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WORLD BANK GROUP

GREEN RESILIENT, AND INCLUSIVE DEVELOPMENT

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Foreword

The COVID-19 pandemic is having devastating health and economic consequences, especially in developing countries. In 2020, extreme poverty rose globally for the first time in over 20 years. Because of the pandemic, around 100 million people were pushed into extreme poverty. As we support developing economies to respond to the crisis, we are also working to help them recover in ways that are more sustainable, more inclusive and more resilient to future shocks to avoid long-term loss for short-term gain. We call this green, resilient and inclusive development (GRID). This is not a simple process or transformation for countries to undertake – particularly not for developing countries – and will require transformative investments and policy reforms.

We are making the GRID approach operational through multidisciplinary expertise, financing, and support for policy implementation, while doing everything we can to ensure everyone benefits from sustainable economic growth. While we have always looked at the different elements of GRID, what is different and marks a paradigm shift, is addressing sustainability, resilience, and inclusiveness simultaneously and systematically in formulating development policy to address the interconnected challenges. It also calls for sequencing interventions in ways that are tailored to country development needs and objectives, and moving from boutique green investments, to greening entire economies. Such a path will achieve lasting economic growth that generates shared prosperity and restores momentum on the SDGs.

This report provides the World Bank Group's first systematic overview of the range of options and solutions available for developing countries to build greener, more resilient and more inclusive economies. It argues that such a path is necessary given the enormous challenges that the world confronts – the pandemic, slowing growth, climate change and degrading environmental services. And it highlights that the cross-cutting enablers are investing in all types of capital; policy reforms, institutional strengthening and technology innovation; and mobilizing capital at scale, especially from the private sector. The GRID approach represents a new chapter in evolving efforts to address the many economic problems the world confronts. I hope that this report will ignite further discussions and inspire concrete actions towards a more sustainable, inclusive and prosperous future.

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LIST OF ACRONYMS

CAPP	Clean Air Priority Program
CCAP	Climate Change Action Plan
CPF	Country Partnership Framework
DEC	Development Economics Vice Presidency
DFI	Development Finance Institution
DPO	Development Policy Operation
DSSI	Debt Service Suspension Initiative
ECR	External and Corporate Relations
EU	European Union
FCS	fragile and conflict-affected situations
FCV	fragility, conflict, and violence
G20	Group of Twenty
GDP	gross domestic product
GHG	greenhouse gas
GRID	Green, Resilient, and Inclusive Development
HR	Human Resources
IDA	International Development Association
IDA19	IDA19 replenishment
IEG	Independent Evaluation Group
IFC	International Finance Corporation
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
LGBTI	lesbian, gay, bisexual, transgender, and intersex
LIC	low-income country
LMIC	low- and middle-income country
LTS	long-term strategy
MDDPP	Managing Director, Development Policy and Partnership
MDOPS	Managing Director, Operations
MIC	middle-income country
MIGA	Multilateral Investment Guarantee Agency
MSME	micro, small and medium-sized enterprise
NDC	nationally determined contribution
OPCS	Operations Policy and Country Services
PPP	public-private partnership
RISE	Resilience, Inclusion, Sustainability and Efficiency
SCD	Systematic Country Diagnostics
SDG	Sustainable Development Goal
SME	small and medium-sized enterprise
SOE	state-owned enterprise
STEM	science, technology, engineering, and mathematics
UN	United Nations
WBG	World Bank Group
We-Fi	Women Entrepreneurs Finance Initiative
WSME	women's small and medium-sized enterprise

All dollar amounts are U.S. dollars unless otherwise indicated.

> *Today, the world has a historic opportunity and necessity to change course—to overcome the rising dangers of hunger, social division, conflict, violence, and climate change. The World Bank Group will work with all stakeholders to address these challenges head on and support our clients to unlock the benefits of green, resilient, and inclusive development.*
>
> *David Malpass, World Bank Group President*

THE GRID APPROACH AT A GLANCE

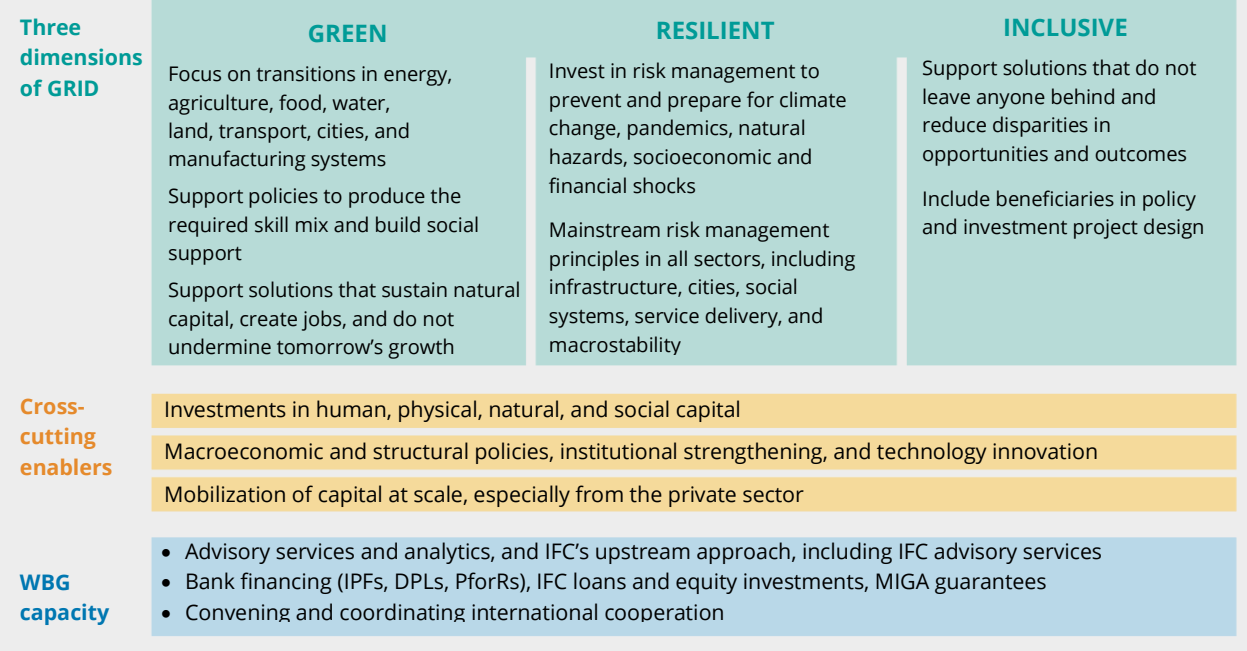
Developing countries have experienced growing structural weaknesses over the last decade. COVID-19 and climate change have further aggravated these, worsening poverty and inequality, and starkly exposing the interdependence between people, the planet, and the economy. A business-as-usual recovery package that ignores these interlinkages would likely result in a lost decade of development, addressing neither the structural weaknesses nor the interrelated challenges confronting the world.

The Green, Resilient, and Inclusive Development (GRID) approach departs from previous development strategies in that it promotes economic growth that goes hand in hand with environmental goals and inclusion. Pursuing the twin goals of poverty eradication and shared prosperity with a sustainability lens, the GRID approach addresses the risks to people, the planet, and the economy in an integrated manner that is tailored to country needs and objectives. It sets a path that achieves lasting economic progress that is shared across the population, providing a robust recovery, and restoring momentum on the Sustainable Development Goals (SDGs).

As countries face this historic opportunity to establish a better way forward, they will need to make significant reforms, mobilize domestic resources fairly, deploy private sector solutions[1] at scale, and put in place the investments needed for a transition to a more sustainable and inclusive development trajectory. The fruits of these transformations are likely to be unevenly distributed, so a range of social and labor market policies are also needed to compensate losers, safeguard the vulnerable, and deliver a just transition to a green economy. As needs are vast, complementary involvement from the public and private sectors, and the international community is vital. This report charts the broad contours of an agenda for a better development model that can be customized to country needs and circumstances (Figure 1).

[1] "Private sector solutions" refer to companies or projects that are majority-owned or operated by the private sector.

Figure 1. An outline of the GRID approach



Notes: IFC = International Finance Corporation; IPF = Investment Project Financing; DPL = Development Policy Loan; PforRs = Program for Results; MIGA = Multilateral Investment Guarantee Agency.

EXECUTIVE SUMMARY

The decade after the 2009 global financial crisis was characterized by growing structural weaknesses in developing countries, which have been further aggravated by COVID-19 and climate change, worsening poverty, and inequality. The litany of challenges includes slowing investment, productivity, employment, and poverty reduction; coupled with rising debt and accelerating natural capital destruction. The pandemic has brought a recession and collapse in investment, pushed over 100 million more people into extreme poverty in 2020, and worsened inequality. Women and the vulnerable have suffered disproportionately from increased joblessness, business contraction, domestic care responsibilities, and gender-based violence. The COVID-19 and climate change crises compound existing vulnerabilities in fragile and conflict-affected situations, leading to new waves of displacement and migration.[1] This warrants urgent action, as does the changing context of advanced economies moving rapidly on the climate agenda, which creates opportunities and pressures on developing countries to meet climate goals.

COVID-19—a zoonotic disease—and climate change have starkly exposed the interdependence between people, the planet, and the economy. Human and economic activities depend on ecosystem services, so depleting the natural assets that create these services gradually worsens economic performance. The science is unequivocal: the consequences of natural capital degradation and pandemics are severe and often irreversible. Developing countries bear the brunt of the impacts due to both geography and their greater economic dependence on natural resources.

A business-as-usual recovery package that neglects this interdependence would not adequately address the interrelated challenges that confront the world, nor its structural weaknesses, and would likely result in a lost decade of development. Targeting socioeconomic, climate change, and biodiversity challenges in isolation would be less effective than a coordinated response to their interacting effects. Continuing current growth patterns would not address structural economic weaknesses. At the same time, it would erode natural capital and increase risk, affecting long-term growth. As the depletion of forests, oceans, and other natural assets worsen, the trade-offs from neglecting the linkages become more expensive every day, and it is often the poor and vulnerable that are most disadvantaged.

This suggests the need for a GRID approach that pursues poverty reduction and shared prosperity through a sustainability lens. The approach, which recognizes that natural capital impacts economic growth, expands on the GRID paper endorsed by the Development Committee (2021), *From COVID-19 Crisis Response to Resilient Recovery – Saving Lives and Livelihoods while Supporting Green, Resilient and Inclusive Development (GRID)*. Promoting economic growth through a recovery path that is inclusive and consistent with environmental and social sustainability, the GRID approach requires technological progress to address externalities, mitigate the risks of crossing tipping points, and build resilience to shocks. Setting an economically prudent recovery path, GRID maintains a line of sight to long-term development goals, recognizes interconnections between people, the planet, and the economy, and tackles the increasing risk of shocks more efficiently.

GRID suggests a path to development that is novel in several respects. First, though development practitioners have long worried about poverty, inequality, and environmental externalities such as climate change, there has been insufficient focus on their interrelationships and the cross-sectoral nature of development policies. Second, GRID recognizes that sustainable and inclusive economic growth is necessary for lasting and robust development. Third, achieving GRID implies simultaneously and systematically addressing sustainability, resilience, and inclusiveness. For example, for trade, it will imply focusing on how carbon pricing may shape country exports, or how trade policies in one country may induce deforestation and biodiversity loss in another, and considering both export diversification for greater resilience to shocks and the distributional impacts of trade policies to ensure inclusiveness. Fourth,

GRID calls for sequencing interventions, in ways that are tailored to country needs, guided by sound analysis. Where feasible, private sector participation in these interventions will be important. GRID suggests a balanced approach focused on development, inclusion, and sustainability in ways that are tailored to country development needs and objectives. Such a path will achieve lasting economic growth that is shared across the population, providing a robust recovery and restoring momentum on the SDGs.

GRID will therefore require urgent investments at scale in human, physical, natural, and social capital to address structural weaknesses and promote economic growth. Rebuilding skills and recovering pandemic-related human capital losses will be crucial, particularly among marginalized groups. Expanding women's participation in the workforce and harnessing the ingenuity of the private sector will allow countries to mobilize the full range of available productive power to support sustainable growth. GRID will also require significant investment to boost economic growth and meet basic needs, through water, sanitation, electricity, and health services. Without economic growth, developing countries will not be able to afford the public services and economic transformations they need. But with vast crisis-related needs, most developing countries face difficult policy trade-offs that call for careful assessments and robust diagnostics to identify where the constraints to a GRID transition may lie and how to address them in a manner that promotes growth. In practice, this will call for differentiated approaches that reflect country needs, risks, and comparative advantages. For example, fragile low-income countries that are exposed to multiple disasters would likely emphasize building resilience, target their own vulnerabilities, and ensure inclusive economic growth, while more advanced economies have greater capacity to contribute to global sustainability goals.

Transformational actions are required in key systems that drive the economy—like energy, agriculture, food, water, land, cities, transport, and manufacturing—which also have a large environmental footprint, accounting for around 90 percent of global greenhouse gas emissions. Without significant change in these sectors, wider sustainability objectives, especially climate change mitigation, will not be achieved. Addressing economic distortions (such as externalities) in these sectors will promote greater economic efficiency, enable private sector participation, create jobs, and reduce adverse productivity and health impacts, leading to better development outcomes.

The costs of transitioning to a green economy are likely to be unevenly distributed, so countries will need to develop social and labor market policies that address adverse distributional impacts, safeguard the vulnerable, and deliver a just transition. The GRID approach therefore supports a transition to a more sustainable economy, while providing targeted support where it is needed to enable a just transition.

Countries will also need to reform their fiscal systems to mobilize domestic resources in a way that promotes inclusiveness and helps finance the transition. Taxes on externalities are a large and unused potential revenue source that can incentivize the private sector to invest in more sustainable activities, while encouraging less harmful consumption and behavior choices. Countries can increase fiscal space through higher taxes on multinational companies and high net worth individuals. Greater selectivity and efficiency in spending are also required.

Private sector-led growth will be key. The scale and types of investment needed require the expansion of private sector solutions where possible and targeted public sector interventions where needed and should be in line with the WBG's Cascade approach[2] to boost private sector participation. Using reforms to remove constraints to private investment in appropriate sectors and technologies and facilitating private sector dynamism to drive economic growth and job creation are essential prerequisites for a fiscally responsible path to recovery. This includes reforms to improve the business environment, create new markets, and design public-private partnerships to encourage broader economic participation. Investors' increasing appetite for sustainable investments, which offer both measurable impacts on the environment

and society, and appropriate financial returns, represents an untapped opportunity to leverage significant private sources of capital.

COVID-19 and climate change have exposed significant institutional gaps and call for a reimagining of government. Both crises have placed unprecedented demands on government, compounded by deepening inequality, weak accountability, and insufficient capacity to respond to existing problems. These new demands on the public sector threaten to undermine the recovery and credibility of institutions. The need to support institutional reforms to enhance state capacity, accountability, and transparency will remain pressing going forward. Even when policy change is deemed necessary, vested interests can create substantial barriers to reform. Incentive-compatible policy design, transparent and timely public outreach, reform sequencing, and a whole-of-government approach are all crucial for turning ambition into action. People-centered approaches and intensive community engagement can create a coalition of support for successful and durable reforms.

Countries will also need exceptional support from the international community. The impacts of climate change and consequences of eroding natural capital are not equally distributed and tend to disproportionately impact developing countries. The World Bank Group (WBG) stands at the forefront of efforts to support countries and work with other international financial institutions to operationalize the GRID agenda through financing, multidisciplinary expertise, and implementation support, and to provide a voice for developing countries. Given the political economy barriers to implementation, such support is essential for translating high-level goals into concrete actions. The WBG's Climate Change Action Plan 2021–2025 aims to advance the climate change aspects of GRID by supporting WBG clients to integrate climate considerations into their development strategies.

Countries face a historic opportunity to chart a better way forward. Just as World War II prompted a reordering that laid the foundation for an unprecedented era of global peace and prosperity, the twin crises of COVID-19 and climate change call for a reset to a new development paradigm. Despite the damage it has wrought, the pandemic offers countries a unique opportunity to address past policy deficiencies and chronic investment gaps. Countries can use crisis-related expenditure to accelerate digital development, expand basic service provision, improve regional supply chains, make green investments, reduce social inequality, and develop policies to catalyze job creation in growth sectors with private sector participation. By investing now to build an economic system focused on green, resilient, and inclusive recovery and growth, countries can turn the challenges of COVID-19 into opportunities for a more prosperous and stable future. This report outlines the direction of change that is needed. It does not provide country-specific recommendations, which would require more detailed assessments.

It is in the interest of low- and middle-income countries (LMICs) to be part of the sustainable, resilient, and inclusive agenda. As developed countries pivot towards more climate sensitive policies, it will be in the interest of developing countries to proactively participate in this transition. Failure to do so may bring risks of being left with stranded assets and shrinking markets for environmentally damaging commodities and production processes. The GRID approach provides a broad menu of options for countries to choose from, based on their context and development aspirations, to help set them on a path towards sustainable, resilient, and inclusive development.

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[1] Kanta Kumari, R, de Sherbinin, A, Jones, B, Bergmann, J, Clement, V, Ober, K, Schewe, J, Adamo, S, McCusker, B, Heuser, S, and Midgley, A. 2018. *Groundswell: Preparing for Internal Climate Migration*. Washington, DC: World Bank.

[2] The objective of this approach is to maximize financing for development by leveraging the private sector and optimizing the use of scarce public resources. The Cascade algorithm consists of asking when a project is presented: "Is there a sustainable private sector solution that limits public debt and contingent liabilities?" If the answer is "yes", promote such private solutions; if the answer is "no", ask whether it is because of: 1. Policy or regulatory gaps or weaknesses—if so, provide WBG support for policy and regulatory reforms— or 2. Risks—if so, assess the risks and see whether WBG instruments can address them. If you conclude that the project requires public funding, pursue that option.

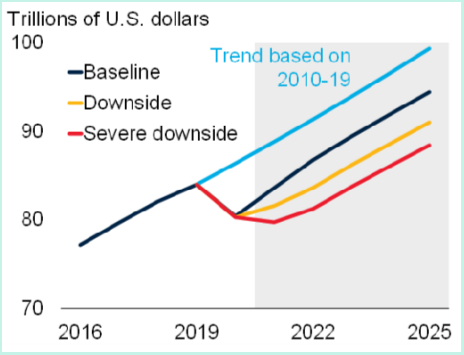
I.

