in adulthood, and to those adults raising healthier, more educated children.
- **Involving women in community-level decision-making processes** tends to produce an increased focus on public goods, such as education, as well as water and sanitation services.
- **Closing the gender gap in agriculture** would generate significant gains for the agriculture sector and for society. If women had the same access to productive resources as men, they could increase yields on their farms by 20–30%. This could raise total agricultural output in developing countries by 2.5–4% which could, in turn, reduce the number of hungry people in the world by 12–17%. Countries where women lack any right to own land have on average 60% more malnourished children. (Cameron 2019)

A resilient economy also provides for a “just transition” for those individuals, households and communities currently invested in high-carbon development as they must also be invited to share in the prosperity of the new economy. The ILO has predicted that employment will be affected in four ways as climate policies and corporate leadership define a low-carbon economy (ILO 2016):

- **The expansion of greener products, services, and infrastructure** will translate into higher labor demand across many sectors of the economy and associated new jobs.
- **Some existing jobs will be substituted** as we shift from internal combustion engine manufacturing to electric vehicle production, or from coal to solar power. This shift may be particularly difficult for low-skilled workers as they will need to retrain to compete for new jobs. Moreover, locations losing employment may not be the same places to benefit from the new jobs and so geographic disparities may increase.
- **Certain jobs or sectors may be eliminated** – either phased out or massively reduced in numbers. This is particularly acute for fossil fuel producers and carbon-intensive industries or practices.
- **Many existing trade jobs will be transformed and redefined** as day-to-day workplace practices, skill sets, work methods, and job profiles are greened. For example, automobile workers will produce more electric cars, while farmers will engage in sustainable land management, address food loss and waste, and respond to changing dietary habits.

A resilient economy will strengthen social dialogue, social protection systems, vocational training, and transfer payments and investments in communities suffering deindustrialization and dislocation.

Issues of resilience and human rights are brought into stark relief by the current COVID-19 crisis. One of the key lessons, as we seek to learn from this experience, ought to be the need for expanded investment in healthcare systems; expanded access to healthcare; reduced healthcare costs; a commitment to democratize preventative measures; and to strengthen health-related human rights including sanitation, food, housing, working conditions, and reproductive rights.

The international framework to support this is already there. Article 25 of the Universal Declaration of Human Rights states that everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care..." (UN 1948). Article 12 of the International Covenant on Economic, Social and Cultural Rights recognizes the right of everyone to the enjoyment of the highest attainable standard of physical and mental health (United Nations General Assembly 1966). According to the Office for the United Nations Commissioner for Human Rights (OHCHR) the right to health includes a wide range of factors, including access to safe drinking water and adequate sanitation; safe food; adequate nutrition and housing; healthy working and environmental conditions; health-related education and information; the right to a system of health protection providing equality of access for everyone; and access to essential medicines (OHCHR 2008).

3. Replace GDP with a metric that assesses our well-being.

There is an old adage in the sustainable development arena that "we will only manage what we measure and we only measure what we value". In the post-COVID world, we must begin to measure what we value and not just value what we price. This means the practice of measuring well-being by economic performance based on GDP must end.

A number of prominent economists and philosophers, including Amartya Sen (Sen 1999) and Kate Raworth (Raworth 2017), have proposed ending our fixation on GDP. Sen argues that economic development should be seen as a process of expanding capabilities through the deepening of political freedoms, economic facilities, social opportunities, transparency guarantees, and protective security. This not only involves expanding political and civil rights but also improving social arrangements such as education, healthcare, and access to financial services. Sen argues that a narrow focus on GDP prioritizes economic well-being rather than the well-being of individuals and the societies in which they live. (Sen 1999). Raworth points out that, today, we have economies that need to grow, whether or not they make us thrive; when, in fact, we need economies that make us thrive, whether or not they grow (Raworth 2017).

Writing for the WEF, Jennifer Morgan, Executive Director of Greenpeace International has proposed a well-being index informed by the UN's Sustainable Development Goals (Morgan 2020). Instead of assessing our well-being based on what we produce and consume, we would instead have metrics related to poverty alleviation; food security; quality and access to education; gender equality; access to and quality of water, sanitation and energy; our ability to innovate and build 21st century infrastructure; our progress in providing decent work with a living wage for our population; the sustainability of our cities and the viability of our circular economy; our efforts to manage the climate crisis; and our ability to safeguard biodiversity on land and in the oceans.

