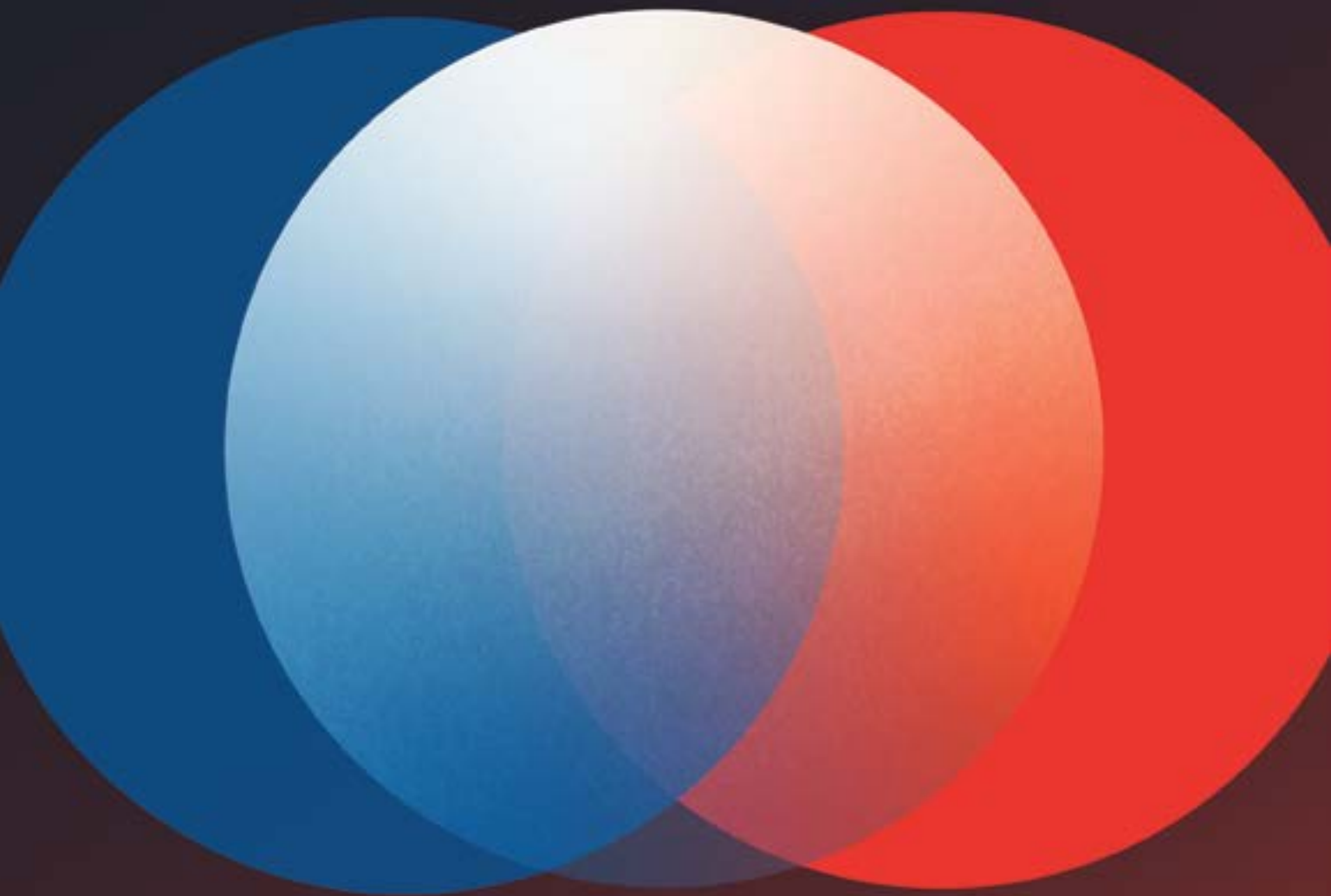


**OVERVIEW**

**POVERTY, PROSPERITY,  
AND PLANET REPORT  
2024**

# **PATHWAYS OUT OF THE POLYCRISIS**



**WORLD BANK GROUP**



POVERTY, PROSPERITY, AND PLANET REPORT 2024

## OVERVIEW

# Pathways Out of the Polycrisis

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# Foreword

For a quarter of a century, economies across the world whittled down poverty at an extraordinary clip. Beginning in 1990, rapid economic growth—especially in China and India—liberated more than 1 billion people from the scourge of extreme poverty. Over the next 25 years, as the incomes of the poorest nations began to converge with those of the wealthiest, the world came closer than ever to extinguishing extreme poverty altogether.

Then, after 2020, starting with the COVID-19 pandemic, a major reversal began. Poverty reduction slowed to a crawl. Poorer countries did worse than the wealthier economies in responding to the pandemic. Conflict in Europe and the Middle East then disrupted the supplies of foodgrains and fuel. Two years ago, the World Bank's *Poverty and Shared Prosperity 2022* report took stock and came to a dismal conclusion: poverty had risen for the first time in decades. The global goal of cutting the extreme-poverty rate to 3 percent by 2030 had slipped out of reach. At the current pace, it will not be met for three decades.

The delay would be longer still for people living on less than \$6.85 a day—the poverty threshold for middle-income countries. It would take more than a century to eliminate poverty at this higher level, which now affects half of humanity. The 2020s, in short, are shaping up to be a lost decade—not just for a small set of countries but for the world as a whole.

That threatens reversals on two other fronts: the fight against climate change and the struggle to expand the middle class everywhere. Poverty, prosperity, and planet are the three corners of the iron triangle of economic development: to achieve durable progress on one, it is imperative to make substantial gains on the other two. In an era of economic populism, rising debt, and aging populations, that will not happen easily. In fact, without the right policy framework, it is far more likely that progress on one front will come at the expense of another.

This report aims to provide exactly that framework—one that can manage the trade-offs and deliver the best possible outcomes on all three fronts. For the first time, it gives governments a comprehensive way to monitor progress, identify new pathways to success, and choose the right policy priorities. The *Poverty, Prosperity, and Planet Report 2024* constitutes the World Bank Group's first integrated progress report on the three goals since the COVID-19 pandemic—and

it serves as a central tool in our institution's efforts to realize its updated vision: to create a world free of poverty on a livable planet.

The analysis yields several sobering conclusions—as well as clear evidence that progress is possible even under daunting conditions. The good news is that progress on extreme-poverty reduction has finally resumed at the global level: in 2024, the extreme poverty rate was 8.5 percent, marking the first time it has dipped below the 8.8 percent rate that prevailed on the eve of the COVID-19 pandemic. The bad news is that the recovery is bypassing the places that need it most: extreme poverty in the poorest economies is still 1 percentage point higher than it was in 2019.

Across the world, governments have also made notable progress in combating inequality within national borders. In 2024, the number of economies with high inequality stood at a 24-year low, reflecting a one-third reduction since the turn of the century. Yet 1.7 billion people—20 percent of the global population—still live in high-inequality economies, which are concentrated in Sub-Saharan Africa and Latin America and the Caribbean. Poverty and inequality are conjoined. Speeding up the reduction of within-country inequality accelerates progress on poverty reduction. It also builds a stronger foundation for peace and stability.

Another finding of this report is that well-off countries have been making considerable progress in adapting to climate change—but poor countries remain far behind. Since 2010, the number of people exposed to extreme-weather events has grown not only in the poorest economies eligible to borrow from the World Bank's International Development Association (IDA) but also in non-IDA countries. These countries have managed to shield nearly all their populations from extreme-weather events—a function of their wealth and access to finance, which enables greater investment in climate adaptation. IDA countries, by contrast, have been able to protect barely one out of every two people from the risk of actual harm from an extreme-weather event.

That disparity underscores the need for a differentiated approach to managing the trade-offs in play at the intersection of poverty, prosperity, and planet. The poorest economies must be allowed to prioritize climate resilience. Sub-Saharan Africa, for example, has the largest share of people at high risk from extreme-weather events—more than a third. And half its people lack electricity or sanitation.

The policy priorities in the poorest economies *must* be different from those in wealthier parts of the world: to roll back extreme poverty, low-income economies must prioritize long-term growth and better health and education. They must be careful, however, to avoid getting locked into carbon-intensive technologies and growth strategies that will become progressively more costly and less efficient in the future. At higher levels of income, however, the policy predicament intensifies. Ending poverty for the 3 billion people who struggle on less than \$6.85 a day would come at a high cost to the environment. By the middle of this century, it would boost global emissions by nearly 50 percent over 2019 levels.



## FOREWORD

The implications are clear: in the poorest economies, the focus should be on economic growth and investing in human, financial, and physical capital. For lower-middle-income countries, the focus should shift to growth and shared prosperity—and measures to increase the efficiency of policies that increase incomes, improve resilience to shocks, and lower emissions. Just by reducing air pollution, for example, they can reap large rewards on multiple fronts, including better health outcomes. For upper-middle- and high-income countries, which account for four-fifths of global carbon emissions, the emphasis must be on slashing emissions while finding ways to alleviate the job losses and other short-term pains that will result from these cuts.

None of this will be easy, but it can and must be done. The world today enjoys a historic opportunity to change course—to overcome the rising dangers of climate change, systemic inequality, social instability, and conflict. With closer international cooperation, it's possible to build the type of progress that ensures a broad and lasting rise in prosperity. It's an opportunity that must not be passed up.

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The term *country*, used interchangeably with *economy*, does not imply political independence but refers to any territory for which authorities report separate social or economic statistics.

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# Overview

The World Bank has set a clear mission: ending extreme poverty and boosting shared prosperity on a livable planet. This new edition of the biennial series, previously titled *Poverty and Shared Prosperity*, assesses the three components of the mission and emphasizes that reducing poverty and increasing shared prosperity must be achieved without high costs to the environment. The current polycrisis—where the multiple crises of slow economic growth, increased fragility, climate risks, and heightened uncertainty have come together at the same time—makes national development strategies and international cooperation difficult.

This overview summarizes the **progress** toward achieving these goals, outlines promising **pathways** to speed up the progress on multiple fronts, and proposes **priorities** tailored to countries at various levels of poverty, income, and environmental vulnerability. Offering the first post-COVID-19 (Coronavirus) pandemic assessment of global progress on this interlinked agenda, the report finds that global poverty reduction has resumed but at a pace slower than before the COVID-19 crisis. It also provides evidence that the number of countries with high levels of income inequality has declined considerably during the past two decades, but the pace of improvements in shared prosperity has slowed and that inequality remains high in Latin America and the Caribbean and in Sub-Saharan Africa. The report also finds evidence of countries' increasing ability to manage natural hazards where there has been progress in poverty reduction and shared prosperity; but in the poorest settings, the report finds that climate risks are significantly higher.

## Progress: Global poverty reduction and improvements in shared prosperity have stalled

**Global poverty reduction slowed to a near standstill during the past five years, raising concerns that 2020–30 would be a lost decade**

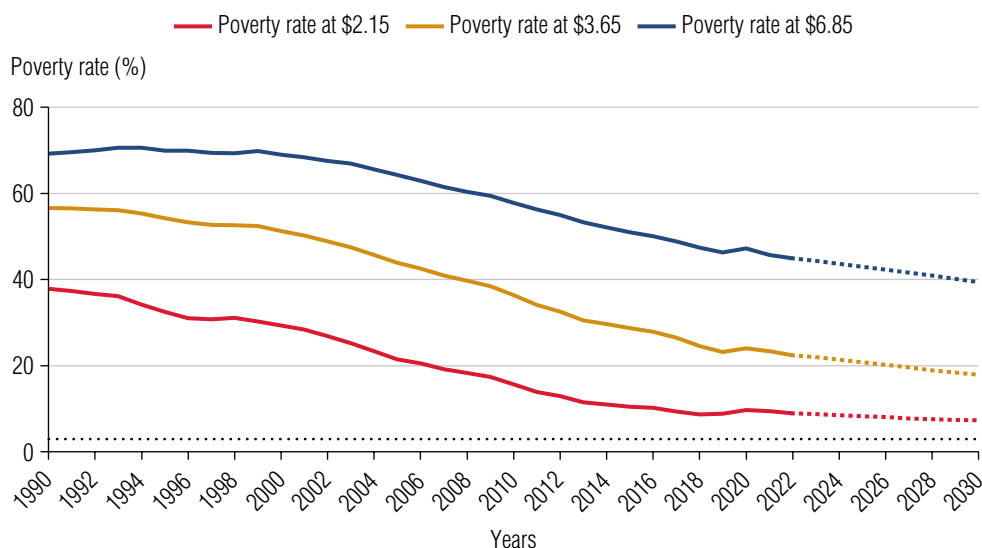
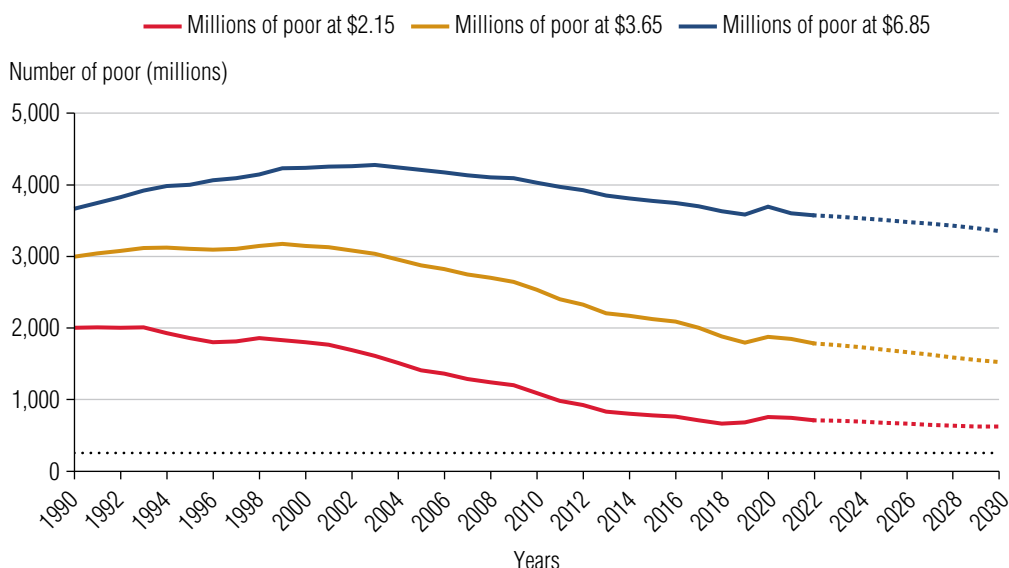
About 8.5 percent of the global population lives in extreme poverty in 2024. This means that 692 million people worldwide live on less than \$2.15 per person per day.<sup>1</sup> While the extreme

poverty rate fell from 38 percent in 1990 to 8.5 percent in 2024, it has stalled more recently amid lower economic growth and multiple shocks such as the COVID-19 pandemic, high inflation, and increased conflict and fragility. Extreme poverty today is only slightly below the rate observed before the pandemic in 2019 and in many poor settings, poverty rates remain higher than they were five years ago. Using the slightly higher poverty line of \$3.65 a day per person (representative of the national poverty lines used in lower-middle-income countries), about 1.7 billion people are living in poverty in 2024 (21.4 percent, or about one-fifth, of the global population). At the still higher standard of \$6.85 per person per day that is more typical of upper-middle-income countries, almost one-half of the world's population (43.6 percent) is living in poverty. This means that the living standards of 3.5 billion people are below this higher poverty line in 2024 (figure O.1). While the share of people under \$6.85 declined from 70 percent to 43.6 percent since the 1990s, the actual number of people living on less than \$6.85 a day has barely changed since 1990 because of population growth.

Even more serious, by the end of this decade, a projected 7.3 percent of the world population will be living in extreme poverty—more than double the World Bank global goal of 3 percent and even further away from the Sustainable Development Goal of ending extreme poverty in all countries by 2030. In fact, between now and 2030, only 69 million people are projected to escape extreme poverty (figure O.1). At the higher poverty line of \$6.85, reductions in the poverty rate are projected to continue more noticeably with slightly less than 40 percent of the global population being projected to live on less than \$6.85 per person per day in 2030 (more than 3 billion people).