INTRODUCTION: RECOGNIZING THE URGENCY OF ACTION

One year into the COVID-19 pandemic, the world has experienced an unprecedented humanitarian and economic tragedy. This includes over 2.5 million deaths, more than 100 million people regressing into extreme poverty, the equivalent of 255 million jobs lost, 265 million people driven into acute hunger, and the worst recession since the Great Depression of the 1930s.[1] The pandemic's economic and social effects have compounded climate change impacts, which have been intensifying over time, particularly the last two decades. The poor and vulnerable have been hit especially hard,[2] also bearing the brunt of natural disasters and violent conflicts. As a result, poverty reduction and shared prosperity have suffered their worst setback in decades. Even as economies recover, many of the consequences will likely endure.

Economic prospects, already weakening before COVID-19, have worsened significantly. The decade after the 2009 financial crisis was characterized by a litany of economic challenges, including growing structural weaknesses,[4] such as: a slowdown in investment, productivity, employment, and growth; slower progress on poverty reduction and shared prosperity;[5] rising debt levels; and limited fiscal buffers. The pandemic has aggravated these structural problems, bringing recession, a collapse in investment (global foreign direct investment fell by 42 percent in 2020, reaching levels not seen since the 1990s[6]) and prolonged unemployment. These are expected to significantly dampen growth over the next decade (figure 1). The pandemic has also triggered a surge in debt levels across low-income countries (LICs) and middle-income countries (MICs). Without rapid and forceful policy responses at national and global levels, this could lead to a string of debt crises.

Figure 2. Long-term global output projections



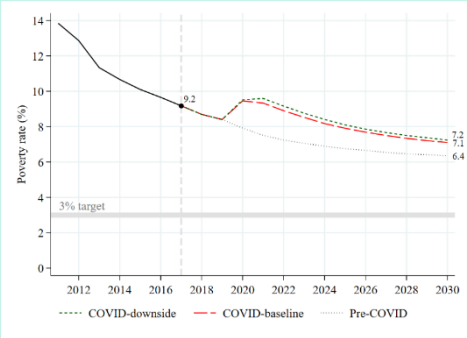
Source: World Bank 2021.[3]

Note: 2010 prices.

When combined with the slow-onset impacts of climate change, the immediate socioeconomic shocks of COVID-19 could reverse decades of progress. The goal of lowering extreme poverty to 3 percent by 2030 may now be unachievable (figure 2).[7] COVID-19 also threatens to reverse decades of hard-won gains in human capital and the SDGs, especially for women, girls, and other vulnerable populations. With a disproportionate impact on the poor and vulnerable, inequality is likely to worsen worldwide. Many of the sectors that have been hit hard by the pandemic have a high proportion of informal workers, who have limited access to health services and social protection.[8] With 740 million women globally in informal employment and a majority employed in services, women are particularly impacted by the crisis. They have lost opportunities due to school closures, unpaid family care, and face heightened exposure to diseases in their role as caregivers.[9] Child mortality is expected to rise by 45 percent globally, due to overburdened health services and less access to food. The pandemic is also expected to aggravate child malnutrition, with irreversible

impacts on health and livelihoods. School closures and dropouts are likely to erode the education and skills of a whole generation of school children, particularly among the disadvantaged.[11] Learning poverty has increased significantly—from 53 to 63 percent—in low- and middle-income countries (LMICs). Combined with de-skilling through prolonged unemployment, this will likely lower future earnings and dent human capital. Unless addressed with decisive action, the consequences on human capital could be permanent. With LMICs accounting for 36 percent of global gross domestic product (GDP) and 55 percent of global growth since 2010,[12] a lost decade of development would have repercussions for the global economy.

Figure 3. Long-term projection of global poverty



Sources: Estimates based on Lakner et al. 2021, PovcalNet, and World Bank 2021.[10]

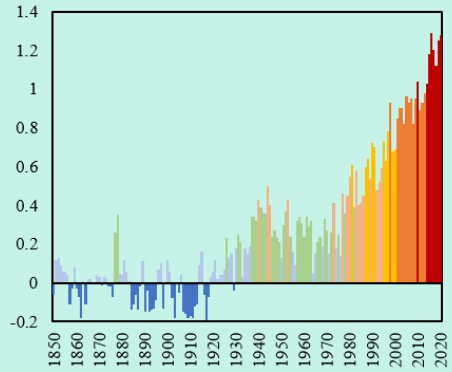
Note: $1.90-a-day poverty line, to 2030.

COVID-19 and climate change have starkly exposed the interdependence of human, economic, and environmental health. The crisis highlights the need for a more balanced form of development that recognizes natural capital as an asset that contributes to economic growth, alongside human, physical, and social capital. The Dasgupta Review estimates that, between 1992 and 2014, physical and human capital stock increased globally by 50 and 13 percent per person respectively, while natural capital plummeted by 40 percent.[13] The decline in natural capital has been so severe over the past century that scientists have coined a new term for this geological epoch: *the Anthropocene*. This refers to an era where for the first time, humans determine the fate of the planet and, by extension, their own fate. In contrast to the previously stable Earth system, which has enabled thousands of years of human progress and prosperity, the Anthropocene is marked by rising system instability and uncertainty about nature's ability to maintain its contribution to future growth.

Climate change risks are compounded by chronic and mounting stresses on ecosystems, with cascading health and economic impacts. Climate change is a symptom of the more widespread degradation of natural capital. With 9 out of 10 people exposed to dangerous levels of air pollution globally, more people are killed by air pollution than war each year.[14] Over half the world's population (around 4 billion people) live in areas that face water scarcity.[15] The economic impact of air, water, and soil pollution is estimated to amount to $4.6 trillion per year, equivalent to 6.2 percent of global economic output. Around 85 percent of wetlands have been lost, and nearly 1 million animal and plant species are threatened with extinction. The value of global fish stocks collapsed by 83 percent from 1995 to 2018, with direct consequences on the poor in LMICs who depend on fishing for their livelihoods. Ecological systems are intricately interdependent, so the collapse of one could cause a cascade of tipping points and trigger collapse in others, exacerbating global warming even if human emissions are reduced.[16] The science is unequivocal: the consequences would be wide-ranging, interconnected, and irreversible.[17] There is a compelling economic case for avoiding risks of tipping points that have severe consequences.[18]

The impacts of climate change and natural resource degradation are rising, with disproportionate effects on the poor. The pace of climate change is faster and more severe than previously projected (figure 3). Around 1.5 billion people, predominantly in LMICs, live in high-risk flood zones.[20] Under a business-as-usual approach, it is estimated that climate change impacts alone could push 130 million more people into extreme poverty by 2030.[21] The burden of environmental degradation is also borne unequally: 95 percent of people who live on degraded land are in LMICs, where dependence on natural resources is highest.[22] Evidence suggests that the very poorest in rural areas earn more income from forest resources than agriculture, and suffer the most from resource depletion.[23] Small states and fragile and conflict-affected situations (FCSs) are particularly vulnerable to resource degradation and climate change.

Figure 4. Global average temperature difference 1850–2020 (°C)



Source: HadCRUT5.[19]

Note: Annual mean temperature difference relative to 1850–1900 pre-industrial levels.

Advancing economic development while also eliminating planetary pressures remains the foremost economic challenge of the century. Achieving this ambitious goal will require addressing the "tail risks" of extreme events. Greenhouse gas (GHG) accumulation and environmental degradation are intensifying the risk of tipping points, where irreversible and catastrophic damage occurs to the planet.[24] Ice collapse is already underway. Intergovernmental Panel on Climate Change (IPCC) models suggest that when warming reaches 2°C, the Arctic has a 10–35 percent chance of being ice-free during summer.[25] Similar trends are underway in Antarctica and Greenland. When the permafrost melts, it releases methane and carbon dioxide, further accelerating climate change. With a 2°C rise in average temperatures, 99 percent of tropical coral reefs will be lost to warming, ocean acidification, and pollution,[26] bringing the risk of irreversible losses of fish stocks and associated livelihoods. Severely destabilized by deforestation, the Amazon Rainforest has lost 17 percent of its area since 1970. Its tipping point is estimated at 20–40 percent deforestation.[27]

Policy and development approaches need to consider the costs and consequences of both - addressing and not addressing these risks. Where damage is catastrophic, uncertain, and irreversible, conventional cost-benefit comparisons are seldom feasible or adequate. Impacts such as premature mortality, morbidity, and loss of ecosystem services are not reflected in GDP, difficult to measure, and hard to incorporate in standard benefit-cost assessments. With uncertain and catastrophic losses of unknown probability, conventional benefit-cost analyses cannot establish appropriate policy directions within desired margins of safety and accuracy. In such circumstances, countries can use science to define safe targets that avoid crossing tipping points, and economics for cost-effective and equitable ways of achieving such goals.[28]

Addressing these crises will have costs and create both winners and losers. For example, when the upfront costs of investing in modern, climate-smart technologies is higher than outdated polluting alternatives, liquidity barriers may emerge, especially in resource-constrained LMICs with high debts aggravated by COVID-19 and the associated recession. Concessional finance can play a key role in supporting climate-smart investments. By correcting distortions and addressing externalities, transitioning to a greener economy will (by definition) enable a country to use its resources more efficiently and reduce adverse impacts now and in the future, leading to higher economic growth and prosperity over the long term. But the fruits of the transition may be unevenly distributed and could

result in greater inequality. To support a just transition of workers and protect affected livelihoods, governments will need to invest in human capital, social protection, and regional development programs (box 1).

Box 1. Proactively managing policy trade-offs

Policy makers will face trade-offs in charting the path to GRID. While addressing infrastructure deficits or policy errors will come with costs, failing to do so also has costs. Weighing the costs of action and inaction should guide policy. However, in practice, it can be difficult to estimate the costs of inaction, since some impacts—such as mortality from air pollution or diarrhea from a lack of clean water—are less visible and identifiable than others. Moreover, who wins and loses matters, but a narrow comparison of costs and benefits will not capture complex distributional changes. The GRID approach aims to draw attention to these issues and encourage decision makers to consider the full range of benefits, costs, and consequences that would facilitate better policy choices. This is important because decisions taken today can have irreversible and detrimental consequences that most often disproportionately impact the poor in the future.

Recovery strategies must therefore address the pressing needs of protecting people and their livelihoods from the current crisis, while also dealing with the slower and irreversible consequences of climate change, biodiversity loss, and the depletion of natural resources that underpin life and economic progress. There is evidence that pro-poor stimuli can simultaneously address immediate macroeconomic and greater sustainability concerns. Most notable are investments in natural habitat restoration, which have among the highest estimated employment multipliers and tend to be pro-poor.

While GRID can create new green jobs and net overall employment gains, the declining competitiveness of carbon-intensive industries will also bring short-term job losses. These will be concentrated sectorally—for example, in coal—and spatially in places specializing in carbon-intensive production. As well as directly impacting workers, the low-carbon transition can have potentially large spillovers to wider communities and regional economies. Targeted measures are crucial to address these risks and ensure a just transition through investment support, safety nets, human capital investments, and so on. To this end, the World Bank Group is providing comprehensive support to governments, including for mine closures, land rehabilitation, skills retraining, labor mobility, and local economic development. Appendix 2 provides examples.

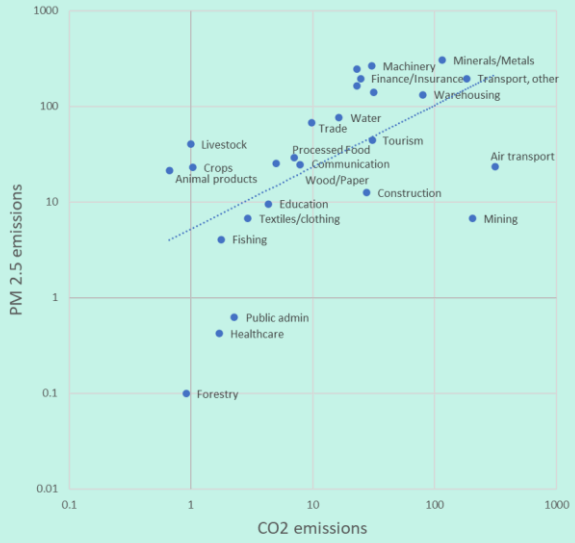
In this context, development is not a choice between addressing poverty or environmental degradation—rather, it is about achieving both these goals. The GRID approach encourages countries to consider the multiple dimensions of development through the interlinkages between human, natural, physical, and social capital.

This makes decision making more complicated, as policy makers need to consider synergies, trade-offs, and interactions between multiple objectives that are often overlooked. A first step in this process would therefore involve identifying and quantifying potential spillovers. For example, recent evidence suggests that, while an investment stimulus that favors many of the traditional sectors in agriculture and industry has large employment multipliers, it also generates male-dominant, low-skill employment, may not stimulate much growth (low valued-added income multipliers), and is highly polluting (large emissions multipliers). In economies dominated by these sectors, transitioning to a low-carbon economy with greater gender parity and higher growth trajectory, may involve sharper trade-offs. Economies also have sectors that are more conducive to female employment, with high employment multipliers and low emissions multipliers.[29] A recent study by the International Monetary Fund (IMF) suggests that, on average, income multipliers associated with green spending are about two to seven times larger than those associated with non-eco-friendly expenditure, depending on sectors, technologies, and horizons.[30] If robust, this finding implies that some green investments can be effective fiscal tools for stimulating the economy. The extent to which such options are available remains an

empirical matter and varies across countries. Rigorous assessment of policy impacts is therefore essential.

Coupled with a smarter choice of policies, concessional financing can go some way towards addressing policy trade-offs. Increasing the efficiency of renewable resource use could generate large allocative efficiency gains due to the prevalence of multiple market and policy failures among common property resources.[31] There are also policy options that simultaneously tackle current and future problems. For example, PM2.5, a harmful air pollutant, is implicated in a host of respiratory diseases, reduced labor productivity, impaired cognitive function, and stunting. PM2.5 claims more lives each year, than the annual death toll from wars and violence. Figure 4 shows that there is a strikingly close correlation between PM2.5 multipliers and GHG emissions multipliers, with an 85 percent correlation coefficient.[32] The implication is that policies could be designed to confer both longer climate benefits and immediate health improvements. And since much of the poor air quality burden is in developing countries, there are opportunities to tackle both problems simultaneously.

Figure 5. PM2.5 and greenhouse gas emissions



Source: Authors' calculations country example based on Taheripour et al. (2021)[33]

Decisions become more complex when costs incurred today only confer benefits in the future, possibly beyond political and policy cycles. There is often little incentive for policy makers—who have to focus on the next election—to invest resources and political capital on abstract future impacts. Considering longer-term impacts is important when decisions are irreversible and lock countries into inefficient development paths. For example, technology choices on whether to invest in another fossil fuel, such as gas, instead of renewables in the transition out of coal may make a country path-dependent, with both "good" and "bad" equilibria being possible. Importantly, heavily indebted countries are less capable of addressing the future adverse impacts of current policy choices—so, as the Ramsey formula on discounting dictates, more attention must therefore be paid to future impacts in these more indebted and poorer countries.[34] Affordable financing options and grants will need to play a crucial role to bridge intertemporal financing gaps in LICs and countries with high levels of poverty and debt.

In sum, trade-offs can at times be avoided by a smarter choice of policy instruments that promote efficiency and productivity gains and could provide the resources to compensate losers from policy shifts. But when trade-offs persist and such options are not available, the question is, how should society choose between competing objectives? While there is no easy answer, an important contribution of the GRID approach is that it emphasizes, and seeks to formalize, the need to identify and consider spillovers and interlinkages that would otherwise be neglected or given a lesser weight in decision making. For LICs and countries with rising poverty levels, concessional financing will be pivotal, especially when addressing global public goods such as the spread of infectious disease, climate change,

biodiversity loss, and transboundary water management issues. Moreover, for climate change, a disproportionate share of cost-effective mitigation actions is in developing countries, suggesting that well-designed transfers to poorer countries can help the world achieve global climate goals at lower net cost.[35]

The analytical foundations of the GRID approach draw on recent advances in economics (see Appendix 1). Traditional concerns about the interaction between the environment and the economy have focused on classical textbook market failures (environmental externalities and public goods). In this view, the economy is a user of natural resources, but there is no well-functioning market for environmental services—such as climate, fish, or forests—so, there is a tendency to overuse and abuse these underpriced natural resources. The ensuing shortage of resources might act as a headwind on growth and in extreme cases, may interrupt or reverse progress. A second line of work recognizes that this is a useful, but an inadequate description of the problem when there are planetary boundaries with tipping points that bring risks of large and irreversible damage. To account for this, the economy is deemed to be embedded in nature and not just a user of natural resources. This seemingly innocuous extension has far-reaching implications. For example, since there is no substitute for the biosphere, degrading the environment ultimately hurts growth potential. The recent Dasgupta review on biodiversity is an example of this approach, which has analytical underpinnings that can be traced back to the earliest models in renewable resource economics and growth theory.[36] A third and parallel literature speaks to the consequences of the small but non-negligible risks of catastrophic events, such as pandemics, climate change, and biodiversity loss. A key insight is that conventional benefit-cost calculus may offer little guidance and may even underestimate the economic costs. In sum, there are three key lessons to be drawn from recent analytical work: the importance of technological progress, managing externalities for sustainable growth, and the need for prudence in avoiding tipping points. Overall, there is a need for greater caution in designing development policies when issues such as embeddedness, dependence, and uncertainty are considered. These lessons are reflected in the GRID approach.

This paper comprises five sections. Section I has provided the introduction and motivation. Section II makes the case for why a business-as-usual recovery would not be effective and proposes a recovery that is focused on GRID. Section III presents a range of actions around three key areas to guide countries: (i) investments at scale in human, physical, natural, and social capital; (ii) policies to enable the transition; and (iii) expanding the deployment of private sector solutions and mobilizing capital at scale. Section IV recognizes that selectivity, based on robust analytics, will be key to defining approaches that are tailored to country needs. Section V calls for sustained exceptional support from the international community, and Section VI closes with brief conclusions.

II.

FROM RECOVERY TO GROWTH THROUGH GRID

A more effective approach to recovery and sustainable growth

A business-as-usual recovery package that neglects interlinkages between people, the economy, and the planet would not adequately address the complex challenges that confront the world, or its structural weaknesses. Targeting any one of the global challenges in isolation is likely to be less effective than a coordinated response to their interacting effects. For example, climate change has adverse impacts on economic performance, while weak economic performance translates into a constrained capacity to invest in risk reduction and adaptation. This can lock countries into weakened positions, creating higher levels of poverty, with undesirable social and economic consequences. The interdependence between economic systems, human health, and nature means that continuing current growth patterns could erode many of the conditions that enable growth. And as the effects of such interdependence cross borders, there needs to be global cooperation (box 2).

