



WORLD BANK GROUP



Executive Summary

# THE DEVELOPMENT, CLIMATE, AND NATURE CRISIS:

## SOLUTIONS TO END POVERTY ON A LIVABLE PLANET

Insights from World Bank Country  
Climate and Development Reports  
covering 42 economies



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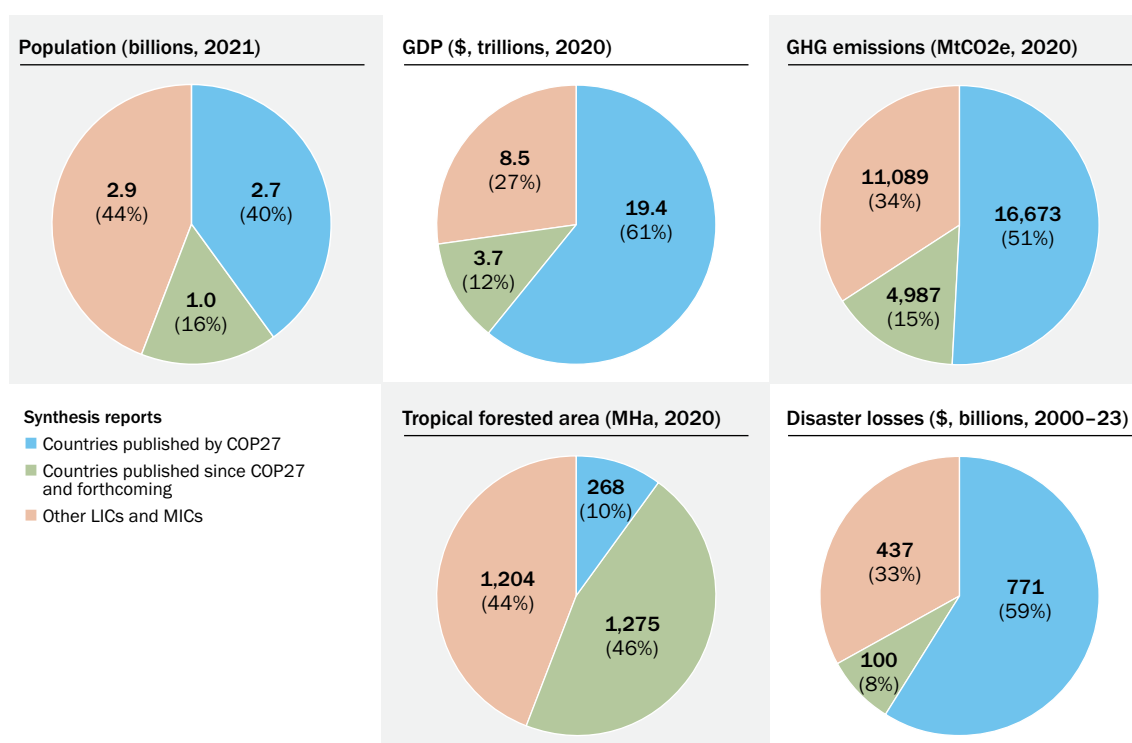
Cover design: Brad Amburn

# Executive Summary

The world is facing a triple crisis—in development, climate, and nature—and climate action is off track. Poor governance, limited access to finance, and political economy barriers are slowing down progress. Countries are not reducing emissions or building resilience fast enough, which is putting development achievements at risk. But beyond these grim headlines, there are increasingly clear opportunities to achieve development and climate double wins and there is a better understanding of the challenges that can turn these opportunities into trade-offs.

The World Bank’s Country Climate and Development Reports (CCDRs) aim to identify opportunities and priorities for investment and reform, to improve people’s lives, health, and safety while also building more resilient, low-emission, and prosperous economies.<sup>1</sup> The first set of 20 CCDRs, covering 24 countries, were published by the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) in 2022. Another 18 CCDRs have been published since, covering a larger share of low- and middle-income countries’ population, gross domestic product (GDP), greenhouse gas (GHG) emissions, disaster losses, and forested area (figure S1).

**FIGURE S1: Share of low- and middle-income countries covered by the CCDRs, various metrics**



Notes: GDP = gross domestic product; GHG = greenhouse gas; MHa = million hectares; MtCO2e = million tonnes of carbon dioxide equivalent; the population, GDP, GHG emissions, and disaster losses charts cover LICs and MICs; the tropical forested area covers all countries.

This second summary report builds on the first report published before COP27<sup>2</sup> and all the CCDRs published by COP28. As well as confirming—with more granularity and stronger evidence, based on more countries—key findings from the first summary, this report discusses new issues, such as key priorities to stop deforestation. It aims to inform country priorities and global initiatives,

<sup>1</sup> <https://www.worldbank.org/en/publication/country-climate-development-reports>.

<sup>2</sup> <http://hdl.handle.net/10986/38220>.

such as the World Bank's Evolution Roadmap and Global Challenge Programs; and, in line with the World Bank's knowledge strategy,<sup>3</sup> it complements global thematic reports that have been published in parallel.