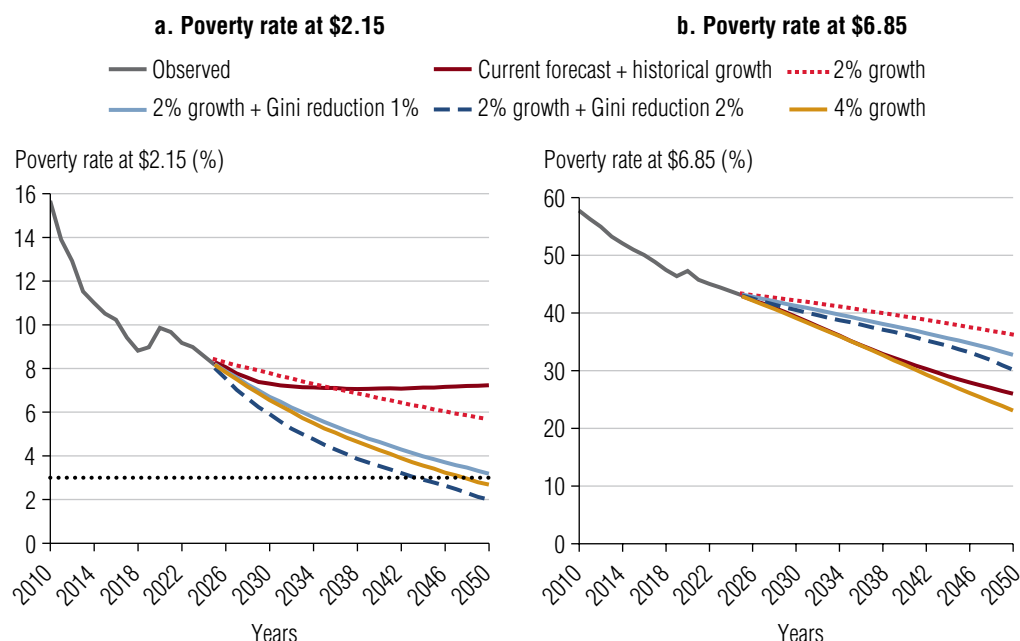
If economic growth continues to be slow and inequality remains unchanged, the 3 percent goal will remain out of reach for decades. If gross domestic product (GDP) per capita growth stays at the average rates observed during 2010–19, extreme poverty rates will remain above 7 percent until 2050 (figure O.2, panel a). If every country grew by 2 percent in per capita terms annually, extreme poverty would not reach 3 percent for another 60 years. Even with 4 percent per capita growth rates, which seem out of reach for many countries, it would take until 2048 to reach 3 percent. Reductions in inequality can help accelerate progress. For example, under the 2 percent per capita growth scenario, if the Gini index in every country were to also decrease by 2 percent annually, it would take 40 years less to eradicate poverty (20 versus 60 years).

Poverty rates at \$6.85 a day are projected to fall faster under the current growth forecast scenario than extreme poverty rates (figure O.2, panel b). Still, under the current growth forecast, it would take more than a century to reach a poverty rate of less than 3 percent at \$6.85 per person per day.

**FIGURE O.1****Progress has stagnated for the poor****a. Progress in reducing extreme poverty rate has resumed but at a slower pace than before 2020****b. The number of people living on less than \$6.85 has remained unchanged over the past 30 years**

Source: World Bank, Poverty and Inequality Platform (version September 2024), <https://pip.worldbank.org/>.

Note: Poverty rates are reported for the \$2.15, \$3.65, and \$6.85 per person per day poverty lines (expressed in 2017 purchasing power parity dollars). Between 2022 and 2029 poverty is projected based on per capita gross domestic product growth projections in *Global Economic Prospects, June 2024* (World Bank 2024c) complemented by the *Macro Poverty Outlook, Spring Meetings 2024* (World Bank 2024e) and the *World Economic Outlook* (IMF 2024); for 2030, average annual historic per capita growth rates (2010–19) are used. See annex 1A for more details on the projection methods. In panel a, the black horizontal dotted line is drawn at 3 percent and indicates the World Bank's target of ending extreme poverty by 2030. In panel b, it is drawn at 256 million, which represents 3 percent of the global population projected for 2030.

**FIGURE 0.2****Projections of poverty until 2050 under different scenarios**

Sources: World Bank calculations using data from World Bank, Poverty and Inequality Platform (version September 2024), <https://pip.worldbank.org/>; World Bank 2024c; IMF 2024; and World Bank 2024e.

Note: Poverty rates are reported for the \$2.15 and \$6.85 per person per day poverty lines (expressed in 2017 purchasing power parity dollars). Poverty rates are projected after 2022 based on country-level growth in gross domestic product per capita. “Current forecast + historical growth” is based on growth projections in the *Global Economic Prospects, June 2024* (World Bank 2024c) complemented by the *Macro Poverty Outlook* (World Bank 2024e) and the *World Economic Outlook* (IMF 2024) until 2029 and average annual per capita historical growth rates (2010–19) thereafter (see annex 1A for further details). Inequality reduction scenarios refer to a reduction in the country-level Gini index by 1 percent or 2 percent annually. The horizontal dotted line indicates a poverty rate of 3 percent.

## Overlapping crises have slowed or stalled poverty reduction

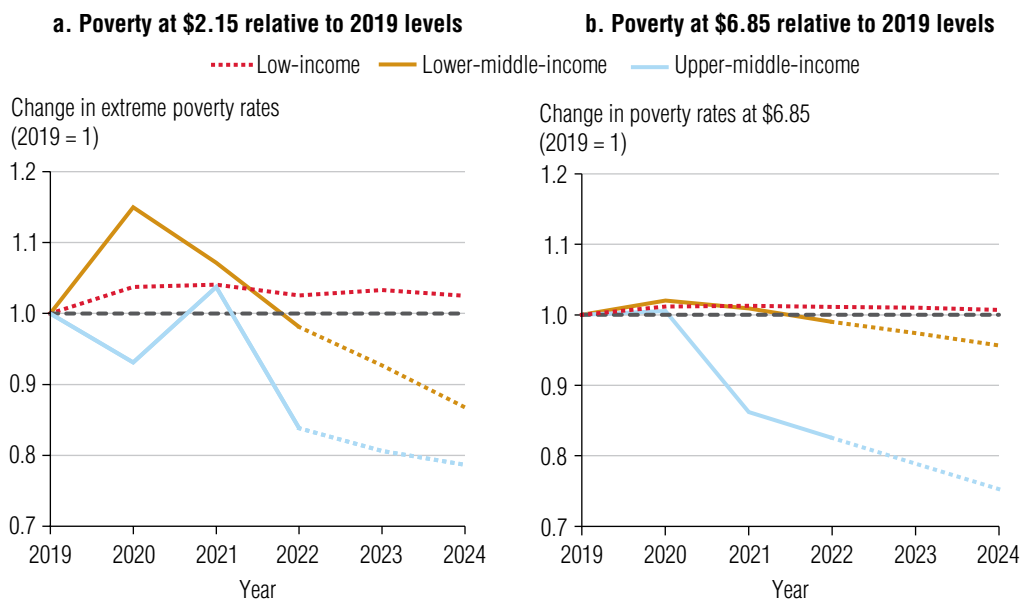
The slow progress on poverty reduction in the past years reflects global conditions characterized by multiple and overlapping crises or a “polycrisis.” *Polycrisis* refers to multiple and interconnected crises occurring simultaneously, where their interactions amplify the overall impact. The scarring effects of the pandemic, slow economic growth, increased conflict and fragility, and insufficient progress on shared prosperity, for instance, are connected and have been behind the slow progress in poverty reduction. The risk of a polycrisis is growing due to heightened uncertainty, fragility, climate change, and other vulnerabilities that tie together diverse sectors and regions.

### ***The poorest countries have still not recovered from the poverty increase caused by the COVID-19 pandemic***

The poorest countries still have higher poverty rates than before the pandemic. In low-income countries, the extreme poverty rate rose in 2020 and 2021 and has not fallen much since (figure O.3). In 2024, 43 percent of people in low-income countries are in extreme poverty. Lower-middle-income countries managed to recover from the COVID-19 shock only in 2022. In contrast, upper-middle-income countries continued to make progress in 2021 and 2022 against poverty (as measured against the \$6.85 line, which is more relevant in these settings). Low-income countries have shown less resilience, as the compounded effects of the pandemic and rising food and energy prices have led to poverty rates remaining higher than in 2019.<sup>2</sup>

**FIGURE O.3**

#### **Poverty is still above prepandemic levels in the poorest countries**



Source: World Bank, Poverty and Inequality Platform (version September 2024), <https://pip.worldbank.org/>.

Note: Poverty rates are shown relative to 2019 levels for the \$2.15 and \$6.85 per person per day poverty lines (expressed in 2017 purchasing power parity dollars). The line for low-income countries is dotted because the surveys covered less than 50 percent of the group's population between 2019 and 2022. Poverty rates for 2022–24 are projected based on per capita gross domestic product growth projections in *Global Economic Prospects, June 2024* (World Bank 2024c). High-income countries are omitted because poverty rates at both lines are small. Poverty rates at the \$6.85 poverty line did not increase in high-income countries between 2019 and 2024, and changes at the \$2.15 poverty line were less than 0.05 percentage points. Income group is kept fixed using the fiscal year 2024 classifications.

In addition to a slower recovery in terms of income, poor people experienced setbacks in human capital and employment, further compromising their resilience and capacity to generate higher incomes in the future. The pandemic had a devastating effect on global health, causing a significant number of excess deaths and reducing the global life expectancy at birth by over 1.5 years.<sup>3</sup> Countries with higher inequalities in income and access to quality care had higher excess mortality during the pandemic (Sepulveda and Brooker 2021). The health and food systems disruptions caused by the pandemic also reversed progress on child nutrition, with an estimated additional 9.3 million children suffering from acute malnutrition and 2.6 million more children stunted by 2022 (Osendarp et al. 2020). In addition, school closures led to learning losses in language, literacy, and mathematics of around 30 percent in multiple countries. In 2021, in several countries a quarter of all young people were not in education, employment, or training (Schady et al. 2023). Poorer households were also less likely to use remote work and schooling (Narayan et al. 2022). Schooling disruptions affected poorer households more than richer ones. It is estimated that students in low-income and lower-middle-income countries could face future earning losses of up to 10 percent because of the pandemic, suggesting a permanent scarring effect (Schady et al. 2023). This generation of students now risks losing \$21 trillion in potential lifetime earnings in present value, or the equivalent of 17 percent of today's global GDP (World Bank et al. 2022). The loss in schooling is likely to have a larger effect on poverty in the future than the immediate effect of the pandemic has had (Decerf et al. 2024).

### ***Extreme poverty has been increasingly concentrated in countries with slow economic growth***

A large factor in the slowing of global poverty reduction over the last decade is the changing regional composition of poverty. In 1990, East Asia and Pacific had a higher poverty rate than Sub-Saharan Africa, and South Asia had rates similar to Sub-Saharan Africa. This picture changed markedly over the years. Fueled by rapid growth, East Asia and Pacific experienced unprecedented progress that also drove poverty reduction at the global level. Until 2013, global extreme poverty reduction was led by China's rapid economic growth, which lifted more than 800 million people out of extreme poverty over three decades. Between 1990 and 2024, the rest of East Asia and Pacific also made remarkable progress, with 210 million people exiting extreme poverty during this period. Extreme poverty also fell significantly in South Asia, despite recent stagnation (see chapter 1).

Since the early 2010s, progress in reducing global extreme poverty has depended on the reduction of poverty in Sub-Saharan Africa much more than it did before. Although the extreme poverty rate in Sub-Saharan Africa has fallen over the past three decades, it did so at much slower rates than in other regions, and the number of people living in extreme poverty in the region has come fairly close to doubling—rising from 282 million in 1990 to 464 million in 2024. Similarly, in the Middle East and North Africa, the number of people living in extreme poverty doubled from 15 million in 1990 to 30 million in 2024. Extreme poverty in that region has surged since 2014, driven by fragility, conflict, and inflation (Gatti et al. 2023).

In 2000, only one-quarter of the extreme poor were living in a country in Sub-Saharan Africa or in a country in fragile and conflict-affected situations (FCS). By 2014, every second person in extreme poverty lived in either Sub-Saharan Africa or in FCS. The share of extreme poor in FCS in Sub-Saharan Africa then grew starkly in the late 2010s, driven by countries with large poor populations becoming fragile (for example, Niger or Nigeria). By 2024, the share of the extreme poor in Sub-Saharan Africa or FCS had increased to three-quarters, and 42 percent of the global extreme poor were in FCS in Sub-Saharan Africa.<sup>4</sup> More broadly, countries eligible for support through the International Development Association (IDA) account for 7 in 10 of the global extreme poor.<sup>5</sup>

IDA countries, particularly those in Sub-Saharan Africa, have not been able to achieve the high rates of income growth seen in East Asia and Pacific and South Asia. While IDA countries are different in many respects, they share common challenges, including low per capita incomes, widespread extreme poverty, and heightened fragility (World Bank 2024d). In Sub-Saharan Africa, which is home to about half of the IDA countries, economic growth has neither been large enough nor inclusive enough to reduce poverty significantly, especially since 2015 (Wu et al. 2024). Between 1990 and 2022, GDP per capita in Sub-Saharan Africa only grew by 0.7 percent annually (compared with 1.6 percent for the world). GDP growth in IDA countries is forecast to strengthen in 2024–25 but remain weaker than in the decade before the pandemic (World Bank 2024d).

### ***Progress in improving shared prosperity has stalled since the pandemic***

How growth benefits the least well-off is an important dimension to consider for improvements in societal well-being. Average income growth alone is not a good marker of development. Therefore, it is important to track a measure of the inclusiveness of growth or shared prosperity. The Global Prosperity Gap is the World Bank's new measure of shared prosperity (see box O.1). It is the average factor by which incomes need to be multiplied to bring everyone in the world to the prosperity standard of \$25 per person per day, which is roughly equal to the average income when countries reach high-income status. The measure gives greater weight to the incomes of the poor, and hence income growth among the poorest households matters significantly more for reducing the Global Prosperity Gap.

Progress in reducing the Prosperity Gap has stalled since the pandemic, highlighting a slowdown in inclusive income growth over this period (figure O.4, panel a). Today, incomes around the world would have to increase fivefold, on average, to reach the prosperity standard of \$25 per person per day. In many places, the convergence of incomes to the \$25 per person per day level remains purely aspirational. The Prosperity Gap ranges from 1.7 in Europe and Central Asia to over 12 in Sub-Saharan Africa, signaling large disparities in income levels across regions. In Sub-Saharan Africa, incomes on average would need to rise more than twelvefold to reach the \$25 standard. Sub-Saharan Africa accounts for 39 percent of the Global Prosperity Gap but 16 percent of the global population (figure O.4, panel b). This disparity highlights the large share of the region's population that is far away from the prosperity threshold.

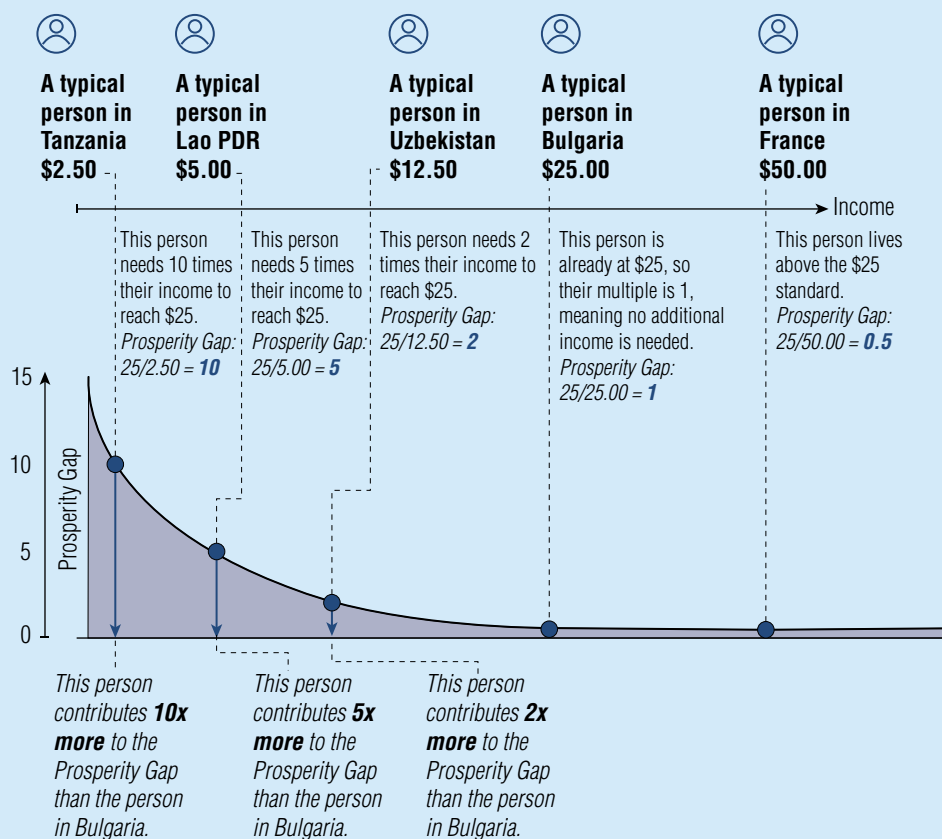
**BOX 0.1****How is the Prosperity Gap calculated?**

The Prosperity Gap captures how far a society is from \$25 per person per day, which is close to the average per capita household income when countries reach high-income status. The society's shortfall is the average shortfall among all individuals living in that society but giving poorer people a greater weight. The Prosperity Gap is defined as the average income multiple needed to reach that \$25 standard for every member of that society (Kraay et al. 2023).

