

Good Development to Manage the Impacts of Climate Change on Poverty

Climate change and poverty are inextricably linked. Climate change threatens poverty eradication. But future impacts on poverty are determined by policy choices: rapid, inclusive, and climate-informed development can prevent most short-term impacts of climate change on poverty, while a failure to adopt good development policies could mean more than 100 million additional people are pushed into poverty by 2030. And only immediate emissions-reduction policies can prevent climate change from threatening longer-term poverty eradication. Well-designed policies and international support can ensure mitigation does not threaten progress on poverty reduction.

This is Policy Note 1 (of 3) drawn from *Shock Waves: Managing the Impacts of Climate Change on Poverty* (2016) by Stephane Hallegatte, Mook Bangalore, Laura Bonzanigo, Marianne Fay, Tamaro Kane, Ulf Narloch, Julie Rozenberg, David Treguer, and Adrien Vogt-Schilb. Climate Change and Development Series. Washington, DC: World Bank. It provides an overview of the report. Policy Note 2 lays out sectoral policy recommendations, and Policy Note 3 discusses the cross-cutting theme of social protection.

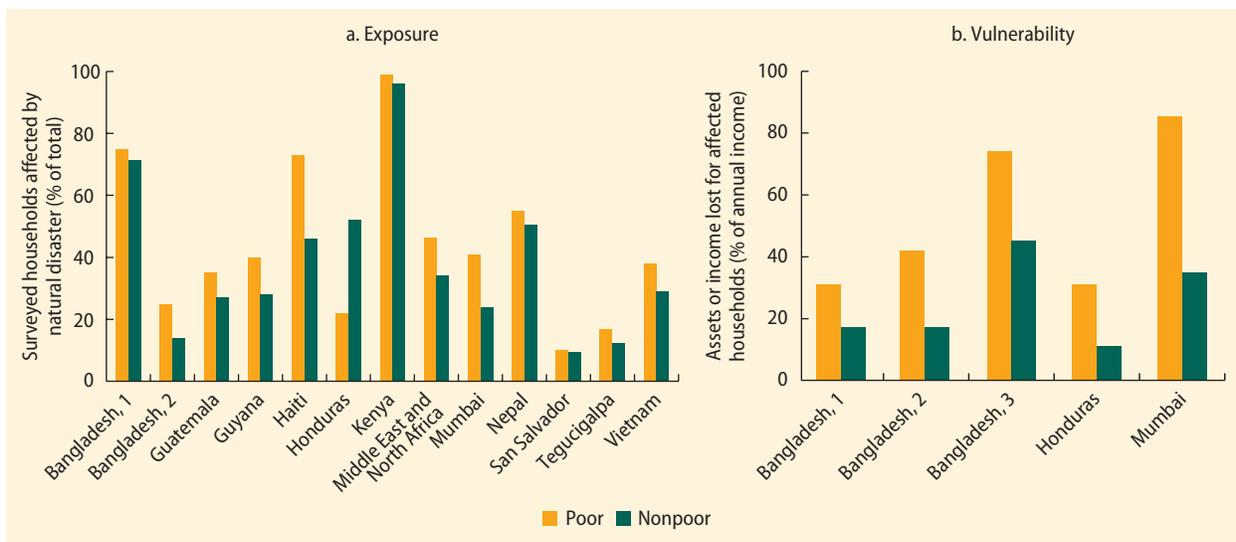
Poor people and poor countries are the most exposed and vulnerable to climate-related shocks—natural disasters that destroy livelihoods; waterborne diseases that become more prevalent during heat waves, floods, or droughts; or crop failures from reduced rainfall and spikes in food prices after extreme weather events.

To end poverty, climate change and its effects on poor people will need to be factored into poverty-reduction policies. Even people who are not poor but who live just above the poverty line

can be pulled into poverty if floods destroy a microenterprise or a drought decimates a herd. Such events can erase decades of hard work and asset accumulation and leave irreversible human and physical losses. Changes in climate conditions caused by higher concentrations of greenhouse gases (GHGs) in the atmosphere can worsen these shocks and slow down poverty reduction.