## Message 1

**Development and resilience are mutually reinforcing: development contributes to resilience, and resilience is crucial for safeguarding development gains from increasingly frequent crises. But countries are not capturing readily available opportunities to adapt to climate change and improve people's lives, health, and safety by building more resilient economies.**

**All people and sectors are found to be exposed to context-specific, highly localized climate change risks, with countries and regions exposed to different threats.** In **Côte d'Ivoire**, the potential decrease in productivity in agriculture could reach 17 percent by 2050, while the impact on services may be close to 6 percent. By 2040, hydropower generation in **Ghana** could be reduced by 8–30 percent compared to 2020 levels. In **Bangladesh**, projected sea level rise could nearly double the assets at risk from flooding by 2050. In **Romania**, annual flooding is expected to raise road transport costs by almost 6 percent and passenger railway costs by nearly 25 percent.

**Development and resilience are mutually reinforcing: climate change impacts are amplified by poverty and development gaps, inadequate domestic policies, poor governance, and a lack of institutional and technical capacity.** In the **Democratic Republic of Congo**, **Mozambique**, and the **Sahel**, conflicts and institutional fragility contribute to people's vulnerability to climate variability. In **Pakistan**, distortionary and inequitable fiscal policies, unequal land ownership, and tenure insecurity make smallholder farmers more vulnerable to future climatic change. In **Brazil**, deforestation contributes to the Amazon ecosystems' vulnerability to climate change, magnifying the risk of large-scale impacts in the region.

**Estimates of a subset of (direct) impacts suggest significant economywide costs of climate change by 2050, particularly for lower-income countries, but much larger impacts are possible through less well-understood channels and beyond 2050** (figure S2). CCDRs identify, but do not quantify, additional critical risks linked to indirect impacts, including effects on conflict and violence, unmanaged migration, ecosystem tipping points, and limits to adaptation, especially in small countries and islands. For example, estimates for **Brazil**, **Colombia**, and **Peru** do not account for possible shifts in Amazon ecosystems, which would have economywide consequences for the whole continent and beyond.

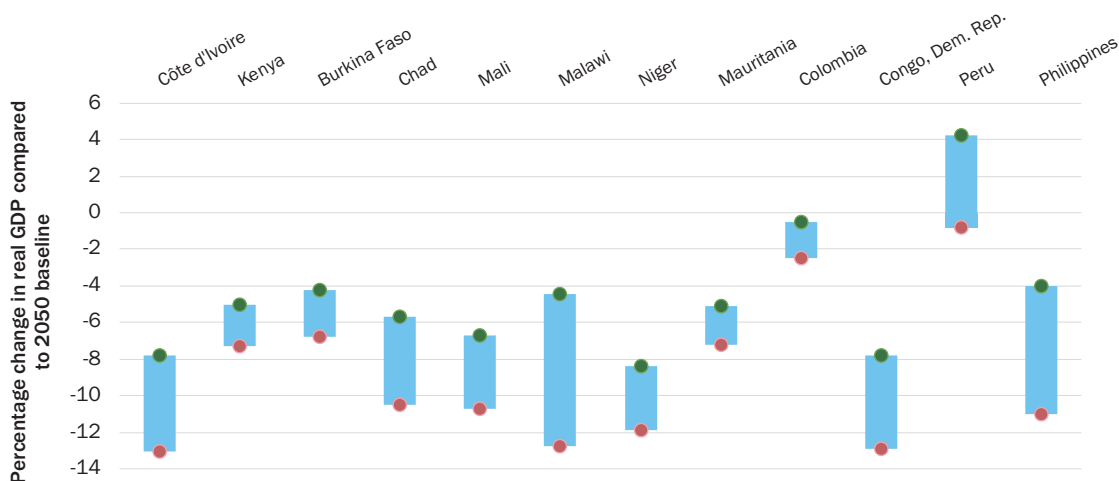
**Aggregate monetary impacts do not capture the full extent of health, welfare, and equity implications, as impacts are highly heterogeneous and more pronounced for poor countries and poor people.** In the **Democratic Republic of Congo**, the poverty rate could increase by 7.5 percentage points due to climate change, pushing 16 million people into poverty by 2050. In **Kenya**, the mortality and morbidity due to malaria and dengue are expected to increase by 56 and 35 percent, respectively, by 2050. In the **Republic of Congo**, the economic costs associated with climate change-induced diarrhea are projected to increase nearly sixfold by 2050.

<sup>3</sup> <http://documents.worldbank.org/curated/en/309981617140869469/Realizing-the-World-Bank-Group-s-Knowledge-Potential-for-Effective-Development-Solutions-A-Strategic-Framework>.