Note that the typical person in Tanzania, the Lao People's Democratic Republic, and Uzbekistan has less than \$25 per day so they contribute with a factor greater than 1, and the typical person in Bulgaria has \$25 per day so they contribute with a factor of 1 (figure BO.1.1). The typical person in France lives above the

**FIGURE BO.1.1****The Prosperity Gap captures how far societies are from \$25 per person per day**

Let's say there are five people with the following levels of daily income:



(continued)



**BOX 0.1****How is the Prosperity Gap calculated?** *(continued)*

\$25 standard and makes only a small contribution to the measure. While income growth experienced by any person in the world will help reduce the Prosperity Gap, the magnitude of that reduction grows exponentially the poorer the individual is. That means that the typical person in Tanzania—the poorest person in this example—will contribute more to the Prosperity Gap, and gains in their income will count more than the others.

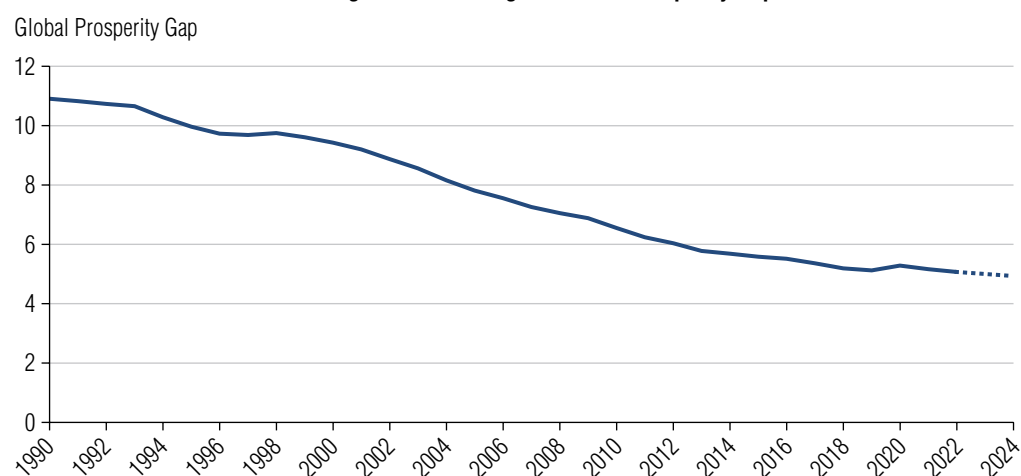
**To find the Prosperity Gap in this example, these numbers are averaged:**

$$\text{Prosperity Gap} = (10 + 5 + 2 + 1 + 0.5)/5 = 18.5/5 = 3.7$$

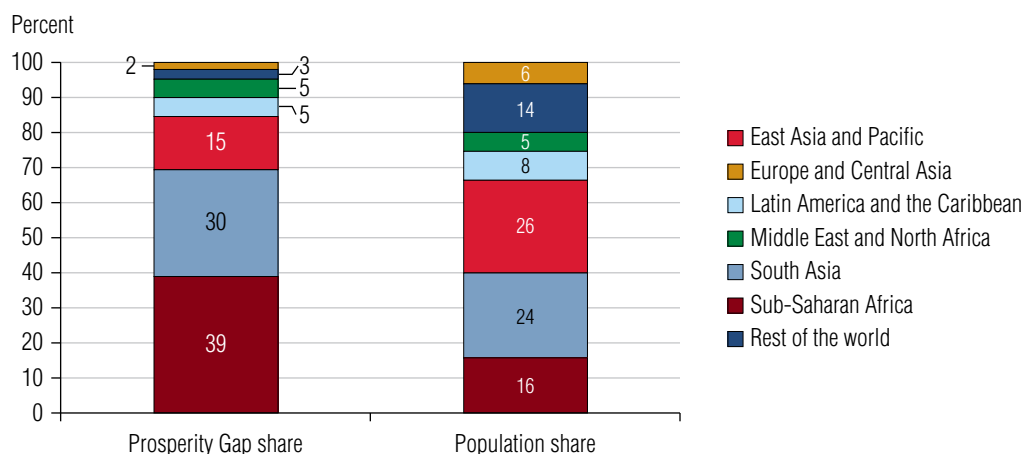
So, the society's Prosperity Gap is 3.7. This means that, on average, everyone's incomes need to be multiplied by 3.7 to reach the \$25 per day standard. If the five people in the example were the only people in the world, the Global Prosperity Gap would be 3.7.

Source: World Bank.

Note: All \$ values are in 2017 purchasing power parity dollars.

**FIGURE 0.4****Stalled progress in Global Prosperity Gap reduction****a. Progress in reducing the Global Prosperity Gap**

*(continued)*

**FIGURE O.4****Stalled progress in Global Prosperity Gap reduction** *(continued)***b. The poorest regions are furthest behind and contribute more to the Global Prosperity Gap relative to their population in 2024**

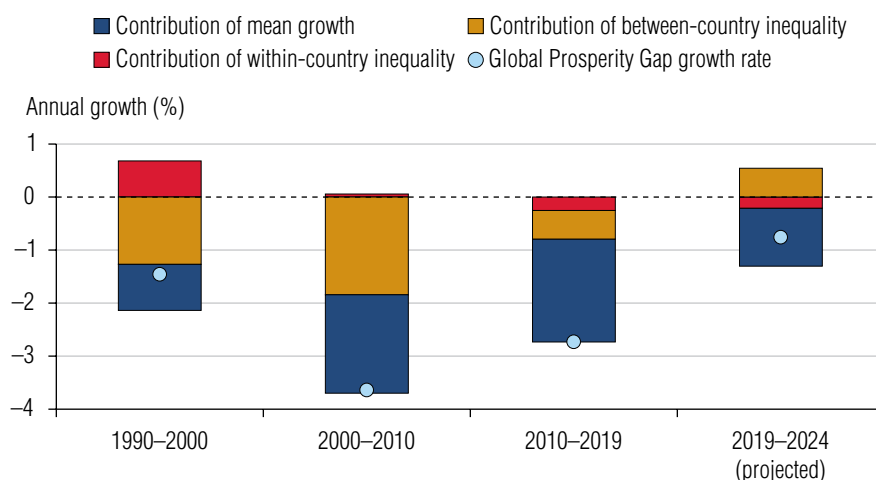
Source: World Bank, Poverty and Inequality Platform (version September 2024), <https://pip.worldbank.org/>.

Note: The estimates after 2022 are nowcasts (see annex 1A for further details on nowcasts and forecasts). See box O.1 for a calculation of the Global Prosperity Gap. Regional contribution (percent) of the Global Prosperity Gap in 2024 is shown in panel b, compared with the regional population shares (see chapter 2 for further details). The label values may not add to 100 percent due to rounding.

Historically, gains in global prosperity have been driven by both overall economic growth and a decline in inequality between countries. Between 1990 and 2024, the Global Prosperity Gap improved at an annual rate of 2.34 percent, with global mean income increasing at an annual rate of 1.48 percent and global inequality declining by 0.86 percent. The decline in global inequality has been driven by a decline in the inequality between countries, which is measured by the disparities in average living standards across countries (Kraay et al. 2023; Lakner and Milanovic 2016). However, from 2019 to 2024, the gains in prosperity were limited by a slowdown of global growth during the COVID-19 pandemic as well as an increase in global inequality driven by a divergence in average incomes between countries (figure O.5).

**FIGURE 0.5**

### Limited gains in the Global Prosperity Gap due to a slowdown of global growth and an increase of global inequality during the COVID-19 pandemic



Source: World Bank calculations using data from the Poverty and Inequality Platform (version September 2024), <https://pip.worldbank.org/>.

Note: A decrease in the Prosperity Gap is an improvement in welfare. Growth is calculated as the log difference. Change in the Prosperity Gap is the sum of the (negative) growth in the mean income and the decline in total inequality. Positive growth in the mean decreases (improves) the Prosperity Gap; thus, in the figure, the contribution of the mean growth is shown as the negative of mean growth. That is, for all the periods in the graph, there was positive growth in the global mean, which is displayed as a negative contribution. Inequality is measured using the inequality measure related to the Prosperity Gap. Change in total inequality is the sum of changes in between-country and within-country inequality. See annex 2B for further details.

### The number of economies with high inequality has fallen, and high-inequality economies are now concentrated in Latin America and the Caribbean and in Sub-Saharan Africa

High inequality reflects a lack of opportunities for socioeconomic mobility, which can further hinder prospects for poverty reduction and shared prosperity over time. In countries where levels of income or consumption inequality are higher, an increase in growth results in a smaller reduction in poverty (Bourguignon 2003). Simulations have shown that declines in inequality can have a significant effect on reducing poverty (Bergstrom 2022; Lakner et al. 2022). However, this double dividend has been missed in some cases. Poverty reduction in Sub-Saharan Africa has been slow, largely because of slow growth. But a lack of improvement in equality has also been a missed opportunity for poverty reduction (Sinha, Inchauste, and Narayan 2024) in a region where many countries have abnormally high levels of inequality.

There is a broad consensus that when inequality in a country is high it is harmful. High levels of inequality within a country can be symptomatic of the inability of some population groups

to rise along the economic and social ladder for reasons that are outside of their control, such as their gender, race, parental background, or place of birth. This is not only unjust but also inefficient, because it means that some population groups cannot participate in economic activity using their full potential. Furthermore, the inequality of outcomes and opportunities in the present directly affects the opportunities for the next generation (Atkinson 2015; van der Weide et al. 2024; World Bank 2017). For instance, unequal societies tend to exhibit greater inequalities among schools or neighborhoods, so inequalities today have a strong effect on children's opportunities (Alesina et al. 2021; Asher, Novosad, and Rafkin 2024; Chetty, Hendren, and Katz 2016). This is also important as societal frictions have been linked to actual or perceived high inequality levels—for example, the social discontent seen during the Arab Spring (World Bank 2016). Concurrently, lower inequality is correlated with higher levels of political and social stability as well as social cohesion (World Bank 2016). Evidence suggests that high inequality has been disproportionately reducing political participation among low-income voters relative to high-income voters (Erikson 2015) and at the same time increasing the share of political contributions of high-income households (Cagé 2023).

Inequality is a broad concept, and it should be studied with a broad range of measures to capture its multiple dimensions (see box O.2). This report focuses on a specific measure of inequality—the Gini index—and a specific threshold to differentiate high-inequality economies—a Gini index above 40. The Gini index is based on income (or consumption) using household surveys, which are the only ones available to monitor inequality globally. Chapters 2 and 4 in the report discuss the indicator in more detail as well as implications for measurement and interpretation.

Using the latest survey available for each economy, 49 out of 166 economies had a Gini index above 40 (map O.1).<sup>6</sup> About 1.7 billion people lived in high-inequality economies in 2022. The number of economies with high inequality has fallen, from 66 a decade earlier to 49 in the most recent year. At the same time, the percentage of people living in economies with high inequality has remained roughly the same in the past decade (about 22 percent of the world population).

At present, high-inequality economies are concentrated in Sub-Saharan Africa and Latin America and the Caribbean. Over 80 percent of the economies in Latin America and the Caribbean had a Gini index above 40 in their most recent household survey. Within Sub-Saharan Africa, inequality is highest in Southern and Central Africa.<sup>7</sup> High income or consumption inequality is more prevalent in low- and middle-income economies as well as economies affected by FCS (figure O.6, panel b). Around one-third of low-income economies and two-fifths of middle-income economies exhibit high levels of inequality.<sup>8</sup> For FCS economies with data, two-fifths of them have high levels of inequality. Of the 68 IDA countries with data on inequality, less than 15 percent were in the low-inequality group and 37 percent were in the high-inequality group.

**BOX 0.2****Concepts of welfare and differences in measured inequality**

The level of inequality depends on the underlying concept of welfare that is captured. Economic inequality is generally captured in three different welfare spaces—income, consumption, or wealth—each reflecting different aspects of welfare and different observed levels of inequality. Whereas *income* signals an individual’s or family’s potential buying power, *consumption* expenditure is the realization of that buying power. Households generally do not consume all their income. What is left over (that is, savings), tends to be greater for the richer households compared with poorer households. This implies that the distribution of consumption tends to be more equal than the distribution of income (see annex 2D and chapter 4 for further detail). Whereas income and consumption both represent the flow of resources—that is, how much one earns or spends in a given time frame, typically a year—*wealth* represents a stock of resources such as accumulated assets, including property, corporate stock holdings, or savings, as well as other investments that can be inherited or acquired. For example, a house (or stock) is wealth, and the rent (or dividends) is the income generated from this asset. The distribution of wealth tends to be much more unequal than either income or consumption.<sup>a</sup>

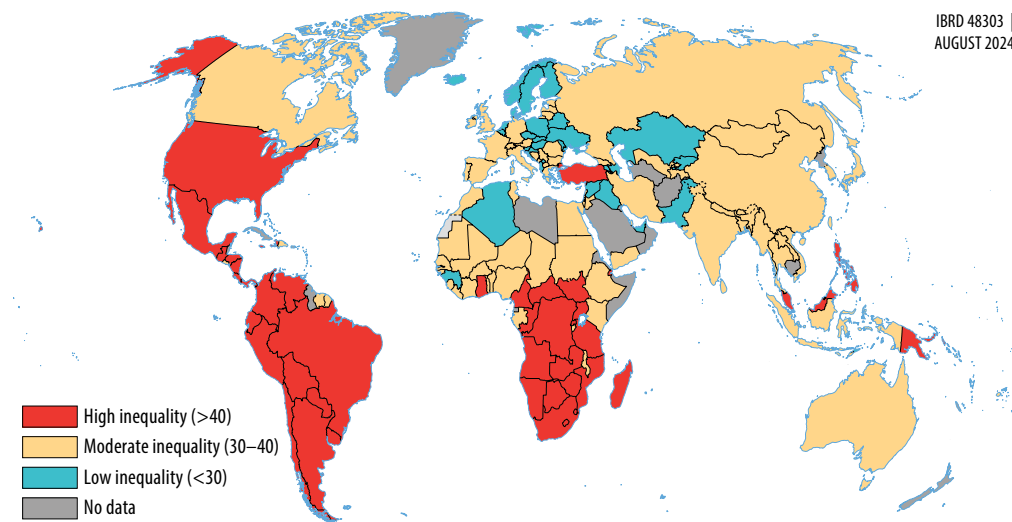
These concepts are interlinked. For instance, recent increases in income inequality have been attributed to the higher rate of return of wealth among the richest (Piketty 2014). Nevertheless, these concepts of welfare are distinct in several crucial ways. Unlike income, which can fluctuate annually, wealth tends to accumulate over time and is more resistant to short-term economic changes. This likely makes wealth a better indicator of long-term resilience and a better signal for economic opportunity or mobility. However, among the three concepts outlined here, wealth remains the most difficult to capture. This is in part due to measurement challenges that also plague income measurement in developing countries, as well as the potential to “hide” wealth offshore, which is a concern even for the countries with the most comprehensive data (Zucman 2015). Given these challenges, this report uses income or consumption depending on the type of survey available.

a. For example, see the studies by Saez and Zucman (2020) for the United States and by Alvaredo, Atkinson, and Morelli (2018) for the United Kingdom.

This report also notes that more analytical work is needed to better capture top incomes in household surveys and adjust for methodological differences between countries—such as differences between income and consumption—to improve inequality monitoring (see chapter 4).

MAP 0.1

## Income and consumption inequality among economies

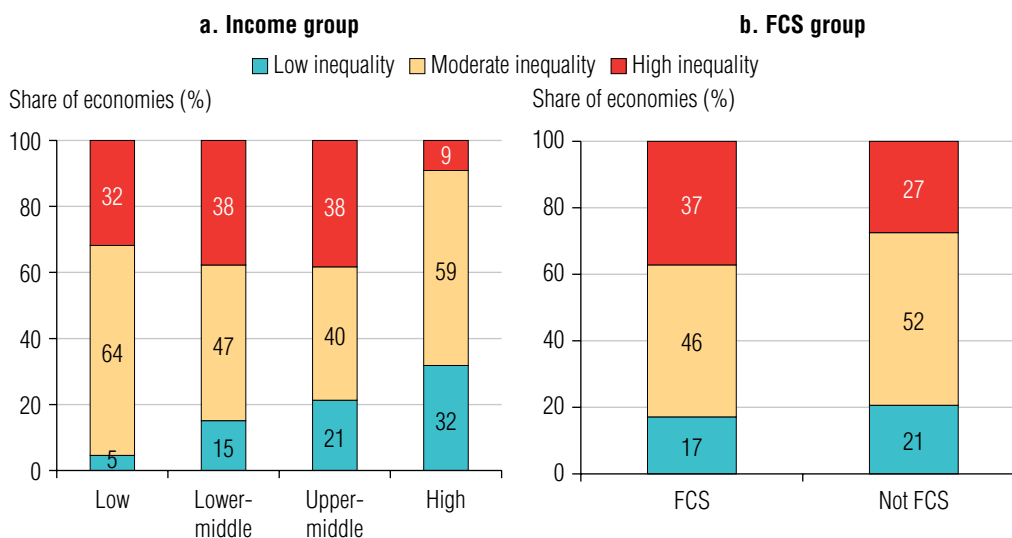
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Sources: World Bank, Poverty and Inequality Platform (version September 2024), <https://pip.worldbank.org/>; Haddad et al. 2024.

