

The “true cost” of climate change?

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Poverty dynamics - An example in India (Andhra Pradesh)

Flows out of poverty

14%



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%

Net flows

2%



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

Three key messages

- The choice of the “metric” – such as GDP or poverty – is not neutral: it impacts decisions and priorities.
- Climate impacts are biased and affect poor people disproportionately. Even moderate changes with small GDP impacts can have large impacts on poverty
- To reduce future impacts, especially on poverty, the most important is to get development right. Absent inclusive and climate-informed development, climate change could bring more than 100 million people in poverty by 2030.

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Project A

Costs \$100 million

Prevents on average \$20 million in losses per year



Project B

Costs \$100 million

Prevents on average \$5 million in losses per year



Traditional risk assessment combines hazard, exposure and vulnerability of assets ...

ASSET LOSSES

1. Hazard



2. Exposure



3. Vulnerability



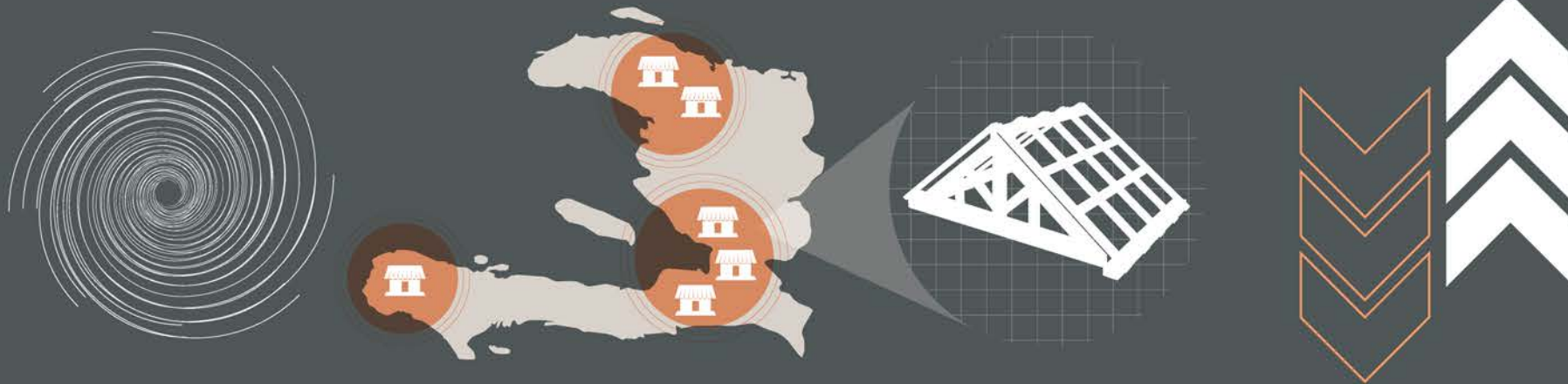
We also account for who is affected, and their **resilience**—that is, the capacity of affected people to cope with and recover from the shock