While people and firms have an incentive to and will act to protect themselves, additional targeted adaptation measures identified in CCDRs can significantly reduce impacts and deliver broader development gains. Adaptation can reduce the identified impacts of climate change on GDP by 2–8 percentage points (figure S2). Many of the adaptation and resilience actions identified in the CCDRs are “no-regret” investments, because the development benefits they deliver make them attractive even without considering avoided climate change impacts.<sup>4</sup> In **Cambodia**, benefit-to-cost ratio of investments in water, resilient roads, and forestry far exceeds one, and the development benefits that do not depend on climate change impacts are four to six times greater than avoided climate change losses.

The CCDRs identify practical priorities for adaptation and resilience action, as well as insights on how to make development more resilient. Some use an adaptation and resilience diagnostic<sup>5</sup> to evaluate the country’s capacity for effective adaptation along six pillars: 1) building resilient foundations through rapid and inclusive development; 2) facilitating the adaptation of people and firms; 3) adapting land use and protecting critical public assets and services; 4) increasing people’s and firms’ capacity to cope with and recover from shocks; 5) anticipating and managing macroeconomic and fiscal risks; and 6) ensuring effective implementation with a robust governance structure and continuous monitoring. These identify a lack of policy and regulatory framework and finance as key barriers to private sector resilience investments, with current regulatory systems providing limited information and incentives for private actors to prepare for and insure against the effects of a warming climate. Robust policies, effective institutions, appropriate incentives, and investments in infrastructure and research and development are all needed to support innovation and ensure countries adopt more sustainable practices.

**FIGURE S2: GDP impacts of climate change in 2050 in pessimistic scenarios, with current policies and with additional adaptation measures for selected countries**



Notes: The red dots show the impact of climate change represented in the CCDRs, with current policies and practices; the green dots show the impacts—and full benefits—of the recommended adaptation measures.

<sup>4</sup> See also <http://hdl.handle.net/10986/31805> and <https://www.gfdr.org/en/publication/triple-dividend-resilience>.

<sup>5</sup> <http://hdl.handle.net/10986/34780>.

## Message 2

Thanks to synergies between GHG emission reductions, development, and resilience, low-emission development can foster similar—or even faster—economic growth and poverty reduction as current development pathways. But this requires a supportive enabling environment and macroeconomic context, well-designed policies, management of negative impacts in some sectors, communities, and regions, and stronger financial and technical support from high-income countries and the international community.

**Even with enhanced adaptation and resilience efforts, current climate change trends lead to unavoidable impacts and residual risks, which make the rapid acceleration of global mitigation action an imperative.** It is vital that high-income countries—which are more responsible for historical emissions and have higher per capita emissions, more capacity to develop new solutions and technologies, and more resources—lead the way with deeper decarbonization at a faster pace. But to achieve global mitigation objectives, all countries have a role to play.

**Low-emission development can build on synergies between development, mitigation, and resilience objectives, which countries are not fully capturing.** Thanks to falling costs, renewable energy will play a key role in meeting growing electricity demand, even if climate objectives are not considered, and represents almost all new capacity additions in low-emission scenarios. Although not without its challenges,<sup>6</sup> if done right, the transition offers an opportunity to mobilize private investments, improve the trade balance, and make countries more resilient to energy price volatility, even for energy exporters. Similarly, modal shift and electrification in transportation and logistics can reduce costs, improve access to jobs and services (such as schools and hospitals), and enhance productivity.

**GHG emission reductions are expected to deliver large benefits through improved air quality.** Global estimates suggest that nearly 4 million people die annually from exposure to indoor air pollution and 4.2 million from ambient air pollution, with an economic cost of \$2.5 trillion per year.<sup>7</sup> Clean cooking has major health benefits and creates new economic opportunities, livelihoods, and environmental benefits. In the **Democratic Republic of Congo**, clean cooking practices can lead to weekly gains of over 8 hours per household by 2050, with women benefiting the most. This, in turn, could result in a 0.6 percent increase in overall labor supply. This health co-benefit is estimated at \$2 billion a year.

**The CCDRs explore options to reduce methane emissions in the energy, agriculture, and waste sectors.** Gas flaring in the **Republic of Congo** could be reduced by about 50 percent at no cost over a 10-year horizon, and optimized flaring performance could generate over \$50 million per year in extra revenues. Better animal feed and breeds in **Kenya** can achieve the same levels of meat and milk production with 13 million instead of 28 million head of cattle, reducing the demand for water and lowering methane emissions by 21–36 percent. In **Uzbekistan**, waste collection systems could be improved by minimizing open dumping and uncontrolled landfilling, managing landfill gas emissions, and diverting organic waste from landfill.

<sup>6</sup> See <http://hdl.handle.net/10986/39689>.

<sup>7</sup> See <http://hdl.handle.net/10986/39423>.