Note: The map presents Gini indexes for the latest available survey (after 2000), which measures the inequality of income or consumption, depending on the economy. High-inequality economies have a Gini index above 40, moderate-inequality economies are those with a Gini index between 30 and 40, and low-inequality economies are those with a Gini index below 30. See annex table 2F.1 for the economy classifications, Gini indexes, year of survey, and the type of welfare, income, or consumption used.

FIGURE 0.6

## Poorer and conflict-affected economies tend to be more unequal



Source: World Bank, Poverty and Inequality Platform (version September 2024), <https://pip.worldbank.org/>.

Note: FCS = fragile and conflict-affected situations. High-inequality economies have a Gini index above 40, moderate-inequality economies are those with a Gini index between 30 and 40, and low-inequality economies are those with a Gini index below 30. The data cover 166 economies with at least one household survey in the Poverty and Inequality Platform between 2000 and 2022. Gini is calculated from the latest survey year. Income group and FCS status are based on World Bank fiscal year 2024 lists. The label values may not add to 100 percent due to rounding.

## Risks of gain reversals remain high for the poorest countries

Although the global distribution of income has improved since 1990, a sizable portion of the population continues to live close to the poverty lines discussed in this report (figure O.7). This means that even moderate shocks can rapidly push people back into extreme poverty. Recent shocks highlight this risk. For example, in the Middle East and North Africa, the extreme poverty rate was below 3 percent between 2000 and 2014. Today, almost 7 percent of people in the region live in extreme poverty due to increased fragility and conflict. Another example is the COVID-19 pandemic, which pushed about 73 million people worldwide into extreme poverty in a single year, predominantly in lower-income countries. The pandemic has shown how shocks can have a long-lasting effect on welfare. Shocks are expected to increase with more frequent and severe extreme weather events.

### ***Nearly one in five people is likely to experience a severe weather shock that they are going to struggle to recover from***

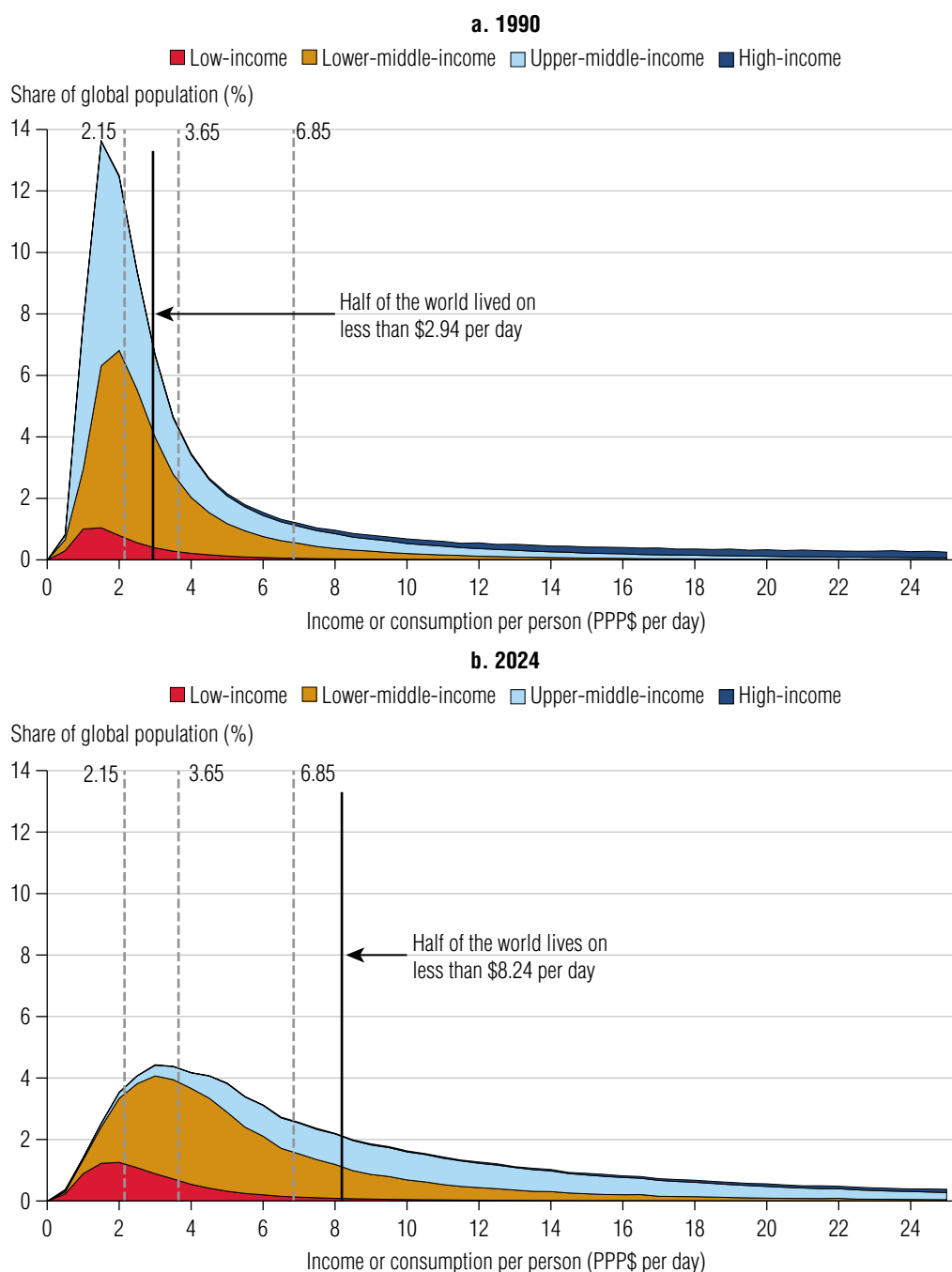
Climate change will likely lead to an increasing occurrence and severity of extreme weather events (IPCC 2023). Since the 1970s, floods, storms, droughts, and heatwaves are occurring more often. Every year, millions of households are pushed into or trapped in poverty by natural disasters (Baquie and Fuge 2020; Hallegatte and Walsh 2021; Hill and Porter 2017; Kochhar and Knippenberg 2023; Pape and Wollburg 2019). In addition, droughts and heatwaves have been occurring at a higher frequency in countries where poverty rates are already high.

The World Bank has developed an indicator that tracks the number of people at high risk from climate-related hazards across the world (World Bank, n.d.). Nearly one in five people (17.9 percent) is at high risk from climate-related hazards globally, meaning they are likely to experience a severe climate shock in their lifetime that they will struggle to recover from. People are considered at risk from climate-related hazards if they are exposed to a hazard (specifically floods, heat, drought, cyclones) *and* are vulnerable to experiencing severe welfare effects from these events when they occur. Vulnerability, which is a person's propensity or predisposition to be adversely affected, is what moves people from being exposed to being at risk. Box O.3 summarizes how the indicator was constructed.

Countries can have similar shares of their population exposed, but different shares of their population at risk (map O.2). South Asia is the region with the largest share of its population exposed to shocks (88.1 percent), followed by East Asia and Pacific (67.9 percent). But Sub-Saharan Africa has the largest share of people who are at high risk from extreme weather events, even though the share of people exposed is smaller than Asia. In Sub-Saharan Africa, nearly the same proportion of people exposed to an extreme weather event is also at high risk (39.2 percent and 37.3 percent, respectively, of the total population). In comparison, even though two-thirds of the population in East Asia and Pacific is exposed, less than one-tenth is at risk. Vulnerability is lowest in North America, with less than 1 percent of the population at high risk, despite 31 percent of the population being exposed to a weather shock. In absolute terms, South Asia has the largest number of people at high risk from extreme weather events (594 million people, or 32 percent of its population).

**FIGURE 0.7**

**Income levels in the world have grown between 1990 and 2024, but many people remain vulnerable to falling back into poverty**



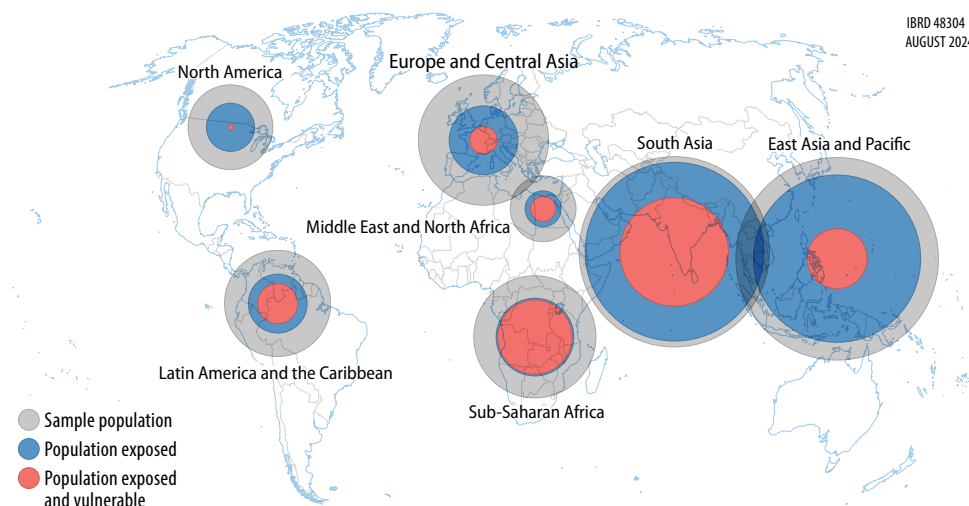
Source: World Bank, Poverty and Inequality Platform (version September 2024), <https://pip.worldbank.org/>.

Note: PPP\$ = purchasing power parity dollars. This figure shows the distribution of the population over income and consumption levels in 1990 and in 2024, cut off at \$25 per person per day and expressed in 2017 purchasing power parity dollars. More than 86 percent of the global population lived below the \$25 per person per day threshold in 1990 and about 80 percent live under the threshold in 2024.



**MAP 0.2**

**Large populations are exposed to extreme weather events in South Asia and East Asia and Pacific, and vulnerability is high in Sub-Saharan Africa**



*Source:* World Bank calculations using data from the World Bank Group Scorecard indicator: the percentage of people at high risk of climate-related hazards globally, <https://scorecard.worldbank.org/en/scorecard/home>.

*Note:* Gray circles depict the overall population in the region, blue circles depict the population exposed to any type of hazard, and red circles depict the population exposed to any type of climate-related hazard and vulnerable along at least one dimension. There is a blue circle in Sub-Saharan Africa, but it is barely visible in the figure because almost everyone in Sub-Saharan Africa who is exposed is also vulnerable. The circles represent regions; their placement on the map does not have any meaning. See annex 3B for more details.

**BOX 0.3**

**How is the number of people at risk from extreme weather hazards calculated?**

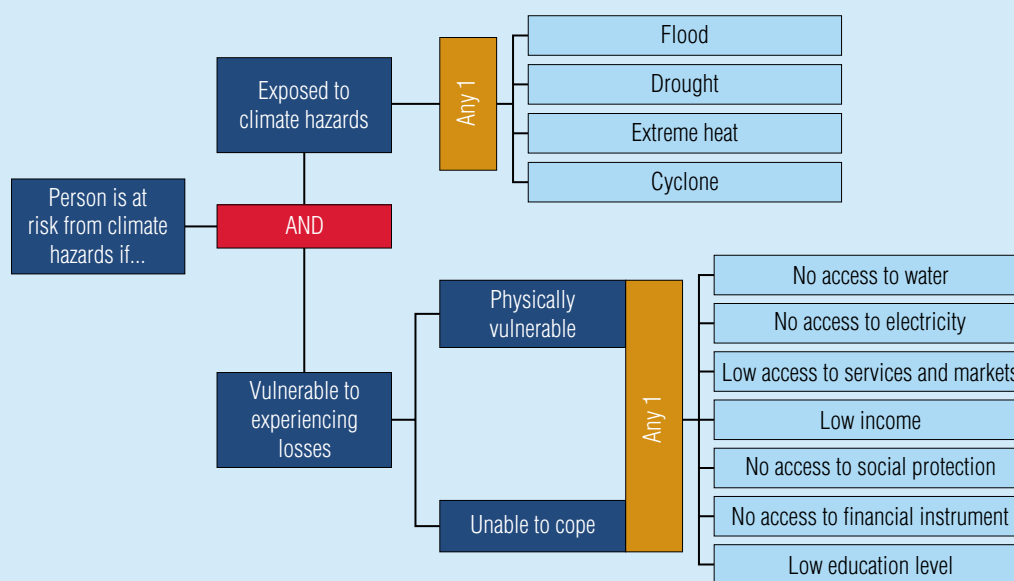
The percentage of people at high risk from climate-related hazards globally is defined as the number of people globally who are both exposed to a set of key climate-related hazards (floods, droughts, cyclones, and heatwaves) and are also highly vulnerable (that is, have a propensity to be adversely affected or unable to cope with the effects), as a share of global population. People are counted as being at high risk from climate-related hazards if they are exposed to at least one hazard and are identified as highly vulnerable on at least one dimension of vulnerability.

(continued)

**BOX 0.3****How is the number of people at risk from extreme weather hazards calculated?** *(continued)*

This indicator follows the traditional risk framework in which risk is the combination of hazard, exposure, and vulnerability. The hazard is the potential occurrence of an extreme event, exposure indicates the people affected in the hazard's location, and vulnerability is the propensity or predisposition of these people to be adversely affected. Here, vulnerability is proxied by a set of indicators measuring (a) the physical propensity to experience severe losses (proxied by the lack of mobility and access to basic infrastructure services, such as water and electricity) and (b) the inability to cope with and recover from losses (proxied by low income, not having education, not having access to financial services, and not having access to social protection). Figure BO.3.1 summarizes the measure.

The indicator is based on a sample of 103 countries with data on all vulnerability dimensions and covers 86 percent of the world population. The latest available data within three years, before or after 2021, are used. The indicator currently considers a subset of climate hazards using historical data, a subset of vulnerability dimensions, and an aggregation methodology similar to approaches used for multidimensional poverty measures. Chapter 3 provides more details on how the indicator is constructed, and chapter 4 discusses measurement challenges with respect to the indicator in more detail, as well as some areas in which the indicator will be updated in future rounds.

**FIGURE BO.3.1****Measuring the vulnerability of people at high risk from climate-related hazards**

Source: World Bank Group Scorecard indicator: the percentage of people at high risk of climate-related hazards globally, <https://scorecard.worldbank.org/en/scorecard/home>.

Without more rapid action, climate-related hazards will likely intensify. In 2022, the three main anthropogenic greenhouse gases—carbon dioxide (CO<sub>2</sub>), methane, and nitrous oxide—reached record levels, trapping nearly 50 percent more heat than in 1990.<sup>9,10</sup> Greenhouse gas emissions, which lead to global warming, are linked to the occurrence and severity of extreme weather events (IPCC 2023). If GHG emissions are not reduced, climate risks will worsen. While economic growth has become less carbon intensive, progress in reducing GHG emissions per unit of growth has slowed down recently (chapter 3 discusses in more detail the trends and patterns in GHG emissions). That progress needs to be speeded up.

To summarize, comparisons between exposure and risk show that risks can be mitigated by reducing vulnerability. While exposure in Sub-Saharan Africa is not as high as in other regions, high levels of vulnerability keep people at high risk. The availability in the region of factors that are important for resilience, such as access to basic infrastructure services (for example, water and electricity), income, education, and financial services, is limited. For instance, only 50 percent of the population in Sub-Saharan Africa has access to electricity, and 65 percent has access to basic drinking water.<sup>11</sup> These deprivations make people more vulnerable to adverse shocks.

## **Pathways: Eradicating poverty and boosting shared prosperity on a livable planet requires managing trade-offs**

Ending extreme poverty and boosting shared prosperity on a livable planet requires actions in two areas: delivering faster and inclusive growth (that is, growing labor incomes by delivering more and better jobs and investing in the productive capacity of the poor) and protecting people from climate shocks (that is, enhancing risk management and accelerating climate change mitigation).

### **Progress requires more economic growth and climate actions**

#### ***Delivering faster and more inclusive growth***

The 1990 World Development Report highlighted that the most effective way to improve the lives of the poor is through (a) promoting economic growth that uses labor, the poor's most abundant asset; (b) investing in human capital, particularly primary education, and health care; and (c) promoting well-targeted social safety nets. These priorities are still appropriate more than 30 years later and are even more urgent given the losses in human capital due to COVID-19 and increasing environmental shocks.