Box 2. The case for global cooperation

- Economies across the world have experienced a simultaneous and deep recession. A coordinated recovery will yield the greatest impact for all given the interdependence of economies.
- Delaying the economic recovery will deepen the damage and increase future needs for development aid.
- A business-as-usual recovery will be detrimental to the environment as it would lock in polluting capital.
- Although cheaper in the long run, a sustainable growth strategy has higher upfront financial costs, which many countries cannot meet, given their limited fiscal space and limited access to affordable financing.
- There is an opportunity to creatively channel vast private savings that are earning low or no yields into financing opportunities for sustainable investment everywhere, especially in LMICs, addressing the global climate challenge and generating both public goods and private returns. The challenge is to find ways to enable and incentivize the private sector to invest appropriately.

Supporting GRID in the crisis response would address the immediate devastation wrought by COVID-19 and the longer-term challenges of climate change. As the world emerges from the pandemic and its accompanying recession, urgency, momentum, and opportunity for climate action coincide. The visible impacts of climate shocks, mounting scientific evidence, political leadership, and prominent advocacy have all helped increase public awareness of the urgency of action. Building on the Paris Agreement, governments and private sector commitments have generated new momentum to recognize the severity of the risks. Countries need private sector solutions and innovative financing to drive their recovery. And as they rebuild their economies, there are opportunities to accelerate digital development, develop new green technologies, strengthen financial stability, and build resilient economies. Renewed emphasis on inclusion can help address the structural inequalities exacerbated by COVID-19.

During the economic recovery, countries must avoid getting locked into unsustainable and inaccessible infrastructure and business practices, as the costs of switching later will likely be disproportionally higher. The window for investing in sustainable infrastructure is today, during the current period of rapid urbanization and demographic transition in LMICs. Cities and transport networks built today will influence pollution, service quality, energy consumption, and population density patterns

for decades to come. A lesson from the past is that growth followed by environmental clean-up is often more expensive than sustainable growth from the outset, despite the higher upfront costs of the latter.[37] As adopting short-term solutions based on cash flow concerns rather than long-term, cost-effective solutions leads to underinvestment in resilience and sustainability, it is vital that financing strategies recognize long-term societal benefits.

Key ingredients of a robust, equitable, and durable recovery

To achieve a more sustainable, equitable recovery and a long-term development paradigm, the response must be:

i. **Green**: Environmental, socioeconomic, and financial sustainability hinge on promoting development through public and private sector investments that eliminate (or reduce) the adverse side effects of activities that threaten growth. Disasters, financial crises, pollution, and the degradation of fertile soils and rivers are among the risks that may impede growth. While investing in public works that promote clean products, and in production techniques for which demand is rising, promotes growth.[38]

ii. **Resilient**: To safeguard development, countries and firms need to prepare for, mitigate, and adapt to a wide range of risks and uncertainties, including recessions, financial shocks, natural hazards, climate change, and zoonotic disease pandemics. By building resilience to economic, climate, and health-related shocks, countries and firms can avoid diverting scarce resources to repeated cycles of shock, restructuring, and rebuilding. Increasing the resilience of the poorest population is essential for eradicating extreme poverty. A range of estimates suggest that appropriate investments in resilience are cost-effective and yield high economic returns.

iii. **Inclusive**: Rising inequality and the exclusion of social groups from services, markets, and opportunities impedes their participation in society and the economy and may foment discord. Ensuring that recovery leaves nobody behind can reduce disparities and help excluded groups realize a fair share of benefits. Women, Indigenous Peoples, racial and ethnic minorities, and lesbian, gay, bisexual, transgender, and intersex (LGBTI) people are overrepresented in groups with no or less access to state-sponsored social security systems. Where these identities intersect, disadvantage and discrimination are higher. Including diverse perspectives in designing and monitoring policies as well as private and public sector investment projects can improve accountability and enhance delivery.

While the WBG has long engaged on issues related to climate change, vulnerability, and inclusion, GRID emphasizes a more comprehensive approach that seeks to address the relations between sustainability, resilience, and inclusiveness simultaneously and systematically (box 3). Integrated approaches are often more effective as they build on synergies and acknowledge the linkages between people, the economy, and the planet (figure 5). For example, social safety nets are core elements of a GRID agenda, as they support job transitions and help address political and social resistance to green policies, such as fuel subsidy reform. They are also key to strengthening resilience, by protecting livelihoods of the poor and making public finance more effective and equitable—especially when coupled with complementary measures such as protective infrastructure like seawalls. In complex and rapidly changing circumstances, a combined approach of synchronized measures will enable more robust development.

Figure 6. **GRID: acknowledging interlinkages between people, the economy, and the planet**

Box 3. **What is different about GRID for WBG engagement?**

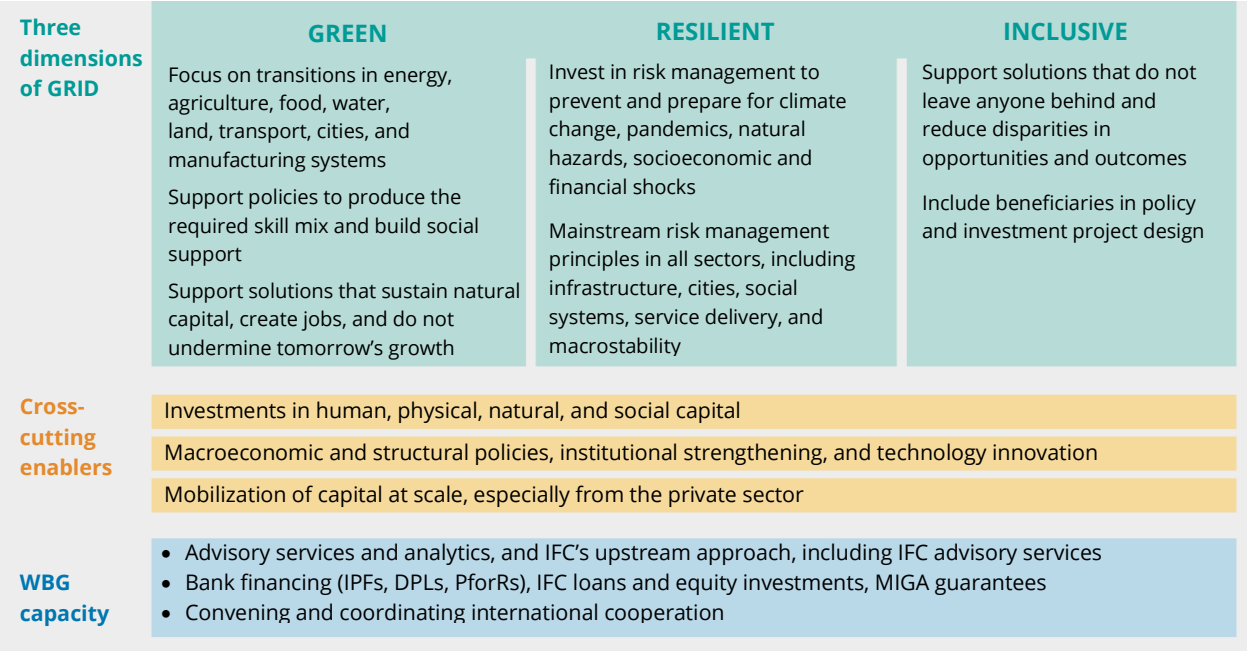
1. **GRID recognizes that the challenges of poverty, inequality, COVID-19, and the erosion of natural capital—including climate change—are interrelated and must be addressed simultaneously and systematically.** COVID-19 and climate change are both symptoms of inadequate natural capital management that in turn have economic and social consequences. As it is more effective to tackle climate change and address poverty and exclusion together, macroeconomic and structural policy designs must account for impacts on resilience, inclusion, and the environment, and vice versa. GRID seeks to leverage these interlinkages, recognizing that development is multidimensional. It acknowledges that there can be trade-offs and calls for examining the full consequences of actions that may not otherwise be considered.
2. **Although GRID relies on economic growth as a necessary condition for development,** it leverages these interrelationships to ensure that growth is not only high, but that it is sustained over time and is inclusive.
3. While project lifecycles and political mandates can bias planning decisions towards short-term outcomes, **achieving GRID requires focusing on the long-term implications and trade-offs of policy decisions.** For example, crisis response measures need to consider the irreversible implications of policies, to avoid stranded assets and locking in unsustainable investments and development paths. Policy makers need to create a level playing field, improve the business environment, and create conditions for GRID-informed public and private sector investments.
4. Recovery and development cannot be sustainable if they leave vulnerable groups behind. **Creating inclusive opportunities is at the core of GRID** because, like COVID-19, environmental degradation—such as pollution and resource depletion—disproportionately impacts the poor and vulnerable. The GRID approach recognizes that exclusion is multidimensional in nature and seeks to ensure that policies in all areas of deprivation tackle some of these difficult and persistent issues, especially for traditionally marginalized groups and minorities.
5. Given the urgency and magnitude of these crises, **all public and private sector interventions and investments must be accelerated and at scale.** This implies full participation of the private sector, policy reforms and addressing financial constraints, especially in countries with limited fiscal space. Since impacts are global, effective responses also need international cooperation.

Countries need differentiated approaches to implement the common principles of GRID. LICs' contribution to global GHGs through energy combustion is typically low. Instead, challenges often revolve around their vulnerability to climate risks,[39] compounded by the unsustainable use of natural resources upon which they are most dependent. The focus in LICs would most likely be on building resilience and ensuring that economic growth is sustainable and yields inclusive benefits. This suggests the need for investments that focus on relevant aspects of adaptation, build adaptive capacity, address poverty, provide basic services, and boost growth and employment, often in a context of rapid population growth. At the same time, it is important to avoid investments that leave countries with stranded assets. GRID presents an opportunity—particularly for LICs—to leapfrog to modern, efficient, and competitive technologies. Leveraging the tools available across the WBG will be key to ensuring countries and companies shift at scale to a GRID-aligned approach. This can unlock new sources of growth and jobs, strengthen resilience to shocks, and address transition costs. In MICs, there is an opportunity to embrace these new sources of growth that come from shifting market preferences. As major companies and investors pivot to sustainable standards, current unsustainable practices could constrain countries' competitiveness and impede participation in global value chains. This will be particularly significant for trade regimes with carbon border adjustments. Appendix 2 provides examples of WBG interventions and policy actions in LMICs that follow some of these principles.

WHAT DOES IT TAKE TO ACHIEVE GRID?

Advancing on the three dimensions of GRID—green, resilient, and inclusive—requires interventions along three cross-cutting enablers: (1) investing in human, physical, natural, and social capital; (2) macroeconomic and structural policies, institutional strengthening, and technological innovation to enable the transition; and (3) mobilizing capital at scale, especially from the private sector (figure 6). This section presents a wide and comprehensive menu of GRID-related investment and policy options for tailoring to country needs, based on robust diagnostics that can account for the linkages between human, physical, natural, and social capital as well as country comparative advantages. Not all investments and policies identified in this section will be relevant or affordable across the board. Instead, countries should prioritize and sequence their interventions, guided by robust diagnostics.

Figure 7. An outline of the GRID approach



Notes: IFC = International Finance Corporation; IPF = Investment Project Financing; DPL = Development Policy Loan; PforRs = Program for Results; MIGA = Multilateral Investment Guarantee Agency.

Investing in human, physical, natural, and social capital

For recovery and economic growth, there is an urgent imperative to scale up investments to reverse the collapse of economies and enable transformation. There is a unique opportunity to make investments that enhance growth, create jobs, and contribute to a better and more sustainable future. The most desirable investments are those that can be swiftly implemented, promote sustainability, are labor-intensive in the short term, have high GDP multipliers, and, where necessary, can be targeted at marginalized groups or regions. Both private and public sector investments are needed across human, physical, natural, and social capital at scale to drive growth and create jobs.

Many investment opportunities can support GRID goals while also promoting jobs and economic transformation. These range from transitions to cleaner energy to labor-intensive options such as retrofitting insulation and rehabilitating land. Investments in reforestation and watershed restoration have very high employment multipliers (creating around 30 jobs per $1 million),[40] while transitioning to clean energy infrastructure construction creates twice as many jobs per dollar as fossil fuel investments.[41] Those that expand coverage of basic services—such as water, sanitation, electricity, clean fuels for cooking, and digital connectivity—will be attractive in LICs and target key aspects of GRID, creating jobs, improving access to services, improving resilience, and meeting the SDGs.

Menu of human and social capital investments

Building human and social capital is a no-regrets strategy for promoting resilience as well as accelerating the post-COVID-19 recovery. It requires integrated policy and institutional reforms and sustained financing, including by private sector companies, to improve service delivery and support job creation. Several measures presented below are needed to reverse the setback in human capital

development caused by COVID-19, address disparities, and build resilient and inclusive service delivery systems.

The immediate priority for countries fighting COVID-19 remains containment and equitable vaccine deployment. While ending the pandemic requires high vaccination coverage, there are gaping inequities in access to COVID-19 vaccines across countries and deploying vaccines is difficult and complex. Vaccine inequity is driving a dangerous divergence in COVID-19 survival rates and in the global economy. To mitigate risks of shortage it is critical to ensure that the limited supply of vaccines currently available is fairly shared between developed and developing countries, and that developing countries can acquire safe and effective vaccines in a timely manner from all potential sources. This requires transparency in contracts, prices and delivery dates by countries, suppliers, and development partners. Once clarity on effectiveness and delivery of vaccines has increased, fair access could be facilitated through mechanisms enabling developing countries to benefit from the excess supply of vaccines of other countries. Vaccine delivery, especially in LICs, presents unprecedented challenges in terms of scale, speed, and specificities, which will require strong coordination. A recent WBG paper provides a more detailed strategy.[42]

Investing in more inclusive and reliable health, housing, childcare, education, water supply, and sanitation services builds stronger and more resilient communities. The pandemic has highlighted the need to invest in resilient health care systems, including strong frontline delivery systems and basic services (box 4). This is crucial, not only to manage crises like COVID-19, but also to ensure the continuity of basic but critical care functions.[43] Immediate investments are also needed to protect learning gains, promote distance learning, and build more equitable education systems to address the high risk of children permanently dropping out of school, especially the disadvantaged.

Box 4. A cross-sectoral effort to strengthen health care system resilience to climate change, disasters, pandemics, and other crises

Universal access to adequate, affordable, and resilient health care is foundational to countries' long-term socioeconomic development prospects. Yet, even before the COVID-19 pandemic, many developing countries were struggling to meet the routine demand for health care services. Climate change, disasters, pandemics, and demographic changes will increase pressures on already strained health systems. Cross-sectoral collaboration is therefore essential for strengthening health care services' resilience to shocks and pressures. Health systems need to be well integrated in countries' disaster risk management and emergency planning systems, including through coordination with search and rescue and civil protection agencies. Ensuring the resilience of infrastructure systems is also crucial, as health facilities depend on reliable electricity, water, transport, and telecommunications systems to provide critical care.

The WBG is leveraging its expertise across sectors to tackle these challenges. Established in 2021, the Health Emergency Preparedness and Response Program is already supporting around 20 countries to strengthen emergency preparedness in health sectors. These engagements complement ongoing collaborative engagements through the Global Facility for Disaster Reduction and Recovery, the Quality Infrastructure Investment Partnership, and the Japan-World Bank Program for Mainstreaming Disaster Risk Management. In addition, the IFC established the Global Health Platform in 2020, a $4 billion facility intended to address manufacturing and service-related healthcare needs in developing countries in response to COVID-19, with initial emphasis placed on boosting vaccine manufacturing capacity and health service capabilities, and longer-term emphasis on enabling sustainable healthcare capacity across emerging markets, including through IFC's upstream agenda.

To tackle deepening inequalities, it is important to target interventions to the most disadvantaged households and communities. This includes over 1 billion people living in informal settlements, who also deserve access to vaccines, reproductive and other primary health care, education, transport,

housing, and livelihood support. A lack of safe water, sanitation, and hygiene services is an enduring problem in LMICs that significantly increases the risks of disease transmission**.** The challenge is vast: 25 percent of the world's health care facilities lack basic water supply, and few of those living in slums have the basic water and sanitation facilities they need to prevent the spread of disease. It is also important to address the new forms of exclusion created by COVID-19. Many of the new poor are more urban and better educated than those who lived in extreme poverty before the pandemic; and a large share are in MICs. Middle-class children who previously benefited from education are being left behind as their families are excluded from digital services, or struggle with home learning.

Education policies must address the learning crisis, meet future skill needs, and improve access to labor markets, especially for disadvantaged groups. This includes redoubling efforts to build literacy, numeracy, and other foundational skills, while also fostering the job skills increasingly demanded in the 21st century labor market. Educational technology can help raise the quality and equality of education, support education delivery so learning continues beyond school, and ensure continuity of learning in emergencies. Policies are needed to strengthen advanced tertiary education skills that can drive innovation and growth. Upskilling and reskilling programs can prepare workers for greener jobs or new livelihoods due to shifting cropping patterns and the many consequences of environmental degradation. More generally, educational institutions often serve as information hubs for the wider community and play an important role in building the sustained support and skills that would be needed for transitions to occur. The need for a strong recovery further emphasizes the importance of women's economic empowerment, including by addressing childcare provision and lending support to female-owned micro, small and medium-sized enterprises (MSMEs), which is at the center of WBG gender priorities (Box 5).

Box 5. Engaging women as agents of change

Women at the center of the GRID agenda would be powerful agents of change. Education for girls, together with family planning, reproductive and sexual health, and economic opportunities for women as entrepreneurs and employees, will accelerate the GRID agenda. This includes positive impacts on resource use and lower environmental damage and land fragmentation in the transition to low-carbon economies. Focusing on women in decision-making and leadership roles, skills training, employment creation, and finance for the green economy will help countries avoid the occupational and sector segregation that characterize fossil fuel-dependent sectors. In line with the WBG's Gender Strategy, the GRID agenda can help equalize opportunities and close gender gaps by bringing new jobs and livelihoods for women in energy, transport, and agriculture.

The WBG is already investing in women's leadership for a new economy. For example, WePOWER is a vibrant women's professional network in South Asia's energy and power sector, where women make up less than 25 percent of employees. WePOWER's 27 partners run and support science, technology, engineering, and mathematics (STEM) awareness sessions, study tours, internships, hiring, technical trainings, and female facilities building to address gaps in women's employment in the energy sector and enrollment in STEM education.

