



The webinar will begin shortly...

Shock Waves: Managing the Impacts of Climate Change on Poverty

November 24 2015

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Moderator: Carlo Carraro

*Vice-Chair, IPCC WG III and
Co-chair, GGKP Advisory Committee*

OVERVIEW

SHOCK WAVES

Managing the Impacts of Climate Change on Poverty

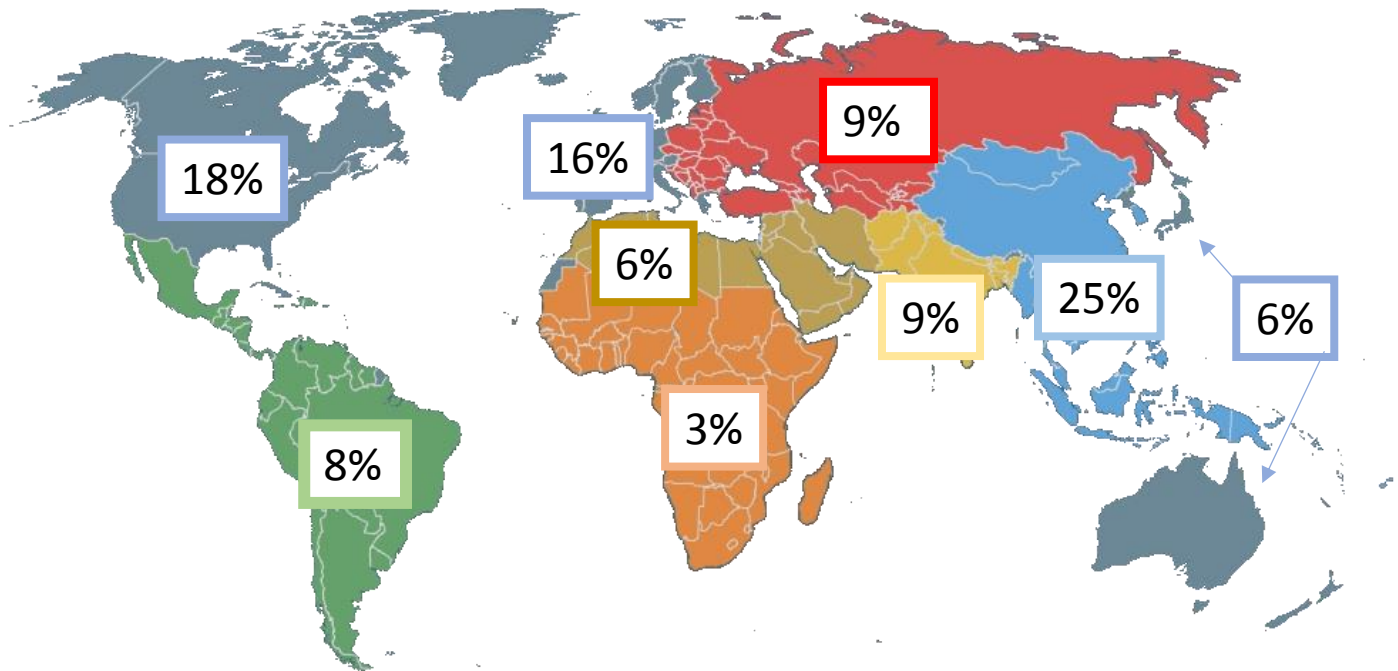
Stephane Hallegatte

Senior Economist, Climate Change Group, World Bank

Mook Bangalore, Laura Bonzanigo, Marianne Fay, Tamaro Kane,
Ulf Narloch, Julie Rozenberg, David Treguer, Adrien Vogt-Schilb

Climate Change Cross-Cutting Solutions Area
The World Bank Group

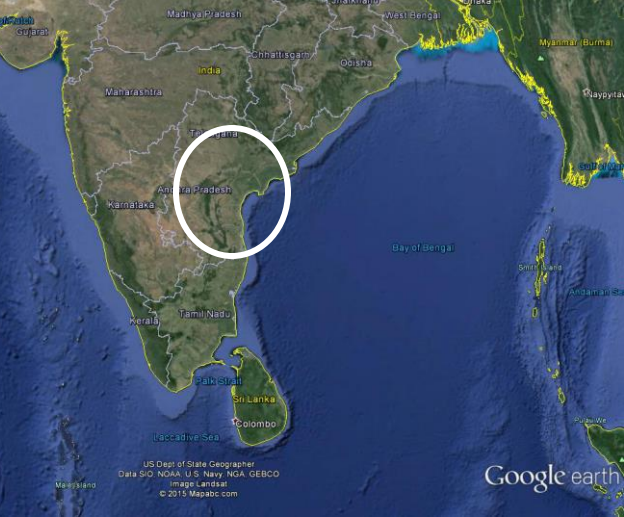
Share of GDP by world regions



What if the important question is not the impact on GDP, but the impact on poverty and welfare?

Main Message #1

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



Poverty dynamics

An example in India (Andhra Pradesh)

Flows out of poverty
14% per year



Decreasing the flow from 14% to 13% would halve poverty reduction



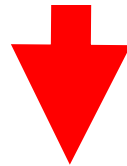
Weather events keep people poor through asset and human capital destruction



Drought, irrigation failure, or crop disease involved in 44% of the cases



Increasing the flow from 12% to 13% would halve poverty reduction



Flows into poverty
12% per year

Net flows
2% per year



Non-poor

Poor

Common shocks that drive or keep people in poverty....



Spikes in food prices and shocks to agricultural or ecosystem-based income



Natural disasters such as droughts, floods, and storms



Disease and health shocks, such as malaria, diarrhea, stunting, and mental disorders