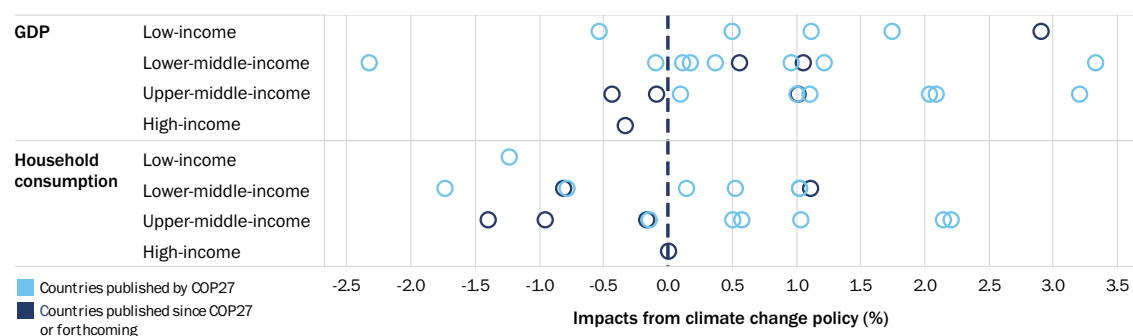


The CCDRs find economic growth to be similar—or in some cases, faster—in low-emission development scenarios than in reference scenarios, if policies are well-designed and a supportive environment is in place. As well as reducing GHG emissions by 73 percent by 2050, the low-emission development scenarios explored in the CCDRs project that GDP will be similar or even higher by 2030 than in the reference scenario (figure S3). Longer-term impacts depend on highly uncertain technological developments and socioeconomic changes, and accelerated innovation thanks to climate policies may result in larger economic gain, as observed with solar power or in some e-mobility sectors.

But the short-term impact on household consumption is larger, because low-carbon development scenarios require higher investments. This shows that the way countries choose to mobilize financial resources is important, because different sources of finance create different trade-offs, opportunities, and challenges. Social interventions are also vital, to protect poor people’s consumption and facilitate a just transition for the workers and communities affected by climate policies.

A just transition presents many challenges, as even with aggregate gains in income and employment, some workers, regions or sectors are disproportionately affected, making complementary action vital. For example, communities and workers that depend on coal mining or coal power plants will be particularly vulnerable, as seen in **South Africa’s** Mpumalanga province. The **Brazil, Uzbekistan, Morocco, and Türkiye** CCDRs recommend reallocating public spending, including through subsidy reform and carbon pricing, to help populations and regions that will be negatively affected by the transition and help workers as they change jobs. Countries like **Iraq** or **Kazakhstan**, which are heavily specialized in fossil fuel exports, are more exposed to transition risks—for example, global decarbonization could reduce Iraq’s GDP by 20.6 percent by 2040. In such cases, progressive diversification into sectors that are less exposed to climate physical and transition risks is a key to long-term economic growth and development.

**FIGURE S3: Impacts of low-emission development pathways on GDP and household consumption by 2030, compared with the reference scenario, by income class**



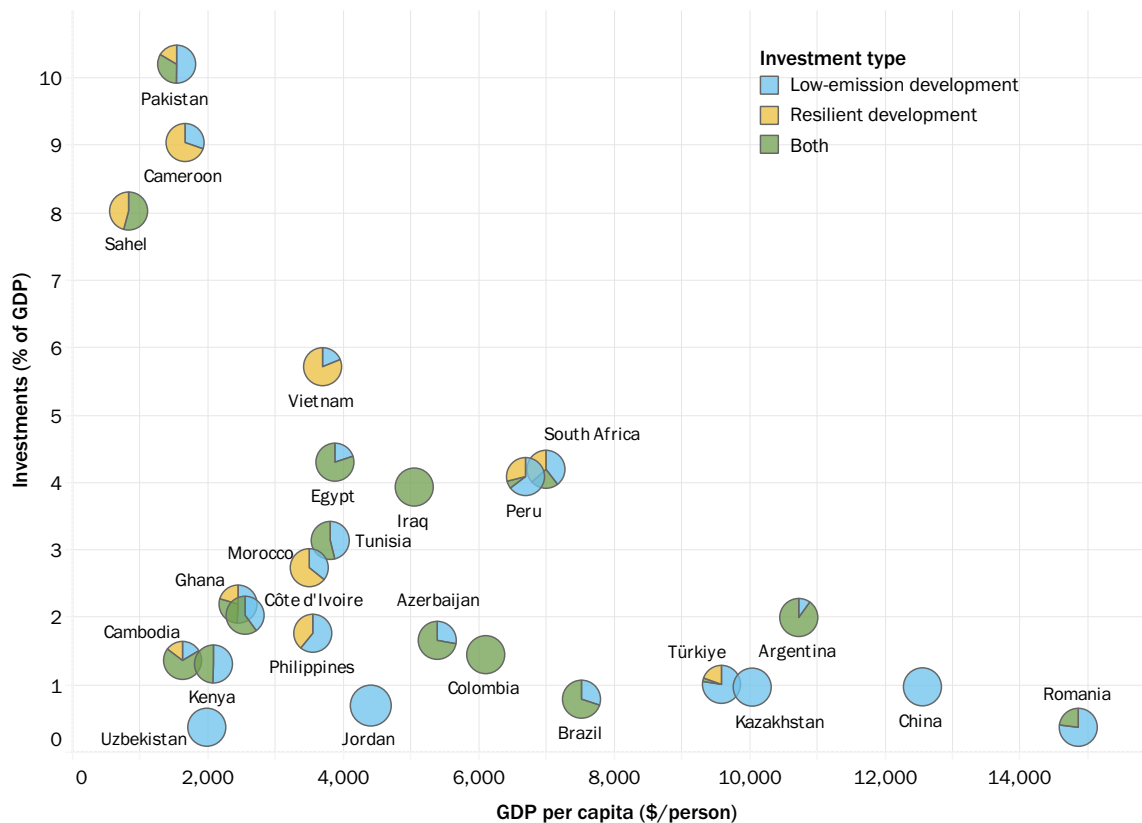
Policies can affect firms’ competitiveness and countries’ comparative advantage, creating both risks and opportunities. Decarbonization could drive competitiveness in countries like **Morocco** and **Brazil**, which have large potential for low-cost renewable energy, positioning them as attractive hubs for low-carbon manufacturing. On the other hand, new trade regulations (such as the European Union’s Carbon Border Adjustment Mechanism) or legislation to support domestic production (such as the United States’ Inflation Reduction Act) may create barriers to low- and middle-income countries’ participation in green value chains—for example, by excluding small and medium-sized enterprises if they cannot meet increasingly demanding reporting requirements.