The IFC is working with companies, financial institutions, and international development partners to prevent private sector gender gaps from widening and to support female entrepreneurs. Its guidance note, *COVID-19 and Gender Equality*: *Six Actions for the Private Sector*, recommends actions for the private sector to ensure that women and men can return to economic activities during and after the pandemic. It has also published guidance on employer-supported childcare, addressing and preventing gender-based violence, financial inclusion, and women's insurance.[44]

To help businesses expand employment opportunities for women, the IFC conducts workforce assessments with private sector clients to identify gender gaps and develop plans to strengthen or institute new practices to recruit, retain, and promote more women and empower women and girls in surrounding communities. Through its *Banking on Women* program, the IFC provided crisis response funding and performance-based incentives, which offer trade finance and working capital solutions to women entrepreneurs, while also facilitating access to life insurance and microfinance loans. For example,

- The Women Entrepreneurs Finance Initiative (We-Fi) and Banking on Women are incentivizing Banco Agrícola, El Salvador's largest bank, to strategically scale up its on-lending to women's small and medium-sized enterprises (WSMEs). A $330 million financial package includes a performance-based incentive for lending to women-led businesses.
- In Egypt, a $2 million IFC equity investment and $2 million We-Fi co-investment in e-commerce marketplace MaxAB—an online platform connecting informal food and grocery sellers with suppliers—will help increase its focus and outreach to women-led retailers on the platform.
- IFC is providing advisory services to Bancamía S.A., Colombia's second largest microfinance institution, to develop a tailored financial product for WSMEs, targeting the forcibly displaced Venezuelan population.
- MIGA is working to support private sector financial institutions as they scale up programs to help women--owned MSMEs.

Gender-disaggregated data in the financial sector can contribute to a gender-inclusive GRID recovery. The increase in the WBG's delivery and support of robust gender-disaggregated data throughout its work—in global datasets such as the *Enterprise Surveys, Doing Business, and Women, Business & the Law*, and through investment and support activities with governments, central banks, financial institutions, and digital financial service and technology companies—is contributing to better outcomes for access to financial services for women and women-led firms.

Strengthening social protection is an essential part of development, as it builds resilience and inclusion. Social protection transfers and livelihood support are key to bolstering poor and vulnerable households' and communities' resilience to shocks and can prevent non-poor households from falling into poverty. Safety nets and cash transfers can also be used to prevent habitat degradation—for example, through payment for environmental services schemes—while rural employment programs that restore degraded land and forests have high job multipliers.[45] When complementing fiscal reforms, such as fossil fuel subsidy reforms, social protection can help build social cohesion. Governments can also use it to protect and build human capital and foster greater inclusion; for example, more inclusive social protection measures can give vulnerable informal workers income resilience against economic downturns.[46] A resilience package including adaptative social protection, insurance systems, early warning systems, and contingent credit lines can deliver $100 billion per year in net benefits to the world.[47]

Promoting community-driven development can deliver results on the ground that respond to local priorities. The WBG has devoted significant financing to community-driven development over the past decades. Using this approach to promote local responses to resource degradation can help mobilize or strengthen local institutions to build local capacities and promote climate resilience and meaningful partnerships between communities, local authorities, and the private sector.

Menu of investments in physical and natural capital

Investing in sustainable, resilient, and accessible infrastructure is vital for a strong economic recovery while laying the basis for transformation. Countries need support to transform their agriculture, food, water, land, transport cities, energy, and manufacturing systems, as they are key drivers of real sector growth and have significant environmental impacts at global and local levels. Transformative change is essential for both climate change mitigation and adaptation. There is some evidence that fiscal multipliers from resilient and sustainable investments may outperform those from alternative investments.[48] It is also estimated that a shift to low-carbon, resilient economies could create over 200 million net new jobs globally by 2030.[49] Successful transitions in these sectors would boost growth and jobs and unlock economic opportunities in the short term, while safeguarding development prospects in the long term.[50]

Agriculture, food, water, and land

Transitions in the agriculture and food system will prevent further rapid degradation of forests, water resources, and natural habitats, and give people access to safe, nutritious, adequate, and sustainably produced food. To ensure universal food security, the global food and land use system must be inclusive in its reach, resilient to shocks, and able to address the significant environmental impacts it has. The global food system is currently the single largest driver of environmental change. Agriculture accounts for over 80 percent of consumptive freshwater use[51], around 20 percent of global GHG emissions, and as the largest land user, is responsible for much biodiversity loss. The nutrient runoff from agriculture is primarily responsible for hypoxia (dead-zones) in surface waters and implicated in myriad human health impacts such as stunting and cancers.[52] The hidden health and environmental cost of the food system is estimated at $12 trillion per year, while the total value of food consumed is around $10 trillion US dollars. The system therefore extracts more than it contributes.[53] By 2050, an extra 2 billion new mouths will arrive at the table needing more food.[54]

While the challenges may seem formidable, solutions are available and affordable. The WBG promotes climate-smart agriculture techniques, which are being widely adopted to increase productivity, improve nutrition security, and boost rural incomes. Landscape approaches decrease the risk of deforestation, support land restoration to strengthen environmental service provision, and reduce vulnerability to climate-related shocks and emissions from food production. Other measures to address the underlying drivers of food and nutrition insecurity include reducing food loss and waste, making healthy diets more affordable, and improving natural resource management. Beef and rice are among the most GHG-intensive food products, and are also responsible for much forest loss, water consumption and heavy pollution. Altering diets and consumer preferences will be vital for changing farming practices and spurring innovation. The WBG also supports the collaborative One Health approach to avoid the spread of Emerging Infectious Diseases, recognizing the interconnections between people, animals, plants, and their shared environment.[55] Digital technologies are increasingly used to improve the efficiency, resilience, and inclusiveness in agricultural value chains.[56] Cutting across these areas is the importance of tackling distortive policies and subsidies through targeted country engagements and by leveraging upstream initiatives for the private sector to create markets aligned with GRID.

These measures need to be accompanied with interventions to address chronic water deficits, which are worsened by climate change. As the demand for water on farms and in cities increases and exceeds sustainable supplies, supporting growth will require increasingly complex integrated solutions. To meet these challenges, countries will need to address water use inefficiencies, the degradation of water supplies through pollution, and the destruction of watersheds. The WBG can support countries to deliver efficient drinking water, sanitation, and irrigation services, and sustain resources through nature-based solutions and physical options that have no adverse environmental impacts on natural capital and undesirable social consequences.

Transport and cities

Transport and urban systems need to build resilience and reduce emissions, in a context of expanding urban population and increased demand for mobility. For the first time, more people live in cities than in rural areas. However, rapid urban growth means that cities have become major sources of GHG emissions and energy use, particularly in the transport, buildings, and waste sectors. Transport systems alone account for 16 percent of global GHG emissions and 25 percent of particle emissions, which have grown faster than those of almost any other sector in the past 50 years. Emissions from transport and in cities show no signs of receding as countries urbanize, air and maritime freight volumes rise, and demand for mobility increases.

Developing green and sustainable cities requires designing more efficient and well-connected urban areas with enhanced access to services. Priority actions include support for expanding efficient waste management, assuring adequate water supply and sanitation services, and increasing the energy efficiency of buildings—for example, through the IFC-led *Excellence in Design for Greater Efficiencies* certification program.[57] Achieving decarbonization will require inducing a modal shift to less polluting forms of transport, with public transport playing an important role, complemented by solutions for last mile connectivity. This will require supporting the expansion of capacity, affordability, and access to frequent and reliable public transport systems that replace polluting, fragmented, and unsafe transport services. Introducing minimum emissions and safety standards for used vehicle exports, improving fuel quality standards, fuel pricing reform, and gradually replacing the fleet with electric vehicles could also greatly reduce GHG emissions and air pollution, improving citizen well-being. Encouraging innovation though private sector interventions and technological advancements will also help develop green, sustainable transportation and cities. The WBG is actively engaged in supporting 10 countries to introduce vehicle and clean fuel standards, and 34 countries to implement measures for decarbonizing the freight sector by enabling modal shift and transition to green logistics.

Energy

To achieve the Paris Agreement goals, global energy systems must transition from carbon-emitting technologies towards zero emissions; but this must be accompanied by policies that assure affordable energy access to achieve the SDG7 goals of universal access to affordable, reliable, and modern energy services by 2030. Energy use accounts for 73 percent of global GHG emissions—with coal combustion accounting for one-third—while fossil fuel-based electricity generation uses large amounts of water.[58] Wide-ranging electrification of economic activity is considered a cornerstone of decarbonization, alongside approaches to manage demand and improve resource use efficiency.

i. For LICs, progress towards providing energy access to all by 2030 must be coupled with increases in renewable energy, including mini grids and off-grid options like solar. This is crucial, particularly in Sub-Saharan Africa, where more than half the population lacks access to electricity. Promising new areas include offshore wind, floating solar, battery storage, renewable mini-grids, and digital technologies.[59] Countries should prioritize private sector investments as the drivers of innovation, in line with the WBG's strategy to maximize finance for development.[60] The WBG can provide green energy solutions and help de-risk private finance into the energy sector—for example, through the Scaling Solar Initiative—while backing governments' efforts to support an enabling private sector environment for green energy. The WBG's Offshore Wind Program, launched in 2018, helps LMICs accelerate their uptake of offshore wind power, while the Scaling Wind initiative aims to replicate the successes of the Scaling Solar program.

ii. For some MICs, particularly in Asia and parts of Europe, critical actions include retiring and replacing coal and other fossil fuels, ensuring a just transition, overcoming market barriers for new technologies, and scaling up energy efficiency programs. The WBG is helping countries ensure just transitions by addressing negative social impacts and facilitating new economic opportunities for affected workers and communities (Box *6*). A key focus is on coal mine closures, but support extends to other sectors impacted by the shift toward a low-carbon economy. The WB and IFC are leading the Climate-Smart Mining Initiative, which supports the environmentally and socially

sustainable extraction and processing of minerals and metals used in clean energy technologies, such as wind, solar, and batteries for energy storage and electric vehicles. The initiative also ensures that women are included in the process.[61]

Box 5. The WBG's support of a just transition

The transition to a low-carbon economy is likely to result in job losses concentrated in particular regions and sectors. To facilitate just transitions in such contexts, the WBG's global initiative, Supporting Energy Transition in Coal Regions, provides pioneering technical assistance to governments to develop strategies, strengthen policies, and build institutional capacities to enable coal regions to transform towards low-carbon futures. The initiative provides comprehensive support, covering mine closure, land rehabilitation, skills retraining, labor mobility, and local economic development.

In Poland, for example, the WBG has leveraged European Commission funding to initiate technical assistance to three coal regions to improve government capacity to prepare for a managed energy transition and coal mine closures. This effort recognizes the importance of strong pre-closure planning and preparedness to guide equitable outcomes in transition. Just transition support to client countries has expanded rapidly in recent years across Europe and Central Asia, driven in part by the European Union's (EU) Coal Regions in Transition Program, the EU Green Deal, and the Just Transition Mechanism. The WBG also supports countries to manage the socioeconomic implications of green transitions in power, manufacturing, agriculture, and other sectors.

Energy efficiency measures are also a crucial element of the energy transition strategy. This includes a focus on helping utilities recover from cash shortfalls, restructure debt, build capacity, improve performance through regulatory and utility reform, and expand the use of private sector solutions where possible and most efficient. These actions are key to successful decarbonization strategies that will also need to address the challenging problem of pervasive fossil fuel subsidies. Advancing energy efficiency is another key priority, including deploying efficient air conditioning and refrigeration, which will become major drivers of electricity demand for most LMICs.

Manufacturing

Getting the manufacturing sector on a low-carbon path requires sector policies that provide appropriate incentives to the private sector. Manufacturing activities in heavy industries—especially the production of base materials such as chemicals, steel, cement, and glass—contribute to about 27 percent of global GHG emissions. These activities are the building blocks that create jobs along all value chains and drive the economic growth of countries. Core action areas include energy and resource efficiency, renewable energy use, and product and manufacturing process-related innovations. Beyond supporting the decarbonization of manufacturing systems, such actions are crucial for strengthening the circular economy, by continuously reducing the wasteful use of resources. Because the viability of many green technologies like solar panels relies on critical minerals and resources, their efficient use and reuse will be key to ensuring scalable approaches. Bringing private sector players along will be vital for illustrating the long-term viability of these solutions.

Resilient and sustainable infrastructure

Appropriately designed infrastructure can help communities adapt to the impacts of climate change and increase prosperity. Even if ambitious actions succeed in limiting global warming, many LMICs will continue to face climate change-related risks. Successful climate change adaptation depends on ensuring that vulnerable populations have the financial, technical, and institutional resources they need to adapt. Absent resilient foundations, countries will be trapped in costly cycles of setback and recovery. To effectively build resilience to compound risks,[62] and to adapt to climate change, the WBG is supporting countries to act in three areas:

i. **Risk-informed decision making and planning:** Strengthening risk information systems will help countries build their capacity to mainstream climate and disaster resilience in all planning decisions. For example, the Climate Adaptation and Resilience for South Asia Project is supporting the development of public natural hazard and risk data platforms, asset management, and decision-making tools to enable governments in Pakistan, Nepal, and Bangladesh to make climate-smart planning and investment decisions. Enhanced hazard information and risk-informed decision-making methods are crucial for managing uncertainty and prioritizing the most cost-effective measures, especially for large infrastructure projects and other long-term investments.

ii. **Risk reduction measures:** After identifying communities and settlements with heightened hazard exposure, decision makers can target investment and planning decisions to minimize disaster risks and impacts. Risk reduction measures are needed across several sectors and range from strengthening the resilience of energy, water, transport, and telecommunication systems to risk-informed spatial planning, irrigation systems, enhanced building standards, and protective infrastructure like sea dikes or drainage systems. Nature-based solutions are particularly cost-effective at reducing risks while providing social and economic co-benefits. In Vietnam, for example, coastal mangrove restoration has reduced flood and erosion risks while also creating aquaculture and ecotourism opportunities.[63]

iii. **Residual risk management:** Ensuring that communities can prepare for, cope with, and rapidly recover from disasters is an integral part of adaptation and resilience. A lack of preparedness can mean that disasters cause prolonged suffering and long-term consequences, especially for the poorest. The WBG is helping countries undertake a range of actions to strengthen disaster preparedness, such as upgrading early warning systems, establishing emergency response protocols, and strengthening civil protection agencies. Disaster risk financing frameworks can help countries create integrated recovery strategies through shock-responsive safety nets or risk transfer solutions such as insurance or catastrophe bonds.

Investing in resilient infrastructure yields high economic returns, despite greater upfront financing costs. Infrastructure disruptions caused by natural hazards and poor maintenance cost LMICs over $390 billion per year. Estimates suggest that building resilient infrastructure in LMICs could unlock $4.2 trillion in socioeconomic benefits over the lifetime of these investments.[64] On average, investing $1 in resilient infrastructure yields $4 in benefits. As well as reduced asset repair and maintenance costs, benefits include resilient supply chains, business continuity, and the assurance of essential jobs, goods, and services.

Investment strategies that are aligned with climate goals can promote more sustainable infrastructure. Nationally determined contributions (NDCs) and low-carbon, resilient long-term strategies (LTSs) that achieve better outcomes and support climate change adaptation are key components of such an investment and reform strategy. In the past two years, the WBG has supported 25 countries to prepare their NDCs and align them with their national development plans and private sector bankable projects. In its Climate Change Action Plan (CCAP) 2021–25, the WBG will engage many more countries to provide support, analytics, and diagnostics for reviewing their climate actions and updating their NDCs to be Paris Agreement-aligned. The WBG will accelerate its support for LTSs, and help countries translate their LTSs into short-term priorities and integrate them into national economic and development strategies.

Menu of macroeconomic and structural policies, institutional strengthening, and technological innovation

Macroeconomic, structural, and sectoral policies will play a critical role in creating an enabling environment to advance a more sustainable recovery. These can generate the required fiscal space, improve the effectiveness and efficiency of public spending, and create incentives to crowd in private sector investments through a variety of policy instruments.

To strengthen their fiscal positions, countries will need to consolidate their fiscal stance in ways that protect essential social spending—including on health and education—while also allowing appropriate levels of public investment. Once the health and economic crises subside, and within a tightened envelope, countries will need to reorientate and target their expenditure to align with the longer-term goals of fostering growth, productivity, and employment. Improving revenue and increasing spending efficiency will help countries build up the fiscal buffers they need to strengthen their economies' resilience and free up resources to invest in GRID. In many LICs, this will only be feasible with support from grants or additional debt relief, including debt rescheduling. Measures can be undertaken on the revenue and expenditure side.

Increasing domestic revenues in ways that are fair and sustainable will soften the drag from consolidation. Domestic resource mobilization that is designed equitably builds trust, creates equal opportunities, closes the inequality gap, delivers much-needed public revenues for investment in infrastructure, education, health, and other necessary public services, and will help finance the recovery and transition to GRID. Better domestic resource mobilization will also enable countries to build up fiscal buffers.

Reforming the tax system is a key priority. The WBG can help countries reshape their tax systems to promote greater fairness and equity. This includes enhancing tax progressivity, applying wealth taxation, eliminating tax avoidance, ensuring fair taxation levels for multinational companies and high net worth individuals, taxing the digital economy, reforming tax expenditures and subsidies, increasing rates on under-taxed activities like tobacco and real estate, and broadening tax bases. Externalities such as GHGs are a large unused tax base with considerable potential for raising revenue and creating incentives for the private sector to shift towards sustainable investments.[65] Raising environmental taxes can generate a triple dividend, cutting pollution, raising economic activity, and producing development co-benefits, such as clean water, safe roads, and health improvements. It also allows governments to lower labor taxes, reducing unemployment and informality, which in turn helps raise fiscal revenues. Finally, it improves productivity in the economy, as taxing negative externalities improves allocative efficiency with gains that may be large, especially when dealing with common property renewable resources, as opposed to taxing production inputs like labor, which may create supply-side distortions.[66]

The WBG can help advocate on taxation matters at a global level to ensure that LMIC interests and challenges are addressed. International corporate tax rules have been shaped without considering the full impact on developing countries.[67] As a result, LMICs lose an estimated $200 billion per year to tax avoidance (profit shifting) by multinational companies.[68] This is roughly equivalent to the amount developing countries are estimated to lose due to COVID-19,[69] and more than they receive in official development assistance each year.[70] WBG global engagement—including at G7 and G20 levels jointly with the IMF—can help develop a practical policy and administrative framework for addressing tax avoidance by multinationals and high net worth individuals.

Curtailing illicit financial flows, which disproportionately impact the poor in LMICs, is vital to address systematic inequality, significantly increase capital for private investment, and mobilize domestic resources. Countries must cooperate with each other—for example, on beneficial ownership

information—and increase their efforts to strengthen governance, transparency, and Anti-Money Laundering and Combating the Financing of Terrorism Frameworks. Tackling illicit financial flows, tax avoidance, and evasion will help countries move towards fairer and more equitable tax systems. Through the Stolen Asset Recovery Initiative, the WBG and United Nations (UN) Office on Drugs and Crime, support international efforts to end safe havens for funds generated by corruption.