... will be worsened by climate change

Poor people are often more exposed to these shocks – take the case of Nigeria



Poor people are 50% more likely to be flooded

Poor people are often more exposed to these shocks – take the case of Nigeria



Poor people are 50% more likely to be flooded



Poor people are 130% more likely to be affected by a drought

Poor people are often more exposed to these shocks – take the case of Nigeria



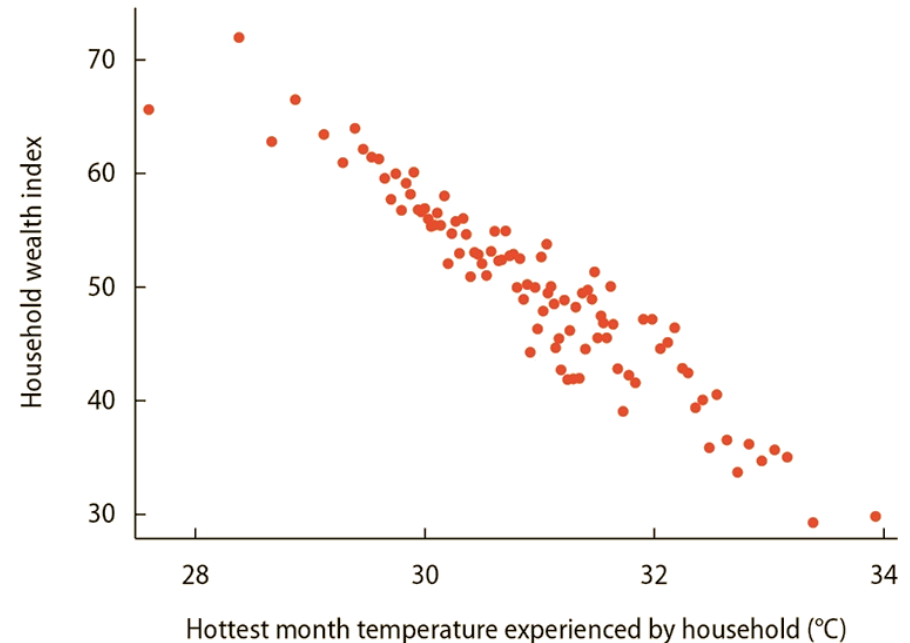
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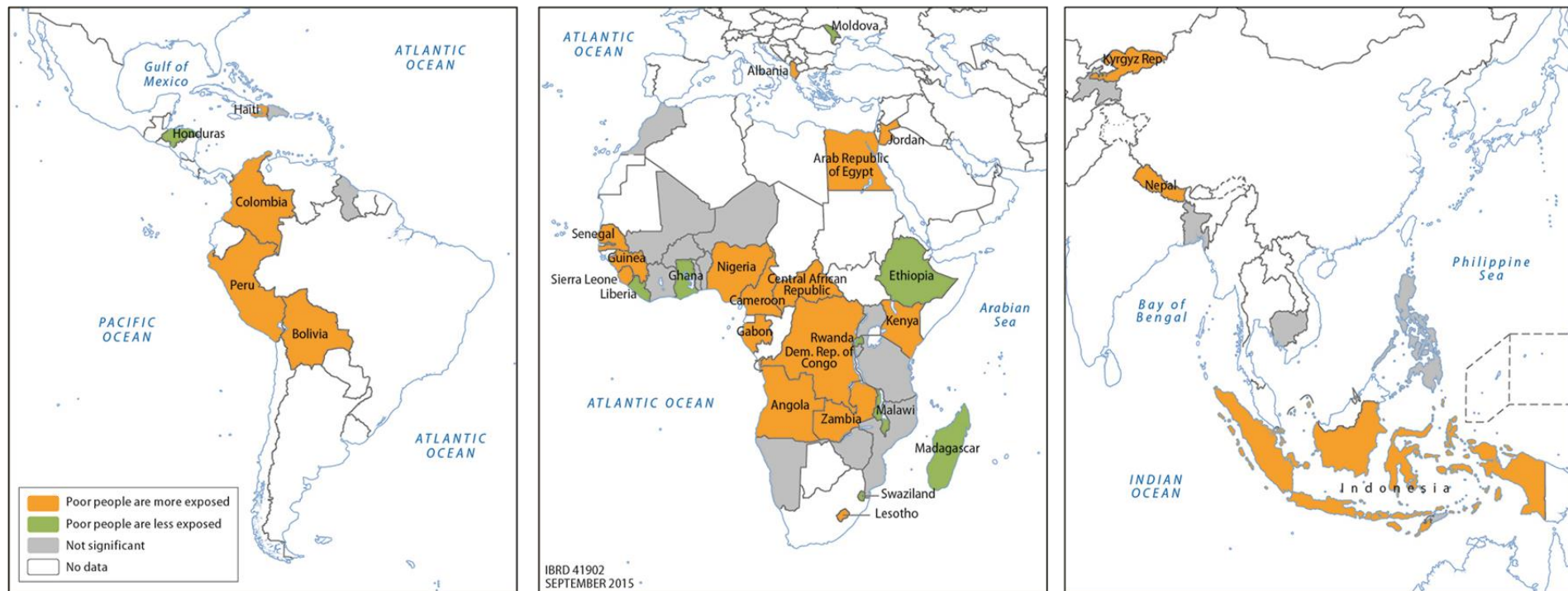


Poor people are 80% more likely to be affected by extreme heat

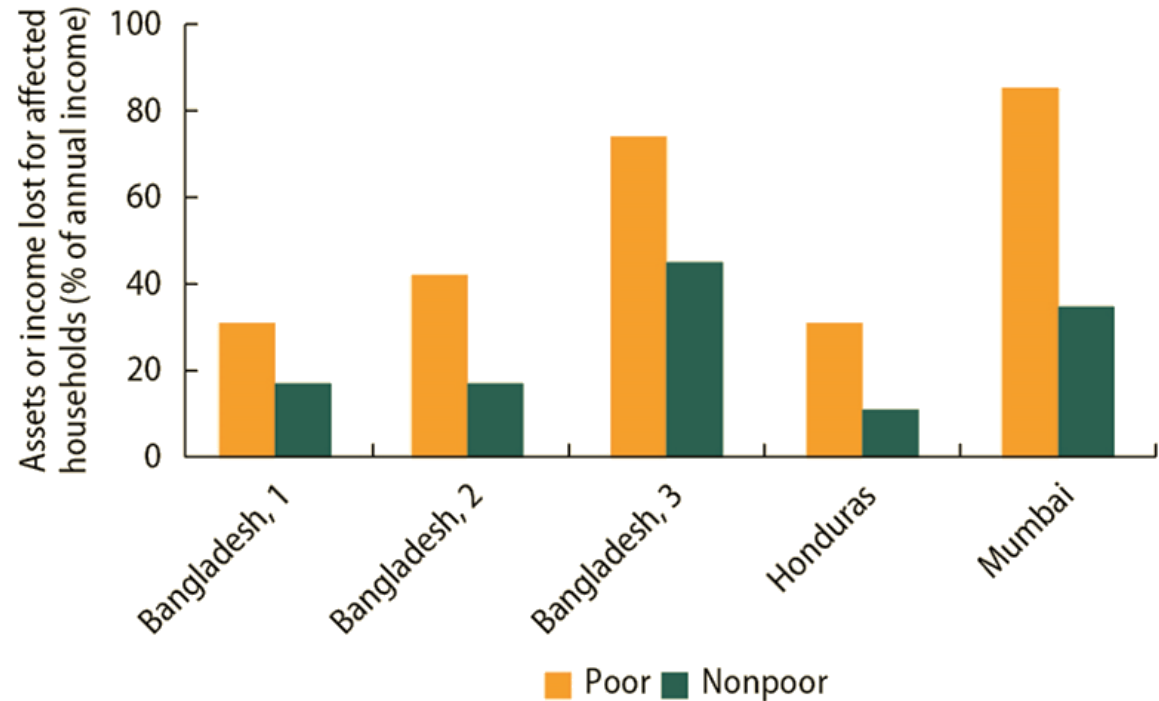
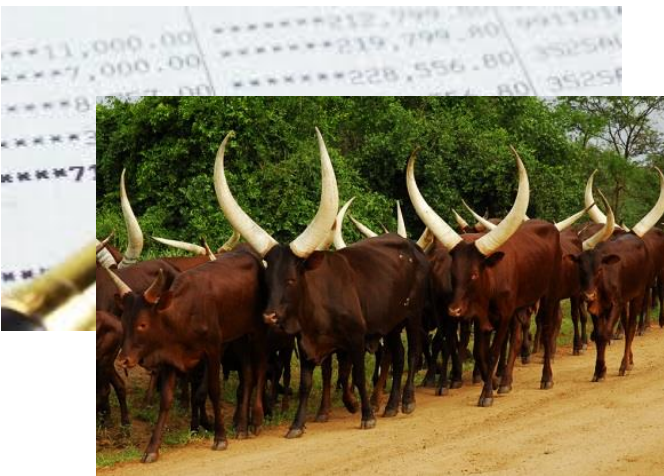


Poor people are often more exposed to these shocks – take the case of urban floods

In most (but not all) countries, poorer urban dwellers are more likely to live in flood zones



Poor people are always much more vulnerable to natural hazards



Poor people have less access to support

		Saved at a financial institution	Average transfer from social protection
Indonesia	Poor	8%	\$0.5/day
	Non-poor	21%	\$2/day



Poor people have less access to support to cope and adapt

		Saved at a financial institution	Average transfer from social protection
Indonesia	Poor	8%	\$0.5/day
	Non-poor	21%	\$2/day
Malawi	Poor	4%	\$0.05/day
	Non-poor	11%	\$0.17/day



Main Message #2

Rapid, inclusive, and climate-informed development can **prevent most consequences of climate change** on poverty till 2030.