Poverty must also be taken into account when designing emissions-reduction policies. The international community’s goal

FIGURE 1 When disasters hit in the past, poor people were more likely to be affected (panel a) and poor people always lost relatively more than nonpoor people (panel b)



Source: See Chapter 3 of the book for a full list of sources.

is to maintain climate change below a 2°C increase in global temperature above preindustrial levels. This can remove the long-term threat that climate change creates for poverty eradication. But it will require deep structural changes in the world economy—changes that will impact the conditions under which poor people succeed or fail to escape poverty.

Ending poverty and stabilizing climate change will be two unprecedented global achievements and two major steps toward sustainable development. But they cannot be considered in isolation. To be socially and politically acceptable, emissions-reduction policies need to be designed to protect, and even benefit, poor people. And to eradicate poverty in a sustainable way, poverty-reduction policies should contribute to the stabilization of climate change. For instance, using fiscal resources from fossil fuel subsidy removal to improve social protection can reduce both poverty and carbon emissions.

This policy note (and the report it is based on) brings together these two objectives—ending poverty and stabilizing climate change—and explores how they can more easily be achieved if considered together. It examines the potential impact of climate change and climate policies on poverty reduction. It also provides guidance on how to create a “win-win” situation, so that climate change policies contribute to poverty reduction and poverty-reduction policies contribute to climate change mitigation and resilience building.

Climate-related shocks and stresses, already an obstacle to poverty reduction, will worsen with climate change

Climate is involved in most of the shocks that keep or bring households into poverty. Poor people are more affected by natural disasters than wealthier people; this is because they are generally more exposed and invariably lose much more in relative terms (figure 1). As a result, natural disasters are followed by increases in poverty. Poor people are also more severely impacted by diarrhea, malaria, and other climate-related health shocks. They are usually not covered by health insurance, and health expenditures can force them to liquidate their assets. And it is poor people, with their greater dependence on agricultural income and a larger share of their budget allocated to food, who feel the greatest impact from crop losses or food price hikes caused by droughts and other extreme climate events.

Making things worse, poor people have less of a safety net to fall back upon. They own fewer assets, hold less savings, and have less access to financial support from family, community, the financial system, and even social safety nets to prevent, cope, and adapt. The result is that poor people are disproportionately impacted.

Climate change will worsen these climatic shocks and extreme events, making it even harder to sustainably eradicate poverty.

Without good, climate-informed development, climate change could force 100 million more people into extreme poverty by 2030

Even the limited changes in climatic conditions we expect in the near future could have a large effect on extreme poverty: our analysis finds that climate change could push more than 100 million more people into poverty by 2030. Between now and 2030, emissions-reduction policies can do little to alter the amount of global warming. But policies can reduce vulnerability to climate change through a combination of targeted adaptation investments and improved socioeconomic conditions.

We use two scenarios to measure how development can reduce the magnitude of future climate change impacts by 2030. Map 1 shows how a world with slow and unequal growth—our *poverty* scenario—is more vulnerable to climate change than a prosperous one, because it has more people living in or close to poverty and thus vulnerable to any shock, more farmers who are vulnerable to reductions in yields, and less social protection and access to health care. Good development (development that is rapid, inclusive, and climate informed as in our *prosperity* scenario) can prevent most—but not all—of the impacts of climate change on poverty by 2030. In either scenario, the hotspots where most impacts are expected are Sub-Saharan Africa and South Asia.