Improving public spending, investment efficiency, quality of public procurement, and accountability can also ensure that expenditures yield high growth dividends and offset the impacts of consolidation. Reforms must promote efficiency through competition—for example, by ending wasteful and environmentally harmful spending such as fossil fuel subsidies. Since 2014, the WBG's Energy Subsidy Reform Facility has helped more than 50 countries reform fossil fuel subsidy schemes, leveraging expertise on energy, macroeconomics, fiscal policy, poverty, social protection, and communications. Activities under the Facility have informed more than $16 billion of WBG development financing. The COVID-19 pandemic has accentuated the need to reform environmentally harmful subsidies—particularly in natural resource sectors such as fossil fuels, agriculture, and fisheries—to make public spending more efficient while protecting the livelihoods of the poor. Such reforms simultaneously generate economic, social, and environmental benefits by improving allocative and spending efficiency.

Green stimulus packages—such as energy efficiency improvements—can leverage private sector participation. These often have large fiscal multipliers, as they are labor intensive, productivity enhancing, and engage the private sector. Such measures would also avoid the negative effects of having stranded assets in obsolete carbon-intensive technologies. Investing in natural capital conservation and regeneration is an effective way to boost employment. It is also poverty-reducing by design, being labor intensive and employing the lower-skilled rural poor. The use of public-private partnerships (PPPs) in infrastructure, health, education, and other sectors can leverage financing and speed recovery when anchored in public investment management frameworks with the necessary support mechanisms and scale-up. Stimulus packages are an opportunity to prioritize investments in the infrastructure needed to develop and roll out transformative technologies. To facilitate a productivity-driven recovery and make best use of limited fiscal resources, support should be targeted at viable firms facing financial distress or insolvency due to COVID-19.

Countries should undertake key structural reforms to promote robust private sector-led growth. This requires creating an enabling environment that facilitates private sector investment and innovation and promotes productivity-enhancing growth and jobs. Key to crowding-in the private sector is the need to level the playing field to ensure that firms investing in cleaner and greener enterprises are not competitively disadvantaged. Removing constraints to private sector growth in the face of COVID-19 could facilitate balance sheet adjustments and free up resources for investment, while upstream policy and regulatory reforms could improve the business environment and open markets to private sector activity. Other possible reforms include addressing market dominance of private firms or state-owned enterprises (SOEs) to promote innovation, deepen trade integration and participation in global value chains, facilitate trade, redress deepening inequality across firms caused by the crisis, address climate change-related externalities through carbon pricing and related mechanisms, and create the conditions needed for GRID-informed investments. Competition policy will be key to assure improvements in productivity and efficiency, and to incentivize greener innovation. This aligns well with IFC's Upstream approach, which looks to develop sustainable private sector investment opportunities across LMICs, particularly in Fragility, Conflict, and Violence (FCV)/International Development Association (IDA) markets, through a continuum approach that ranges from sector-enabling environment work through to support for individual private sector investment opportunities.

Trade reforms can help spur growth, develop greater resilience, promote inclusion, and support the green transformation. More resilient and inclusive trade for LMICs requires export diversification, greater insertion in regional and global production networks, lower informality in the export sector, and wider export markets. Reducing trade costs at the border, as well as lowering tariffs and non-tariff barriers on imports that embody new technologies, can drive productivity growth and adaptation. Identifying goods and services with opportunities to develop carbon-competitive exports can help reduce countries' reliance on comparative advantages that are vulnerable to climate change. Global and regional integration agreements can develop common standards on environmental goods and services and address challenges with cross-border impacts such as deforestation. Developed countries can: (i) support the GRID agenda through trade reforms that reduce the bias towards carbon-intensive upstream goods;[71] (ii) support green trade liberalization, focusing on goods and services of priority interest to LMIC exporters; and (iii) review trade-related measures, such as intellectual property rights, that can hold back the diffusion of new carbon-efficient technologies or health outcomes in LMICs. All countries can drive more inclusive trade by: (i) removing barriers to women—far fewer female-owned businesses are engaged in international trade than male-owned ones[72]; (ii) lowering trade costs for MSMEs; and (iii) addressing barriers that constrain MSME linkages with foreign investors, reaping the benefits of trade expansion in services and enhancing digital connectivity to allow broad participation in e-trade. With the right policies (e.g., carbon pricing), trade will steer resources to their most effective use from a carbon emissions perspective and is therefore part of the solution to addressing climate change.

Technology and innovation will play an essential role in promoting growth that is decoupled from increased emissions and environmental damage. Since climate-friendly technologies confer public good benefits that spill across nations and generations, there will be underinvestment in cleaner technologies unless regulations and incentives provide greater assurance about future returns. Early stage or venture capital investments, supported by the private sector, can provide the necessary impetus to advance technology and innovation through a GRID lens. Technological innovation should be accompanied, however, by investment in basic and advanced digital skills to ensure that technologies can achieve their potential impact. There is, therefore, a role for governments to play.

Technologies need to be transferred at scale to provide suitable and affordable development solutions. Patent pools, cooperative intellectual property right arrangements, cross-licensing, and South-South transfers have the potential to accelerate the adoption of new solutions. Technology transfer through South-South investments, and technology licensing are important for promoting efficient domestic production, while direct subsidies and feed-in tariffs have proven effective in making renewable energies cost-competitive with fossil fuels. Regulatory frameworks, such as emissions trading systems, create incentives for innovation and new markets for low-carbon technology, while multilateral trade liberalization can accelerate transfers and remove barriers to trading such technologies. Unilateral tariff reductions offer short-term solutions, while international investment agreements can accelerate transfers to LMICs by reducing foreign direct investment restrictions and spurring private investment.

Digital transformation provides an opportunity for countries to accelerate development, connect communities to modern services, and promote inclusion. The COVID-19 pandemic has further demonstrated the significance of the internet in enabling economic activity by connecting people to goods and services. In the context of the growing availability of digital tools and platforms for civic engagement, virtual forms of participation are increasingly important for inclusive citizen engagement and people-centered approaches. Countries with more advanced digital infrastructure before the pandemic were generally better able to weather the negative impact, showing that the digital sector can help drive economic growth in recovery. The pandemic has created important opportunities for private

sector growth in the cloud-based business segment. The daily number of users of video communication software Zoom has increased from 10 million in December 2019 to 300 million during the pandemic. Oppenheimer's research[73] expects that cloud-related capital annual investments by Apple, Amazon, Alphabet, Facebook, and Microsoft will increase from $40 billion in 2017 to $100 billion by 2023. Assuring adequate competition in these sectors where network externalities prevail and impede new entry, will be key to generating benefits that are accessible and affordable in developing countries. Cloud-based applications are growing at a staggering rate, with communication platforms rising by more than 40 percent each year.

Digital technologies can boost financial inclusion, which is essential for increasing resilience and access to jobs and services. The lack of access to reliable and affordable financial services can severely limit people's ability to manage risks and thrive. Without savings accounts, many poor households store their wealth in kind—for example, in livestock or physical assets. Yet these material savings are most at risk from natural hazards, such as floods or hurricanes. Without access to affordable credit, poor people's options to smooth consumption by borrowing are also severely limited, often forcing them to cut down on essential consumption such as food, education, or health care. Boosting inclusive access to financial services strengthens community resilience and risk management and enables access to formal labor markets and essential services such as social protection programs. New technologies make it easier to enhance financial inclusion, though they require regulations and policies to ensure equitable, affordable, and high-quality standards. The digital payment company Fawry, for example, brings convenient, lower-cost payment systems to over 30 million customers in Egypt, where as recently as 2014, 94 percent of all transactions were cash.

Almost half the world's population has no internet access. Most of these are in LMICs, where women are 8 percent less likely than men to own a mobile phone, and 300 million fewer women than men use mobile internet, representing a 20 percent gender gap.[74] To avoid excluding persons with disabilities, digital development must also be accessible. In a global economy that is increasingly driven by digital technologies, a persisting digital divide could exacerbate inequalities and create a new class of "digital poor." There is a compelling need to invest in digital infrastructure, with the cost of universalizing digital access estimated at a modest $428 billion over 10 years across all regions. The WBG's Digital Economy for Africa Initiative sets a vision to ensure that every African individual, business, and government is digitally enabled by 2030. To this end, it has defined priority investments and policy reforms and leveraged multiple layers of financing instruments, supported by country-level analytics.

COVID-19 and climate change demand a reimagining of government as an institution. Before the pandemic, governments faced multiple challenges in managing their economies and delivering public services, which had persisted despite decades of efforts to address them. The health and economic impacts of the COVID-19 and climate crises have exposed vulnerabilities such as local and national government coordination failures, weak public institutional capacity to formulate and implement policy responses, ineffective and inefficient use of limited fiscal resources, weak regulation and compliance, insufficient accountability and transparency, and patronage and corruption. Both crises have placed unprecedented demands on government, compounded by changing social values and norms. These will continue to impact on both the role of government and the way it operates. The cross-sectoral nature of GRID will require a whole-of-government approach to coordinate implementation. Persistent governance challenges, including weak accountability and transparency, and insufficient capacity to respond to existing and new demands on the public sector threaten to undermine recovery. In most LMICs, strengthening public sector capability to design and implement policies to address poverty and exclusion is key. The need to support institutional reforms to enhance state capacity, accountability, and transparency will remain pressing to enhance effectiveness and efficiency in the public sector.

Crucially, countries must overcome political economy challenges to translate high-level goals into concrete action. As with all reforms, political economy barriers can obstruct the implementation of GRID policies and investments. Competing investment needs, short-sighted decision making, and influential vested interest groups can create substantial institutional and political barriers. These challenges can be exacerbated when resources are constrained—for example, due to high debt—and institutional governance is weak. GRID policies can also be at odds with socioeconomic development objectives or be perceived as such. Experience from fossil fuel subsidy reform shows how reform can threaten livelihoods and trigger wide-spread opposition, especially if it does not pay enough attention to social vulnerabilities. The WBG has long-standing experience in supporting implementation of reforms that recognize such political and socioeconomic realities. Policy design, transparent and timely public outreach, identification of vulnerable households, adequate compensation, smart timing and sequencing of measures, and effective strategies for reinvesting reform revenues in public services and infrastructure are all crucial for turning ambition into action. People-centered approaches to reform and intensive community engagement can help create a vital support base for successful and durable reforms (Box *7*).

Box 7. Political economy of reform

The transition to a cleaner, more inclusive, and resilient economy will create both winners and losers. Insights from behavioral economics are relevant in helping policy makers navigate the complexities of distributional changes. One important finding from behavioral economics is that people tend to be "loss averse", implying that they dislike losing a given sum of money more than they like gaining an equal amount. And since losses are more salient, resistance from those who lose is greater than support from those who gain. Moreover, when the anticipated losses affect concentrated and powerful vested interests, resistance to reform becomes disproportionately greater.

Common solutions to these problems are compensation and communication to build support coalitions, with the form of the coalition differing, according to who benefits and loses. A challenging unresolved problem is that of credibility and time inconsistency: even if compensation today makes all losers better off, committing future governments to sustain those compensatory policies is difficult.

There is no simple blueprint for reform, as much depends on the distribution of economic and political power, which varies widely across countries. [75] Successful reform is most often about seeking pragmatic solutions that might not be the first-best option, but become necessary when confronted with political economy constraints. For example, eliminating all harmful subsidies remains the economic ideal, but in practice, reform has usually occurred by repurposing existing subsidies in ways that are distributionally neutral and more benign in their impacts. Likewise, taxes on externalities tend to be more vigorously opposed than alternative policies such as trade caps or quotas, because of distributional objections. [76] Finally, policies that shift fundamental economic incentives are often the most effective and lasting way to catalyze reform. Allowing technological changes to bring down the price of solar or wind power would provide a powerful incentive for firms and countries to alter investment strategies for fear of being left with stranded assets. Similarly, if enough countries or firms believe that there will be explicit or implicit economic penalties for using carbon, they would switch to green investments to avoid potential losses that could erode competitiveness.

Maintaining financial stability will be key. Monetary policy in LMICs is likely to remain generally accommodative in the near term, which may bolster the effectiveness of fiscal policy. Countries will need to preserve financial stability while maintaining accommodative macroprudential policy stances to help facilitate credit availability, including for GRID-related projects. They must be vigilant of financial

risks materializing during the relief or recovery stages and be ready to take quick action. Several LMICs entered the pandemic with high public and private debt, fragile banking sectors, and weak corporate insolvency regimes. In a successful vaccination and economic recovery scenario, unwinding support measures may expose other financial vulnerabilities and trigger insolvencies, leading to financial instability. If the crisis is prolonged—for example, due to vaccination-related issues—governments may be unable to extend support measures and will need to broaden the tax base early on to fund recovery. In a world with more frequent shocks due to climate change, developing financial protection mechanisms, such as contingency funds, social protection systems, and risk transfer instruments, is essential for rapid resource mobilization in a disaster without compromising fiscal balance.

Mobilizing capital at scale, especially from the private sector

At a time of fiscal constraints and debt overhang, countries need to augment all sources of finance and use resources more efficiently to mobilize significant finances for investment. As well as mobilizing public revenues (discussed above), countries will need to leverage the private sector and restructure debt.

The scale of investment needed and the pressure COVID-19 has put on government balance sheets make leveraging the private sector a priority. Most countries, and especially LMICs, do not have the public financing capacity required to support a post COVID-19 recovery. The current and future impact of climate change on economic growth in LMICs also reinforces the need for complementary and supporting economic activity, triggered by the private sector. The pandemic has created an opportunity to channel vast amounts of savings that are earning low or no returns into sustainable investment opportunities, and investors are more aware of new investment opportunities with positive economic and social impacts that help address climate change.[77] Private sector investment and financing can be facilitated through the menu of options presented below.

Improving countries' business environment can provide the certainty needed for investors to finance green investments. The WBG's upstream advisory assistance helps create the market conditions for private finance and strengthening private international resource mobilization

Critical is the need to introduce sector and country-wide policies and regulations that create a level playing field for "greener" private sector economic activity. Current economic and fiscal incentives most typically condone and even promote environmental damage and renewable resource over-use through implicit and explicit subsidies and regulations. Leveraging private sector investments will call for creating the right incentives through the reform of subsidies, policies and regulations.

Creating the enabling environment also requires policies and regulations that "green" the financial sector. There is a need to grant recognition to environmentally and socially responsible investors by further developing and implementing the growing wave of green financial sector regulation — climate stress tests, green taxonomies, and the move towards harmonized, international sustainable corporate reporting standards. Such regulation mandates corporations to disclose not only the risk of climate change to their operations, but also the impact of their business on society and the environment.[78] LMICs are behind on these trends, and the WBG and other international financial institutions (IFIs) can play a role in ensuring that international standards are applied globally in a proportionate and appropriate way that encourages capital to flow to countries, companies, and projects that are key to achieving the SDGs and Paris Agreement goals.

Expanding capital markets in LMICs can help mobilize long-term finance to support the transition to green technologies. The WBG and other IFIS can support the development of private equity and venture capital, which can play an important role in supporting the application of new technologies.

LMICs also need support to develop new financial instruments to finance green investments. Globally, investors are increasingly demanding investments that not only generate financial returns, but also have a positive impact on the environment and society. Sustainable capital markets offer this opportunity. With bonds issued by 22 national governments and private sector financial institutions, infrastructure firms, and other actors, this market is worth over $1 trillion in 2021. But it still only represents around 1 percent of the global fixed income market. The WBG supports the development of innovative fixed income instruments, including social and sustainability-linked bonds and loans markets with a view to expanding opportunities for private sector investors, as well as sovereign and sub-sovereign entities (such as SOEs). For example, initial green and blue IFC issued bonds in LMICs paved the way for further growth and demand of these sustainability linked instruments. The WBG is also helping mobilize climate finance through investment funds—for example, through the Climate Investment Funds, Green Climate Fund, Adaptation Fund, and Global Environment Facility—which countries can leverage to support GRID-type interventions. IFC's recent market analysis shows that supporting low-carbon investments through COVID-19 recovery funds could generate $10.2 trillion in investment opportunities for the private sector, resulting in 213 million cumulative jobs and 4 billion tonnes of CO_2 equivalent reduction.[79]

Working directly with real sector companies in LMICs can provide a strong demonstration effect for others. For example, IFC and MIGA's broad network of real sector clients across LMICs, including in FCV/IDA markets, have increasingly looked at climate mitigation and adaptation factors in project design and implementation.

Promoting PPPs to facilitate private sustainable investments is also essential. This will generate a pipeline of investment-ready projects that meet GRID objectives. Monetizing existing public sector assets—including private sector concessions that are nearing the end of their term—could also raise revenue for treasuries and mobilize additional private investment for upgrades and expansion. IFC and MIGA are supporting private sector engagement in renewable energy in some of the most fragile country settings, with MIGA effectively deploying its political risk insurance instrument.

IFIs can employ their financial resources to support the private sector to make green investments. Through the "Cascade" approach, the WBG can provide financing, policy advice, de-risking, and blended finance instruments to support the recovery efforts, especially in FCS and small states. Through the IDA19 Private Sector Window and other risk-sharing facilities that help spur private sector growth, IDA can help propel poor countries towards a greener, more resilient, and more inclusive future. In addition, the availability and use of other sources of blended finance can provide an added means to encourage this transition, providing private investors with the necessary support to mainstream innovation, technology and sustainability across LMICs.

The private sector and MDBs can collaborate through country platforms. Country platforms can bring together stakeholders in a purposeful way around unlocking green investments and their private financing. This requires developing a concrete green investment program/pipeline, setting the right policies in place, and building the required capacity to identify and implement bankable green projects.

MDBs can also undertake risk mitigation measures. Two types of risk need to be mitigated for private sector to make green investments in EMDEs. Firstly, risk that can arise in the early stages of a project (land title risk, low revenue risk, etc.) and where MDB assistance with project financing can be of greatest value. Secondly, longer-term risk that arises along the life of the project and which can be mitigated among other measures through the securitization of assets. The key issue to address is achieving risk mitigation at scale.

Working with the IMF, the WBG can help countries tackle longer-term debt sustainability challenges. Learning from past debt crises (Box 8), IDA has recently adopted the Sustainable Development Finance

Policy, which takes a broader and more systematic view of rising debt vulnerability drivers, especially around debt transparency, debt management, and fiscal management, to provide stronger incentives and more proactive and systematic country-level engagement. IMF-financed programs, World Bank development policy operations (DPOs), and their accompanying technical assistance and advisory services and analytics will also continue to help countries implement reforms that tackle these debt vulnerabilities. Suggestions to lessen future debt vulnerabilities include making financing arrangements more resilient through disaster clauses or hedging instruments, enhancing debt reporting and contract transparency, and improving creditor practices. Section IV covers support for debt reprofiling and relief to LMICs.