Absent such good development, climate change could add more than **100 million people** in extreme poverty by 2030.



In the absence of climate change, we can imagine two different ways for the world to evolve

Prosperity

More optimistic on:

- Economic growth
- Poverty
- Inequality
- Basic services



Poverty

Less optimistic on:

- Economic growth
- Poverty
- Inequality
- Basic services



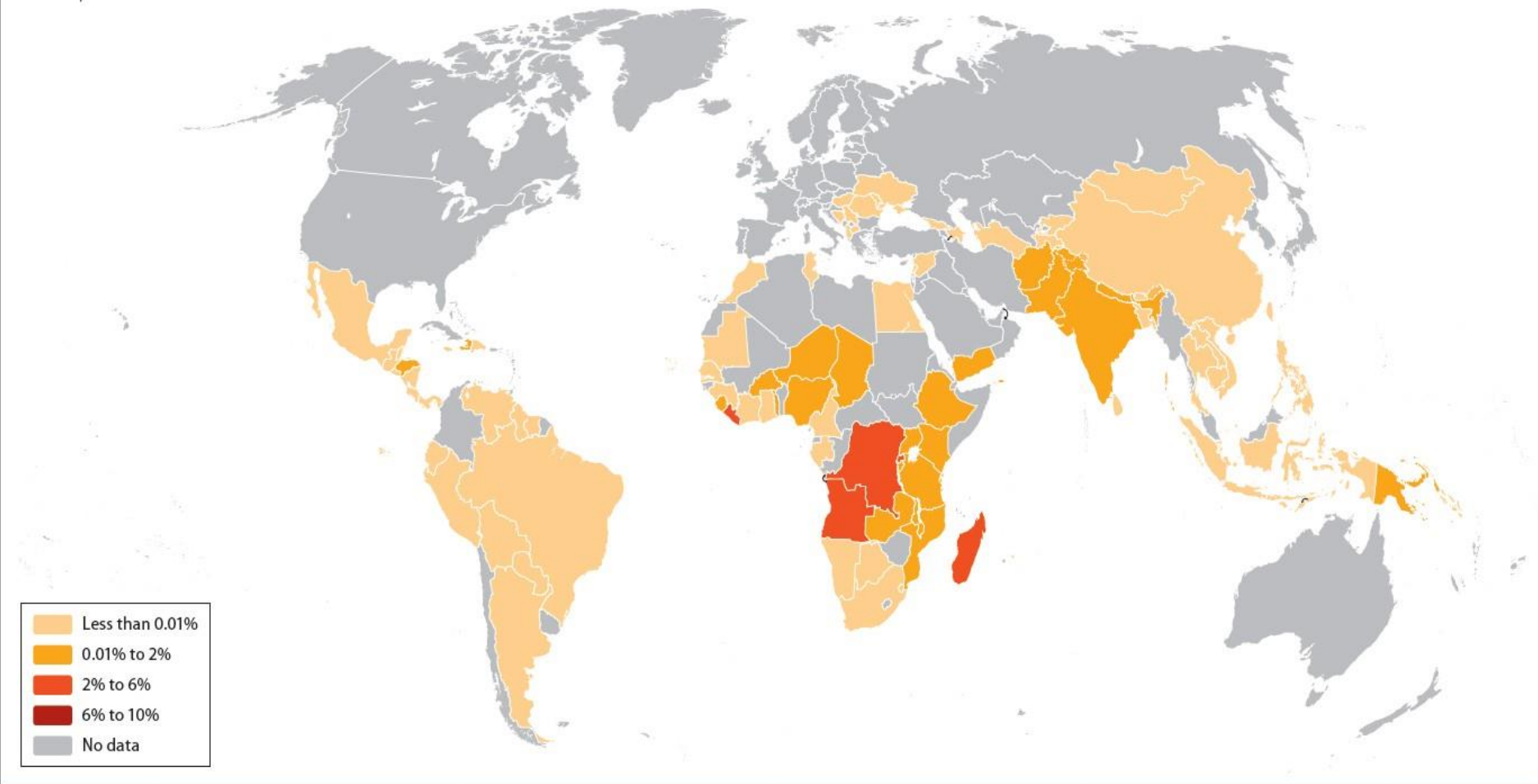
Then, we introduce climate change in these two scenarios.

And we explore what development can achieve to reduce future climate change impacts

Good development – rapid, inclusive and climate-informed –
can prevent most of the impact of climate change on poverty

Prosperity Scenario

IBRD 41903 | SEPTEMBER 2015

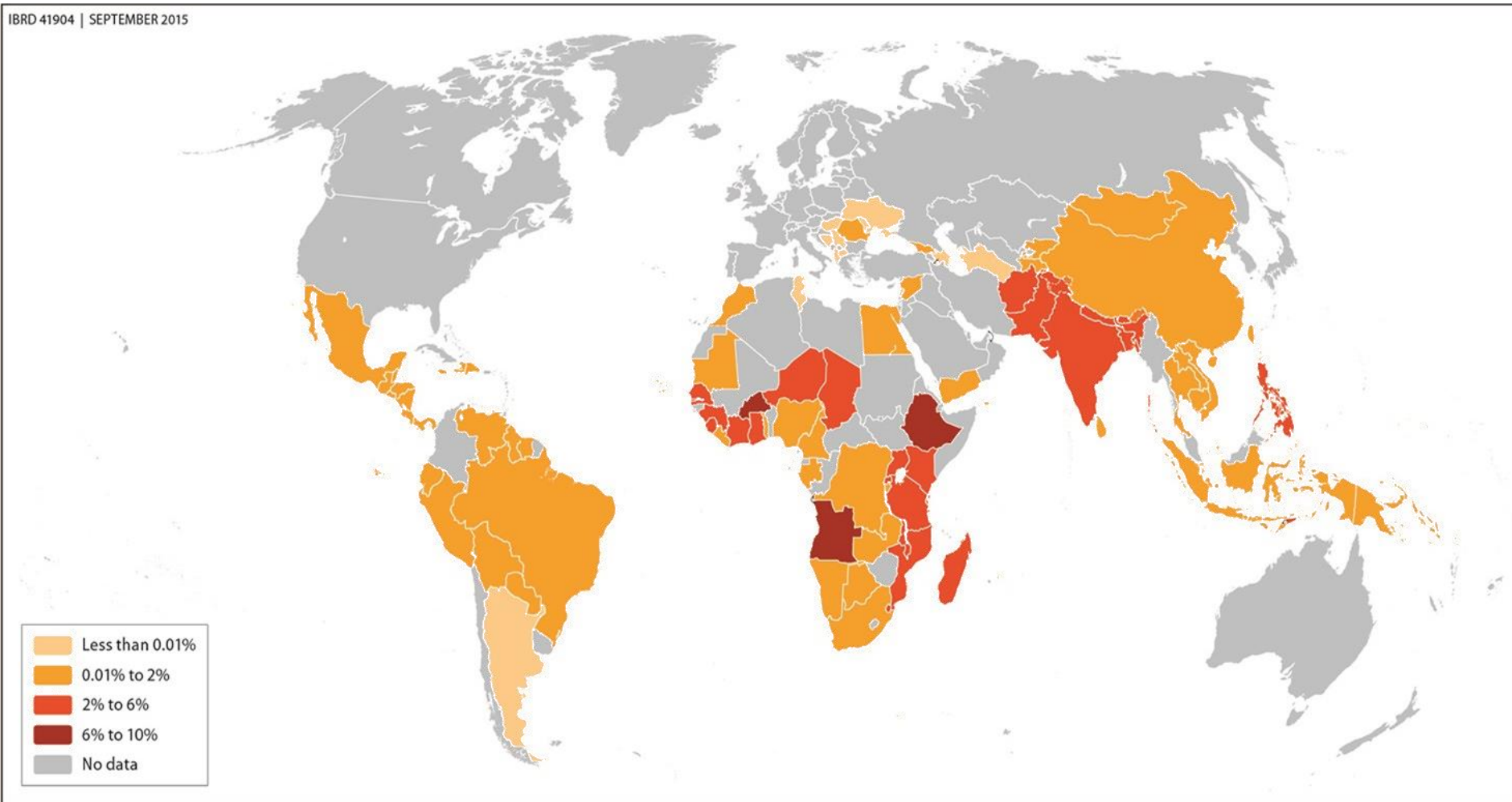


Up to 16 Million more people below the poverty line in 2030 due to climate change