ASSET LOSSES

1. Hazard

2. Exposure

3. Vulnerability



WELL-BEING LOSSES

1. Hazard

2. Exposure

3. Vulnerability

4. **Socioeconomic
resilience**

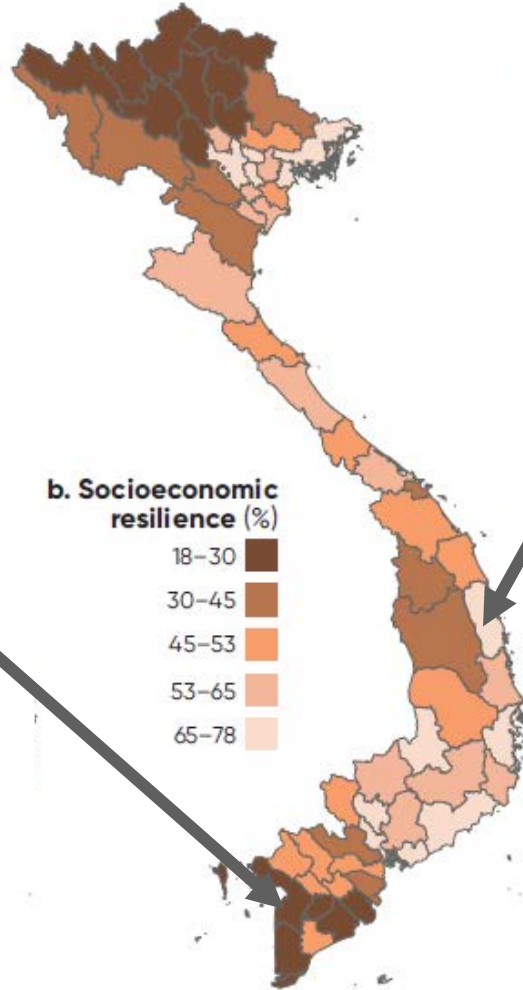
Investment priorities should be driven by more than aggregate costs and benefits

Prevents \$1 million per year in asset losses



In Kien Giang
(resilience 29%)

**Gains in terms of well-being
\$3.4 million**



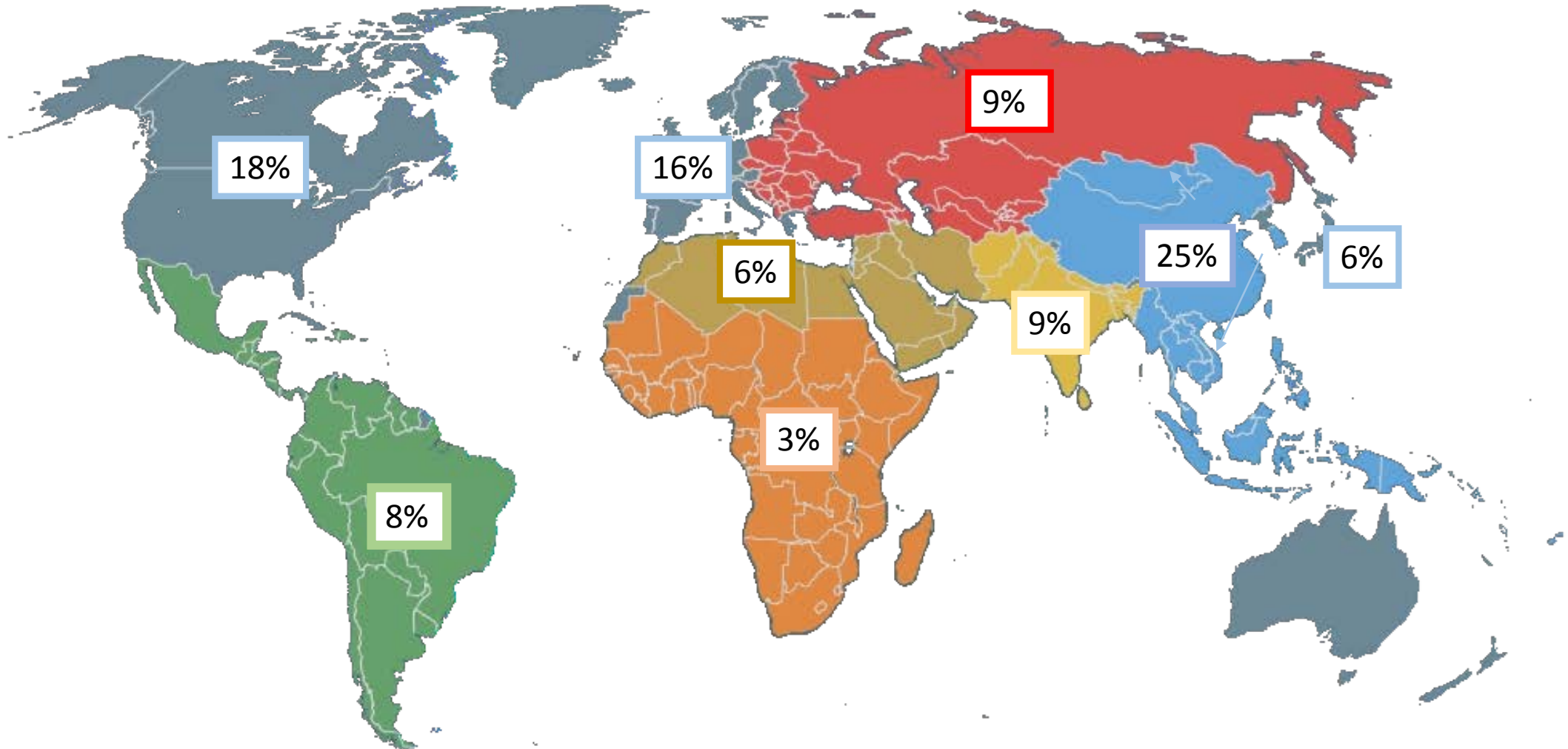
Prevents \$1 million per year in asset losses