Box 8. Lessons learnt from past debt relief experiences

Previous coordinated debt relief among creditors and debtors include the Highly Indebted Poor Country debt relief (1996–2005), the Brady Plan (1989–94), the 1953 London Debt Agreement, and the 1934 interwar debt defaults. Debt write-downs like these help heavily indebted countries return debt to sustainable levels. Shallow agreements that avoid face value reductions, on the other hand, can usher in or extend a protracted series of modest restructurings that last for many years until a more permanent resolution is found. [80]

Offering debt relief in the form of debt standstills or rescheduling without reducing the face value of debt perpetuates debt-to-GDP ratio rises and is typically followed by debt default or debt stock reductions to return countries to solvency. For example, prolonged periods of insufficient debt restructuring in the 1980s were associated with continued debt increases and a lost decade of growth in Latin America and LICs. In some cases, only debt write-offs, rather than rescheduling, can improve the economic outlook. [81]

Pre-emptive debt restructurings have generally been associated with better macroeconomic outcomes than restructuring after a default. [82] Where debt restructurings prove necessary, both creditors and debtors should aim to be ambitious to avoid repeating past mistakes.

Linking debt relief to growth-enhancing structural reforms, expanded public spending on poverty reduction, green recovery goals, and improved domestic resource mobilization will help to set countries on paths to higher, equitable, and sustainable growth, and thus debt sustainability. Linking debt relief to reforms that increase debt transparency and debt management capabilities and developing fiscal rules and institutions to prevent or build resilience to inappropriate debt build-ups will help ensure countries do not fall back into unsustainable debt.

IV.

IMPLEMENTING GRID – THE FIRST STEPS

WBG support for countries implementing the GRID approach

The GRID approach is anchored in the WBG's twin goals of reducing poverty and enhancing shared prosperity in a sustainable manner. A distinguishing feature of GRID lies in its emphasis on sustainability, having learned the importance of "tail risks" (catastrophic events with low probability) from the COVID-19 crisis. The GRID approach, with its focus on the synergies between the economy, people, and the planet, also emphasizes the cross-sectoral nature of critical development policies, highlighting the importance of a whole-of-WBG approach to both public and private sector interventions.

The three dimensions of GRID—green, resilient, and inclusive—provide a framework for looking at thematic programs and ensuring they analyze key aspects and address trade-offs. For example, on the topic of trade a new area of study will explore how carbon taxation and pricing may shape country exports; there will be greater focus on the distributional impact of trade on households; and old topics like export diversification will receive renewed interest, given their impact on resilience.

The GRID approach is also anchored in country risks and priorities. The World Bank's Europe and Central Asia Region leads with its regional strategy for decarbonizing growth and provides lessons for other regions. Risks, priorities, and demographic trends inevitably differ across regions, reflecting country heterogeneity. For example, climate change models project harsher changes and starker impacts in Sub-Saharan Africa, suggesting greater emphasis on building adaptation and strengthening resilience, especially in countries with high vulnerability and low GHG emission levels. With fast population growth and infrastructure deficits, the need to focus on meeting the SDGs through basic service provision (health, energy, water, education) and enhancing productivity in such countries is increasingly urgent. In contrast, exposure to extreme climate events and zoonotic disease risks remain high in some Asian countries, and there is a need to encourage a transition away from coal and other highly polluting activities that are harmful to human health. In the Middle East and North Africa Region, some countries are major oil producers with a high GHG footprint, but also extremely vulnerable to the consequences of climate change due to chronic water deficits, poor water quality, and deteriorating air quality. The energy mix through much of Latin America, on the other hand, is reasonably "clean". Instead, they face challenges due to unsustainable land and water use. In sum, there is no one-size-fits all approach and rigorous analytical tools are needed to identify "pinch points", evaluate synergies and trade-offs between the many dimensions of good and inclusive development, and establish priorities.

GRID priorities should ideally emerge from analytical work (Box 9), which can inform and strengthen other WBG core diagnostics. The Systematic Country Diagnostics (SCD) and Country Partnership Frameworks (CPFs) provide the overarching strategic directions and will need to play a crucial role in ensuring that GRID's wide-ranging sustainability, inclusion, and resilience objectives are embedded in country programs. The enormity and breadth of the challenges outlined in this paper emphasize the importance of selectivity and prioritization in knowledge activities (as noted in the WBG's new *Strategic Framework for Knowledge*) and financing for maximum development impact. The recently developed Resilience, Inclusion, Sustainability and Efficiency (RISE) diagnostics, which have been piloted in 30

countries, provides a transparent way of identifying country pinch-points to GRID, while the new Country Climate and Development Reports (CCDR) are a complementary analysis focused on climate change dimensions. Importantly too, Public Expenditure Reviews and Country Economic Memoranda provide enabling economic context for determining affordability as well as the macroeconomic context. Ultimately, the GRID approach can only succeed if it is incorporated into all WBG engagement through the SCDs and CPFs.

Box 9. Analytical tools for identifying and prioritizing GRID actions

Prioritizing cost-effective investments and policy measures for achieving progress towards GRID is crucial, especially in resource-constrained contexts. In the face of uncertainty, decision makers can use data-driven analytical tools to identify actions. The WBG has a long track record of developing and adapting analytical tools for designing projects, appraising investments, identifying risks, and other purposes. There is a significant body of core analytical tools that include Poverty Assessments, Public Expenditure Reviews, Country Economic Memoranda, Strategic Country Diagnostics, InfraSAPs, Country Private Sector Diagnostics, Jobs Diagnostics, and Climate Assessment for Financial Inclusion. These will be complemented and informed by other tools that provide new data and a greater focus on the sustainability dimensions of development, especially at sector level, including:

- **RISE toolkit**: [83] A one-stop shop designed to help operationalize GRID by identifying critical constraints and pinch-points in an evidence-based manner. It has curated data from a wide range of publicly available sources, including WBG analytical products such as country economic assessments, the Climate Change Portal, Human Capital Index, city resilience analytics, energy efficiency indicators, infrastructure services, and country environmental analyses, as well as information from other sources on natural disaster losses, employment multipliers, and GHGs. This toolbox provides what may be globally the largest assembled data set on GRID-related issues.
- **ThinkHazard!** and the **Climate Change Knowledge Portal:**[84] These offer in-depth data and decision support tools for identifying disaster and climate risks to prioritize resilience-building measures.
- **Carbon Pricing Assessment Tool:** A new spreadsheet-based tool for rapid analyses of the economic, environmental, and social impacts of carbon pricing reforms being piloted for systematic, country-level climate change diagnostics.
- **Country Climate and Development Reports (CCDR):** A new core country diagnostic to enhance climate analysis and policy in WBG programs and identify opportunities for mainstreaming climate action, capturing synergies between a country's national climate commitments, its development objectives and the SDGs.
- **Climate Assessment for Financial Institutions**: The IFC's impact monitoring and reporting tool allows financial institution users to assess the climate impact of each project in their portfolio.

Implementing GRID will require finding the intersection between where the needs are greatest in each country (demand), and where the entry points and lower hanging fruits of reform lie (supply). Resource and capacity constraints mean that not all reforms and investments can be implemented immediately. Diagnostics are therefore a first key step in the implementation process, to identify and prioritize the most effective, achievable, and affordable actions in each country. Operational engagements and country-level analytical work that complement diagnostics will be key in helping identify country priorities, implementation opportunities, challenges, and the sequencing of investments and policies. In this context, applying the Cascade approach[85] will be key for optimizing the use of all available resources and capital in service of the GRID agenda.

GRID must be tailored to country circumstances and supported through WBG country programs. The principles of GRID apply at both country policy and individual project level, as they seek to mainstream inclusion, resilience, and sustainability in the development agenda. In the near term, the WBG is helping countries navigate the COVID-19 crisis, repair their economies, and become more sustainable, resilient

and inclusive. Integrated, longer-horizon GRID planning will aim to repair the structural damage caused by the crisis and accelerate climate action while restoring momentum on economic development, poverty reduction, and shared prosperity. Investment needs for basic infrastructure alone are vast in many countries. For example, estimates suggest that for LMICs to achieve universal access to water, sanitation, electricity, greater mobility, improved food security, better flood protection, and eventual full decarbonization would cost around 4.5 percent of GDP per year in new infrastructure.[86] The implication is that there is a need for selectivity and leverage of other investors.

In FCV-affected situations, GRID means safeguarding essential needs while laying the foundations for a resilient recovery. FCV countries are often confronted with a complex challenge of compound risks, including fragile political environments and high vulnerability to natural shocks. The emphasis should be on securing livelihoods and promoting conflict-sensitive approaches to managing shared natural resources, such as land, minerals, and water, which often act as triggers of violence. Community-driven development approaches are often more effective at delivering services and promoting consensus in such circumstances. The WBG is supporting client countries to meet immediate priorities, particularly safeguarding livelihoods by ensuring essential goods and service provision, including food and health care. Continued strong collaboration with UN agencies will be crucial for meeting the needs of vulnerable communities. Yet, building the foundations for a resilient recovery and GRID also means that the WBG will support countries to address systemic and emerging risks. Investing in disaster risk management can mitigate devastating and prolonged impacts on poverty and instability, especially as climate change heightens risks.

The WBG's new CCAP 2021–2025 places a particular focus on global climate change challenges and aims to advance GRID's climate change aspects by helping WBG clients integrate climate considerations into their development strategies. CCAP also recognizes the need to ramp up climate finance in ways that make the greatest impact. That means supporting the largest emitters to stabilize and reduce their GHG emissions, while also seeking avenues to finance adaptation to climate change. Integrating climate and development is critical to CCAP's success as this will find the best opportunities to combine mitigation and adaptation with economic growth and poverty reduction.

The WBG's role within the international community

International cooperation among development partners is crucial for addressing the world's interconnected challenges and accelerating sustainable growth. GRID requires global action; multilateral engagements and forums serve as important opportunities to provide a voice for developing countries and advance key priorities on an international level. With its knowledge and convening power, the WBG plays a global leadership role on a broad range of topics—such as climate change, fragility, debt, and human capital—which can help LMICs implement GRID. The WBG is coordinating with the UN community in FCV contexts to better support vulnerable communities and collaborating with the global community to accelerate vaccine deployment.

To lay the foundations for GRID, LMICs will need exceptional financial support from the international community. Past recessions have been associated with large and lasting potential output losses, and the duration and depth of the current recession may increase the impact of COVID-19. Crisis-related expenditures will leave most LMICs with limited choices and difficult policy trade-offs. With domestic financing impaired, many countries will likely seek increased foreign financing. External financing needs for active IDA countries could increase by up to $100 billion per year; and for International Bank for Reconstruction and Development borrowers, by up to $600 billion annually.[87]

The WBG can help countries finance GRID. Since the beginning of the pandemic, IDA has mounted substantial support to countries' crisis response—from vaccine delivery to remote learning, structural reform to safety nets, and locust swarms to famines. Due to pressures of the COVID-19 crisis, almost half of the IDA19 replenishment (IDA19) was committed in the first year of the three-year cycle and IDA donor and borrower country representatives agreed to advance the IDA20 replenishment (IDA20) by one year to support countries in their recovery from the COVID-19 crisis and transition to GRID. IDA20 will conclude in December 2021 with a policy and financial package to provide additional support to 74 countries between July 2022 and June 2025. In IDA20, human capital is introduced as a new special theme and crisis preparedness as a new cross-cutting issue, to provide a stronger foundation for IDA countries' inclusive and resilient recovery. IDA20 will also scale up ambitions under the special themes of climate change, gender and development, FCV, and jobs and economic transformation, as well as the cross-cutting issues of debt and technology. Because climate action must be complemented by broader sustainability and conservation principles—such as terrestrial and ocean biodiversity—countries will continue to need IFC's upstream engagement dedicated to proactively creating the market conditions for private finance, and strengthening private international resource mobilization and MIGA's support for catalyzing private finance downstream through its de-risking instruments. Through the Cascade Approach, the WBG can provide financing, policy advice, de-risking, and blended finance instruments to support the recovery efforts, especially in FCS and small states. Through the IDA19 Private Sector Window and other risk-sharing facilities that help spur private sector growth, IDA can help propel poor countries towards a greener, more resilient, and more inclusive future. The availability and use of other blended finance sources offer another means to encourage this transition, giving private investors the support they need to mainstream innovation, technology, and sustainability across LMICs.

However, support from international financial institutions alone will not suffice. The G20 Debt Service Suspension Initiative (DSSI) will help create some fiscal space for broad-based action towards GRID (Box 10). But some countries will require further assistance with their debt.

Box 6. Implementing the G20 Debt Service Suspension Initiative

The IMF and WBG are supporting the implementation of the COVID-19 DSSI endorsed by the G20, including by monitoring spending, enhancing public debt transparency, and ensuring prudent borrowing. The DSSI initially offered to suspend debt service payments from May through December 2020, and it was extended twice in October 2020 (until end-June 2021) and April 2021 (until end-2021).

In the ongoing unprecedented circumstances, the DSSI continues to provide breathing space for IDA countries and Least Developed Countries, adding to increased WBG financing. The DSSI has provided about $10.3 billion (including a national development bank participating as a private creditor) in debt service relief through end-June 2021 for 47 countries since it became effective in May 2020. From April 2020 through June 2021, the WBG has complemented with $28 billion in net transfers. As of August 2021, 66 percent of countries that were eligible for bilateral debt service under the DSSI have taken advantage of the initiative. Participating countries are diverse, with the greatest share (65 percent) in Africa and more than half are at high risk of or already in debt distress.

Enhanced fiscal and debt transparency are central to the DSSI's objectives. The WBG has launched a DSSI website publishing information about participation status, current debt sustainability ratings, and potential debt service suspension amounts based on the WBG's International Debt Statistics database. The information is updated weekly and includes requests and potential savings for 2020 and 2021.

Source: World Bank, MTI Global Practice.

Developing countries under debt distress will need debt relief or reprofiling to finance GRID. The WBG and IMF support the G20 Common Framework on Debt (Box 11), which guides agreements on debt treatment for eligible countries, including debt relief. One way to mobilize resources is to link them

directly to strategies related to climate change mitigation and adaptation that are widely supported in both IDA and creditor countries. The WBG and other multilateral development banks could provide advice on recipient country commitments in the agreed areas and their implementation status. The WBG and IMF are also exploring ways to tackle financing pressures on countries and the climate crisis at the same time. IFC is working with private sector players who need to refinance or restructure their balance sheet to improve their environmental, social, and governance footprint.

Box 7. The Common Framework on Debt and the role of the WBG

Comprehensive debt relief by official bilateral and commercial creditors will be key for dealing with unsustainable debt and supporting countries to finance their GRID needs. The on Debt, endorsed by the G20 and supported by the IMF and WBG, offers a structure for guiding agreements on debt treatment for eligible countries. It aims to provide debt treatments—including deep debt reductions in net present value terms when needed—to eligible countries under the DSSI.

The WBG and IMF will support the implementation of the framework by:

1. Offering comprehensive and reliable public debt information.
2. Expanding the scope of the WBG's Debt Reduction Facility, raising country eligibility, and broadening advisory services for external debt reduction.
3. Communicating with country authorities and the public to raise awareness about options for countries with high financing needs but sustainable debt to reschedule or reprofile debt to enhance their fiscal space.
4. Coordinating with other institutions to provide support on how to engage with creditors to determine the validity and value of claims and how to deal with potential legal actions.

The WBG, IMF, and other partners will need to continue providing increased concessional flows to support LICs' ability to recover from COVID-19 and finance GRID. This includes continued access to concessional credits and grants, particularly for countries applying to the Common Framework on Debt.

The WBG and other international financial institutions, including the IMF, could partner to help mobilize affordable public and private sector solutions to scale up climate action while helping LMICs lower their debt burden. This could be facilitated by matching countries' debt situation with appropriate financial instruments. Facilitation would be directed at helping both investors and countries.

i. **For investors, this would involve acting as a catalyst to leverage investment by reducing information asymmetries**. Analytical work to cluster countries according to investment opportunities, risk, financing capacity, and climate and nature goals would be of value to investors and would also develop standardized approaches on financing for nature and climate, including key performance indicators and monitoring protocols. This would reduce transaction costs and enable private sector investors to get recognition for environmentally and socially responsible investments.

ii. **Countries would also benefit from technical assistance to identify and assess financing options and develop standards**. Technical assistance would:
   - Help attract financing from public and private sources to help LMIC investments meet the climate and nature goals expressed in their NDCs and biodiversity action plans
   - Explore opportunities to reduce current debt service costs through green refinancing
   - Reduce future borrowing costs related to sustainable investments
   - Identify the most efficient climate or nature projects and their benefits in terms of debt sustainability

- Help match the identified green investments with creditors who are willing to provide finance, including the private sector by mobilizing grants, concessional debt, first-loss guarantees, equity instruments, and sustainability-linked bonds to leverage blended finance and crowd in private investment to take nature and climate action to scale. The WBG intends to continue providing large positive net flows of public and private finance for interventions that deliver GRID benefits for LMICs.

A more inclusive multilateralism is needed to effectively tackle illicit financial flows, facilitate the recovery of stolen assets, and address tax avoidance by multinationals and high net worth individuals to support inclusive economic growth and help reduce inequality. The amounts lost to illicit transfers and tax avoidance in LMICs eclipse all official development assistance. International collaboration is key to end tax and financial opacity and enhance information sharing across countries.

With its global reach and a presence in most developing countries, the WBG has a structural comparative advantage in addressing many global sustainability challenges. Climate change, declines in global fish catches, illegal trade in endangered species, illegal timber exports, pandemic spread, and transboundary water (river, aquifer, and pollution load) management are but some of the sustainability challenges that require cross-country and often global approaches to tackle their root causes. Similarly, there is a significant emerging body of analytical work on the drivers of migration (including refugees) to help both sending and receiving countries maximize benefits and limit adverse impacts. Trade corridors also require working across countries and regions to build not just the physical infrastructure but also the necessary institutional architecture to maximize benefits. By working with countries and supporting international policy platforms, the WBG can play a role, highlighting the development dimensions of global sustainability challenges and leveraging its analytical work, convening power, and operations. Regional financing instruments may be especially useful in providing countries with the incentives and financial support to tackle transboundary externalities.

CONCLUSION

Recovery from COVID-19 offers a historic opportunity to establish a better way forward, addressing weak growth, inequality, climate change, and conflict. COVID-19 exposed systemic weaknesses that threaten growth and poverty reduction prospects. The GRID approach departs from previous development strategies in that it makes it clear that the challenges of poverty, inequality, COVID-19, and climate change are interrelated, and must be addressed simultaneously and systematically. It recognizes that piecemeal and uncoordinated approaches will be less effective. Because the impacts of COVID-19 and climate are global, effective responses also need international cooperation. And because of the urgency and magnitude of these crises, interventions and investments must be rapid and at scale. The GRID strategy calls for exceptional and urgent global action to help countries achieve speedy investment to propel growth, a technological shift to ensure growth is sustainable, and an economic transformation led by new digital technologies and the private sector to generate jobs, build human capital and promote economic inclusion.