Investments in a 21st century economy

4. Governments need to focus on jobs.

Reed Hundt has pointed out that the economic recovery and stimulus packages after the 2007–2008 financial crisis were focused on the abstract goal of stimulating the economy. He writes that at the height of the financial crisis, Henry Paulson, then United States Secretary of the Treasury, focused on restoring the financial sector rather than on the recovery of the real economy (Hundt 2019). Writing in 2017, Nobel Laureate Paul Krugman estimated that underutilization of capacity during the eight years after the financial crisis amounted to US\$ 8 trillion. In other words, the poorly designed stimulus, with insufficient ambition and a lack of a specific moral purpose, failed to revive the economy sufficiently and lost the opportunity to not only shift the entire economy to clean energy, improved infrastructure, and shared prosperity, but also failed on the critical metric of employment. Krugman concluded that it took the United States 9 years to reduce unemployment to its December 2007 level of 4.7%, and the average rate over that nine-year period was 7.3%. He further argued that the right stimulus would have resulted in median household income in 2017 of US\$ 70,000 per year, instead of a little below US\$ 60,000 per year. (Krugman 2017).

Low-carbon investment creates new job opportunities and increases the quality of jobs, while boosting employment and creating new industries. An analysis from UNDP shows developing the clean energy sector can create



sharp increases in employment when the transition is consistent with a 1.5°C pathway, estimating a total of 68% more jobs than in a 'business as usual' scenario (UNDP, 2016). Moreover, research conducted for the Global Commission on the Economy and Climate has revealed that green stimulus could deliver at least US\$ 26 trillion in net global economic benefits between now and 2030, while creating more than 65 million new low-carbon jobs in 2030 (Mountford 2020). As a result, this time around, the focus must be on employment.

5. Governments and companies should work together to create viable social protection systems.

Social protection systems include policies and programmes intending to reduce poverty, deprivation and vulnerability and may include social safety nets (cash and food transfers, public works programs, school feeding programs); social insurance (pensions, health or unemployment benefits); labor market interventions (job benefits, labor standards); and social care services (for the elderly or disabled). The principal lesson from the COVID-19 crisis should be that vulnerability is exacerbated by the absence of adequate social protection. Zero-hour contracts and lack of sick-pay force people who are ill to work, and prevent them from building a financial reserve upon which to draw in times of crisis. Lack of health coverage prevents people from seeking medical treatment when they are ill, with the potential for spreading rather than containing disease. Insufficient funding of unemployment and pension benefits forces people into destitution in times of economic hardship. Governments should use the money in economic recovery and stimulus packages to build a new social contract, ensuring that all people have access to an adequate standard of living, minimum means of substance, and the right to health, just as the International Bill of Human Rights states.

6. Governments must commit to research and development.

Research and development (R&D) is essential to creating better jobs, maintaining competitiveness in the global market, and generating the breakthrough innovations necessary for a low-carbon, resilient and inclusive world. Countries have been setting their own R&D spending targets for some time.

The European Union (EU) aims to commit 3% of GDP to R&D projects, but only four EU countries have reached this target. The African Union has set a target of 1% of GDP for R&D ventures but only three sub-Saharan African countries are close to this target. In North America, the United States and Canada spent 2.8% and 1.6% of GDP respectively on R&D in 2017. In Latin America and the Caribbean, Brazil reported the highest level of R&D investment for 2016 with 1.3% of GDP. In Asia, the Republic of Korea is leading investment in R&D with 4.6% of GDP, but the picture across the rest of the continent is decidedly mixed.

The global stimulus and rescue packages in response to COVID-19 now provide an opportunity to governments to meet and surpass their R&D targets. While spending money at scale, they must spend it wisely. UNEP has designed principles that are key in the design of policies and programs to accelerate low-carbon innovation. Governments must be willing to take on the high, early-stage risk that private companies and financial institutions avoid; and, once an innovation emerges, governments must also be willing to de-risk private investment in commercial-scale projects. At the same time, the whole economy must be given a coherent direction through joined-up government rather than through fragmented and sporadic policies (UNEP 2018). The stimulus and rescue packages currently available are an ideal opportunity to execute on all of these principles. They should endow universities, national science foundations and public-private partnerships with funds focused on breakthrough innovations in clean power, sustainable food systems, transportation, and health.