In Binh Dinh
(resilience 69%)

**Gains in terms of well-being
\$1.4 million**

Share of GDP by world regions



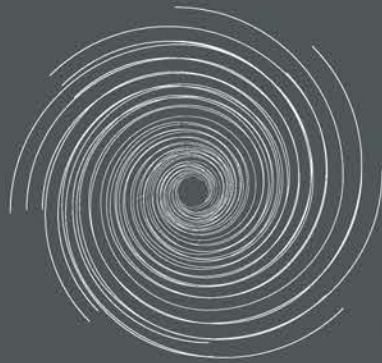
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The impact of natural shocks is biased – poor people suffer disproportionately

ASSET LOSSES

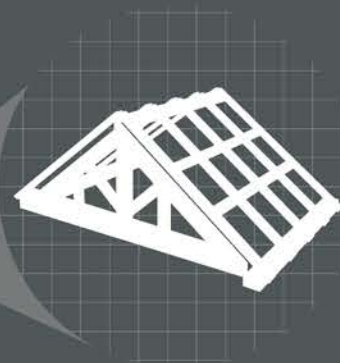
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2. Exposure



3. Vulnerability



WELL-BEING LOSSES

1. Hazard

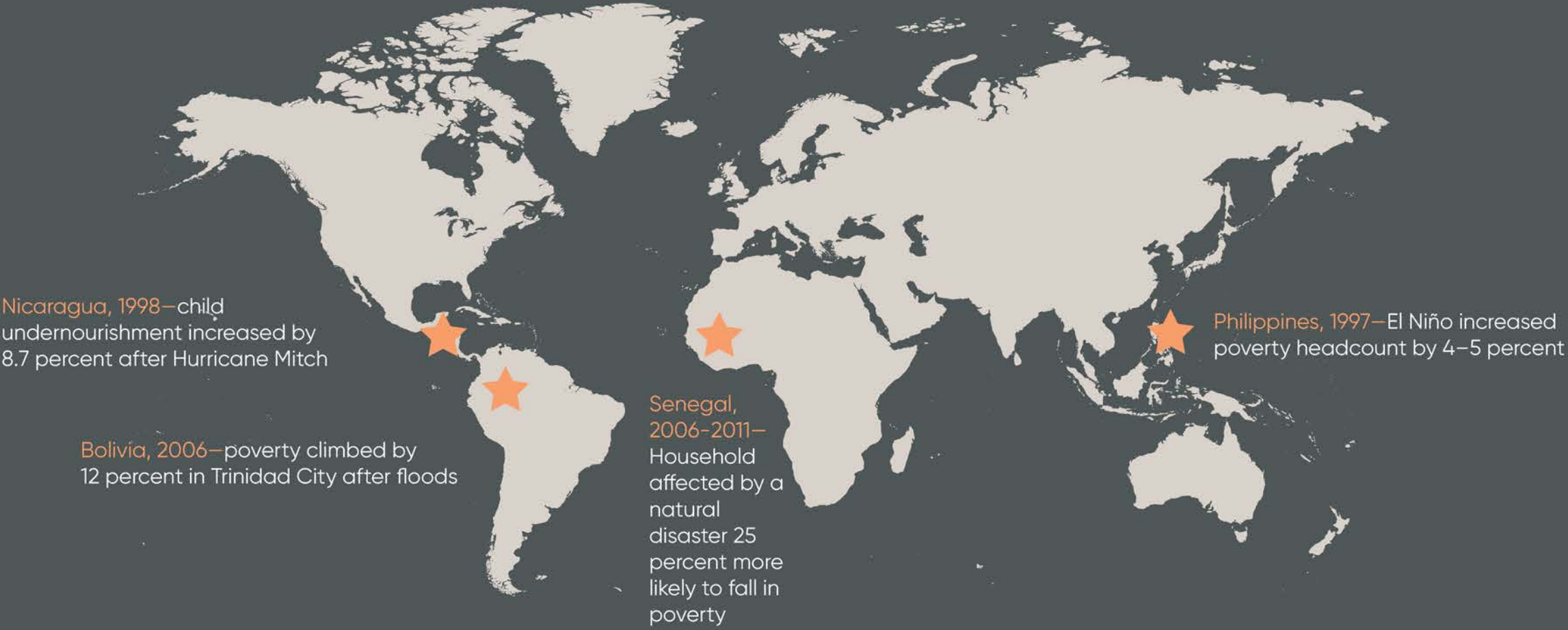