Absent good development, climate change could keep more than 100 million people in poverty, especially in Sub-Saharan Africa and South Asia

Poverty Scenario

IBRD 41904 | SEPTEMBER 2015



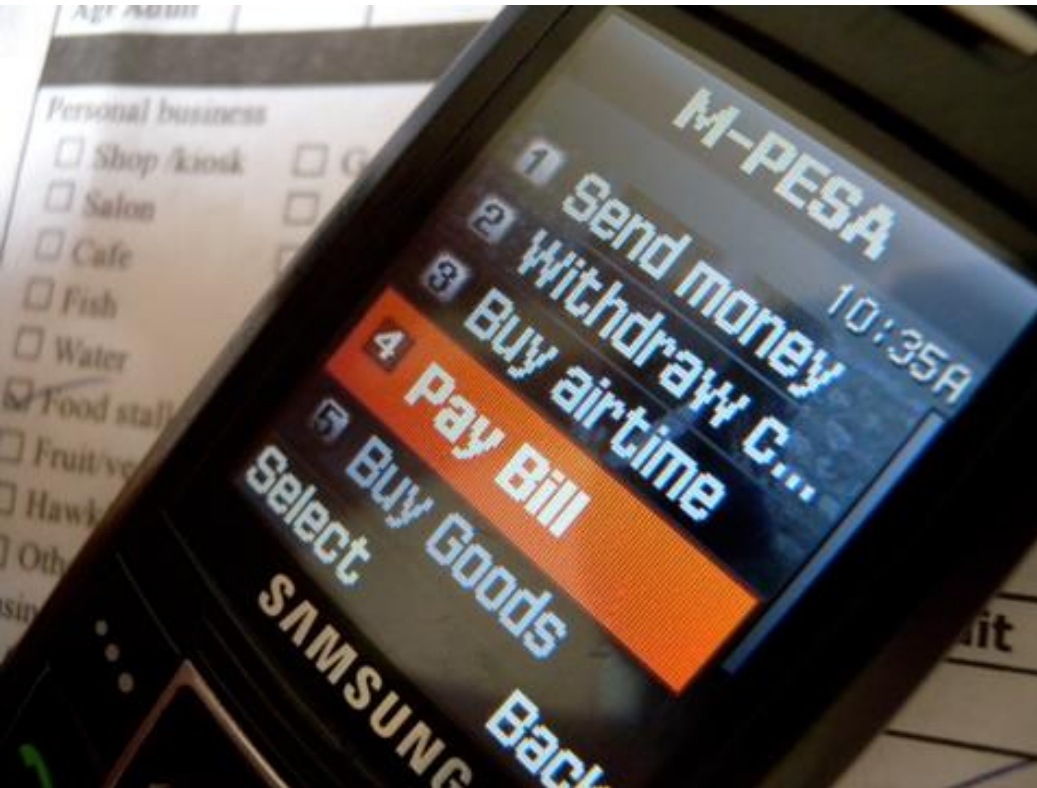
Up to 122 million more people below the poverty line in 2030 due to climate change

Good development includes progress in the agricultural sector and infrastructure

Better education, transport infrastructure, and connection to markets can reduce climate change impacts through agriculture

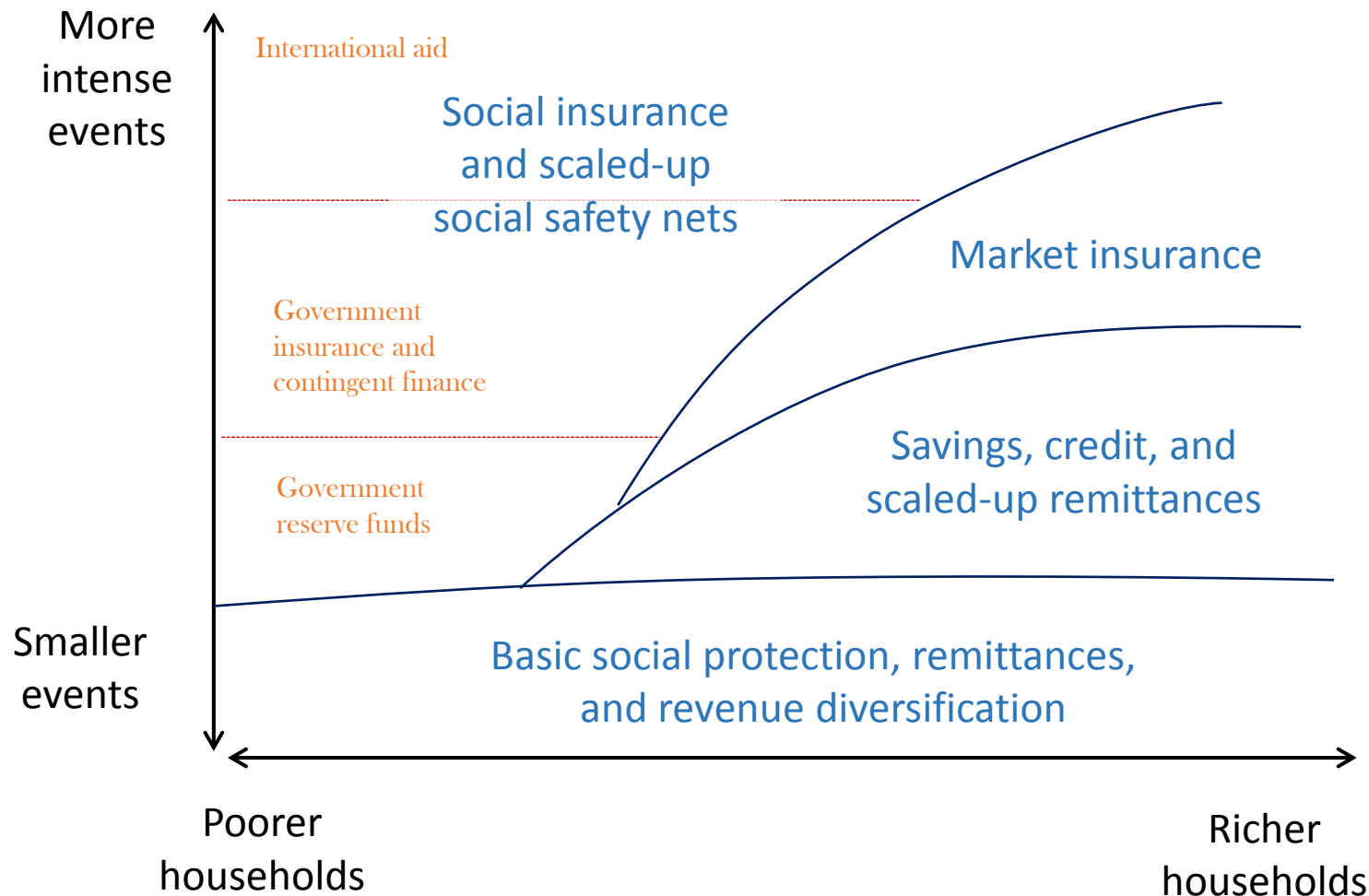


Good development includes financial inclusion that protects people against all shocks...