7. Governments should create green infrastructure banks and rural development banks.

In 2008, a team of researchers at the Center for American Progress proposed a green economic recovery program that would spend US\$ 100 billion dollars over two years in six green infrastructure investment areas: retrofitting buildings to improve energy efficiency; expanding mass transit and freight rail; constructing "smart" electrical grid transmission systems; wind power; solar power; and next-generation biofuels. They estimated that this would create 2 million jobs (Pollin et al 2008). A bigger vision is now needed focusing on energy and food systems to cover both urban and rural economies. The money should

be used to fund entrepreneurs and accelerators, and to support vocational training to create the human capital necessary to build a low-carbon, resilient and inclusive future.

- **Green Infrastructure banks** should focus on energy systems, transport and the built environment. Project Drawdown has accumulated more than 5,000 references, citations and sources to catalogue more than 80 individual measures to reduce GHG emissions consistent with reversing climate change, including: the deployment of wind, solar, micro-grids, wave and tidal, biomass and nuclear power; the construction of net-zero buildings, green roofs, district heating, insulation, and retrofitting buildings; and investment in public transport, electric vehicles and bike infrastructure. These measures can advance a wide range of Sustainable Development Goals, including creating jobs, creating livable communities and resuscitating economies in distress.
- **Rural development banks** should focus on building a new sustainable food system. Annual terrestrial ecosystem services have been valued to be approximately equivalent to annual global GDP, estimated at US\$ 75 trillion; yet we are degrading these resources and neglecting those who steward them. Land degradation occurs over a quarter of the Earth's ice-free land area, and the food system we have created contributes 37% of global GHGs (IPCC 2019). The IPCC has identified close to 60 so-called response options covering land-management, value chain management, risk management, and political / financial enablers that can reduce GHGs, enhance resilience, improve rural livelihoods, drive economic development, and strengthen food security. Rural development banks should be created to fund these response measures across the globe with the goal of transforming our food system.

Governments can magnify the impacts of these investments with supportive policies elsewhere. For example, by ensuring public procurement rules are consistent with low-carbon, resilient and inclusive development; sending a powerful signal to the real economy. In addition, governments should ensure that there is no roll back of environmental regulations. An analysis conducted for UNEP concluded that the nationally

determined contributions (or national climate plans) adopted by 184 countries as part of the Paris Agreement of 2015, fall well below the level of ambition necessary to hold global temperatures to 1.5°C. In fact, a fivefold increase in ambition is needed to align global climate action and emissions with limiting warming to 1.5°C by the end of this century (Christensen and Olhoff 2019). Consequently, the investments outlined in this document must be complemented by a supportive and joined-up policy enabling environment.

Conditionality must ensure that stimulus is used as a catalyst for change in the real economy

In 2008, using a three-page memo, Henry Paulson, then serving as US Treasury Secretary, secured US\$ 500 billion from Congress to bail out banks with virtually zero conditionality. The government refused to instruct the banks on their conduct; did not use their equity to take a seat on boards; did not take voting shares; did not compel them to offer mortgage relief to families facing foreclosure; did not restrict dividend or executive compensation; and was even hesitant to make money from the banks rebounding. The government bailout helped guarantee the debts of financial institutions; and, within months of receiving government assistance, the banks paid out big bonuses to their executives. Similarly, the Bush Administration awarded car companies US\$ 18 billion with virtually no conditions. It was only later, after the companies sought a second bail-out from the Obama Administration, that some degree of restructuring was imposed upon them (Hundt 2019). Beyond the banks, many other companies spent enormous sums on stock buybacks, which reward shareholders and increase executive pay. For example, the airline industry collectively spent more than US\$ 45 billion on stock buybacks over the past eight years (Wu and Serkez 2020). COVID-19 stimulus and rescue packages should have a condition that temporarily bars stock buybacks for companies that receive taxpayer loans.

But, to date, the signs of conditionality in stimulus and rescue packages in response to the COVID-19 pandemic are mixed at best. In the United States, the US\$ 2.2 trillion package agreed by Congress resisted lobbying

from the coal industry to bail-out an industry that has suffered long-term decline. Once again, the airlines appear to be receiving preferential treatment. They have been allocated an initial \$25 billion mostly in the form of grants with the promise of another \$25 billion in loans. Unlike the automaker bailout in 2009, very few environmental or social conditions are imposed on these companies (Rattner, 2020).