2. Exposure

3. Vulnerability

4. Socioeconomic resilience



Today, natural disasters already keep or push 26 million people in poverty, every year.



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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



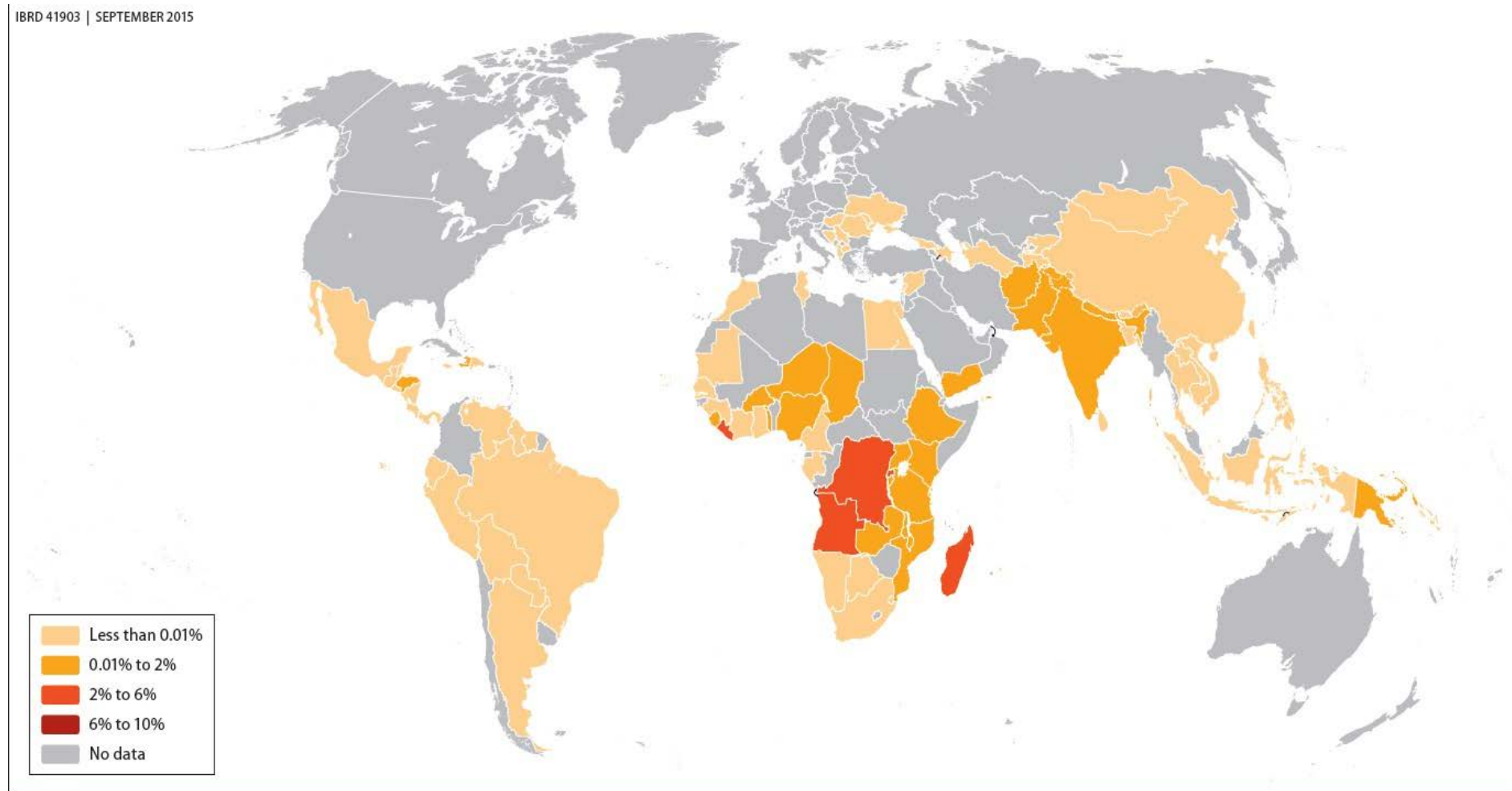
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Less optimistic on:
- Economic growth
 - Poverty
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 - Basic services