Enabling the poor to benefit more from economic growth will require better-functioning labor markets, as labor is the main source of income for the poor (World Bank 2013a). It is therefore crucial to ensure that the conditions are in place for strong private sector-led growth—the main creator of jobs. Governments can support job creation by ensuring that the fundamental elements of macroeconomic stability, a business-friendly environment, and the rule of law are in place. Developing effective job strategies leading to sustained labor productivity enhancements (which are essential for fostering economic growth), reducing poverty, and ensuring inclusive

outcomes in the long term depend heavily on essential job transformations across sectors, occupations, and space (see box 1.5 in chapter 1). For example, the transition from agriculture to nonagricultural sectors is vital for economic growth, and it is marked by substantial productivity gains. The move from rural to urban areas is associated with higher wages and productivity if urban labor markets work well. Completing these job transitions is essential to closing massive income gaps and combatting poverty. Evidence suggests that progress in these transitions can significantly reduce poverty rates by shifting people into more productive activities.<sup>12</sup>

Growth that is most effective in poverty reduction creates opportunities for those at the bottom of the income distribution. If poorer households possess lower productive capacity, the potential for income growth and overall economic growth is more limited (López-Calva and Rodríguez-Castelán 2016).<sup>13</sup> Moreover, growth that reduces poverty requires structural conditions that enable socioeconomic mobility, thereby ensuring that everyone can use their full productive capacity.

Enabling the poor to benefit more from economic growth will require substantive investments in human capital, basic infrastructure, improved opportunities and access to markets, and progressive fiscal policies that reduce inequality and raise domestic revenue (Lakner et al. 2022; World Bank 2022e; Wu et al. 2024).

### ***Protecting people from climate shocks by enhancing risk management***

A large body of evidence highlights the importance of risk management for increasing resilience to negative shocks (World Bank 2013b). Risk management must integrate the ability to prepare for risks with the capacity to respond effectively afterward. Building on the foundational work of Ehrlich and Becker (1972), preparation should encompass three proactive measures: self-insurance, market insurance, and self-protection. In addition to these three measures, a comprehensive risk management strategy includes support for sensible coping measures. Better knowledge can lead to more informed decisions about allocating resources between insurance and protection (World Bank 2013b). Similarly, improved insurance and protection can make coping with risks less challenging and less costly. Effective ways to promote resilience to climate risks are discussed in more detail in box 3.4 in chapter 3.

### ***Investments in education and infrastructure are fundamental for risk management***

Development strategies that bolster households' productivity and income-generating capacities often concurrently enhance their ability to manage climate risks by enhancing prevention and coping (Doan et al. 2023; Hallegatte and Rozenberg 2017; IPCC 2022a) and should be prioritized in poorer and more vulnerable countries.

Investing in education is fundamental to increasing incomes, but it also allows households to better prepare and cope with shocks. One important aspect of risk management is knowledge, and an increase in education leads to an increase in knowledge. Furthermore, evidence suggests that households with higher levels of education have a better understanding of and ability to process risk information such as weather forecasts and early warnings (Hoffmann and

Muttarak 2017; Muttarak and Lutz 2014; Muttarak and Pothisiri 2013). In addition, households with more education are less likely to engage in negative coping strategies (Dimitrova 2021; Hill and Mejia-Mantilla 2017; Le and Nguyen 2023).

Improving infrastructure increases access to markets and productivity and also supports risk management and resilience. For example, better infrastructure can improve access to energy, water, and communication, which can allow households to better cope with shocks when they occur. Infrastructure improvements are beneficial for both economic development and resilience, but unlocking synergies depends on how infrastructure is built. Infrastructure investments need to account for future risks, such as an increased frequency and intensity of flooding (Hallegatte et al. 2016; Hallegatte, Rentschler, and Rozenberg 2019). It is important to consider that constructing infrastructure in a resilient manner improves its cost-effectiveness in the long run, and higher up-front investment costs can reduce damages and repair costs in the future (Hallegatte, Rentschler, and Rozenberg 2019).<sup>14</sup>

### *Expanding insurance is also crucial*

Beyond these foundational investments in human capital and infrastructure, it is important to strengthen insurance mechanisms that protect individuals from severe poverty and prevent deeper hardship during crises (Gill, Revenga, and Zeballos 2016).

Financial development is important to enable access to credit, formal insurance, and other financial products that can help households and businesses manage climate risk. One of the primary objectives of financial inclusion is to enhance households' capacity to manage common but unpredictable events that entail financial expenses. Mobile money is an example: when a weather crisis strikes, mobile money can allow households to quickly receive transfers or remittances from relatives or migrant family members who live elsewhere (Batista and Vicente 2023; Jack and Suri 2014). For instance, Sub-Saharan Africa has shown significant growth in financial inclusion driven by mobile money account adoption. Yet many adults still conduct transactions in cash, which suggests opportunities to increase financial inclusion through continued payment digitalization (Demirgüç-Kunt et al. 2022). Many people exposed to severe climate hazards are not financially included (figure O.8). These issues are particularly prevalent in Sub-Saharan Africa and the Middle East and North Africa regions, where about one in three people exposed to extreme weather events does not have a financial account (including mobile money).

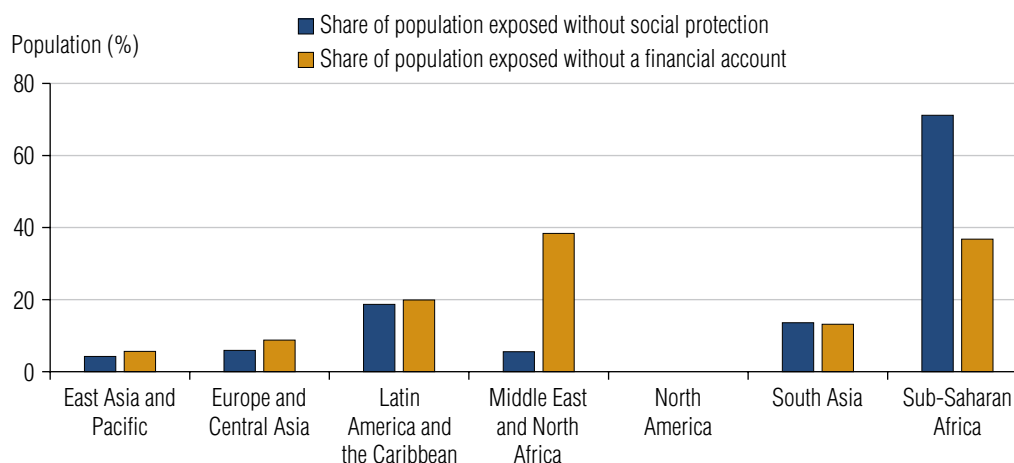
Developing insurance markets and increasing the demand for insurance is central. Household demand for insurance is constrained by several factors. In 2023, the estimated global economic losses due to natural disasters was \$380 billion,<sup>15</sup> of which only about one-third were covered by insurance. In low-income countries, less than 10 percent of losses were covered by insurance, forcing governments to redirect limited development funds toward disaster recovery. Despite its importance for risk management, access to insurance remains insufficient, leaving billions unprotected. One important challenge is affordability, as the demand for insurance is price sensitive (Cai, de Janvry, and Sadoulet 2020; Cole et al. 2013; Hill et al. 2019; Karlan et al. 2014; McIntosh, Sarris, and Papadopoulos 2013). Interventions to reduce prices (for example, reducing reinsurance costs or reducing taxes on insurance products)

can increase demand. Moreover, insurance is a more complex financial product than savings or credit products, and financial literacy training also increases demand for insurance (Cai and Song 2017; Vasilaky et al. 2020). Liquidity constraints also limit the use of insurance, but moving payment of the insurance premium to the end of the coverage period can increase demand (Casaburi and Willis 2018; Liu, Chen, and Hill 2020).

Noncontributory social assistance programs, or social safety nets, aimed at those who are chronically or extremely poor also serve as last-resort insurance. The use of adaptive social protection can help vulnerable people manage risks from climate-related hazards by timely transferring resources to disaster victims (World Bank Group 2023). Post-disaster transfers have a benefit-cost ratio above 1.3 (Hallegatte et al. 2016). For example, the Philippines supported recipients of its flagship social safety net program, the Pantawid Pamilyang Pilipino Program, when they were hit by Typhoon Yolanda in 2013 (World Bank 2022c). In Kenya, the Hunger Safety Net Programme provided aid to over 100,000 additional households in response to droughts during 2015 and issued a special transfer to 200,000 households in anticipation of expected droughts (Hallegatte et al. 2016). Anticipatory cash transfers before the traditional humanitarian response would normally arrive can have a significant additional welfare effect (Pople et al. 2021). Yet, in Sub-Saharan Africa, 71.2 percent of the people exposed to severe cyclones, floods, droughts, and heatwaves are neither covered nor contributing to social protection and are unlikely to receive public support when one of these severe events occurs (figure O.8). Additionally, not all of those covered will have their climate risk fully covered by public safety nets.

**FIGURE O.8**

**A large share of the population in Sub-Saharan Africa does not have access to social protection or a financial account**



*Source:* World Bank calculations using data from the World Bank Group Scorecard indicator: the percentage of people at high risk of climate-related hazards globally, <https://scorecard.worldbank.org/en/scorecard/home>.

*Note:* The figure shows the share of population exposed to any hazard that neither receives social protection benefits nor contributes to social insurance, and the share of population exposed to any hazard that does not have a financial account (including mobile money). For North America, the share of population exposed to any climate-related hazard and without social protection or access to a financial account is zero. See annex 3B in chapter 3 for more details.

While safety nets serve as last-resort insurance, they need to be complemented by social insurance programs designed to protect a broader segment of the population from falling back into poverty because of individual or systemic shocks. Additionally, global insurance mechanisms are essential to help countries manage the effects of large-scale natural disasters affecting multiple nations or pandemics.

*Basic systems to deliver timely information on climate risk are fundamental*

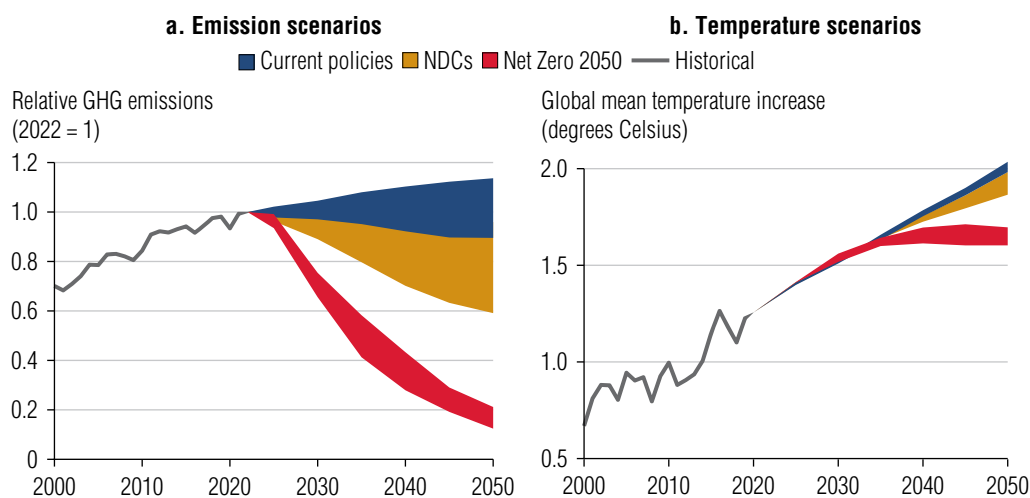
Climate risk management can be enhanced through expanded early warning systems, hazard maps, and climate knowledge. In Bangladesh, Cyclone Bhola caused 300,000 deaths in 1970, and Cyclone April killed 138,000 people in 1991. Since then, investments in resilient infrastructure, road networks, and early warning systems have significantly reduced fatalities. Cyclone Sidr in 2007 resulted in 3,363 deaths, Cyclone Fani in 2019 caused five, and in 2020, Bangladesh evacuated 2.4 million people for Cyclone Amphan, with 20 fatalities. Yet, one-fifth of the world's population is not covered by an early warning system, even though these systems save lives and greatly reduce climate-related disaster losses in developing countries.<sup>16</sup>

*Faster economic transformations to reduce the emissions intensiveness of growth*

Faster transformations of the global economy are necessary to limit global warming and reduce climate risks.<sup>17</sup> Since 2015, when the Paris Agreement was adopted, GHG emissions were expected to rise by 16 percent until 2030 based on existing policies. At present, the expected increase is 3 percent, showing that transformations have already occurred over the past years. However, figure O.9 shows that with current policies, temperatures are projected to increase close to 2°C. Even if currently pledged Nationally Determined Contributions (NDCs)<sup>18</sup> were to be enacted, emissions would not fall enough to limit global warming to below 1.5°C (IPCC 2022b). Only a Net Zero 2050 scenario, which is shaped by stringent climate policies and innovation, would have the chance to limit warming to around 1.5°C.<sup>19</sup> A net-zero path would require emissions to decline by 80 percent in advanced economies and 60 percent in emerging market and developing economies by 2035 compared with the 2022 level (IEA 2023b).

Both expanded use of renewable energy and improved energy efficiency are necessary. The energy sector produces three-quarters of global emissions. Despite progress, in 2022 renewable sources added up to just 7 percent of total global energy, up from 4 percent in 1990 (see chapter 3 of the full report). Petroleum (with other liquid fuels) and coal remain the largest sources of energy (32 percent each). To reduce GHG emissions, the reliance on coal and oil will need to be brought down substantially. Doubling the pace of progress in energy efficiency could cut energy bills by one-third and constitute 50 percent of CO<sub>2</sub> reductions by 2030 (IEA, IRENA, et al. 2023). Further advancements and adoption of technology have the potential to speed up the necessary transformations for cutting GHG emissions. Without the growth of key clean energy technologies since 2019 (for example, solar photovoltaic [PV], wind power, heat pumps, electric cars), the increase in emissions would have been three times larger (IEA 2023a).

Carbon pricing policies are key to internalize the externalities of greenhouse gas emissions, incentivize efficiency gains, reduce the reliance on fossil fuels, and spur innovation in less emission-intensive technologies (World Bank 2024f). The coverage of carbon taxes and emission trading systems (ETS) has increased from 0.15 percent of global emissions in 1990 to 24 percent in 2024. Despite the progress, three-quarters of global emissions remain unaccounted for, and many emissions have negative effective prices due to pervasive fossil fuel subsidies. Thus, while coverage is increasing, the global total carbon price—which takes into account the additional net effect of indirect pricing from fossil fuel taxes and subsidies—has not increased much since 1994 (Agnolucci et al. 2023). Repurposing fossil fuel subsidies is thus important to remove market distortions and to help move resources to sustainable projects (Damania, Balseca, et al. 2023). Investing in research and development and digitalization is crucial to spur innovation and transitions.

**FIGURE 0.9****Projections of emissions and temperatures to 2050**

*Sources:* Panel a: Network for Greening the Financial System (NGFS) 2023, harmonized to historical 2022 emissions estimations from EDGAR data. Panel b: World Bank calculations using projections from NGFS 2023, harmonized to historical 2020 temperature estimations from IPCC 2021.

*Note:* EDGAR = Emissions Database for Global Atmospheric Research; GHG = greenhouse gas; IPCC = Intergovernmental Panel on Climate Change; NDCs = Nationally Determined Contributions. Ranges for each policy scenario are based on four different projection models: GCAM 6.0, MESSAGEix-GLOBIOM 1.1-M-R12, REMIND-MAGPIE 3.2-4.6 Integrated Physical Damages [95th-high], and REMIND-MAGPIE 3.2-4.6 Integrated Physical Damages (median). In panel b, temperature increases are relative to the average global surface temperature of the period 1850–1900 (pre-industrial) (IPCC 2021). Temperature projections refer to the AR6 Surface Temperature increase (50th percentile) from the MAGICC 7.5.3 model.



## Informed decisions require understanding trade-offs and synergies and managing transition costs

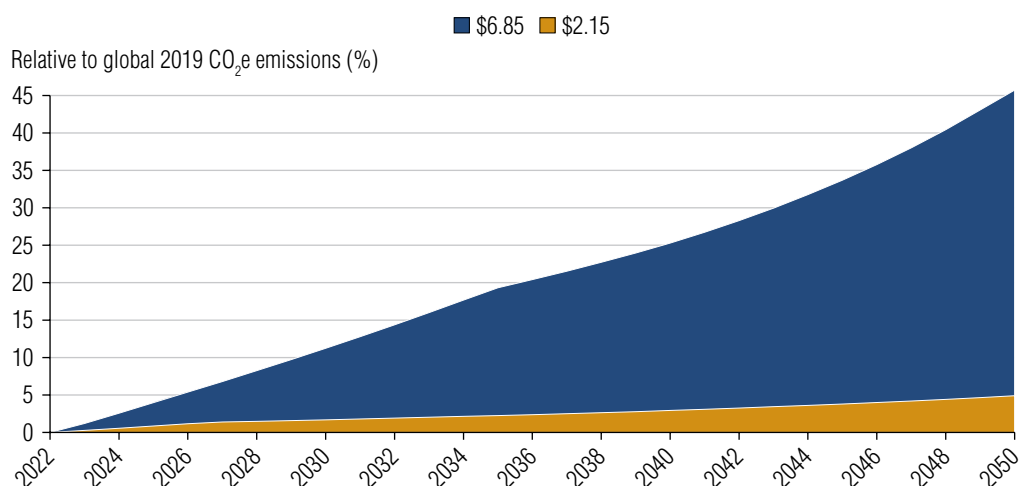
To inform decisions, it is important to understand the trade-off between growing incomes and lowering GHG emissions, find ways to scale up synergistic policies that can help advance on multiple fronts or reduce trade-offs, and manage transition costs to specific groups and communities.