The US stimulus of 2008 also failed to make any environmental requirements on those industries that were bailed out. That included aviation, whose lobbyists succeeded in removing from the draft package a requirement for airlines to halve GHG emissions by 2050 – even though this was a target the industry had committed to achieving previously. China's current rescue and stimulus package following the COVID-19 outbreak also makes no mention of the climate or environmental aspects of any measures (Pearce, 2020). The French government voted to earmark 20 billion Euros of the country's total bailout package for large companies and rejected any condition that these companies should reduce their GHG emissions in light of another potential crisis looming post-COVID. Without stricter climate conditions, the French government is de facto creating a weak post-COVID world, where companies that should transform to low-carbon operations delay this transformation even longer, exposing their employees, consumers, and the communities within which they operate to even greater risk (Greenpeace 2020).

Poland and Denmark have been welcome exceptions, becoming the first countries to ban companies that are registered in tax havens from accessing financial aid in response to COVID-19. In addition, the Danish measures, adopted on 21 April 2020, require firms applying for an extension of Danish state funding to refrain from paying dividends or pursuing share buybacks until 2022 at the earliest (Skydsgaard, 2020).

Going forward, stimulus and rescue packages must come with conditionality – public money must be spent with economic, social and environmental conditions. Finally, companies should reduce GHGs using a science-based target and commit to resilience by disclosing their climate risks; investing in adaptive capacity across their supply chain; and reporting progress regularly through their annual reports.

8. Financial Institutions need to reinvest in a just and sustainable economy.

Financial Institutions (FIs) receiving public money should be compelled to offer relief and grace periods to families struggling to pay loans and facing housing foreclosure. In addition, FIs need to divest from their fossil fuel investment and reinvest in a low-carbon, resilient and inclusive economy. The Banking on Climate Change 2019 report card – the tenth annual fossil fuel report card and the first ever analysis of funding from the world's major private banks for the fossil fuel sector as a whole – reveals that 33 global banks, mostly from the United States, Canada, China, Europe, and Japan, have provided US\$ 1.9 trillion in finance to the fossil fuel industry since the Paris Agreement was adopted in 2016. This is an order of magnitude above the Paris Agreement target for climate finance of US\$ 100 billion per year (Rainforest Action Network 2019).

9. Companies should pay their taxes and refrain from stock buybacks.

Companies receiving government support should be headquartered, and paying their fair share of taxes, in the country that provides them with their rescue package. This means rejecting tax evasion and avoidance measures. All governments should block firms registered in tax havens from accessing the state bailout funds. There should also be a prohibition on using public money on stock buybacks, which reward shareholders and increase executive pay, but do little for worker and the real economy. Governments need not shy away from being active when using public money; they should be willing to assume equity and voting shares in the major corporations that receive taxpayer rescue packages. Blackrock, the world's largest asset manager with nearly US\$ 7 trillion in investments, recently announced plans to make decisions with environmental sustainability as a core goal. To achieve this, it plans to exit investments that "present a high sustainability-related risk"; press companies to disclose climate plans; and vote against management teams that are not making progress on sustainability (Blackrock 2020). Governments should follow this same model.

10. Companies receiving stimulus should adopt climate targets.

Companies receiving stimulus and rescue packages in response to COVID-19 should adopt science-based GHG reduction targets. This means agreeing emissions reductions in line with what the latest climate science says is necessary to limit global warming to 1.5°C – meeting the goals of the Paris Agreement. Companies should also establish monitoring, reporting, and verification procedures to ensure full disclosure and independent accountability. They should also commit to resilience. In recent years, many companies across the globe have formalized their climate leadership into tangible commitments. The time is ripe to complement these mitigation-focused commitments with a new pledge on climate resilience. A resilience commitment could consist of a publicly disclosed pledge to create a science-based assessment of their climate risks; to follow this by formulating a strategy to build resilience to climate risks based on the six capital assets; and to report progress regularly to shareholders and stakeholders.

There must be solidarity as well as stimulus

COVID-19 is having a disproportionate impact on the developing world and vulnerable communities. Similarly, patterns of inequality both internationally and within countries have exacerbated risk for low-income populations and those who suffer from structural discrimination. While countries have been quick to initiate rescue packages, previous experience suggests that stimulus fatigue can set in, so governments need the foresight to design revenue models that sustain the stimulus, generate revenues for the public purse, and ensure that all within society pay their fair share.

Five actions would ensure there is solidarity within the stimulus: a global solidarity package to support developing countries; the repatriation of money evading the law in tax havens; the phasing out of fossil fuel subsidies; the expansion of carbon pricing to reflect the ‘polluter pays’ principle; and expanded estate tax to ensure the wealthiest in society pay their fair share.