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

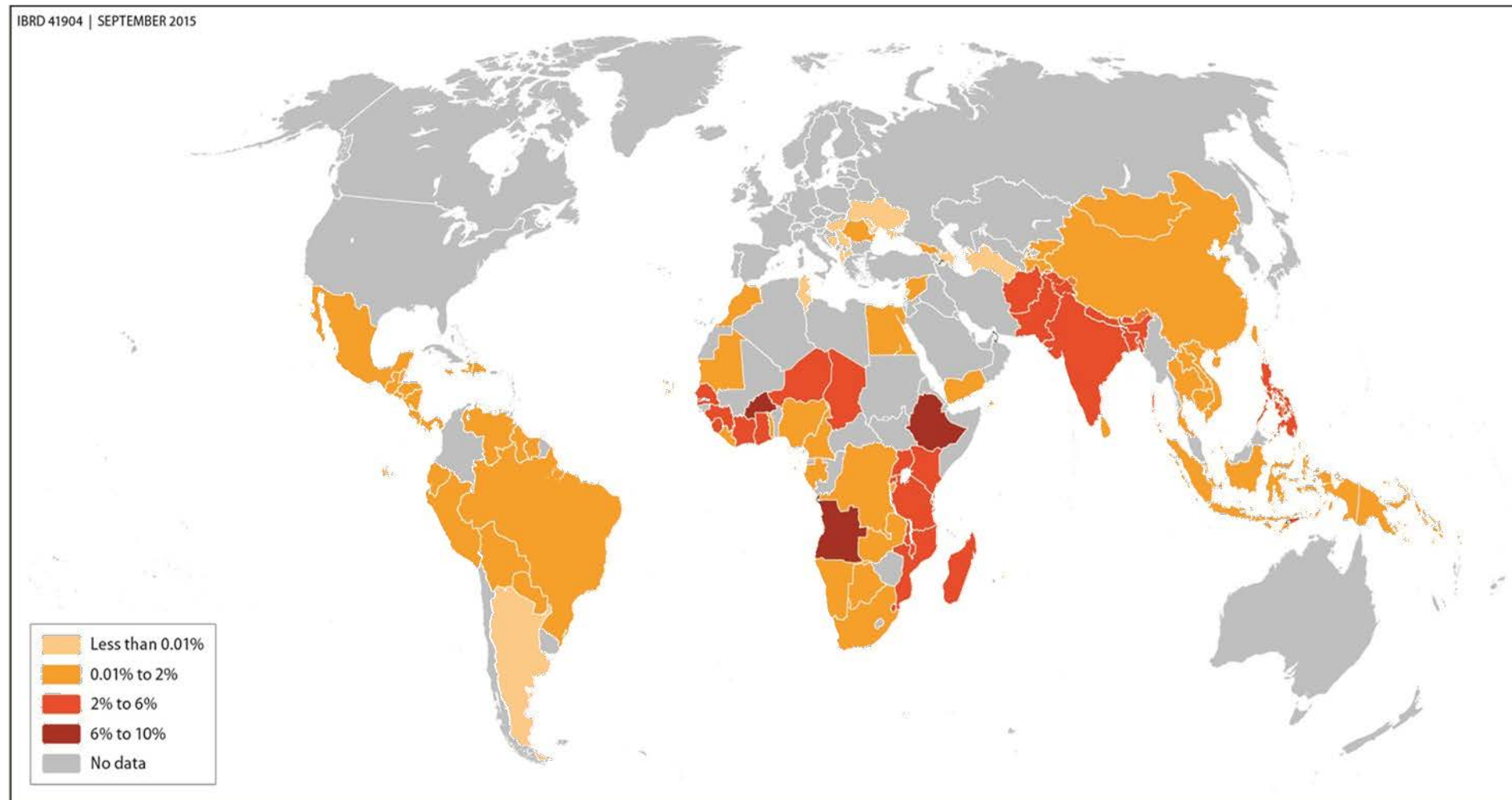
Prosperity Scenario



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