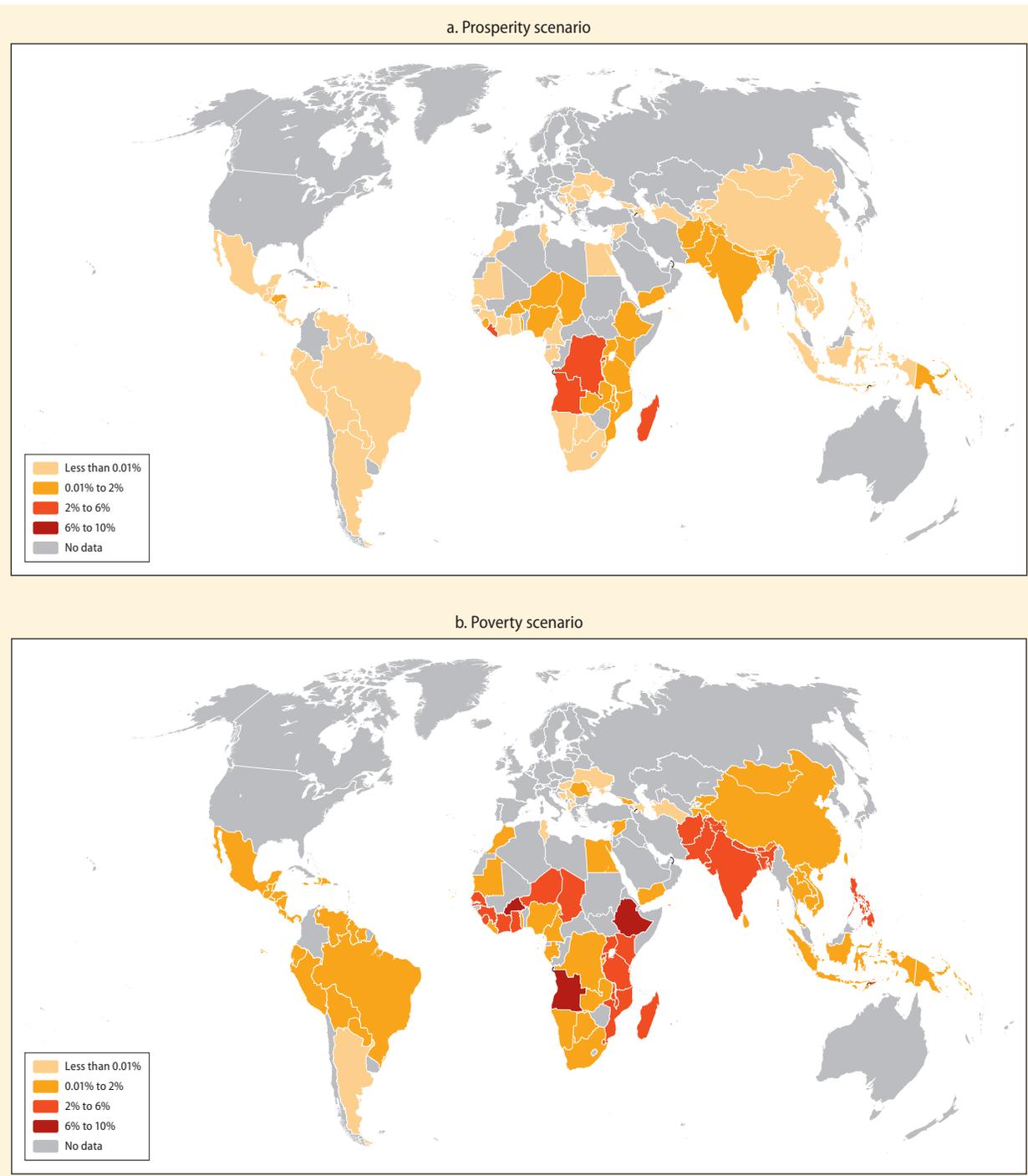
So future impacts of climate change on poverty are determined by policy choices: rapid and inclusive development that includes social safety nets and universal health coverage will make poor people less vulnerable. But development also needs to be climate informed, with investments and development patterns accounting for what we know about future climate conditions so they do not create new vulnerabilities. And it needs to be accompanied by targeted adaptation, such as upgrades in flood defenses or more heat-tolerant crops.

Immediate mitigation is needed to remove the threat climate change represents for long-term poverty eradication

Our ability to manage increasing climate change impacts is limited. Without emissions-reduction policies, impacts could be catastrophic in the long term (after 2050). In Europe, the summer 2003 heat wave, which led to more than 70,000 deaths, could become an “average” summer at the end of this century—meaning that, by 2100, every other summer would be warmer than the 2003 one. Climate change is also expected to reduce crop yields and increase