Achieving such a far-reaching transformation calls for bold and ambitious responses from all countries. Many of the prerequisites for change have emerged with a growing chorus of hope that there will be a pivot to a better future. The COVID-19 recovery is an unprecedented opportunity to address the systemic challenges of the current system that have fomented dissent, exclusion, and environmental degradation, even as growth has accelerated and poverty has retreated in many parts of the world. This is a singular opportunity to shift economic incentives in ways that can deliver prosperity that is inclusive within and across nations, and to protect the planet's rich natural resources.

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The Cascade algorithm is, when a project is presented, ask: "Is there a sustainable private sector solution that limits public debt and contingent liabilities?" If the answer is "yes", promote such private solutions; if the answer is "no", ask whether it is because of: 1. Policy or regulatory gaps or weaknesses—if so, provide WBG support for policy and regulatory reforms— or 2. Risks—if so, assess the risks and see whether WBG instruments can address them. If you conclude that the project requires public funding, pursue that option.

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APPENDIX 1: IS GREEN AND RESILIENT GROWTH FEASIBLE, OR IS IT AN OXYMORON?

Economic growth is desirable, not least because poverty, inequality, debt, and unemployment are on the rise in the aftermath of the COVID-19 shock. Green growth, sustainable development, and GRID provide an alluring alternative to the current growth paradigm, since they suggest that economic progress can go hand in hand with preserving the environment.

Greening growth, and especially transitioning away from fossil fuel dependence, has become an important global aspiration, but concerns remain on whether it is feasible—or even desirable—in developing countries. The feasibility of delivering on both growth objectives (increases in GDP) and green objectives depends on whether there are fundamental and inescapable trade-offs between GDP growth and natural capital, whether they complement each other, or whether it is possible to decouple growth from environmental use and degradation.

The earliest attempts to answer this foundational question focused on the limits that resource scarcity might impose on growth. In the 19th century, there were concerns that the world might run out of coal (Jevons 1865), or food (Malthus 1872), and more recently, the Club of Rome predicted that the world would exhaust its finite supply of minerals (Meadows et al. 1972). Much has been learned since these pessimistic projections confronted a more positive reality. Today, coal supplies are abundant, much food is wasted, and there are few signs of mineral shortages impeding growth.

It is now acknowledged that markets manage scarcity very effectively through price signals, which curb excessive demand, and incentives to find substitutes for depleting resources. At the same time, it is recognized that markets do not solve all environmental problems, including pollution, species extinction, climate change, and free riding. Hence, there is a need for policy interventions. More recently, there has been growing recognition of the dangers of crossing planetary boundaries and the uncertainties surrounding catastrophic events like COVID -19 or ecosystem damage. These scientific advances have influenced the analytical underpinnings of the green growth policy debate.

This appendix identifies three phases of the debate. Phase 1 focuses on an economy that draws on nature; Phase 2 recognizes that life and the economy are embedded in nature; and Phase 3 acknowledges that the economy is threatened by low-probability, but potentially very harmful, tipping points.

Beginning around the 1980s, Phase 1 of contemporary environmental economics focused on the classical textbook market failure problems of environmental externalities and public goods. This approach recognizes that natural resources are inputs, like machinery or labor. But they differ in that there is often no well-functioning market for their services, leading to a tendency to overuse and abuse these underpriced natural resources. The ensuing shortage might act as a headwind on growth, and in extreme cases, interrupt or reverse progress. This approach led to a focus on finding the most efficient policy instruments to “correct” externalities and address problems that may lead to overconsumption of unpriced common property natural resources. The literature is vast and well known, and has informed attempts to introduce environmental concerns in economic policies at the World Bank (Fay 2012), IMF (2012) and OECD (2012).

The second phase views the economy as being *embedded* in the biosphere, and not just a user of natural resources. This seemingly innocuous extension has far-reaching implications. For example, since there is no substitute for the biosphere, degrading the environment ultimately hurts growth potential. It also

implies that there are limits to technological panaceas and decoupling opportunities. The recent Dasgupta Review on Biodiversity (2021) is an example of this approach, which has analytical underpinnings that can be traced back to the earliest models of renewable resource economics (e.g., Dasgupta et al 1978).

A third and parallel literature speaks to the consequences of the small (but non-negligible) risks of catastrophic events, such as pandemics, Earth system collapses, and biodiversity losses. A key insight is that the conventional benefit-cost calculus may offer little guidance and even underestimate the economic costs (Stern and Stiglitz 2020). Such circumstances call for greater efforts to avoid catastrophe than conventional benefit-cost approaches might suggest.

In sum, recent advances in economics suggest the need for prudence in avoiding tipping points and call for caution when considering issues such as embeddedness, dependence on natural resources, and uncertainty. The newer models also point to the limits of some policy prescriptions.

The remainder of this appendix provides a non-technical summary of these three prominent strands of literature.

Phase 1: Green growth with externalities and natural resources

The large literature on growth and natural resources offers considerable guidance about the pathways through which environmental assets and services might impact growth and well-being. In general, two main channels of influence have been identified. First, natural resources provide direct inputs into either consumption or production. Common examples include fish stock and timber harvesting, and recreational activities such as tourism and ornithology. Natural resources also serve as an intermediate (or indirect) input that determines the productivity of other factors of production. Ecosystem services are a typical example of indirect impacts. For instance, forests provide watershed benefits and prevent soil erosion—both of which influence land productivity—while polluted air or contaminated water affects human health and mortality with impacts on labor productivity, and hence output and growth.

This can be simply captured through a production function where natural capital (termed *N*) influences output together with physical capital (*P*) and human capital (*H*). In addition, one can allow for interdependence of inputs by allowing one kind of capital (say natural capital *N*) to impact the productivity of other types of capital (say human capital *H*). This is illustrated in the following simple production function, where *y* is output and *A* represents total factor productivity, which is a reflection of productivity and technology in the economy:

$$y = Af(N\ (H,P), H(N,P), P(N,H)) \qquad (1)$$

It is assumed that output increases with inputs, at a diminishing rate.[1] Though essential, for simplicity, resource and input dynamics and output growth dynamics are ignored to illustrate a few key points.

Observe that natural capital influences output directly (through the term *N*(*H*,*P*)) and indirectly through its impact on other inputs (for example, *H*(*N*,*P*)). But this says nothing about whether natural capital is crucial for maintaining growth. Can there be unlimited growth without depleting natural capital?

Much depends on what is assumed about the substitutability of the different forms of capital. If the three forms of capital are perfect substitutes, then natural capital becomes irrelevant since a country can deplete its stocks and replace these with other forms of capital (such as human and physical capital). For example, an artificial fertilizer (*P*), can substitute for natural soil fertility (*N*). Allowing for such substitution is termed “weak sustainability”. In that world, infinite growth is feasible so long as the

depletion of one kind of capital is compensated by increases in another form of capital. Much analysis on sustainable development—such as measures of "inclusive wealth" estimates—evokes this assumption, as do most growth models that include a natural resource.

It is often recognized that there are limits to substitutability in the real world. Groundwater is a good substitute for surface water, but once these options are depleted, the next option is desalination, which may be too costly, thus constraining growth. Perfect substitutability would also imply that in the logging industry, a chainsaw (physical capital) is a substitute for a forest (natural capital). And on a farm, a tractor (physical capital) is a substitute for a depleted aquifer. This might stretch credulity and might cast doubt on the relevance of these results. In many cases, natural and physical capital are complements and depleting one will constrain growth. Importantly, there is no known substitute for the biosphere.

A second implication of this formulation is that, even when capital is being depleted, with technological progress (represented by the term *A*), overall output can be increased. Technological progress can therefore allow for a decoupling of growth from the environment, even in extreme cases where: (i) there is complementarity of natural capital and other capitals and (ii) natural capital is in decline. This is clearly extremely good news for policy makers and calls for significant investments in all types of productivity-enhancing technologies, not just "green" technology.

A third implication is that to hasten growth (and perhaps achieve the optimal steady state) there is also a need to address externalities. For example, if a decline in air quality (*N*) impacts the productivity of human capital,[2] then optimally correcting this externality will boost human capital productivity and output.

Based on this paradigm a vast literature has explored the best policy instruments for correcting market failures under uncertainty, multiple market failures (second-best problems), informational asymmetries, tipping points, and political economy problems. The most appropriate policy instrument depends on the problem at hand, with taxes (price corrections) not always emerging as the best policy in a second-best world. For example, where there is high uncertainty about the responsiveness of polluters to a tax, a quota that caps emissions might be preferable.

Phase 2: An economy embedded in nature

In the early approach, the economy draws from the biosphere and uses its services as an input. In contrast, Phase 2 is centered on the observation that the economy is embedded in nature. This reflects recent advances in science that emphasize the importance of planetary boundaries (Rockstrom et al. 2009). It turns out that this seemingly innocuous extension can have significantly different policy implications.

To see why, let *S* represent the biosphere (or some aspect of it), upon which the economy depends. Then a simple way of incorporating "dwelling in nature" into the model is to include *S* as follows:

$$y = AS^{\eta} f(N\ (H,P), H(N,P), P(N,H)) \quad (\eta > 0) \qquad (2)$$

For completeness, it is also necessary to specify how the biosphere (*S*) is impacted by depletion, pollution, and consumption through an equation of motion.[3]

Three distinct policy implications follow. First, note that as *S* declines, so does output (*y*). Hence, if damage to the environment is severe enough, any temporary increase in output that is obtained (by depleting *S*), will eventually be reversed. This result also implies that technology (increases in *A*) can buy time but cannot separate the economy from the biosphere in which it is embedded.

Second, when the biosphere or ecosystem (*S*) is damaged, there is a need for both passive and active investments in ecosystems to restore *S* and hence growth (output) potential. This is especially important when there is no close substitute for the biosphere. A passive investment could be a protected area or payment for environmental services policy. An active investment could be the circular economy approach that tracks, mitigates, and recycles waste products that flow from consumption and production activities.

Finally, the type of growth matters for sustainability. For example, it is possible to obtain protein in diets through more harmful sources like beef, or less damaging ones, such as vegetables. Hence, the pattern of consumption (not modeled here) can make a vast difference to the speed of growth and global well-being.[4]

Phase 3: Dealing with uncertain catastrophic risks

In Phases 1 and 2, little was stated about uncertainty. There is much that is not known about the extent of environmental damage that would result from unabated water pollution, GHG emissions, or toxic waste disposal. There are multiple uncertainties over underlying ecological processes, their economic impacts, and future technologies that might reduce or reverse the damage. This is especially so for environmental damage that lasts over long time horizons, such as deforestation and climate change.

Consider a situation where the probability of occurrence is assumed to be small, but the consequences of that event is catastrophic. Examples might include a nuclear accident, or the collapse of the West Antarctic ice sheet. In conventional benefit-cost analyses, it is hard to know how to handle a situation when a near zero probability of the event occurring meets a damage that approaches infinity.

It is this problem of tail-end risks that is addressed in a classic set of papers by Weitzman (2009, 2011). In such circumstances, traditional cost-benefit analysis based on expected values can mislead and will underestimate the gains from GHG abatement and resilience building. It implies that decision makers should pay more attention to the likelihood and possible consequences of extreme outcomes than a simple comparison of benefits or costs would recommend. The policy conclusion is that, in the face of extreme climate (or other) risks, it may be preferable to use the insights of science to determine where safe boundaries might lie, and then use the analytical tools of economics to determine the most cost-effective and efficient way of achieving those goals, being mindful of adverse distributional impacts.

Why is green and resilience both necessary and economically prudent?

In sum, the traditional approach to “greening growth” offers invaluable guidance when dealing with environmental impacts that are relatively small, and in cases where there are close substitutes for the environmental resource that is being degraded. For example, if a river is dammed and diverted to another destination but ground water is available to farmers, the traditional tools of examining external costs and benefits are helpful for policy guidance.

But when the impacts are consequential and threaten to destroy life-sustaining ecoservices, there is a need to acknowledge that the economy dwells in nature, which enables growth. When potential impacts reach this scale, there is a need to invest in restoration and recognize that absolute decoupling of growth from the biosphere is not feasible in the long term. Finally, uncertain catastrophic damage calls for even greater caution in building resilience when damage is inevitable, and calls for close attention to reducing the likelihood of high damage occurrence beyond what conventional benefit-cost analysis might suggest.

Notes

[1] That is, $\frac{\partial y}{\partial P}, \frac{\partial y}{\partial H}, \frac{\partial y}{\partial N} > 0$ and $\frac{\partial^2 y}{\partial P^2}, \frac{\partial^2 y}{\partial H^2}, \frac{\partial^2 y}{\partial N^2} < 0$

[2] Through H(N,P) when $\frac{\partial H}{\partial N} > 0$.

[3] One simple way of stating this is $\dot{S} = \gamma S_t - h(y)$ where (.) denotes time differential as usual and *h*(*y*) describes how increases in output impact *S,* with *h'(y)> 0* and *h''(y) < (>) 0*.

[4] There are other nuances that are not discussed here. For example, despite being a driver of growth in the standard literature, a higher savings rate can bring about collapse sooner if it depletes *S*.

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APPENDIX 2: A JUST TRANSITION TO GREEN, RESILIENT, AND INCLUSIVE DEVELOPMENT

Examples of transition interventions and policy actions supported by WBG

Bulgaria: A Reimbursable Advisory Service program is supporting the development of territorial decarbonization strategies, focused on emissions-intensive sectors, including mining, power, and heavy industry.

Burkina Faso has regulated the determination of forest zones and wildlife areas as protected and implemented such protection to 17 classified forests.

Cape Verde has developed a long-term master plan to modify the power generation mix towards cheaper and cleaner sources, with the aim of achieving 30 percent of power generation from renewable energy sources by 2025, reaching 54 percent by 2030.

Costa Rica: The First Fiscal and Decarbonization Management Development Policy Loan ($300 million) aims to support the country's program to: (i) protect people's income and jobs from the impact of COVID-19 and foster small and medium enterprise (SME) recovery; (ii) reinforce fiscal sustainability in the aftermath of COVID-19; and (iii) lay out the foundations for a strong post-COVID-19 recovery by promoting green growth and low-carbon development. A world leader in environmental management policies with strong commitment to modernizing and revitalizing the economy through a green growth lens, Costa Rica enacted a major fiscal reform in 2018 to put its national debt on a sustainable path. But the social and economic impact of COVID-19 has slowed fiscal adjustment, resulting in a sharp contraction of the economy. This operation supports the government's fiscal consolidation efforts through measures to broaden the tax base, contain the wage bill, and improve debt management. It also supports the system needed to register, track, and analyze low-carbon development.

Cote d'Ivoire is promoting green growth through environmentally sustainable investments in the cocoa, agroforestry, renewable energy, and energy efficiency sectors. As well as introducing significant quantities of variable renewable energy in its energy mix by 2030, its new Forest Code enables PPPs for forest management, agroforestry, and tree tenure security and introduces a new land zoning type, "agroforest", where farmers can grow cocoa under tightened agroforestry and reforestation rules.

Croatia adopted the Law on Climate Change and Ozone Layer Protection to strengthen the policy and accountability framework for low-carbon development and resilience.

The **Dominican Republic** is developing a green taxonomy for the financial sector that will generate green investments through financial institutions or capital markets.

East Africa: The Skills for Transformation and Regional Integration Project focuses on improving Technical and Vocational Education and Training programs, 4 out of 16 of which include geothermal, hydropower, and railway (x2). Equipment procurement includes potential impacts of climate change.

Eastern Europe, including Kosovo: At a time of severe economic stress and uncertainty due to the COVID-19 pandemic, MIGA guarantees are freeing up regulatory capital, allowing for the expansion of German bank ProCredit's green SME loans in Albania, Bosnia and Herzegovina, Georgia, Kosovo, Moldova, North Macedonia, Serbia, and Ukraine. By supporting climate finance SME transactions, MIGA

guarantees will help lay the foundation for sustained green growth in impacted countries. Approximately 15 percent of this support will be in Kosovo, an IDA and FCS country.

Egypt: The Smart Technology and Energy Efficient Production project supported change of regulations mandating higher energy efficiency standards (IE3) for selected electric motors to help the country transition to a greener economy. It aims to reduce industrial energy consumption by encouraging the adoption of energy-efficient motors and promoting the growth of local energy-efficient manufacturing. It is estimated that effective implementation of high-efficiency motor standards could help save Egyptian industry nearly US$560 million by 2030. Mandating the implementation of high-efficiency motor standards in industry creates opportunities for local and foreign investments in a growing energy-efficient technology.

El Salvador: The Sustainable Industries project aims to increase the competitiveness of selected strategic industries by promoting environmental sustainability and climate-related investments and providing greater access to green financing. It aims to generate US$30 million in financing for industries that want to increase their environmental footprint and will reduce annual CO2 emissions of about 17,000 tonnes.

Ethiopia: The Green Industry Technical Advisory Project aims to enhance the competitiveness of the textile and footwear sectors by improving the sustainability of public and private sector actors through an environmental management mechanism. It focuses on industrial parks, which are the government's primary tool for developing the textile and footwear industries and central to the country's industrialization strategy. The project delivers intensive capacity building, develops efficiency-improving interventions, introduces innovative technologies to reduce unsustainable energy and water resource use, helps manage waste and wastewater, lowers production costs, and minimizes environmental impacts. At a broader level, it contributes to reducing GHG emissions by removing regulatory barriers to energy and water efficiency investments in the private and public sectors.

Ethiopia: The Rural Productive Safety Net Project aims to address the underlying causes of food insecurity, including environmental degradation. The public works program is aimed at watershed and rangeland development. Impact assessments have shown overwhelmingly positive environmental and social results, leading in many cases to the rehabilitation of entire community watersheds, with commensurate improvements in rangelands management, enhancing agricultural productivity, health, education, nutrition, and livelihoods, and increasing resilience to climate change. It empowers women though maternity leave, flexible working hours, equal pay, and on-site childcare, challenging social norms within rural agricultural societies, while their participation in local program implementation and their role in public works strengthens both their voice and agency.

Ghana: The COVID-19 Emergency Preparedness and Response Project is strengthening national disease surveillance to enhance detection of future outbreaks of climate-related diseases and increasing vaccination coverage, including for climate-sensitive diseases, thereby strengthening overall climate resilience. The project also raises awareness on critical prevention measures to reduce risk from waterborne and vector-borne diseases linked to climate change.

Jamaica has introduced disaster risk financing mechanisms to protect private assets and generate opportunities for private-sector involvement in disaster risk reduction, including business contingency planning.

Morocco: Through the Green Zone project IFC is working with a prominent industrial zone to implement a "greening" strategy by introducing the Eco-Industrial Park Standard. Adhering to the standard allows the Tanger Med Zone to self-certify as a green zone, helping to mitigate the carbon tax in Europe and

maintain its competitive edge as a destination of manufacturing investments targeting the European market.