11. The international community should create a global solidarity package.

The UNCTAD estimates that a US\$ 2.5 trillion rescue package for developing countries will be needed in the coming weeks (UNCTAD 2020). Professors at the London School of Economics have developed an idea for a Global Solidarity Fund, which would allow developed countries to borrow cheaply and transfer 1% their GDP to a trust dedicated to the global pandemic response. If all G7 countries and China committed 1% of GDP, the fund would reach US\$ 650 billion. Moreover, they propose US\$ 1 trillion in debt forgiveness and US\$ 1 trillion in liquidity from special drawing rights – the supplementary foreign exchange reserve assets maintained by the IMF (Ghatak et al 2020). Writing in the Washington Post on 14 April 2020, the former British Prime Minister Gordon Brown and the former Secretary of the United States Treasury Larry Summers proposed a similar initiative of US\$ 1 trillion in lending using the IMF’s US\$ 150 billion gold reserves and network of credit lines, plus an additional US\$1 trillion using the special drawing rights. They further argue for upcoming debt repayments to be waived for the 76 low income and lower middle-income countries, relieving over US\$ 35 billion of immediate debt. This money could then be repurposed for spending on health systems and economic stimulus (Brown and Summers 2020).

12. Repatriate money avoiding tax liabilities in tax havens.

French tax economist, Gabriel Zucman, has estimated that by 2013 about US\$ 5.9 trillion – or 10% of global GDP – was held in tax havens, with at least three-quarters of it unrecorded (Zucman 2013). Zucman’s assessment includes only financial wealth and does not account for many other forms –including real estate or works of art – in which stolen or legally acquired assets can be stored and protected from taxation (Milanovic 2019). A team of researchers from California, Norway and Denmark concluded that households who own US\$ 10–12 million in net wealth are twice more likely to conceal assets abroad than households with around US\$ 5–6 million; and households with more than US\$ 45 million are four times more likely. They concluded that the wealth in offshore tax havens is extremely concentrated, with the



top 0.01% of the distribution owning about 50% of the hidden wealth. Importantly, they also found that when tax evasion measures are relaxed, tax evaders do not legally avoid taxes more – despite the opportunity to do so – suggesting that fighting tax evasion can be an effective way to collect extra tax revenue from the wealthy (Alstadsaeter et al 2017). Consequently, governments should use this moment to press for the repatriation of close to US\$ 6 trillion at a 5% rate, producing over US\$ 250 billion in government revenue. This could be used to capitalize investments in green infrastructure and rural development banks. As Hundt has pointed out, it could be made contingent on firms repatriating money to allocate 5% to capitalize their own investments in low-carbon, resilient and inclusive development (Hundt 2019, p128).

13. Governments should phase out fossil fuel subsidies.

In 2015, the world spent US\$ 4.7 trillion on fossil fuel subsidies, growing to US\$ 5.2 trillion in 2017 or 6.5% of GDP. This figure incorporates a variety of support for fossil fuels, including the costs of air pollution and the burden on healthcare systems from respiratory illnesses, as well as undercharging for consumption taxes and undercharging for supply costs. If these subsidies had been eliminated in 2013, global carbon emissions would have reduced by 21% and deaths from fossil fuel air pollution would have fallen by 55%. At the same time, revenue would have increased by 4%, and social welfare by 2.2% of global GDP (Coady et al 2017). The money saved could be better spent on increasing energy productively, improving transmission, and retrofitting buildings. In addition, governments should expand renewable electricity standards that require utilities to buy a certain percentage of renewable generated electricity. The standards help project developers raise the capital for investing a new renewable capacity by guaranteeing demand.

14. Carbon pricing should be expanded to reflect the polluter pays principle.

Carbon pricing is intended to be a financial incentive to invest in clean technology and cut GHG emissions. At the time of writing, 45 countries and 25 cities, states and

provinces use carbon pricing mechanisms. However, 85% of global emissions are currently not priced, and about three-quarters of the emissions that are covered are priced well below the target price of at least US\$ 40–80 / tCO₂ by 2020 and US\$ 50–100 / tCO₂ by 2030, identified as being Paris-compliant by the Carbon Pricing Leadership Coalition (High-Level Commission on Carbon Prices 2017). Well-designed carbon pricing can drive down demand for GHG-intensive activities, incentivize low-carbon production and consumption, encourage investment in clean technology, and raise government revenues (Cameron 2018). Crucially, carbon pricing raises significant revenue over a sustained period of time, providing options for public sector investment in infrastructure and innovation, pro-growth tax reforms or rebates to low-income households. Research conducted by the World Bank suggests carbon prices, if properly designed, could provide the resources to more than double current levels of social assistance or other investments that benefit poor people, including connections to sanitation and improved drinking water or access to modern energy (Hallegatte et al., 2015).