### *The trade-off between growing incomes and lowering emissions*

Past economic growth and poverty reduction have been associated with high GHG emissions. This marks an apparent tension between advancing on poverty reduction, growing people's incomes, and reducing emissions. Unsurprisingly, research suggests that additional emissions attributed to moving individuals out of *extreme* poverty does not materially undermine climate goals, as emissions of low-income households are miniscule (Bruckner et al. 2022). Wollburg, Hallegatte, and Mahler (2023) calculate the additional economic growth that would be required to eradicate extreme poverty, and the additional emissions implied using historical emission intensities (2010–19). Eradicating extreme poverty would entail 4.7 percent more emissions than in 2019 (figure O.10). This number becomes larger at higher poverty lines. At \$6.85 per person per day, additional emissions would reach 46 percent with historical emission intensities (figure O.10). This trade-off is different across countries, depending on their levels of poverty and the sources of economic growth and emission levels. Yet, it is clear that the foregone reduction in GHG emissions from extreme poverty eradication is minimal.

**FIGURE O.10**

**Additional emissions associated with poverty alleviation increase with the level of ambition**



Source: Wollburg, Hallegatte, and Mahler 2023.

Note: CO<sub>2</sub>e = carbon dioxide equivalent. The figure shows additional emissions relative to 2019 if poverty were to be alleviated at the \$2.15 and \$6.85 per person per day poverty lines (expressed in 2017 purchasing power parity dollars) using historical emission intensities.

## ***Synergistic policies can ameliorate the trade-offs***

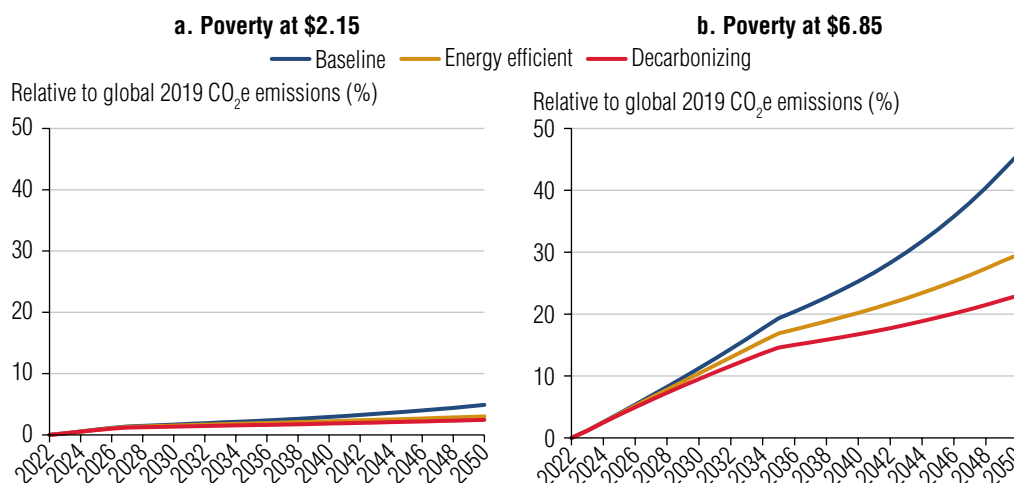
Investment in renewable energy and energy efficiency offers multiple benefits beyond reducing emissions

Studies show that renewable energy investments not only help lower emissions but also meet growing energy demands and improve energy security (World Bank Group 2023). For some countries with low energy access, it can be more cost-effective to develop renewable energy infrastructure than to expand fossil fuel generation (World Bank Group 2023).<sup>20</sup> Solar and wind energy are particularly efficient for connecting sparsely populated areas, and lower-income regions can benefit directly from them. For example, in countries such as Uzbekistan and Côte d'Ivoire, where gas supplies are decreasing and electricity demand is rising, transforming power systems to renewable energy is the most cost-efficient solution (World Bank Group 2023).

These investments are also synergistic in the sense that they can ease the trade-off between economic growth, poverty reduction, and emissions. Simulations indicate that investing in renewable energy and energy efficiency combined would in fact lower the additional emissions that accompany the economic growth needed to reduce poverty by more than half (figure O.11) (Wollburg, Hallegatte, and Mahler 2023).

**FIGURE O.11**

**Lower emissions from poverty alleviation projected with energy efficiency and decarbonization**



Source: Wollburg, Hallegatte, and Mahler 2023.

Note: CO<sub>2</sub>e = carbon dioxide equivalent. The figure shows additional emissions relative to 2019 if poverty were to be alleviated at the \$2.15 and \$6.85 per person per day poverty lines (expressed in 2017 purchasing power parity dollars). The baseline scenario uses historical emission intensities. Energy-efficient and decarbonizing scenarios assume that all countries achieve the top 10 percent historical performance in energy efficiency and decarbonization.

## Tackling air pollution is a clear win-win strategy that should be prioritized

Air pollution is a leading environmental risk to people's health (World Bank 2022a). Air pollution is estimated to be responsible for a staggering 6.7 million deaths<sup>21</sup> annually worldwide, almost the total number of deaths due to COVID-19 to date<sup>22</sup> or an amount roughly equivalent to one-third of the combined deaths due to communicable, maternal, neonatal, and nutritional diseases in 2021.<sup>23</sup> Air pollution today carries a global health cost representing 6.1 percent of global GDP in 2019 (World Bank 2022a).

For some countries, particularly those in South Asia and Sub-Saharan Africa, annual exposure levels are particularly high, exceeding 10 times the recommended levels. Indeed, South Asia is home to 37 of the 40 most polluted cities in the world (World Bank 2023e). In South Asia, air pollution causes an estimated 2 million premature deaths each year and imposes significant economic costs. World Bank (2023e) shows that cost-effective strategies to lower air pollution in South Asia not only can save lives but also bring important climate benefits. For example, reduction of air pollution concentrations to World Health Organization (WHO) Interim Target 1 by 2030 would reduce CO<sub>2</sub> by 22 percent and methane by 21 percent.<sup>24</sup> Urban development that focusses on mass transit systems can lower both CO<sub>2</sub> emissions and air pollution levels (Mukim and Roberts 2023).

## Several other actions can help depending on the context

Another area with sizable synergies is improving agricultural productivity through climate-smart practices, especially for low-income countries (Sutton, Lotsch, and Prasann 2024). In regions where agriculture is an important contributor to emissions, such as Latin America and the Caribbean and Sub-Saharan Africa, such practices will be crucial. For instance, in Colombia, agriculture accounts for 22 percent of the country's GHG emissions, and agricultural expansion over the past two decades has primarily occurred at the expense of forests and natural ecosystems. Climate-smart agriculture increases agricultural productivity, spurring economic growth without deforestation. However, only 15 percent of farms in Colombia use innovative technologies, and most climate-smart agricultural initiatives have remained in the pilot stage. Public policy is needed to promote these practices more widely. This can be achieved by redirecting agricultural support, strengthening innovation systems, facilitating financing services, and improving land information systems and administration (World Bank 2023c). In Cambodia, which could suffer one of the largest losses in rice yields in Southeast Asia because of climate change, analysis indicates that the negative effects of droughts can be entirely mitigated through irrigation or crop-rotation practices (World Bank 2023b).

Repurposing agricultural subsidies to climate-smart and productivity-enhancing practices can reduce overall agricultural emissions by more than 40 percent, the land footprint of agriculture by 2.2 percent, and higher productivity could reduce global extreme poverty by about 1 percent (Laborde et al. 2022). This is not only relevant for lower-income countries, as removing inefficient subsidies alleviates market distortions and also reduces deforestation and

biodiversity loss in high-income countries (Damania, Balseca, et al. 2023). Agricultural and energy subsidies constitute around 3 percent of GDP in lower-middle-income and low-income countries, but only 20 percent of spending on subsidies reaches the bottom 40 percent of the populations (World Bank 2022d).

Moreover, sustainable forest management initiatives not only protect biodiversity and reduce emissions but also provide livelihood opportunities for local communities, thereby reducing poverty and enhancing resilience to climate-related disasters (Barbier 2010; Damania, Polasky, et al. 2023; Grosset, Papp, and Taylor 2023). In Peru, transitioning to a zero-carbon forest sector could generate employment opportunities, yield \$3.5 billion in benefits from restored ecosystem services, and increase the value added of the sector sevenfold by 2050 (World Bank 2022b). More efficient land use could sequester an additional 85.6 billion metric tons of CO<sub>2</sub> equivalent without adverse economic impacts—an amount equivalent to approximately 1.7 years' worth of global emissions (Damania, Polasky, et al. 2023).<sup>25</sup>

### It is important to identify and remove constraints to scale up synergistic policies

While synergistic strategies exist across different geographical contexts and sectors, challenges may still arise in their implementation. For instance, agroforestry may require a fundamental shift in traditional farming techniques, necessitating new skills or knowledge that farmers may not initially possess. Risk aversion can also be a challenge; farmers might be hesitant to adopt new practices because of uncertainty about the outcomes or fear of initial yield reductions. Financial constraints are another common barrier, as up-front costs for resources or training might be prohibitive for lower-income households. Moreover, cultural and social norms can influence the willingness to adopt new methods, as practices deeply ingrained in community identity may not be easily altered. Lastly, the lack of supportive policies or incentives from governments can impede widespread adoption, as can inadequate access to markets or resources necessary to implement these new practices effectively. Addressing these barriers through finance, comprehensive support systems, education, and community engagement is essential for the successful adoption and long-term sustainability of synergistic strategies.

### ***Managing transition costs is important for the poor and vulnerable***

Transitioning toward a low-carbon, climate-resilient economy may involve a trade-off between a cost today and benefits in the future, as well as opportunity costs between different priorities. These transitions bring future climate benefits by altering the probability distribution of climate-related hazards, but they can be costly for specific people now.

Transitioning to green industries may lead to or accelerate job displacement in traditional industries that rely heavily on fossil fuels. Reductions in coal production are unlikely to have substantial effects on national employment and output in many economies because of the industry's low labor share. For example, in Indonesia, the world's second-largest coal exporter, the coal industry's share of the GDP is less than 2 percent, and it employs only 0.2 percent of the workforce (World Bank Group 2023). However, effects on local communities can be

substantial in some instances (World Bank Group 2023). Challenges arise as displaced workers may face difficulties transitioning to alternative employment because of differences in skills, wages, and geographic locations (World Bank 2023a). For instance, in six South Asian countries (Bangladesh, India, the Maldives, Nepal, Pakistan, and Sri Lanka), workers in pollution-intensive jobs are systematically less educated and are often informally employed; the opposite applies to workers in green jobs. Going beyond education levels to consider foundational skills, analysis in Poland shows that people in green jobs on average have higher numeracy, literacy, and problem-solving skills. There are also major gender differences in green employment across all major occupation groups, with women tending to have browner jobs (World Bank 2022d).

Workers in carbon-intensive sectors can be affected not only by local energy transition policies but also by the global consequences of carbon mitigation policies on trade flows. Changes in goods and labor demands may originate from abroad. Take, for example, the Carbon Border Adjustment Mechanism (CBAM), a carbon tariff that penalizes high-carbon exports to the European Union. If industries in certain countries fail to decarbonize, such systems may redirect demand to producers elsewhere.<sup>26</sup> While CBAM is not likely to have a large effect on countries' GDP or trade balances, it may negatively affect workers in some sectors in lower-income countries (World Bank Group 2022).

Consumers, especially those with lower purchasing power or who allocate a significant portion of their budget to food and energy, may encounter challenges from policies aimed at reducing emissions that affect prices. For example, carbon pricing schemes and the removal of fossil fuel subsidies could lead to short-term increases in poverty in several low- and middle-income countries if policies are not carefully designed (World Bank Group 2022). Indirect subsidies, like those for energy, often constitute a higher share of the market income for poorer households (World Bank Group 2022).

The transition costs and how to manage them will vary depending on each country's context. These challenges will also depend on how policies are implemented and how political and economic institutions align to support these transitions (Lankes et al. 2024; Rizk and Slimane 2018). Transition costs, such as higher energy prices or job losses in carbon-intensive sectors, can be particularly hard for poorer people to manage. Therefore, assessing how the green transition affects poor and vulnerable people and designing policies to reduce negative effects are essential.

Policies that invest in skills and reskilling can play a vital role in facilitating the transition of workers affected by industry changes. Active labor market programs, for instance, not only help workers acquire the skills needed for this transition but also ensure a workforce is ready to meet the demand in green industries. Programs supporting internal migration can be particularly valuable (Rigolini 2021). To support communities most affected by job losses, targeted policies are essential. These include initiatives to promote job creation, especially in areas facing employment challenges, and support for climate-smart agricultural practices, job training, and skills development. Such measures are crucial for facilitating the transition to low-carbon and sustainable livelihoods.

It is also important to implement compensatory measures to not disproportionately affect poor households. Well-designed redistribution measures can mitigate the effects on households,

especially those with lower incomes (Blanchard, Gollier, and Tirole 2023). According to the findings of Steckel et al. (2021), redistributing revenues generated from carbon pricing to all individuals, not just the poor, results in a net income gain for poor households. Similarly, redistributing domestic carbon revenues as an equal-per-capita climate dividend more than offsets the negative effects of higher prices, lifting approximately 6 million people out of poverty globally.

To counteract the adverse effects of fuel price hikes on the poor, governments have various policy tools at their disposal beyond cash transfers. For instance, in urban areas, making public transportation more affordable or providing subsidies to assist low-income households in securing housing closer to job opportunities can help mitigate these effects (Liotta, Avner, and Hallegatte 2023). Such incentives also align with emission reduction objectives.

## Priorities: Doing what matters, where it matters most

Acting on these multiple fronts requires fundamental changes in how countries approach their national development strategies and their contributions to global public goods. However, there are no simple solutions. The pathways presented above involve difficult trade-offs across objectives and transition costs.

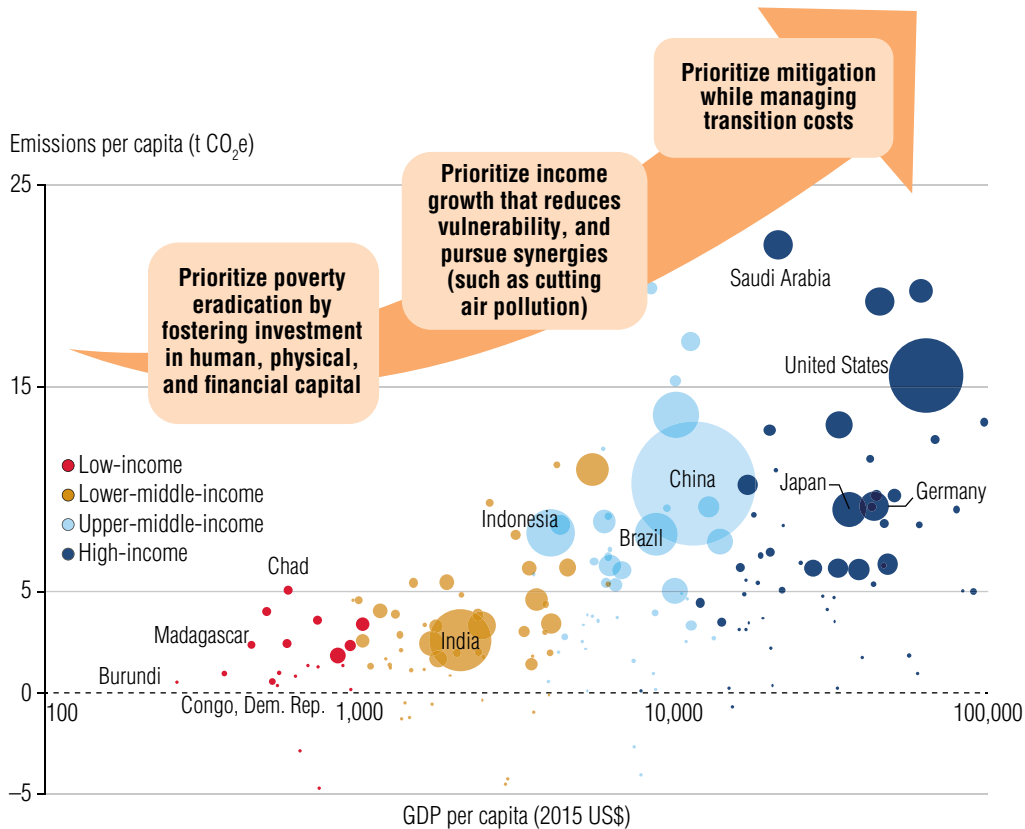
It is important to recognize that low growth and high debt servicing severely constrain the ability of many countries to act. The financing gap for sustainable development is mounting (United Nations and Inter-agency Task Force on Financing for Development 2024; World Bank 2024d). The COVID-19 pandemic, inflation, and the global economic slowdown have exacerbated the already high debt levels in poorer countries (World Bank 2024d). These debt burdens further constrain the already limited fiscal space of lower-income countries (World Bank 2023d, 2024b). Interest payments on their total external debt stock in IDA countries have quadrupled since 2012, reaching an all-time high of \$23.6 billion, which diverts spending away from health, education, and other critical needs (World Bank 2023d). Low-income countries are spending about 2 percent of GDP on interest payments to service debt in 2024 (World Bank 2024c), which is more than half of what they spend on education (about 3.6 percent of GDP [Bend et al. 2023]).