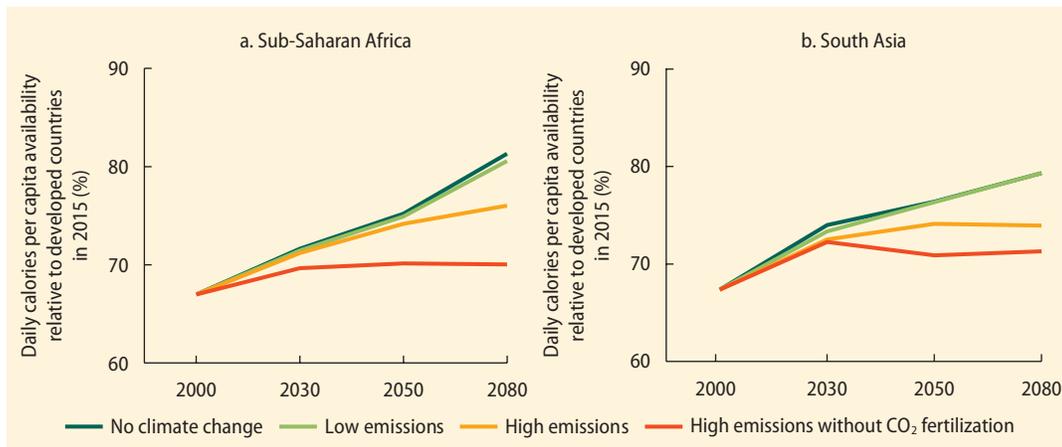
MAP 1 Policies that promote good development can reduce the impact of climate change on poverty by 2030

(Increase in number of extreme poor people due to climate change (% of total population))



Source: World Bank (IBRD 41903 and IBRD 41904, September 2015). See chapter 6 of the book for full details.

FIGURE 2 Climate change can significantly reduce food availability in poor regions



Source: See chapter 2 of the book.

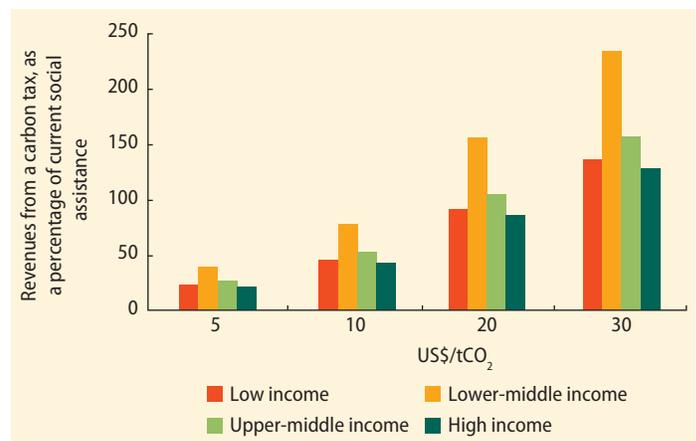
agricultural prices, making it more difficult to ensure food security in regions like Sub-Saharan Africa and South Asia, even with more trade and technological improvement (figure 2). And unabated climate change creates long-term risks to development and well-being that are still difficult to quantify. The need for climate stabilization arises from a risk management approach that accounts for threats that are created by long-term impacts and the fact that GHG emissions lock us into irreversible warming.

To keep long-term impacts on poverty in check, global temperatures need to be stabilized at a safe level—which implies that net global carbon emissions be brought down to zero before 2100. Such an ambitious goal requires governments to act now to implement emissions-reduction policies. These policies will benefit poor people over the long term, thanks to avoided climate change impacts, and can be designed not to slow poverty reduction over the short term.

All countries should pursue emissions-reduction options that provide local and immediate benefits (such as less pollution, better health, improved energy access and efficiency, reduced energy expenditures, and higher agricultural productivity). But to stay on a pathway compatible with the complete decarbonization of the economy before 2100, countries will have to do more than implement “win-win” options, sometimes facing net costs and trade-offs.

Fortunately, most governments can protect the poorest using new redistributive policies or strengthening their existing social protection system, potentially using the resources raised by climate policies. In most countries, the resources that could be raised by a carbon tax (or a reform of energy subsidies) are significant compared with current social assistance transfers (figure 3). Even a low carbon tax would make it possible to significantly scale up social

FIGURE 3 Revenues from a domestic carbon tax could help increase social assistance



Note: tCO₂ = tons of carbon dioxide.

assistance or other investments (such as access to improved drinking water, sanitation, or modern energy) that benefit poor people.

But in some poor countries domestic resources will be insufficient to protect poor people, and support from the international community is essential. This is particularly true for investments that involve high immediate costs but are urgently needed to prevent irreversibility and lock-ins into carbon-intensive patterns (such as for urban transport, energy infrastructure, or deforestation).

The changing climate as well as policies to mitigate climate change both impact poverty. The best way forward is to design and implement solutions to reduce poverty and stabilize climate change as an integrated strategy.