15. The wealthiest in society ought to pay their fair share through an expanded estate tax.

Changing estate taxes is an excellent way to raise revenue and address issues of inequality and elite capture in our politics. Milanovic argues that the children of the rich benefit from inheritance, better education, and enhanced social capital obtained through their parents. In the top 38 US colleges and universities, more students come from families in the top 1% than from the bottom 60% of the income distribution and legacy admissions. Students who are accepted because one of their relatives went to the same institution account for 10–25% of the students in the top 100 US colleges and universities. In France, up to 15% of the population receives inheritance equal to or greater than the capitalized lifetime earnings of the median worker (Milanovic 2019). In addition, research conducted by academics at Stanford, Princeton, University of Georgia and New York University has revealed that in the 2016 US Presidential and Congressional Elections, the top 1% of the top 1% contributed 40% of total campaign donations (Bonica et al 2013).

4. CONCLUSION

Over the coming months and years, the international community will spend tens of trillions of dollars on economic stimulus and rescue packages in the wake of the COVID-19 pandemic. There will be a temptation to seek a return to the economy as it was on 31 December 2019. Should we spend these trillions of dollars and succeed in rebuilding the stock market, while still living in a world where more than 3 billion people live on less than US\$ 2.50 a day? Should we grow GDP back to pre-crisis levels and still live in a world where 22,000 children die each day due to poverty and 805 million people worldwide do not have enough food to eat? Should we put people back to work but still live in a world where 750 million people lack adequate access to clean drinking water – killing an estimated 2,300 people per day? Should we resuscitate the price of oil and commodities and continue our long march towards climate catastrophe? Would we call that success? Would that world be a better world than the one we have now?

What if, instead, we used this money to reinvent the economy, based on the principles of low-carbon development and resilient ecosystems and societies, in a new era of shared prosperity and inclusive politics? What if we used this money to build a 21st century energy system, instead of resuscitating the tired energy infrastructure of the 19th century? What if we incentivized the private sector to think broadly about shared value and relinquish the myopic pursuit of profit at the expense of all else? What if we created a veritable army of new architects, engineers, and skilled tradespeople to take on the mission of a low-carbon, resilient and inclusive future? These are the people who will build the solar panels and wind turbines to drive our clean energy future; who will improve our land-use practices through sustainable agriculture, enhanced forest management, and innovative approaches to soil fertility; who will revolutionize our transport and mobility practices by decarbonizing the way we move people, products and services; who will ensure that our utilities, homes, factories and infrastructure are low carbon and climate resilient; and, ultimately, will benefit from the trillions of dollars of investment and the expansion of the tax base through new and high-paying jobs.

What if we could turn this moment of crisis into an opportunity to build a 21st century economy and society?

Now is the time for a vision of a world made new.



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ABBREVIATIONS AND ACRONYMS

BGMEA Bangladesh Garment Manufacturers and Exporters Association

BRAC Building Resilience Across Communities

CO2 Carbon dioxide

DOL United States Department of Labor

EU European Union

FAO Food and Agriculture Organization

FDI Foreign Direct Investment

FIs Financial Institutions

GDP Gross Domestic Product

ICU Intensive Care Unit

IFRC International Federation of the Red Cross and Red Crescent Societies

ILO International Labour Organization

IMF International Monetary Fund

IPCC Intergovernmental Panel on Climate Change

MNEs Multinational enterprises

NRDC Natural Resources Defense Council

OBR Office for Budget Responsibility

OECD Organisation for Economic Co-operation and Development

OHCHR Office of the United Nations Commissioner for Human Rights

R&D Research and development

SIGI Social Institutions and Gender Index

TCFD Task Force on Climate-Related Financial Disclosures

UNCTAD United Nations Conference on Trade and Development

UNDP United Nations Development Programme

UNECA United Nations Economic Commission for Africa

UNEP United Nations Environment Programme

WHO World Health Organization

WMO World Meteorological Organization