In this constrained environment, there is an urgent need to prioritize the actions that will have the highest return for development and that can allow the world to make progress on the interlinked goals of eradicating poverty, boosting shared prosperity, and making the planet more livable. The guiding principle is to focus on where the poor and vulnerable live and where the emissions are highest and where they are likely to increase most. As shown in chapter 1, extreme poverty will be concentrated increasingly in Sub-Saharan Africa and fragile and conflict-affected countries (in Sub-Saharan Africa and elsewhere). The poorest countries are also most at risk from climate hazards.

Yet, emissions are largely generated by high-income and upper-middle-income countries. Priorities in terms of mitigating emissions should also consider how emissions are evolving.

Under current policies, GHG emissions from high-income and upper-middle-income countries are projected to decline, but not nearly fast enough to limit warming to around 1.5°C. To reach this goal, additional CO<sub>2</sub> emissions will need to fall to practically zero in these countries. In addition, lower-middle-income countries do not contribute much to emissions today, but without action, they will have a significant role in total emissions in a few decades.

Figure O.12 brings these considerations together and illustrates a simplified way to identify priorities. Importantly, each unique situation requires its own tailored solutions, and the results from this report do not aim to be prescriptive for a specific country. Country-specific studies are recommended to guide prioritization at that level. The following discussion aims to shed light on where attention should be placed from a broader global perspective.

**FIGURE O.12****Priorities to advance on the interlinked goals**

Source: Emissions Database for Global Atmospheric Research, Grassi et al. 2023, and World Development Indicators.

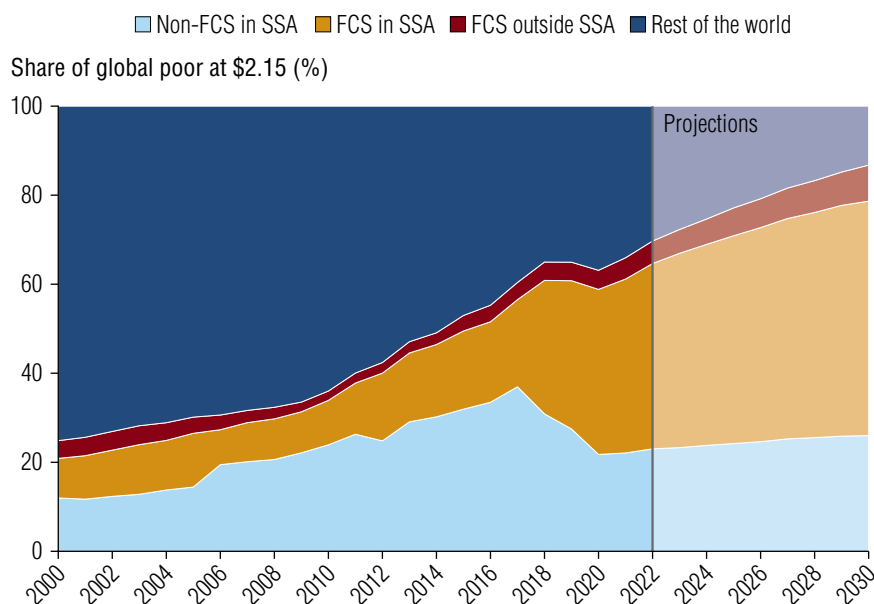
Note: GDP = gross domestic product; GHG = greenhouse gas; t CO<sub>2</sub>e = tons, carbon dioxide equivalent. The size of the bubbles indicates total GHG emissions. Negative emissions occur when ecosystems absorb more carbon than the country emits. A few small countries with very high per capita emissions (Bahrain, Guyana, Iceland, Kuwait, Oman, Palau, Qatar, Trinidad and Tobago, United Arab Emirates) and countries with very low per capita emissions (Central African Republic, Vanuatu) are omitted for visual purposes. The horizontal axis uses a logarithmic scale.

## Low-income settings: Prioritize poverty reduction by fostering investment in human, physical, and financial capital

Going forward, extreme poverty will be concentrated increasingly in countries in Sub-Saharan Africa and in FCS (figure O.13). By 2030, one-half of the global extreme poor will be in today's FCS within Sub-Saharan Africa, and an additional one-quarter is projected to be in countries in Sub-Saharan Africa that are not in FCS today. Effectively, the relative concentration of extreme poverty in FCS or Sub-Saharan Africa versus in non-FCS and non-Sub-Saharan Africa will have reversed over the course of three decades. The share of poor in FCS and Sub-Saharan Africa will have grown from one-quarter to more than four-fifths. Current IDA countries will comprise 82 percent of the global poor in 2030 with the currently projected growth rates, and 90 percent of the global extreme poor in 2050.

**FIGURE O.13**

### Increased concentration of extreme poverty in Sub-Saharan Africa and FCS



Source: World Bank calculations using data from the Poverty and Inequality Platform (version September 2024), <https://pip.worldbank.org/>.

Note: FCS = fragile and conflict-affected situations; GDP = gross domestic product; SSA = Sub-Saharan Africa. The extreme poverty rate is calculated at \$2.15 per person per day (expressed in 2017 purchasing power parity dollars). Countries in FCS are defined following the World Bank classification of fragility and conflict-affected situations for each year until 2022, and keeping the definition fixed in 2022 for the years after. Between 2022 and 2029, poverty is projected based on per capita GDP projections in *Global Economic Prospects, June 2024* (World Bank 2024c) complemented by the *Macro Poverty Outlook, Spring Meetings 2024* (World Bank 2024e) and the *World Economic Outlook* (IMF 2024), and for 2030, average annual historic growth rates (2010–19) are used. Population coverage is below 50 percent for Sub-Saharan Africa after 2019, and for countries in FCS in 2000 and after 2017.



In these settings, higher economic growth is an essential foundation to support poverty reduction and build resilience. Per capita income growth is expected to remain at a meager 1.5 percent in Sub-Saharan Africa and 2.3 percent in IDA countries in 2025 (World Bank 2024c, 2024d). Various factors have contributed to the slow economic growth in IDA countries. First, many of these countries have not benefited from globalization as much as countries that historically had high poverty rates have, in particular Asian countries (Lakner and Milanovic 2016; Milanovic 2016). IDA countries engage less in international trade than other lower-middle-income countries and rely heavily on food imports, making them vulnerable to food price inflation (Laborde, Lakatos, and Martin 2019; World Bank 2024d). Moreover, compared with other countries, IDA economies have exhibited limited technological change (World Bank 2024a) and are still heavily dependent on agriculture and natural resources. IDA countries are also characterized by weak institutions, inhibiting investment and growth (World Bank 2024d).

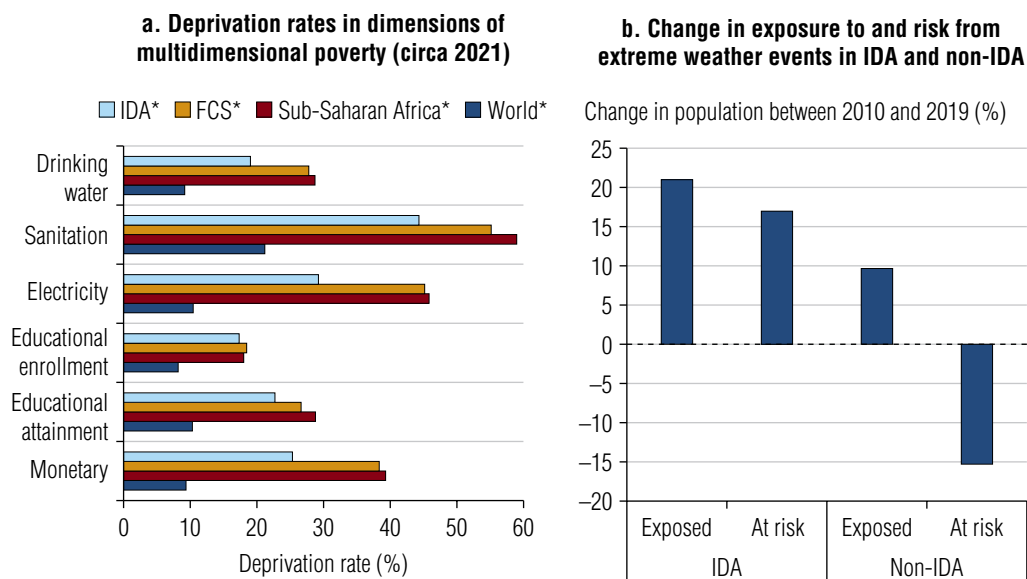
Poverty reduction in IDA countries is hindered by big gaps in human capital and basic infrastructure and services. About one-half of the people in Sub-Saharan Africa and FCS countries lack electricity or sanitation (figure O.14, panel a). Large education gaps also persist. In 20 low-income countries with available data, more than 90 percent of children cannot read or understand a basic text by the end of primary school.<sup>27</sup> Yet, investments in education in low-income countries remain very low.<sup>28</sup> In 2021, the average low-income country spent only \$54 per student per year, compared with more than \$8,500 in the typical high-income country (Bend et al. 2023). In some of the poorest countries in Sub-Saharan Africa, only 20 percent of respondents surpass the education of their parents, compared with 80 percent in East Asia (van der Weide et al. 2024). In addition, in 15 out of 18 countries with available data in Sub-Saharan Africa, more than half of the inequality in consumption is due to factors beyond an individual's control, such as their place of birth or ethnicity (Sinha, Inchauste, and Narayan 2024). The result is that many people are deprived of the opportunity to use their full potential.

These large gaps and more broadly limited progress on multidimensional poverty have also increased vulnerability to shocks in these countries. For example, of the population in IDA countries covered by the data on risks from extreme weather events used for this report, 56 percent are exposed to extreme weather hazards and 47 percent are at risk. This means that 84 percent of those who are exposed are also at risk. In comparison, while a larger share of people is exposed to an extreme weather event in non-IDA countries (59 percent), only 11 percent are at risk. Between 2010 and 2019, the number of people exposed to extreme weather events rose in both IDA and non-IDA countries, but twice as fast in IDA countries (figure O.14, panel b).<sup>29</sup> However, despite the increase in the exposed population, non-IDA countries were able to reduce the population at risk significantly over this period. This is not the case for IDA countries, where the population at risk rose almost one-to-one with the population exposed. In non-IDA countries, the population at risk fell because of the large gains in income and financial access, developments from which people in IDA countries did not benefit as much.

Accelerating economic growth in these settings will not lead to significantly higher GHG emissions. Low-income countries barely contribute to emissions and emissions are not expected to grow significantly under current policies (see chapter 3 of the full report). Still, low-income countries must be careful to avoid getting locked into carbon-intensive technologies and growth paths that will become more costly and less efficient in the future (Hallegatte, Rentschler, and Rozenberg 2019). This is where international financing plays a key role—in enabling these countries to invest in future-oriented technologies now and not lock in on a pathway that will leave them with inefficient and stranded assets in the future (Hallegatte, Rentschler, and Rozenberg 2019).

**FIGURE 0.14**

### Rates of multidimensional poverty and increased risks from extreme weather in IDA countries compared with other countries



Source: Panel a: World Bank calculations using data from the World Bank Global Monitoring Database. Panel b: World Bank calculations using data from Doan et al. 2023.

Note: FCS = fragile and conflict-affected situations; IDA = International Development Association. Panel a: The figure presents the share of population deprived in each indicator of the multidimensional poverty measure for selected regions and country groupings circa 2021. For more information on the multidimensional poverty measure and its components, see chapter 1 of the full report. Panel b: The sample consists of 45 countries that have data both for 2010 and 2019. These countries represent 52 percent of the population in IDA and 63 percent of the population in non-IDA countries. The variables used to compute the risk indicator for the years 2010 and 2019 differ slightly from the risk indicator for the year 2021 used in other parts of the report. \* The surveys available for 2020 or later cover less than 50 percent of the population.

## **Middle-income countries: Prioritize income growth that reduces vulnerability and pursue synergies such as cutting air pollution**

Growth in middle-income countries needs to continue and accelerate to lift people above poverty lines of \$3.65 and \$6.85 per person per day, but many countries in this group are stuck in a middle-income trap (World Bank 2024g). As for low-income countries, fast growth that creates jobs and enhances the productive capacity of poorer households is important to serve the dual function of increasing incomes and improving the resilience of these households.

At the same time, the GHG emissions of many middle-income countries cannot be neglected. Even though lower-middle-income countries currently contribute less than higher-income countries to GHG emissions (19 percent versus 29 percent of total emissions in 2022), their emissions will increase over the next decades under current policies and surpass those of high-income countries by 2030 and those of upper-middle-income countries in the 2040s in absolute terms. Therefore, it is essential that lower-middle-income countries start transitioning to a less carbon-intensive pathway soon.

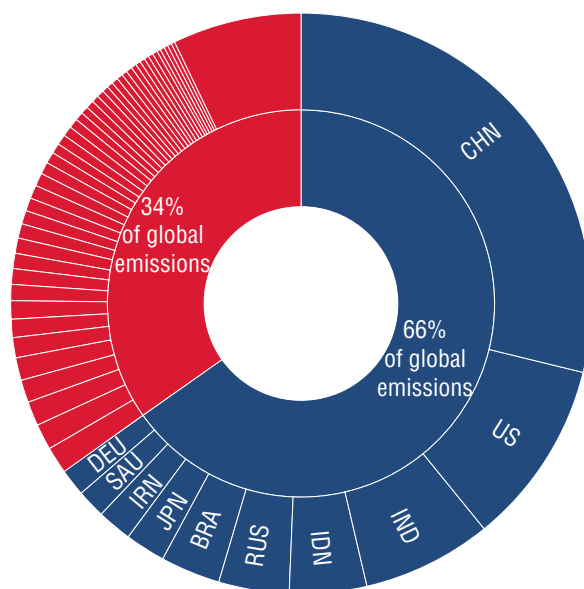
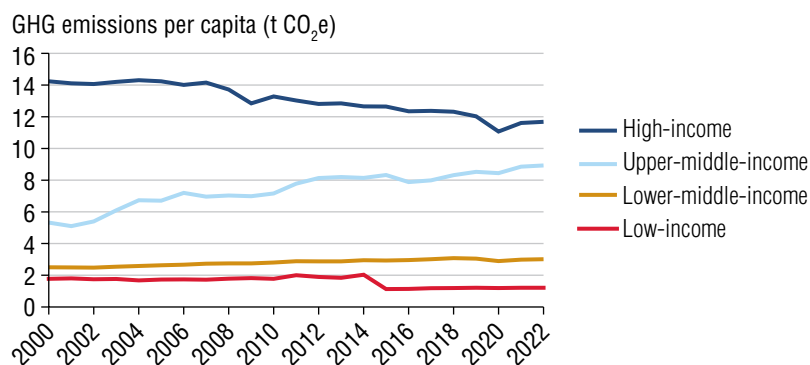
Because growth needs to be less carbon intensive, it is crucial to identify and scale up synergistic policies that can contribute significantly across the intertwined goals. As discussed, tackling air pollution is a clear area with multiple gains, particularly for low- and middle-income countries. In countries where agriculture is important, climate-smart agriculture and repurposing agricultural subsidies could be an important area of action. It is also important to invest early in renewable energy.

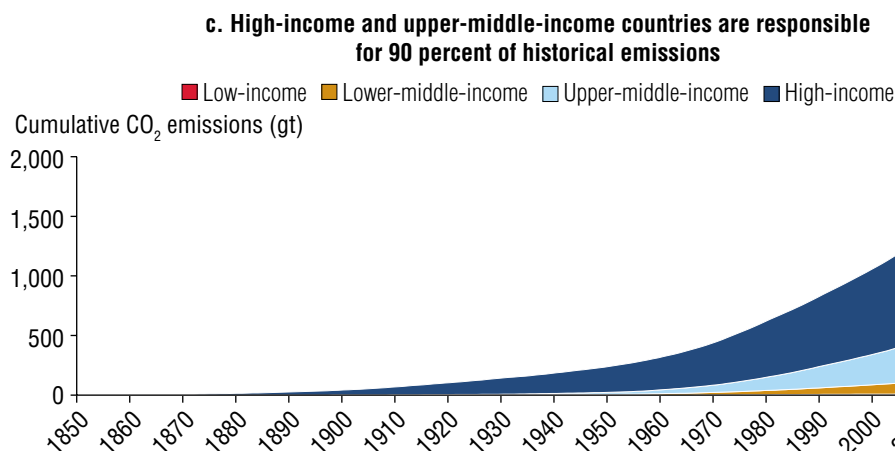
## **High-income and upper-middle-income countries: Accelerate mitigation while managing transition costs**

High-income countries and upper-middle-income countries respectively account for 32 percent and 52 percent of global CO<sub>2</sub> emissions, while accounting only for 15 percent and 35 percent of the global population. Ten economies emit two-thirds of global emissions annually (figure O.15, panel a). The next 30 economies, by total emissions, contribute 24 percent of global emissions. The 140 least-emitting economies, which comprise 12 percent of the total population, produce less than 5 percent of GHG emissions.<sup>30</sup>

Upper-middle-income countries are responsible for an increasing share of global GHG emissions, having overtaken high-income countries in 2004 in terms of total emissions. Today, upper-middle-income countries produce as many GHG emissions as all other income groups combined (see chapter 3 for more details). The trend in per capita emissions in upper-middle-income countries is particularly striking, as they are rapidly converging to the levels of high-income countries (figure O.15, panel b). However, it is also important to note that the

stock of GHG emissions in the atmosphere is what matters for warming (Eyring et al. 2021; IPCC 2022a). Today's high-income countries started emitting large amounts of CO<sub>2</sub> in the mid-nineteenth century, and upper-middle-income countries have caught up quickly over the past 40 years (figure O.15, panel c). In 2022, high-income countries and upper-middle-income countries were responsible for 90 percent of all historical CO<sub>2</sub> emissions, of which emissions from high-income countries make up roughly two-thirds.