Morocco: The Climate Entrepreneurship project aims to help unlock the country's clean technology markets by supporting the growth and scaling of green entrepreneurs, notably though the Green Business Booster, an investment readiness program. To date, 32 entrepreneurs have benefitted from the program, three of whom have raised over $900,000 in equity investment.

Mozambique: Investments in gray and green drainage solutions under the WBG's Mozambique Cities and Climate Change Project have proven effective in building urban resilience to floods. In the coastal city of Beira, which is highly exposed to the effects of climate change, the project financed a $60 million upgrade of the stormwater drainage system, including rehabilitating 11 kilometers of canals, flood control systems, and a 175,000 cubic meter retention basin. This upgraded system has effectively reduced flooding during several extreme events, including Cyclones Idai (2019) and Eloise (2021). The project also showcased the effectiveness of nature-based solutions for climate change adaptation, while leveraging $15.75 million in climate finance and €17 million in co-financing by KfW. A 17-hectare area along the degraded Chiveve River was rehabilitated to improve natural drainage and transform it into a vibrant urban park. Overall, project investments improved the lives of more than 284,000 people, significantly reducing flood risk and bringing additional benefits, including improved mobility and safety thanks to rehabilitated roads and solar-powered street lightning.

Nepal. The Government of Nepal is working together with development partners and the private sector on a GRID agenda to help Nepal build back better and greener from the pandemic. Nepal is establishing a GRID platform, supported by development partners. The GRID platform emphasizes multi-sectoral strategic planning, enhancing the policy environment, convening institutions and knowledge, and coordinating and scaling-up investments, bringing together the public and private sector and development partners. The WBG is calibrating its portfolio to support Nepal to deliver on its emerging GRID vision of a resurgent economy that delivers good green jobs, builds the resilience of people and property, protects natural capital and human capital, and does not leave anyone behind.

Niger has introduced reform to support the development of renewables, off-grid solar access, and private investment. It also aims to mitigate perceived and actual risks of such investment by clarifying the rural concession process, buy-out options in case the national grid expands to the concession areas, and incentives to support investment.

Niger: The Adaptive Social Safety Net Project supports 1.1 million people (51 percent women), in the poorest communes, with monthly cash transfers and accompanying interventions to support early childhood development, human capital development, and livelihoods. The productive inclusion package aims to increase women's economic empowerment, including through life skills training designed to provide address pervasive social barriers and boost self-confidence. Cash-for-work programs are targeted on high-risk climate areas.

Nigeria has enforced fees imposed on gas flaring, which will boost revenues, benefit the environment, and encourage economic diversification by commercializing natural gas.

Paraguay has increased the resilient management of landscapes and natural resources—including water resources—and has improved the effectiveness of its management of public investment in resilience and green growth.

Poland: WBG has actively supported Poland's air quality and energy transition agenda. Air pollution has substantial economic and health impacts, with an estimated 46,300 premature deaths and economic costs of up to $40 billion each year. WBG technical assistance fed into the launch and continuous reform

of the government's flagship Clean Air Priority Program (CAPP), which combines subsidies, tax relief, and regulatory measures to support thermal retrofitting and boiler replacements in 3 million houses to reduce residential heating emissions. Overall WBG engagement in CAPP is estimated to contribute directly to increased energy efficiency and lower air pollution. It is also expected to mobilize private capital and be a net creator of jobs.

Rwanda: The First Programmatic Human Capital for Inclusive Growth Development Policy Financing supports integrated early childhood development, preparing children for better learning and development through the education system and enhancing families' access to improved health delivery systems. The reform program includes climate change adaptation and mitigation interventions with positive spillovers for the environment, as well as system strengthening for service delivery, preparedness, and emergency response at local and central levels.

Rwanda and Democratic Republic of Congo: MIGA guarantees, with support from the IDA-IFC-MIGA Private Sector Window, are contributing to Rwanda's and Democratic Republic of Congo's national electrification targets, where grid electrification in various regions is either unavailable, unreliable, or cost-prohibitive. The MIGA-backed project will help with the expansion of an off-grid solar power generation solutions provider in both countries, enabling household electrification.

Tuvalu: The WBG is supporting the government through a $27 million-Resilience DPO with a Catastrophe-Deferred Drawdown Option. This project supports the government's efforts to (i) strengthen public financial management; (ii) enhance infrastructure management and climate-resilience; and (iii) improve social protection and inclusion in education.

Uzbekistan: The WBG is providing advisory and lending support to transition state-mandated cotton production with extremely adverse environmental and social impacts to a diversified, market-driven climate-smart agricultural sector.

Vietnam: A new WBG project is financing the development of a Bus Rapid Transit corridor to improve the performance and efficiency of public transport in a high-priority corridor in Ho Chi Minh City. The public transit system will stretch over 23 kilometers, have 28 stations, and offer more efficient sustainable transport to up to 28,300 passengers a day. Its design aims to address the needs of women, children, and people with disabilities.

Western Balkans and Ukraine: The WBG, European Commission, European Bank for Reconstruction and Development, and government of Poland have launched a knowledge platform to support coal region transitions in the Western Balkans and Ukraine.

Western Macedonia, Greece: EU-financed technical assistance is supporting the region to develop a strategic roadmap to manage coal mine closure in the region.

APPENDIX 3. KEY ACTIONS FOR GRID PILLARS AND CROSS-CUTTING ENABLERS

Green

Food and land use systems

- Climate-smart agriculture, including land use interventions to reduce extensification
- One Health approaches
- Agricultural subsidy reform

Transport and urban infrastructure

- Door-to-door travel by low-carbon modes of transit
- Public transport
- Motorization management
- Green logistics
- E-mobility
- Vehicle and fuel standards

Energy systems

- Access to clean and affordable energy
- Fossil fuel subsidy reform and pricing
- Coal transitions, including cross-cutting social safety nets, with education and labor market programs
- Energy efficiency

Manufacturing

- Circular economy solutions in the value chains
- Eco-industrial parks

Resilient

People

- Expand early warning systems
- Risk-informed urban planning
- Shock-responsive social safety net programs
- Food and water security
- Pandemic preparedness

Infrastructure

- Mainstream climate risk assessments
- Maintenance and operations
- Ensure critical service delivery and access, especially in poor and informal communities
- Scale up nature-based solutions

Economies

- Disaster risk financing strategies
- Fiscal consolidation

Inclusive

Just transition

- Retraining to facilitate the transition across sectors (including girls in STEM)
- Labor market and regional stimulus programs for coal transitions

Human capital

- Universal health coverage
- Investments in women's leadership for a new economy
- Community-driven approaches for service delivery
- Inclusion of women and marginalized groups, reducing barriers to their full participation in the economy—for example, through safety in transport and childcare
- Access to infrastructure, including water, sanitation, transport, power, and internet

Investing in human, physical, natural, and social capital: Priorities across the three GRID pillars will depend on country needs and circumstances. For examples, see Appendices 2 and 4.

Fiscal policies, finance, and technology innovation

- Debt restructuring, fiscal consolidation and reform, domestic resource mobilization
- Closing the digital divide, leveraging digital transformation across sectors
- Incentives to crowd in private savings

Mobilizing capital

- Greening the financial sector
- Recognizing investors for environmentally and socially responsible investment
- Reducing information asymmetries
- Facilitating matching of green investments with creditors
- Exploring opportunities to reduce debt service costs by green refinancing

APPENDIX 4. POTENTIAL WBG PUBLIC AND PRIVATE INTERVENTIONS

Pillar	Menu of potential actions
Mainstreaming GRID	• Mainstream GRID-conducive country plans and commitments such as NDC/biodiversity/adaptation plans into SCDs and CPFs. • Strengthen national social and environmental risk management systems across critical sectors, including infrastructure, energy, and food systems, to manage risks more effectively and maximize opportunities for inclusion. • Prepare and expand coverage of relevant diagnostics and recovery notes. • Support regular social impact analysis and monitoring, as well as conflict and violence monitoring, to assess social sustainability of GRID strategies. • Strengthen citizen engagement mechanisms for policy and investment decision making in support of GRID with a view to fostering social inclusion and social sustainability. • Leverage WBG DPOs to prioritize reforms to enable green, digital and inclusive financial services.
Supporting the survival of viable firms and facilitating structural adjustments to strengthen private sector capacity to create jobs and grow their business	• Support upstream reforms of insolvency and work out frameworks to restructure/refinance firms. • Support efforts to develop a methodology to measure carbon content in firm production. Help identify goods and services where LMICs have opportunities to develop "carbon-competitive" exports. Propose green trade liberalization reforms of priority interest to LMICs. Assist governments on trade facilitation, particularly to remove barriers to women's and SMEs' participation in international trade, including e-trade. • Structure DPOs with upstream reforms that strengthen competitive markets, including developing exit strategies from extraordinary actions taken by governments that could have created market distortions; enable domestic and cross-border investments focused on expanding green private sector investments. • Strengthen sources of long-term funding for viable firms to finance capital investments for growth. • Support countries with carbon accounting methodologies to identify "carbon-competitive" exports and benefit from carbon efficiency certification. • IFC to provide debt refinancing, restructuring, and equity capital to support long-term survival of viable firms. • MIGA to support private sector cross-border green investments that strengthen job creation and recovery.
Preserving a healthy and stable financial sector capable of lending in support of recovery and GRID	• Support policy reforms for nonperforming loan resolutions to relieve bank capital and reallocate it to new lending to investments that support the recovery. • Support capital market reforms through DPOs and advisory services and analytics. • Investigate debt, climate, and environment swaps and other instruments to mobilize finance for GRID. • Leverage IFC equity investing to recapitalize banks and strengthen balance sheets. • IFC advisory and investment products to incentivize banks to adopt new business models and products, such as digital and gender finance, and green loans and bonds. • Use IFC investment and advisory services to strengthen players in capital markets and expand use of green loans and bonds, fintech solutions by banks and non-bank financial institutions, gender, and bottom-of-the-pyramid financing. • MIGA to support innovative green investment solutions, including off-grid renewables.

	• IFC to invest and mobilize equity capital in fintech companies and green equity in banks to support their green transformation. • MIGA to deploy capital optimization product to support private sector financial institutions' sustainable lending into the recovery. • MIGA to deploy credit enhancement product to mobilize private capital in support of public sector financial institutions in support of recovery and GRID.
Creating fiscal space to support GRID and establishing incentives	• Facilitate debt sustainability through debt restructuring, improved transparency, and sustainability analytics, promoting better debt management and sustainable debt policy. • Prioritize private sector solutions where sustainable and commercially viable. Implement financial sector Cascade agreement and prioritize lending to private banks over sovereign guaranteed credit lines to finance recovery. • Support for greening fiscal policy: expenditure prioritization and taxes (carbon taxes, harmful subsidies), incentives for private sector investment in GRID.
Promote poverty reduction and equitable development	• Support poverty and equity-informed policy making. • Modernize statistical and data systems, provide analysis and leverage tools for realtime monitoring of impacts on poverty and equity. • Leverage IFC funding and equity capabilities and MIGA's de-risking instruments to support financial institutions serving the bottom of the pyramid and job-intense projects and firms such as those in service sectors that have been hit hard by the crisis, including tourism and food and beverages. • Deepen social accountability mechanisms in service delivery to strengthen quality transparency and efficiency of services, as well as effective targeting. • Invest in measures to prevent conflict and reduce interpersonal violence with a view to reducing risks to investments in human capital and infrastructure, fostering a positive investment climate, and enhancing social sustainability.
Energy transition	• Prepare national electrification plans and least-cost electricity sector development plans that account for clean energy scenarios, contribute to decarbonization pathways, and expand access to cost-effective energy sources in poor and marginal urban and rural communities. • Support coal transition through use of concessional resources and help coal-dependent regions and countries develop a just transition strategy to account for social, economic, and environmental impacts. • Support capacity to identify, maximize, and ensure equitable sharing of the social co-benefits of energy transition, including better quality jobs and reduced air pollution. • Promote climate-smart mining to secure the supply of minerals and metals used in clean energy technologies in ways that minimize the social, environmental, and climate footprint throughout the value chain. • Establish effective policy frameworks to develop PPPs that promote clean energy investments through transparent and competitive tenders. • Implement SOE reform to enable GRID transition, including support for utilities to recover from cash shortfalls, restructure their debt, and enhance their governance and operational performance. • Build technical capacity for adopting advanced clean energy technologies, such as smart networks to manage demand and adopt larger amounts of variable renewable energy, energy efficiency, and modern electricity storage systems. • Leverage new technologies and private sector solutions for efficient cooling, battery storage, floating solar, offshore wind, green hydrogen, renewable mini-grids, and energy network digitalization.

	• Develop countries' hydropower potential as a key clean energy technology that enables more wind and solar system integration and wider environmental impacts on biodiversity, with due consideration for social sustainability and optimizing benefit-sharing opportunities. • Support fossil fuel subsidy reform and broader energy tariff reform accompanied by measures to protect lower-income customers. • Improve energy efficiency of industrial and municipal sectors. • Strengthen power system interconnections and establish the necessary soft infrastructure to enable in-country and regional electricity exchange.
Urban and transport transition	• Support door-to-door travel by low-carbon modes such as public transport, including mass transit where appropriate, walking, and biking. • Introduce minimum emissions and safety standards for used vehicle exports and imports, improve fuel quality standards, introduce motorization management policies. • Support e-mobility transition plans, particularly for buses and trucks, including unlocking commercial finance. • Improve sidewalks and bike paths to protect vulnerable users and promote low-carbon modes. • Assist with planning models and smart systems to better account for increased load associated with growth in e-mobility and electrification of building heating and cooling (both attributable to shifts in country net-zero emission commitments). • Improve performance and uptake of public transport, including the deployment of quality, accessible, and safe mass transport systems to help transition away from high-polluting, fragmented, informal urban transport services. • Explore cost-effective mechanisms to enhance transportation services for marginal communities, including through new technologies and PPPs. • Implement policies to disincentivize inefficient travelling (such as congestion taxes or parking policies) and promote walking and cycling, with related urban safety measures. • Promote lower-emission freight by developing rail freight corridors, increasing use of inland waterways, and improving efficiency in the trucking sector. • Support land use strategies that account for climate impacts and are consistent with promoting densification around mass transit corridors, with appropriate mix of regulations and incentives to enhance efficiency and sustainability without compromising inclusion. • Support the development and enforcement of urban land use plans that are based on a spatial understanding of climate risks and provide resilience to future climate impacts. • Support efforts to maintain and retrofit existing urban infrastructure and buildings to enhance their climate resilience—for example, short-term clearance or disposal of solid waste from drains to prevent clogging. • Support the further integration of climate risk considerations into capital investment planning and asset-level project design. • Promote investments in nature-based solutions, green buildings, and vegetation to support urban cooling and more livable cities. • Invest in emergency preparedness and response initiatives that educate residents on climate risks and help cities respond more quickly and effectively to climate events. • Limit urban sprawl and promote mixed-use, high-density, compact development through urban spatial/zoning plans and land-use regulations—for example, with use restrictions, density regulations, urban containment instruments, building codes, permitting systems, green standards, design regulations, and affordable housing mandates.

	• Support urban regeneration, infill development, and retrofitting of underused urban districts. • Support green and energy-efficiency improvements in new and existing buildings. • Promote sustainable and energy-efficient cooling and district heating systems. • Promote integrated solid waste management, circular economy approaches, and waste-to-energy solutions that also provide opportunities for job creation, resource recovery and climate change mitigation. • Integrate green infrastructure design interventions and green/public space creation to reduce the city's carbon footprint and enhance its resilience. • Structure financial vehicles like green bonds, PPP schemes, and equity investment facilities to channel private sector finance towards developing a pipeline of low-carbon, climate-resilient investments.
Food system transition	• Support the repurposing of agricultural public policies and creation of incentives to adopt production patterns and growing practices that promote resilient productivity growth and healthier diets, and reduce the environmental footprint of agriculture through lower emissions, natural resource degradation and pollution, and through soil carbon sequestration. • Implement food-smart diagnostics to identify losses across the value chain and priority intervention hotspots, and demonstrate trade-offs between farmer well-being, food security, imports, natural resource stress, and GHG emissions. • Invest in One Health programs to reduce zoonotic risks (including antimicrobial resistance and pandemics) within food systems and shift global health security towards prevention and preparedness. • Support climate-smart agriculture investment plans. • Invest in restoring degraded landscapes, improving agricultural productivity, and promoting livelihoods. • Support development and inclusion in agricultural value chains to expand economic opportunities, including for women, persons with disabilities, and vulnerable communities. • Support the efforts of Indigenous Peoples and ethnic minorities for local and diverse food production, building on traditional knowledge and production systems.
Resilience	• Enhance support for water security with climate- and biodiversity-sensitive basin plans. • Support nature-based solutions and natural capital restoration. • Strengthen disaster risk management by expanding meteorological systems, coastal resilience, city resilience initiatives, and planning tools. • Scale up risk transfer solutions. • Support export diversification by assisting reform policy, reducing trade costs, and enhancing access to trade financing. • Improve basic services in slums and poor rural communities with a focus on food security, shelter, water, sanitation, hygiene, and health. • Support locally led climate action that harnesses local knowledge and risk management strategies and decentralize climate finance to local communities to invest in adaptation. • Strengthen citizens' (including women's) voices in national climate dialogues. • Develop community-driven development platforms to deliver basic services and infrastructure to marginal communities and to deepen social cohesion, particularly where there are social tensions. • Support financial inclusion, digital and physical connectivity, and diverse food and economic production models, building on customary and traditional systems to build resilience for rural and remote Indigenous Peoples and ethnic minorities.

	• Strengthen territorial governance and recognition of land rights for Indigenous Peoples and ethnic minorities.
Human capital	• Support COVID-19 containment and vaccine deployment; urgently restore essential health services such as reproductive, maternal, and child health; and strengthen national systems for public health preparedness. • Offer safety nets for the poor and vulnerable—particularly women and girls—with incentives and/or support for returning to work and school; build universal and adaptive social protection to strengthen crisis response, human capital development, and economic inclusion. • Protect learning gains, promote distance learning and early childhood development, and build skills to facilitate the transition across sectors (including girls in STEM), with a particular focus on marginal groups, including persons with disabilities, LGBTI, ethnic minorities and Indigenous Peoples. • Strengthen the role of local leaders in providing intercultural bilingual education options for remote and rural Indigenous Peoples and ethnic minorities. • Invest in modernizing national systems toward green, resilient, inclusive service provision to build, protect, and use human capital, including health, education, social protection, housing, water, sanitation, electricity, transport, and digital development across sectors. • Develop community-driven approaches for service delivery, support, and incentives toward food security, nutrition, and women empowerment.
Technology and innovation	• Support digital transformation to enable GRID, including in marginal communities where digital technology can help provide crucial basic health and education services and encourage community mobilization and productive inclusion.