- Mobile banking will help.
- But bank account must be designed for poor people...
- ... and they need consumer protection.

Good development includes strengthened social protection systems



Good development includes universal health coverage and better health care quality...

In Rwanda, the government started investing in universal health coverage in 1994. Today nearly 80 percent of its population is insured.

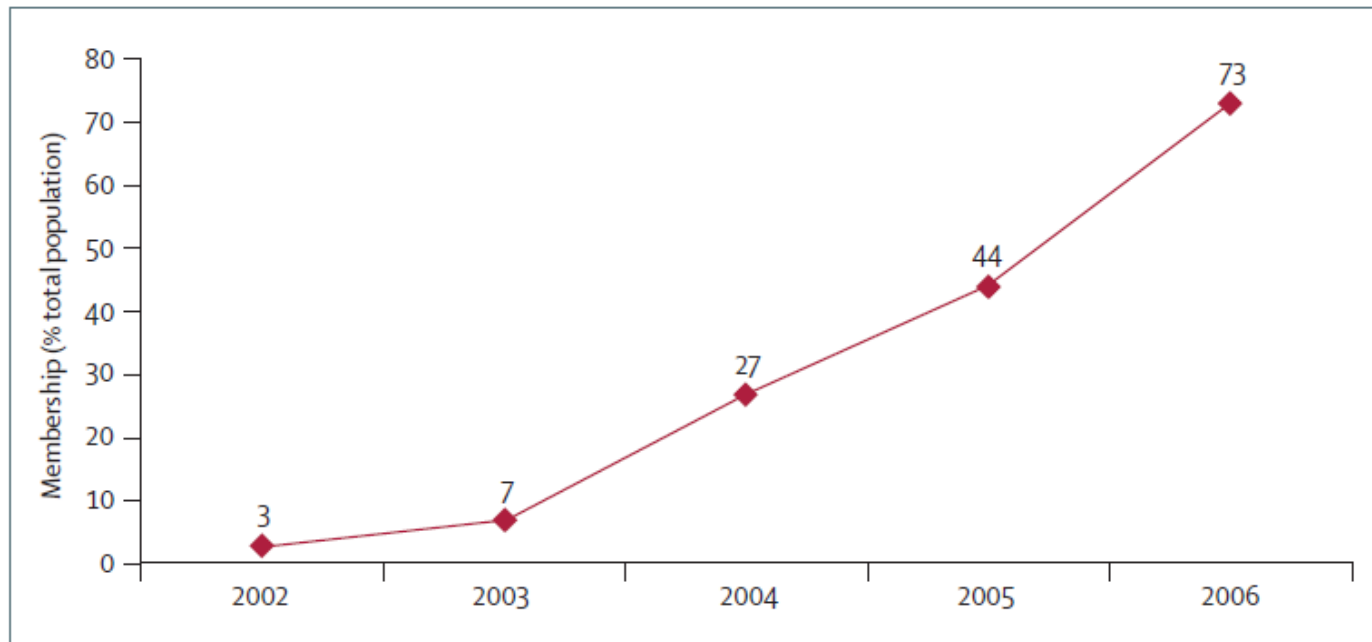


Figure 3: Scale-up of community health insurance scheme
Reproduced from Basinga and colleagues with permission.¹⁸

Source: Logie, Rowson, and Ndagije,
The Lancet

Good development needs to be complemented with targeted adaptation policies in the three key sectors



- Climate-smart agriculture, for instance mixing trees with annual crops
- Heat-tolerant crops
- Water reservoirs and groundwater management
- R&D for tropical agriculture



- Early warning systems, taking into account behavioral issues
- Land-use plans that account for future changes in climate (and the uncertainty in projections)
- Coastal and floods protection including mangroves and wetlands



- Monitoring and surveillance systems for emerging health crises
- R&D toward diseases that will increase due to climate change

Scaled-up social protection to help households cope with shocks and avoid detrimental secondary effects



- In Mexico, beneficiaries of Prospera are less likely to withdraw their children from school when hit by shocks.
 - In Kenya, the Hunger Safety Net Program prevented a 5 percent increase in poverty among beneficiaries following the 2011 drought.
- In the report we discuss *how to scale up social protection after a shock*:
 - Increase coverage (Ethiopia PNSP, Brazil social registries)
 - Increase amounts (Philippine 4Ps)
 - Create a new program (Pakistan *Citizen's Damage Compensation Program*)
 - And we discuss *how to finance this scale up*:
 - Reserve funds
 - Insurance and risk sharing facilities
 - Contingent finance (Cat-DDOs)