### Message 3

The private sector has a key role to play in meeting investment needs for resilient low-emission development, with annual incremental needs in developing countries estimated at 0.4–10 percent of GDP. It can also deliver innovation, faster technology adoption, and new business models. To incentivize private sector involvement, countries will need to develop an appropriate legal and institutional framework and provide adequate concessional resources to mitigate credit, foreign exchange, or market risks when it is needed.

The transition to resilient low-carbon development will require an increase in overall investments compared with current and projected levels. To build resilience and reduce emissions, countries will require an additional 1.4 percent of their GDP, on average, in annual investments over 2023–30. Incremental investment needs range from 0.4 to 10 percent of GDP and are higher in low- and lower-middle-income countries (figure S4). With lower domestic resources levels and more limited access to capital markets and private capital, these countries will need support from international concessional climate finance, including grants.

**FIGURE S4: Required increase in annual investment in CCCR countries**



Note: Sahel is Burkina Faso, Chad, Mali, Mauritania, and Niger.

By closing development and infrastructure gaps that magnify people’s vulnerability, these investments would deliver development benefits above and beyond avoided climate change impacts and emission reductions. For example, of the \$348 billion in investment needs identified in the **Pakistan** CCCR, \$55 billion are for universal access to water and sanitation. In the **Sahel**,



solar panels and mini-grids are the least-cost option for achieving energy access and contribute to the population's resilience and its economic future. Because development and resilience are closely interlinked, increased support for climate action cannot deliver more resilience if it is done at the expense of support to development.

**The private sector has the potential to account for a majority of financing across multiple sectors in all economies.** The CCDRs identify potential distribution between public and private investment for a subset of countries and sectors, but bringing in private capital at the scale needed will require developing a larger flow of projects that match investors' risk and return expectations. And this will require supportive government policies and appropriate incentives. The capital cost of a typical utility-scale solar project can be twice as high in key emerging economies than in advanced economies, reflecting real and perceived risks at country, sector, and project levels. Market failures, demand-side weaknesses, institutional capacity, policy shortcomings, and inadequate risk-sharing mechanisms compound this challenge. With fiscal constraints rising and climate finance needs increasing across many countries, new ways to attract more private capital are urgently needed. Establishing an appropriate legal and institution framework would enable the private sector to participate in energy generation, transmission, and distribution, or ensure building codes and energy performance standards give clarity to private firms and investors. Lower fossil fuel subsidies and stronger carbon price signals, as suggested in most CCDRs, including **Colombia's** and **Indonesia's**, would provide incentives for the private sector to shift to greener sources.

**Blended finance can help close the finance gap by using donor funds from governments or philanthropies to enable private investments that would otherwise not take place.**<sup>8</sup> Instruments such as first-loss guarantees, political risk insurance, and subordinated loans enable an evolution from 'financing assets' to 'financing risks.' Some CCDRs, including **Türkiye's**, also suggest green private equity funds and equity capital sharing facilities as options for providing green financing for small and medium-sized enterprises. Public financial backing for state-owned utilities, which are off-takers of renewable energy, can reassure private companies that renewable energy purchase agreements will be honored. International carbon markets and sustainability-linked bonds and loans can also be a source of results-based funding for sovereigns, state-owned enterprises, and private firms engaging in activities that reduce GHG emissions.