**FIGURE O.15****Positive relationship between income levels and GHG emissions****a. Ten economies produce two-thirds of global emissions****b. Emissions per capita are converging between high- and upper-middle-income countries***(continued)*

**FIGURE O.15****Positive relationship between income levels and GHG emissions** (*continued*)

Sources: Panels a and b: World Bank calculations based on data from EDGAR, Grassi et al. 2023, and WDI data; panel c: PRIMAP-hist data from Gütschow, Pflüger, and Busch 2024.

Note: CO<sub>2</sub>e = carbon dioxide equivalent; EDGAR = Emissions Database for Global Atmospheric Research; GHG = greenhouse gas; LULUCF = land use, land use change, and forestry; WDI = World Development Indicators. Panel a: The 10 economies are Brazil (BRA), China (CHN), Germany (DEU), India (IND), Indonesia (IDN), Iran, Islamic Republic of (IRN), Japan (JPN), Russian Federation (RUS), Saudi Arabia (SAU), and the United States (US). Data are from 2022. Panel b: Emissions per capita are in tons of CO<sub>2</sub>e. Panel c: CO<sub>2</sub> emissions are cumulative in gigatons (gt) and do not include emissions from LULUCF. Panels b and c: Country income groups are fixed at 2022 definitions. In panel b, the drop in emissions from low-income countries in 2015 comes from the Democratic Republic of Congo, where LULUCF emissions declined substantially after 2014.

The quickest way to reduce future climate risks is for high-income countries and upper-middle-income countries with high emissions to drastically cut their emissions while managing transition costs. Accelerated actions by wealthier nations to reduce current emissions could significantly affect global emissions and alter the distribution of future environmental risks worldwide. Upper-middle-income countries also have significant populations at risk from extreme weather events, so it is in their own population's interest to act on reducing GHG emissions.

High-income and upper-middle-income countries need to prioritize and accelerate the shift away from primary energy generated by fossil fuels, which would have to fall by around 60 percent by 2035 and by 90 percent by 2050 compared with 2020 levels. The use of energy will also need to become more efficient.<sup>31</sup> Recent evidence indicates that countries with significant renewable potential, like Brazil, can fully decarbonize their power systems without higher costs or compromising resilience (World Bank 2023a).

In contrast to lower-income countries, these countries are in a better position to leverage funds and technology to transition to net zero. Research and development is needed to

spur technological innovation to accelerate progress in fully decoupling economic growth from GHG emissions. Several countries have already managed to decouple growth from emissions, and more need to follow. Fostering technology infusion and innovation in upper-middle-income countries will be decisive for these countries to raise incomes while lowering emissions and transition to high-income status (see *World Development Report 2024* [World Bank 2024g]). These processes can catalyze a widespread adoption of renewable energy, the deployment of which requires a higher level of technological sophistication. Yet, it will be important to manage transitions costs to protect their more vulnerable populations.

## **Across the board: Better data and more international cooperation are needed**

Achieving the interlinked goals of eradicating poverty and boosting shared prosperity on a livable planet requires decisive actions. This needs to be achieved in a global environment that has already become more challenging amid the polycrisis—from slow growth prospects and high levels of debt to increased uncertainty, fragility, and polarization. Solutions and policies exist to achieve the interlinked objectives, but these issues are complex and there will be trade-offs. Decisions must be made with a clear understanding of both the trade-offs and complementarities across objectives.

Across the board, more and better data are needed to design solutions that can address these complex policy issues and monitor their effects on vulnerable populations. Data provide the infrastructure for policy. This is essential to both designing and targeting interventions as well as monitoring progress. While data availability has improved in many countries, less than half of IDA countries had a household survey available in 2020 or later. Making progress on these interlinked global challenges requires a solid foundation of evidence. More investment is needed to produce reliable, granular, and timely information. This requires foundational efforts to strengthen national statistical systems and innovative approaches to advance the frontier of data and modeling for welfare analysis. Because the lived experience of poverty goes well beyond what can be captured by monetary measures, it is important to ensure that data efforts also invest in understanding other dimensions of well-being, such as deprivations in access to services, health, or food security.

Moreover, international development cooperation needs to play a larger and more effective role. There is a pressing need for more and better alignment of funding, as well as stronger international cooperation to meet the escalating challenges posed by climate change and development goals. International cooperation to achieve the Sustainable Development Goals (SDGs) and climate goals is ongoing but faces significant challenges and requires urgent action and increased investment. The United Nations 2024 World Economic Situation and Prospects report highlights the need for robust global cooperation to tackle economic vulnerabilities, rising interest rates, and climate disasters. The report stresses that without significant investments in sustainable development and climate action, achieving the SDGs will remain

elusive (United Nations 2024; United Nations and Inter-agency Task Force on Financing for Development 2024).

The financing gap for sustainable development is growing, with many developing countries lacking access to affordable finance and facing high debt burdens, which hinder their ability to invest in both development and climate resilience (United Nations and Inter-agency Task Force on Financing for Development 2024; World Bank 2024d). Estimates suggest an additional annual investment of \$4 trillion is needed to meet the SDGs by 2030 (United Nations and Inter-agency Task Force on Financing for Development 2024). Despite reaching the \$100 billion climate finance goal in 2022, significant gaps remain. More financing is needed for adaptation and building resilient infrastructure in the first place. Climate adaptation costs alone for developing countries are expected to be between \$160 billion and \$340 billion annually by 2030 (UNEP 2022).

In particular, lower-income countries will need substantial and immediate investment in both adaptation and mitigation actions (World Bank 2024d). For instance, there is a significant gap between the required and actual funding for climate adaptation and mitigation in Sub-Saharan Africa. Current international adaptation finance flows are estimated to be 5–10 times below the needed levels. Current adaptation costs in Africa are estimated to be in the range of \$7–\$15 billion per year, with projections suggesting these could rise to \$35 billion annually by the 2040s and up to \$200 billion per year by the 2070s if warming exceeds 2°C. If no adaptation measures are implemented, costs could escalate to 7 percent of Africa’s GDP by 2100 (UNEP 2022).

It is sometimes argued that climate finance is crowding out other development finance. As this report lays out, most of the policies that support climate resilience generally support development. At the same time, richer countries need to step up their support to low-income countries with financing and technologies so they can accelerate growth in a sustainable way.

The implementation of development and climate policy solutions requires a robust financial framework capable of navigating the fragmented global aid landscape—effectively incorporating domestic resource mobilization with external funding sources, including concessional funding. In particular, it is essential to promote a greater balance and complementarity between leveraged and unleveraged approaches to aid delivery (see box 3.5 in chapter 3 for a discussion on the current challenges in the aid ecosystem). Scaling up both public and private financing for SDGs and climate investments also entails closing policy gaps, enhancing international cooperation, and reforming financial institutions to provide more substantial and sustainable support.

The potential policy pathways can differ drastically depending on a country’s historical development trajectory, access to technology and financing, and national priorities. However, countries must also consider their global responsibilities, and international actors have a critical coordination role to play. Ending poverty and boosting shared prosperity on a livable planet will require novel ways of organizing economic activity.

## Notes

1. This is expressed in 2017 purchasing power parity dollars.
2. Using the coverage rules in the Poverty and Inequality Platform (Castaneda et al. 2024), data coverage for low-income countries fell somewhat below 50 percent of the population in 2018 and 2019. Comparing poverty rates from 2020 onward to data from 2017 would still show an increase in the headcount at the \$2.15 and \$6.85 poverty lines.
3. Florina Pirlea and Emi Suzuki, “The Impact of COVID-19 on Public Health,” published on Data Blog, World Bank Group (July 26, 2023), <https://blogs.worldbank.org/en/opendata/impact-covid-19-global-health>; “Chapter 2: Current Context: the COVID-19 Pandemic and Continuing Challenges to Global Health,” in *A Healthy Return*, World Health Organization (May 17, 2022), <https://www.who.int/about/funding/invest-in-who/investment-case-2.0/challenges#:~:text=The%20global%20toll%20of%20COVID,extent%20of%20cases%20and%20deaths.>
4. Not only is the share of poor in FCS increasing, but the poverty rates in FCS have also been rising over the past decade (see annex 1D).
5. IDA, a part of the World Bank Group, provides grants and concessional loans to the world’s poorest countries. As of 2024, there are 75 countries eligible for support from IDA, with 75 percent of total commitments concentrated in Sub-Saharan Africa. See the following for more information: <https://ida.worldbank.org/en/ida-financing>.
6. The data set for inequality is based on surveys starting in 2000. Those economies with surveys older than 2000 are excluded. The data set covers 166 economies out of the 170 economies in the Poverty and Inequality Platform.
7. Note that Sub-Saharan Africa measures inequality based on consumption. Inequality based on income would tend to be higher than the numbers reported here.
8. The economies in the low-income and lower-middle-income categories predominantly have consumption surveys that are known to have lower levels of inequality than the income survey widely used in upper-middle-income and high-income countries. This implies that if inequality was measured with income, the levels of inequality would be even higher in low-income and lower-middle-income settings.
9. For more information, see the World Meteorological Organization’s 2022 Greenhouse Gas Bulletin at <https://wmo.int/publication-series/greenhouse-gas-bulletin>.
10. NOAA Research News, “Greenhouse Gas Pollution Trapped 49 Percent More Heat in 2021 than in 1990, NOAA Finds,” NOAA Research, May 23, 2022, <https://research.noaa.gov/2022/05/23/greenhouse-gas-pollution-trapped-49-more-heat-in-2021-than-in-1990-noaa-finds/>.
11. These figures are based on the definitions used to construct the climate risk indicator described in box O.3 and chapter 3. Therefore, figures are consistent but slightly different from the ones presented in chapter 1 as part of the multidimensional poverty measure.
12. For more information, see <https://datatopics.worldbank.org/jobsdiagnostics/>.
13. A household’s capacity to generate income depends on the assets they own or have access to, the existing returns to these assets, and how intensively they are used. In the short term, the distribution of household assets does not change, and variables such as prices, the composition of economic growth, and fiscal transfers will play a more significant role in driving household incomes and reducing poverty. In the medium and long term, however, the level and distribution of assets, along with the returns on the assets that reflect their productivity, will be the primary drivers of household incomes and poverty reduction.
14. Hallegatte, Rentschler, and Rozenberg (2019) estimate that improving the infrastructure resilience of assets exposed to hazards would cost less than 0.1 percent of the GDP of low- and middle-income countries.
15. Jennifer Rudden, “Natural disaster losses cost worldwide 2000–2023,” Statista (February 23, 2024), <https://www.statista.com/statistics/612561/natural-disaster-losses-cost-worldwide-by-type-of-loss/#:~:text=In%202023%2C%20there%20was%20a,to%20118%20billion%20U.S.%20dollars.>



16. For more information about early warning systems, see the United Nations website at <https://www.un.org/en/climatechange/early-warnings-for-all>.
17. Warming beyond 1.5°C will increase the magnitude and the share of people exposed to climate hazards substantially (IPCC 2023).
18. Nationally Determined Contributions are climate action plans to cut emissions and adapt to climate change. All parties to the Paris Agreement are required to establish one and update it every five years (<https://www.un.org/en/climatechange/all-about-ndcs#:~:text=Simply%20put%2C%20an%20NDC%2C%20or,update%20it%20every%20five%20years>).
19. Note that some, but not all, Network for Greening the Financial System (NGFS) countries are projected to have no greenhouse gas emissions in 2050 in the Net Zero 2050 scenario. Moreover, the Net Zero 2050 scenario refers to net-zero CO<sub>2</sub> emissions only, while total greenhouse gas emissions are not net zero across all countries. There is also heterogeneity between the models used by NGFS as to when net-zero emissions need to be reached in order to limit warming to 1.5°C.
20. See, for example, World Bank Climate Change and Development Reports for Benin, Brazil, Cameroon, or Tunisia.
21. “Household Air Pollution,” World Health Organization (December 15, 2023), <https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health>.
22. As of May 17, 2024, the data were obtained from <https://data.who.int/dashboards/covid19/deaths?n=o>.
23. The data are from IHME, <https://vizhub.healthdata.org/gbd-results/>.
24. WHO Interim Target 1 refers to a PM<sub>2.5</sub> level of 35 micrograms per cubic meter.
25. The mitigation potential estimates indicate total amount mitigated over time (with a 20-year time horizon) through changes in land use and land management.
26. M. Haddad, B. Hansl, and A. Pechevy, “Trading in a New Climate: How Mitigation Policies Are Reshaping Global Trade Dynamics,” blog (February 13, 2024), <https://blogs.worldbank.org/en/developmenttalk/trading-new-climate-how-mitigation-policies-are-reshaping-global-trade-dynamics>.
27. See World Bank SDG Atlas: <https://datatopics.worldbank.org/sdgatlas/goal-4-quality-education?lang=en>.
28. Though there is a consensus of spending at least 4–6 percent of GDP or 15–20 percent of public expenditure on education, only 1 in 10 countries and territories meets the 20 percent benchmark, and only 4 in 10 meet the 15 percent benchmark (UNICEF 2022).
29. Note that this calculation is based on a smaller sample of countries and that the probability of experiencing a hazard is kept constant over time. Changes are therefore driven by population growth and people settling in more exposed areas (Doan et al. 2023).
30. Twenty-five countries in the world with an aggregate population of 100 million people, out of which 10 countries with 75 million people are in Sub-Saharan Africa, had negative greenhouse gas emissions in 2022, so their ecosystems absorbed more carbon than the country emitted.
31. The availability of technology for carbon capture and storage is also assumed to increase under the Net Zero 2050 scenario of Network for Greening the Financial System (NGFS), though only at a limited scale. See for example the NGFS scenarios portal: <https://www.ngfs.net/ngfs-scenarios-portal/explore/>.

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*The Poverty, Prosperity, and Planet Report 2024* is the latest edition of the series formerly known as *Poverty and Shared Prosperity*. The report emphasizes that reducing poverty and increasing shared prosperity must be achieved in ways that do not come at unacceptably high costs to the environment. The current “polycrisis”—where the multiple crises of slow economic growth, increased fragility, climate risks, and heightened uncertainty have come together at the same time—makes national development strategies and international cooperation difficult.

Offering the first post-Coronavirus (COVID)-19 pandemic assessment of global progress on this interlinked agenda, the report finds that global poverty reduction has resumed but at a pace slower than before the COVID-19 crisis. Nearly 700 million people worldwide live in extreme poverty with less than US\$2.15 per person per day. Progress has essentially plateaued amid lower economic growth and the impacts of COVID-19 and other crises. Today, extreme poverty is concentrated mostly in Sub-Saharan Africa and fragile settings. At a higher standard more typical of upper-middle-income countries—US\$6.85 per person per day—almost one-half of the world is living in poverty.

The report also provides evidence that the number of countries that have high levels of income inequality has declined considerably during the past two decades, but the pace of improvements in shared prosperity has slowed, and that inequality remains high in Latin America and the Caribbean and Sub-Saharan Africa. Worldwide, people’s incomes today would need to increase fivefold on average to reach a minimum prosperity threshold of US\$25 per person per day.

Where there has been progress in poverty reduction and shared prosperity, there is evidence of an increasing ability of countries to manage natural hazards, but climate risks are significantly higher in the poorest settings. Nearly one in five people globally is at risk of experiencing welfare losses due to an extreme weather event from which they will struggle to recover.

The interconnected issues of climate change and poverty call for a united and inclusive effort from the global community. Development cooperation stakeholders—from governments, nongovernmental organizations, and the private sector to communities and citizens acting locally in every corner of the globe—hold pivotal roles in promoting fair and sustainable transitions. By emphasizing strategies that yield multiple benefits and diligently monitoring and addressing trade-offs, we can strive toward a future that is prosperous, equitable, and resilient.



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