Many Policy Decisions Have Long-Term Consequences and are climate-sensitive

Flood Protection



Land Use Policies



Energy Investments



Transportation Systems

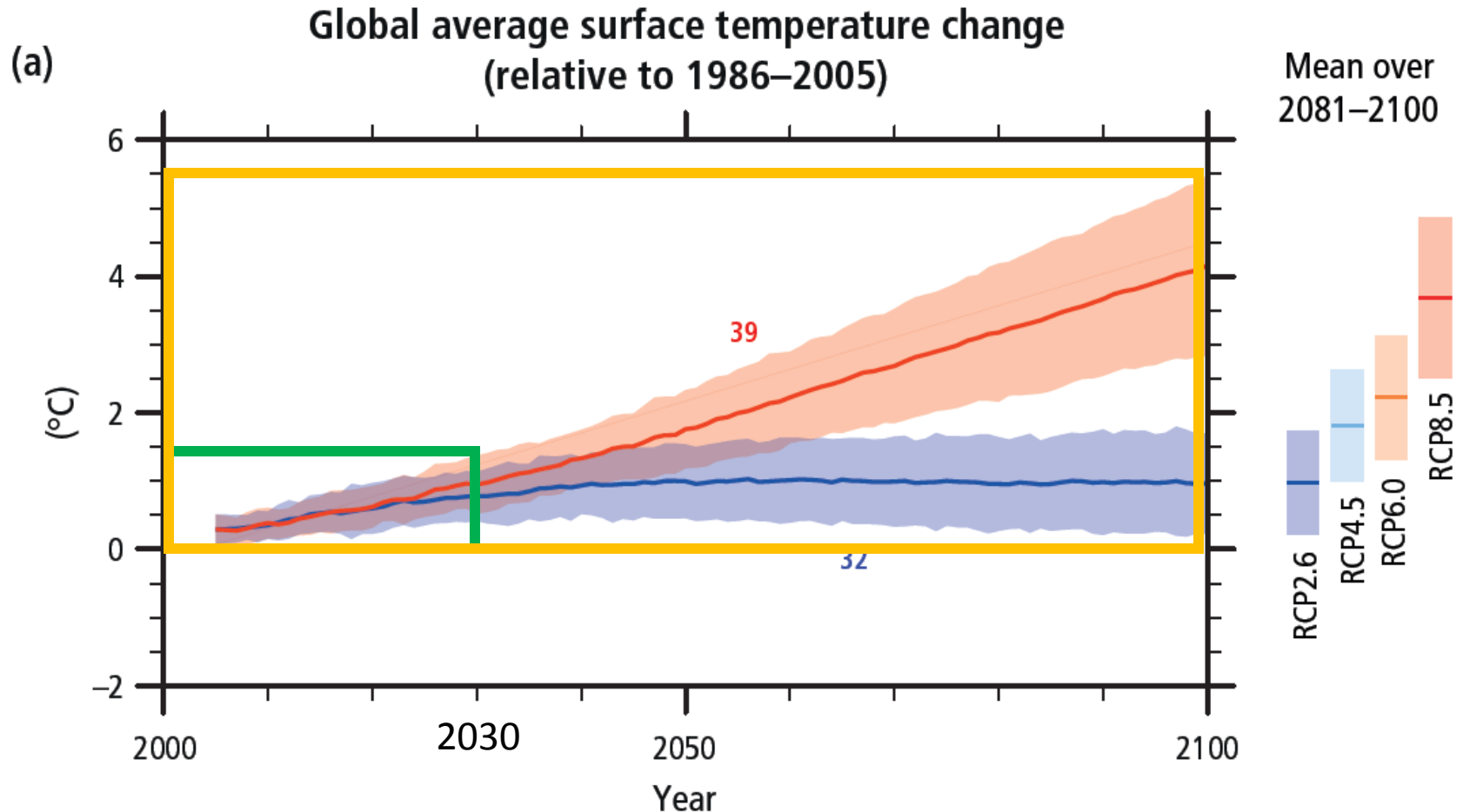


Main Message #3

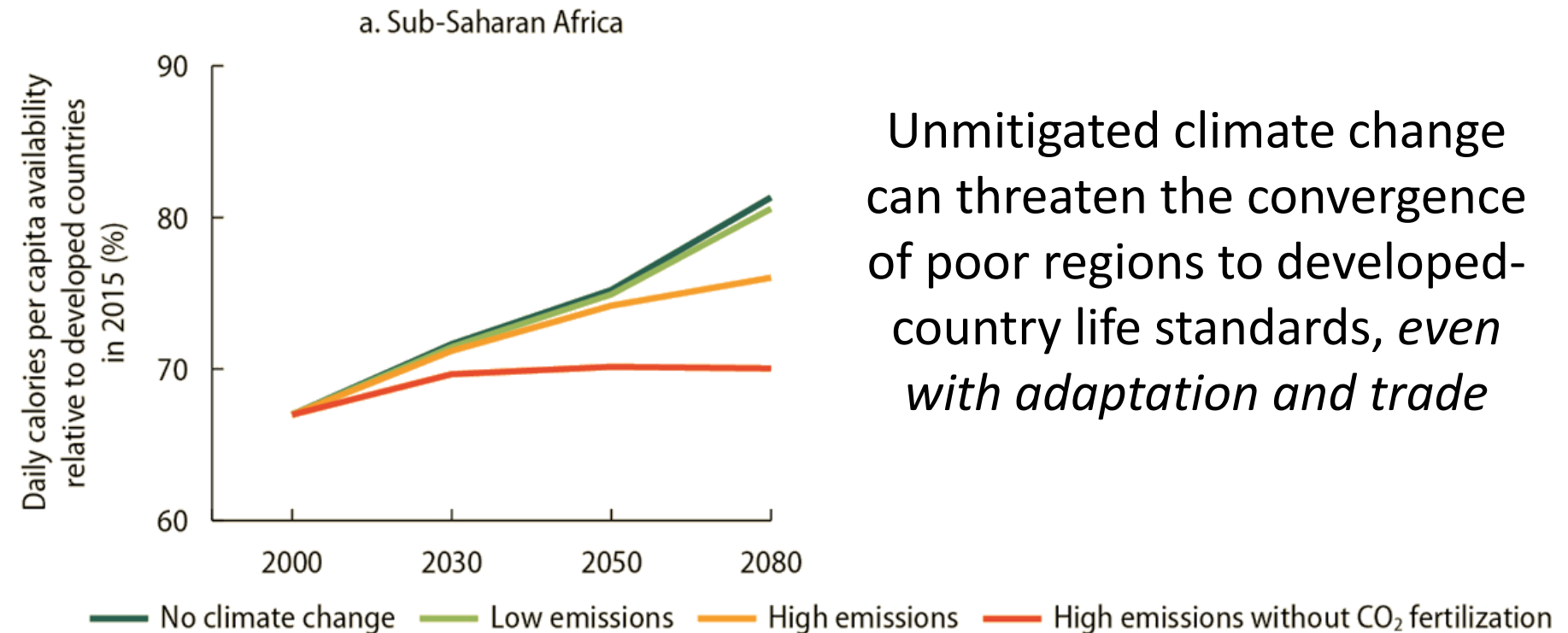
Immediate mitigation is required **to remove the long-term threat** that climate change creates for poverty eradication.

Mitigation need not threaten short-term progress on poverty reduction provided that policies are well designed and international support is available.

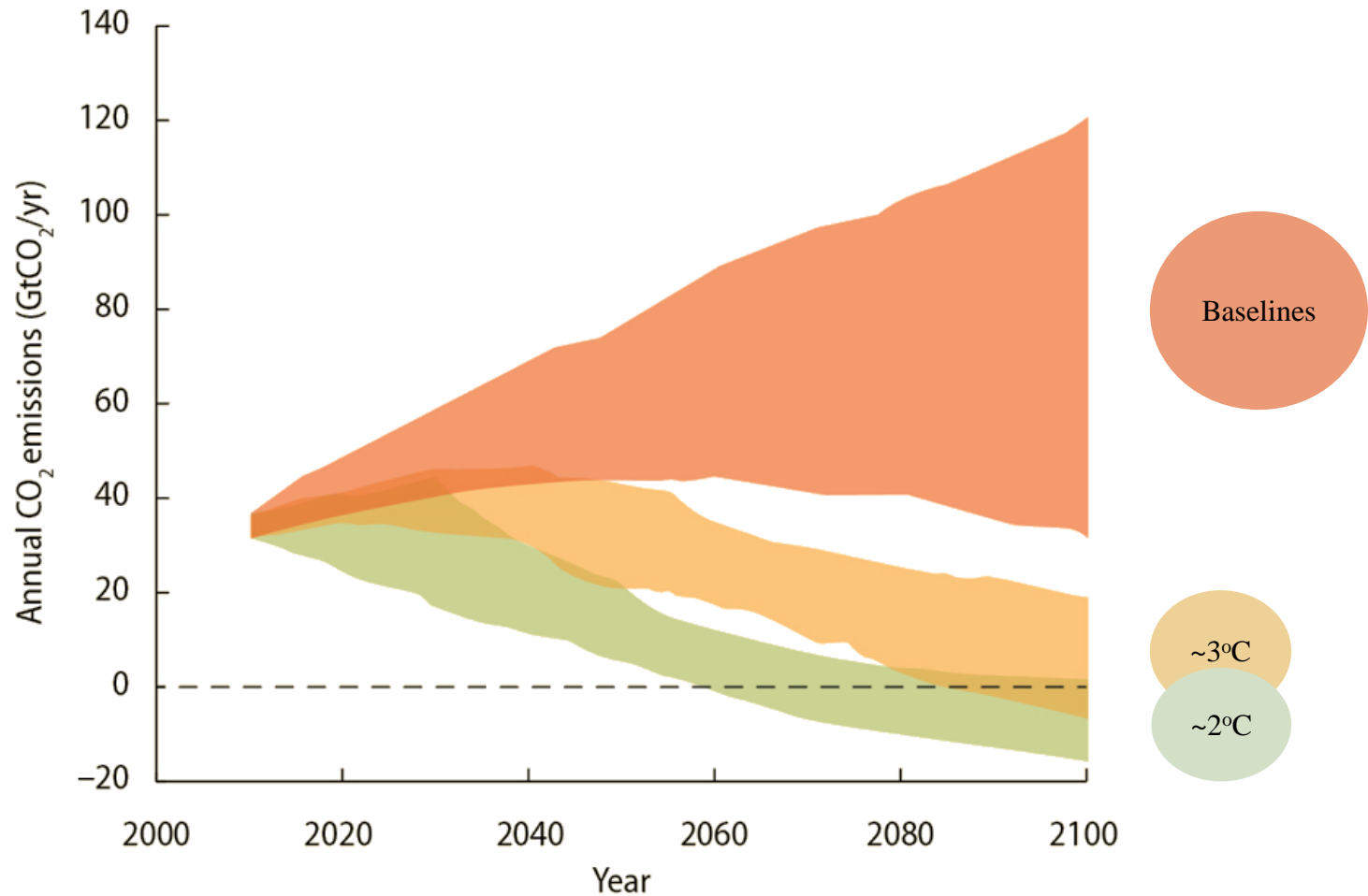
So even the limited changes we expect by 2030 could have a large effect on poverty