**Beyond financing, the private sector also provides green technological solutions, project creation and operation, and new business models.** Foreign-owned and large firms tend to have greener practices, and implementing green strategies or technologies is challenging for small and medium enterprises. Only 40 percent of Indonesian firms have a green strategy, 58 percent have dedicated energy teams or personnel, and only 15 percent set energy and emissions targets. In **Azerbaijan**, drip technology adoption would reduce water consumption and support a shift toward higher value crops, but high investment costs deter farmers, particularly smallholders. The CCDRs also note the lack of competition and state control over key sectors for resilience or decarbonization, such as energy or major industrial sectors, which can slow down the adoption of greener production techniques. Progress could be accelerated by increased high-income country support for countries and firms to adopt green technologies and practices, adapt them to their needs, or develop original ones that are adapted to their context.

**Foreign direct investment and other cross-border capital flows can play a crucial role.** They can be a source of financing—especially in countries where domestic credit and equity markets are

<sup>8</sup> <https://www.ifc.org/en/what-we-do/sector-expertise/blended-finance/how-blended-finance-works>.

shallow and unprepared to provide the required long-term investments—and a source of technical expertise. To attract long-term foreign capital, countries must have purposeful public-private sector dialogue and will also need to consolidate and enhance the enabling environment. But countries, especially lower-income ones, will need to access concessional funding, including grants, to meet spending needs to enhance resilience in poor communities, ensure a just transition, and invest in sectors where attracting private finance is more challenging.

#### Message 4

To achieve global climate change and development objectives, addressing forest loss, boosting carbon sequestration, and working with nature are vital. Action on land use in five CCDR countries alone could reduce annual GHG emissions by 2.7 gigatonnes of carbon dioxide equivalent (GtCO<sub>2</sub>e) by 2050, representing almost 6 percent of today's global emissions. But there are economic, distributional, and political challenges to achieving this, and success requires securing international payments for the ecosystem services forests provide globally.

**Deforestation remains a key source of GHG emissions.** Countries included in this summary report cover 56 percent of the world's tropical forest area and 48 percent of global emissions connected to forest loss. Countries are in very different situations. The **Republic of Congo** has successfully kept its deforestation rate low, at 0.1 percent, while **Côte d'Ivoire** lost about 80 percent of its forest cover between 1900 and 2015 and could lose all its forests by 2034. Successes in **Brazil** and **Indonesia** show that policies can reduce deforestation. In **Indonesia**, deforestation has slowed considerably, from an average of 1.13 million hectares per year between 2000 and 2006 to less than 0.12 million per year for 2019–21.

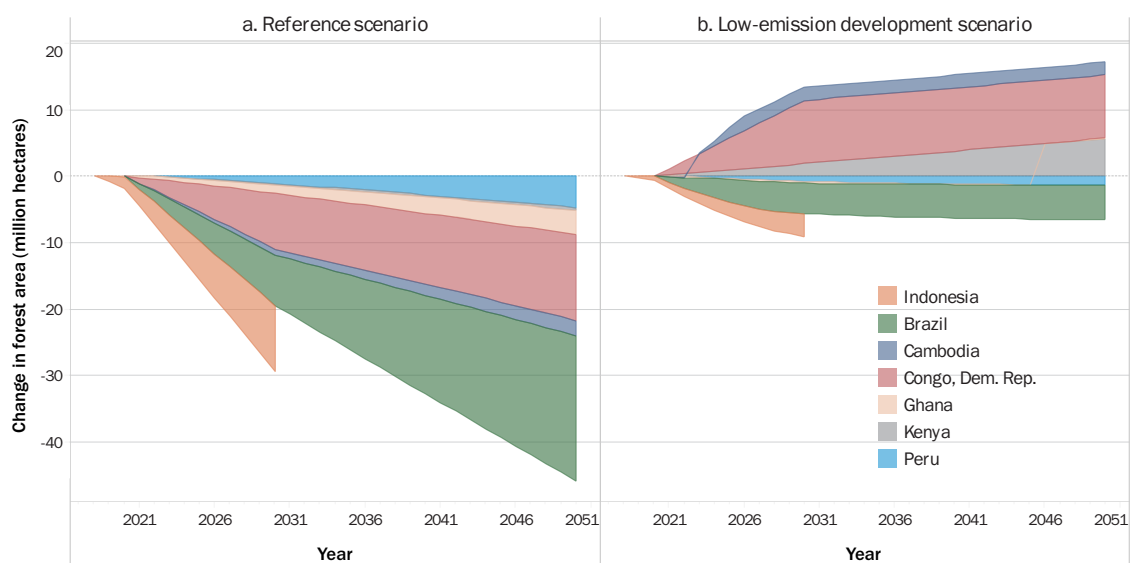
**The difference in land use between the reference and low-emission development scenarios in five CCDRs is equivalent to a 2.7 GtCO<sub>2</sub>e reduction in annual global GHG emissions by 2050, or almost 6 percent of global GHG emissions in 2019.** Without policy changes, an additional 56 million hectares of forests could be lost by 2050 in seven CCDR countries (figure S5). But this trend could be reversed, with the potential to increase forest area by 7 million hectares, a net gain of 63 million hectares. In a subset of five CCDR countries, this would be equivalent to avoiding a total of 63 GtCO<sub>2</sub>e between 2023 and 2050.