Long-term climate change is likely to exceed adaptation capacity



Stabilizing climate change requires to bring net emissions to zero...

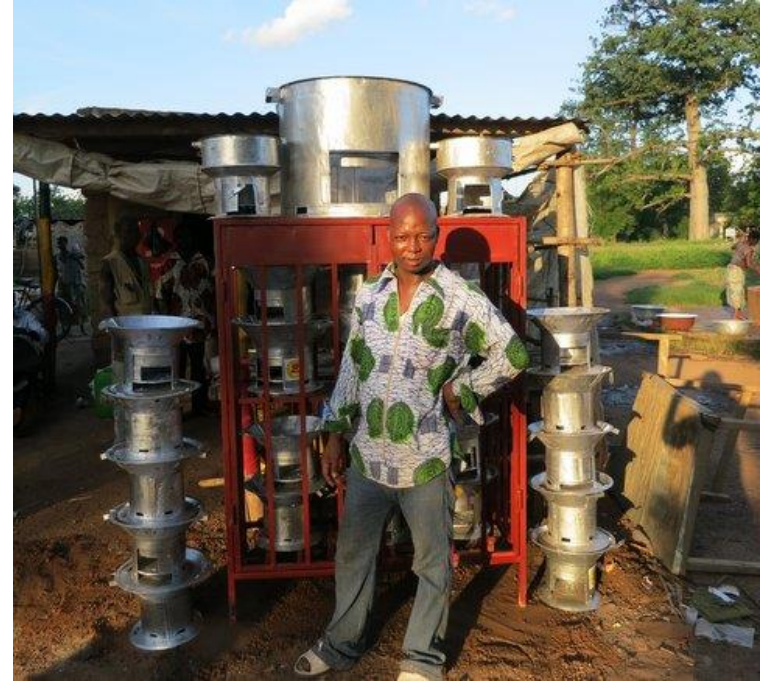


... but mitigation should not slow down poverty reduction

Start with measures with immediate and local co-benefits

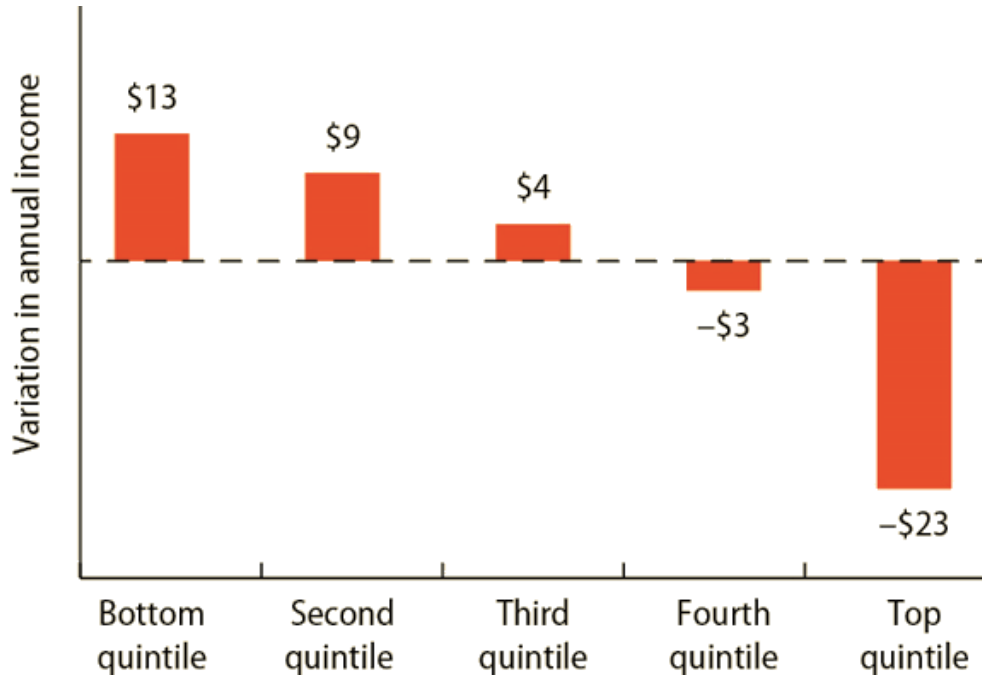


Of which there are many



Policies can be designed to benefit the poor

Distributional impacts of replacing \$100 of fossil fuel subsidy by a universal cash transfer



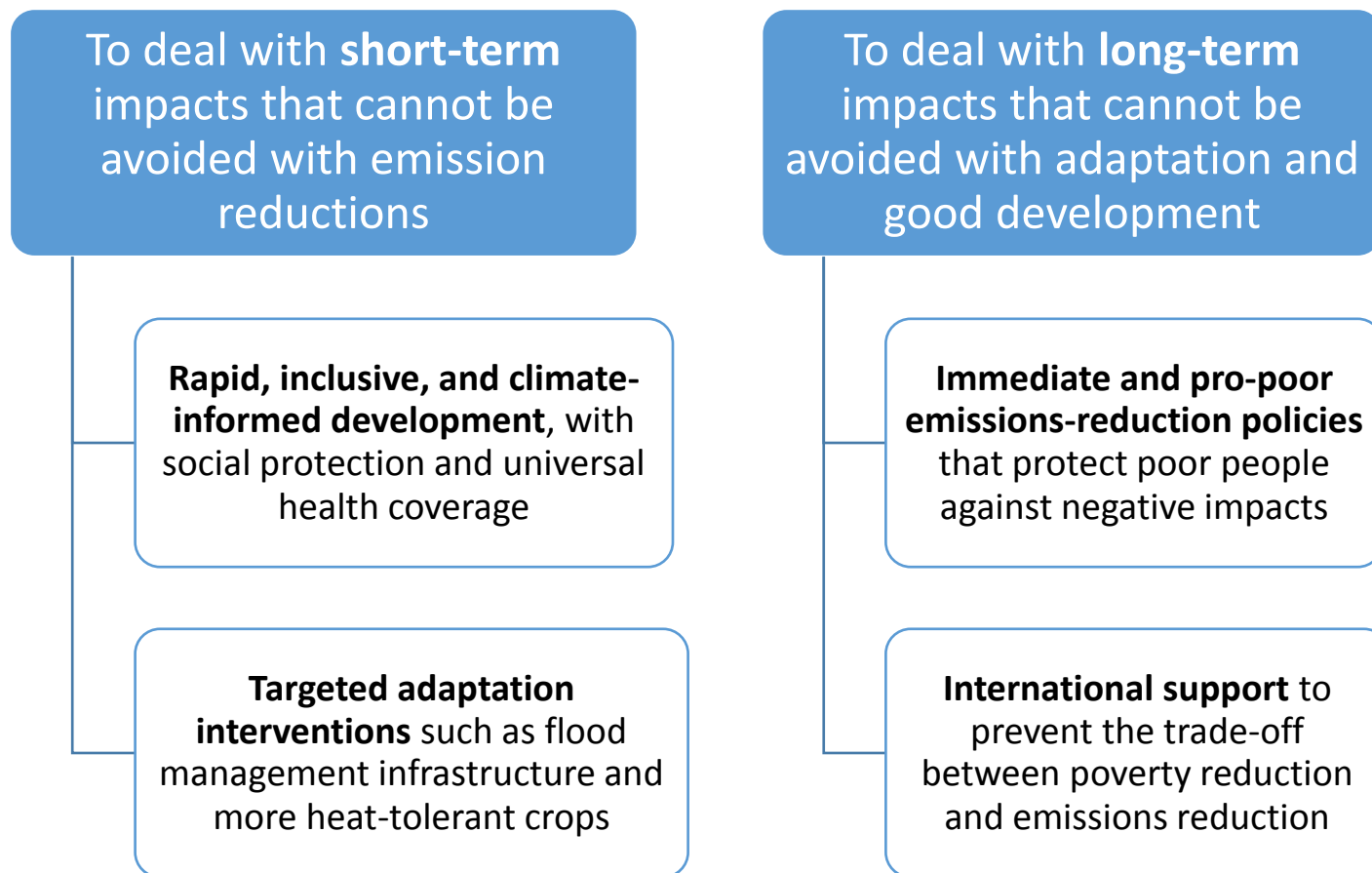
When it reformed energy subsidies, **Indonesia** deployed a program of cash transfers that provided 30% of the population with \$30 per quarter, significantly more than the increase in energy costs.

Source: based on Arze del Granado et al (2012)

But very poor countries cannot protect poor people and need international support

An optimistic take-away?

The future is not set in stone. We have a window of opportunity to achieve our poverty objectives in spite of climate change.





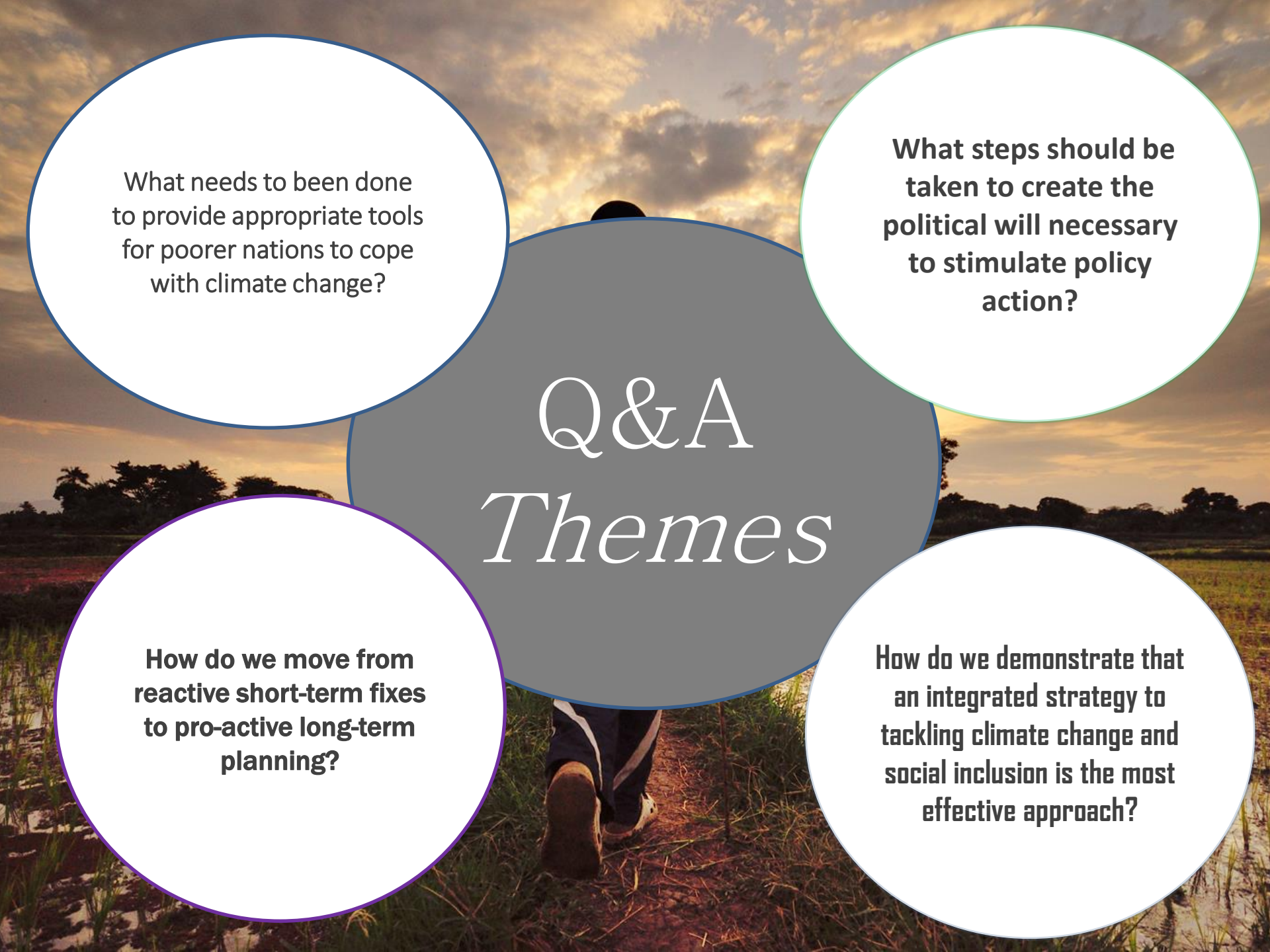
Discussant: Paul Ekins

*Director, Institute for Sustainable Resources, UCL
Professor, Resources and Environmental Policy, UCL*

A photograph of a wind farm. Several tall, white wind turbines are visible on a green, rolling hill. The sky is blue with scattered white clouds. In the foreground, there are dark green trees and bushes. A dirt path or road runs along the crest of the hill. The overall scene is bright and clear.

Discussant: Simon Anderson

*Head, Climate Change Group,
International Institute for Environment and Development*

A person is walking away from the camera on a dirt path that leads into a field. The sky is filled with clouds, and the sun is low on the horizon, creating a warm, golden light. The person is wearing dark clothing and light-colored shoes. Four circular callouts are overlaid on the image, each containing a question. A central grey circle contains the title 'Q&A Themes'.

What needs to be done to provide appropriate tools for poorer nations to cope with climate change?

What steps should be taken to create the political will necessary to stimulate policy action?

Q&A *Themes*

How do we move from reactive short-term fixes to pro-active long-term planning?

How do we demonstrate that an integrated strategy to tackling climate change and social inclusion is the most effective approach?

Thank you for attending this webinar on “Shock Waves: Managing the Impacts of Climate Change on Poverty”

- This webinar was recorded and will be uploaded to the GGKP website: www.greengrowthknowledge.org
- If you have any further questions about the webinar please email: contact@ggkp.org
- The GGKP asks you to complete a survey which will be sent out after this webinar.