**Countries can benefit from more sustainable land management practices and working with nature, including by mobilizing nature-based solutions to boost resilience and deliver development gains.** Forests often play a crucial role in the growth, transformation, and sustainability of national economies, and in income growth in poor communities. So, reducing deforestation will boost countries' resilience to climate risks and avoid the loss of ecological benefits such as water storage, carbon sequestration, and biodiversity. In **Peru**, for example, new forests can generate around \$3.5 billion per year in ecosystem services. Beyond local benefits, the world's forest basins are of planetary importance. Improved landscape management and conservation have the potential to increase the global value of the **Democratic Republic of Congo's** ecosystem services by about \$1.8 billion annually by 2030.

**To transform land use, countries will need to take an economywide approach, adopt integrated land management approaches, and carefully consider distributional impacts.** Making alternative

forested land uses less attractive, increasing direct benefits from forests, and paying for conservation will incentivize forest protection. For example, in **Vietnam**, coastal water utilities pay upstream communities for forest management activities that regulate soil erosion and stream flow. **Nepal's** strategy includes actions to boost incomes from ecotourism, forest-based livelihoods, and sustainable timber exports. Improving tenure security is essential, particularly for poor households and Indigenous communities, who can be disproportionately affected by climate policies. For example, **Brazil's** ABC program—the main agriculture subsidy credit program—requires formal land titles, largely excluding lower-income and tribal communities. More secure tenure and is a central element of the **Democratic Republic of Congo's** land reform and agricultural policy.

**FIGURE S5: Change in projected forest area in seven CCDRs: reference vs. low-emission scenario**



Note: Scenarios in the Indonesia CCDR end in 2030.

**Boosting agricultural productivity and supporting clean cooking can reduce pressure on forests, but only as part of a broader strategy.** In **Peru**, sustainable agriculture intensification can reduce encroachment in adjacent forest areas. But, as seen in **Brazil**, if forest protection measures are not strengthened at the same time, increasing productivity can also increase the incentive to convert forests into agricultural land. Access to clean cooking is particularly important in countries like the **Democratic Republic of Congo**, where many households rely on firewood and charcoal for cooking.

**The international community has an important role to play in helping countries stop deforestation, protect biodiversity, and use their land more efficiently.** To meet investment needs and support the realignment of incentives to promote sustainable forest and land use management, it needs to increase existing climate finance flows, including by helping countries secure international payments for the ecosystem services their forests provide globally, such as the 44 and 77 GtCO<sub>2</sub>e stored in the forests and peatlands of the **Republic of Congo** and **Democratic Republic of Congo**, respectively.

**While still in their infancy and facing many obstacles, carbon markets and associated cross-border capital flows can become crucial to the preservation of forests as a global public good.** To unlock the potential of results-based financing and carbon markets for forest carbon, countries

will need to establish robust policy and regulatory frameworks and strengthen their institutional capacity for monitoring, reporting, and verification, effective oversight, and equitable sharing of carbon revenues. Several innovative financing channels and programs have also emerged, such as the Forest Carbon Partnership Facility. A notable limitation of existing market mechanisms is their difficulty in providing incentives for conserving standing forest. Typically, carbon credits are awarded for emission reduction efforts, assessed by comparing actual and historical emissions. This approach presents challenges for countries like the **Republic of Congo** and the **Democratic Republic of Congo**, which have standing forests that are not under immediate threat or have historically low deforestation rates.

### Message 5

A just transition toward resilient, low-emission development requires improved governance, better spending efficiency, and proper considerations of political economy barriers. The CCDRs identify opportunities for countries to strengthen their legal, institutional, and regulatory framework and ensure they spend existing resources better, including by repurposing energy, water, and agriculture subsidies, and through trade policy reforms.

**Effective legal and governance frameworks and institutional arrangements are needed to respond to climate change challenges.** While the Paris Agreement's nationally determined contributions and adaptation plans contain mitigation and adaptation measures, these are neither legally binding nor internationally enforceable. To give them legal force, countries need to translate these measures into their legal frameworks through new or amended laws and regulations.

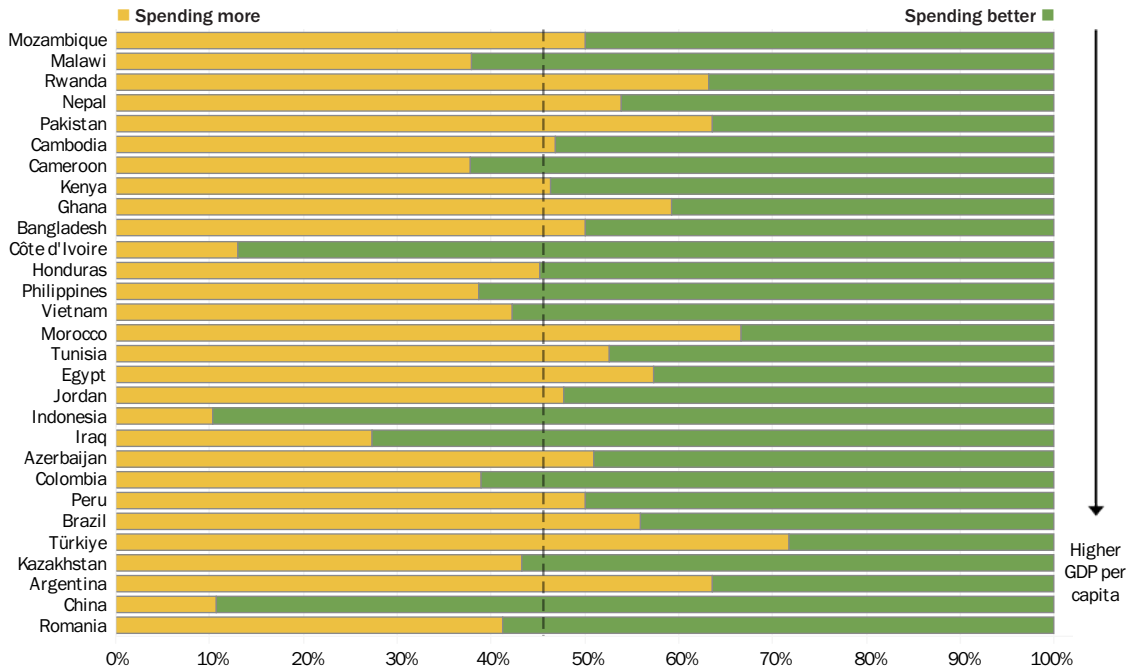
**Many countries have a patchwork of legislation, policy documents, and institutions, leading to ambiguous, fragmented, and overlapping responsibilities.** The **Philippines** has tracked budget allocations for climate action since 2013. But it is one of the few countries that address climate change in their budgets and public investment management practices. Most have yet to implement robust arrangements for civil society participation in, and oversight of, climate policy. Although the political economy is a key barrier for impactful climate action, it is not written in stone: experience from many countries shows that political economy challenges can be successfully managed.<sup>9</sup>

**There is enormous potential for countries to spend better and redirect their investments toward more resilient and lower-emission options.** The CCDRs identify opportunities to spend existing resources better (figure S6). They can do this by repurposing or redirecting inefficient fossil fuel subsidies, water tariffs, and agricultural subsidies, or by reforming tariffs and trade policies. Despite having a carbon tax since 2016, **Colombia** spends about 2.6 percent of GDP on fuel subsidies, so its net effective carbon rate is low compared to its peers. In **Morocco**, adjusting water tariffs could help reflect the true value of water resources and help improve the sector's financial sustainability. In **Brazil**, **Cambodia**, and **South Africa**, well-sequenced communication and awareness-raising campaigns have led to behavior change and successful water reforms. In **Cambodia**, renewable energy products face on average a 10 percent tariff; this is five times higher than the global average. The country also has high duties on parts and components, undermining participation in value chains as tariffs raise costs for manufacturers, hindering their competitiveness, and raising the cost of decarbonization. In 2020, **Indonesia** spent approximately 20 times more on fertilizer

<sup>9</sup> <http://hdl.handle.net/10986/39423>.

subsidies (\$16 billion) than on its agricultural knowledge and innovation systems (\$82 million). And in **Brazil**, a subsidized rural tax crediting scheme provides incentives for cattle ranching in the Legal Amazon.<sup>10</sup> Spending better also means ensuring clear planning, good prioritization of projects and programs (whether for mitigation, adaptation or development and growth), and that funds are spent well (efficiently and with integrity).

**FIGURE S6: Share of CCDR recommendations focused on spending more (increased investment) vs. spending better (more efficient use of existing resources)**



The CCDRs are diagnostics that aim to help countries achieve their development and climate goals together. They are part of a new playbook to drive impactful development and lead to a better quality of life—through access to clean air, clean water, education, and decent health care—with more resilience and lower GHG emissions. These reports offer a rich layer of climate-informed analysis to boost the World Bank’s engagements with governments, and public and private stakeholders. As well as informing global initiatives and priorities, such as our Global Challenge Programs, they help countries select priorities for action, including in the World Bank portfolio through their impact on Country Partnership Frameworks. Most importantly, they will contribute foundational knowledge to global and country debates on how to align climate and development, providing substantive guidance on how to create a world free of poverty on a livable planet.

<sup>10</sup> On the role of subsidies, see also <http://hdl.handle.net/10986/39453>.