Poverty Scenario



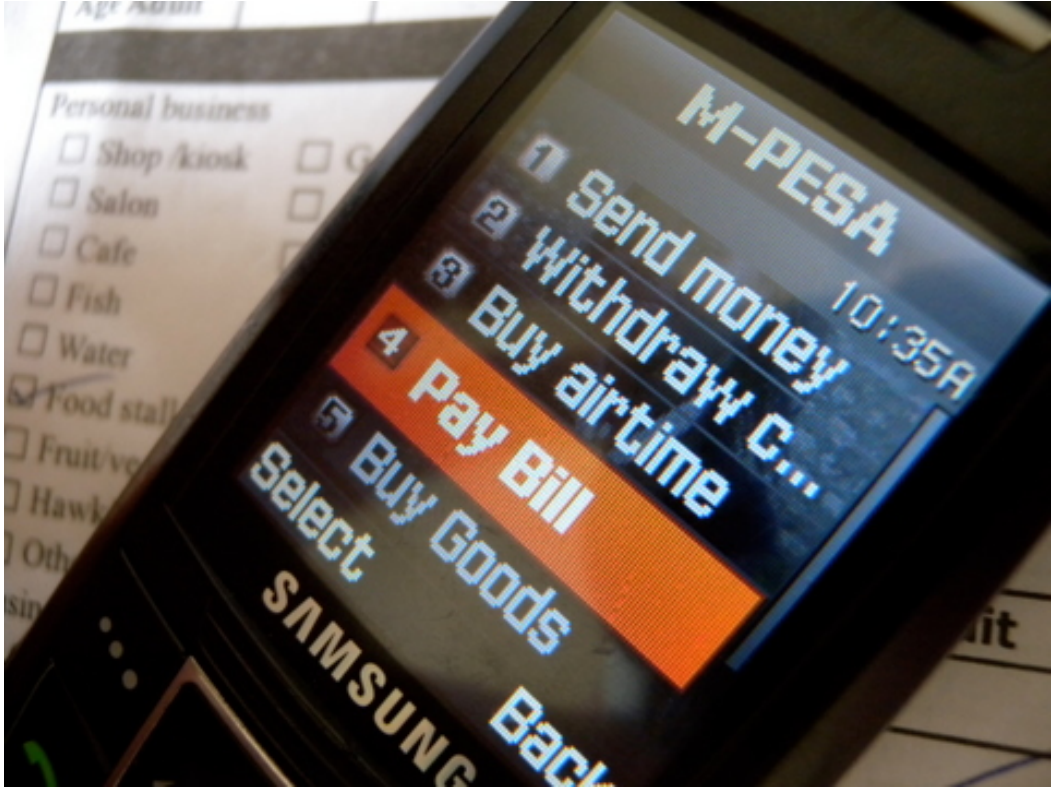
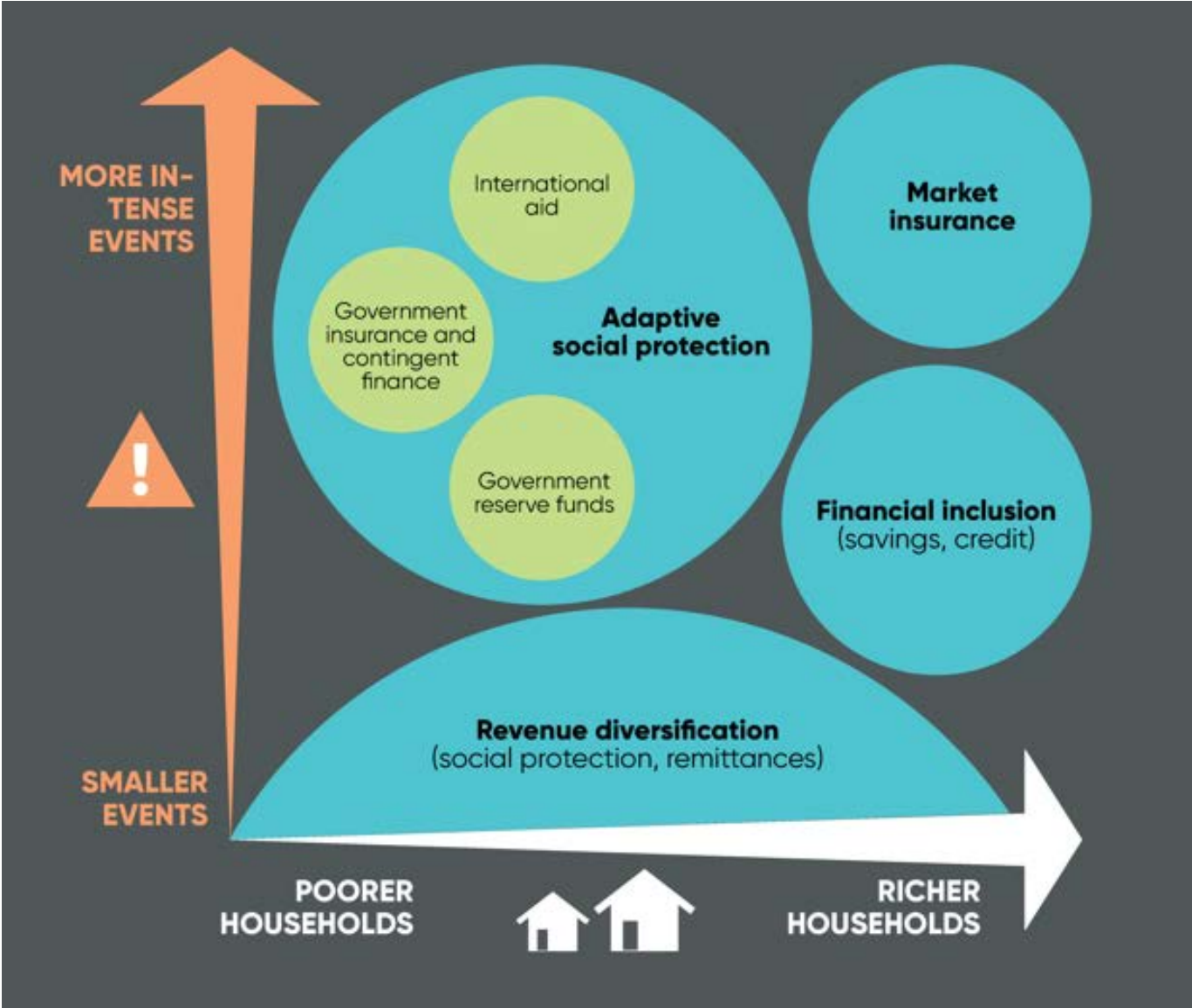
Up to 122 million more people below the poverty line in 2030 due to climate change

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 strengthened social protection systems and financial inclusion



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.

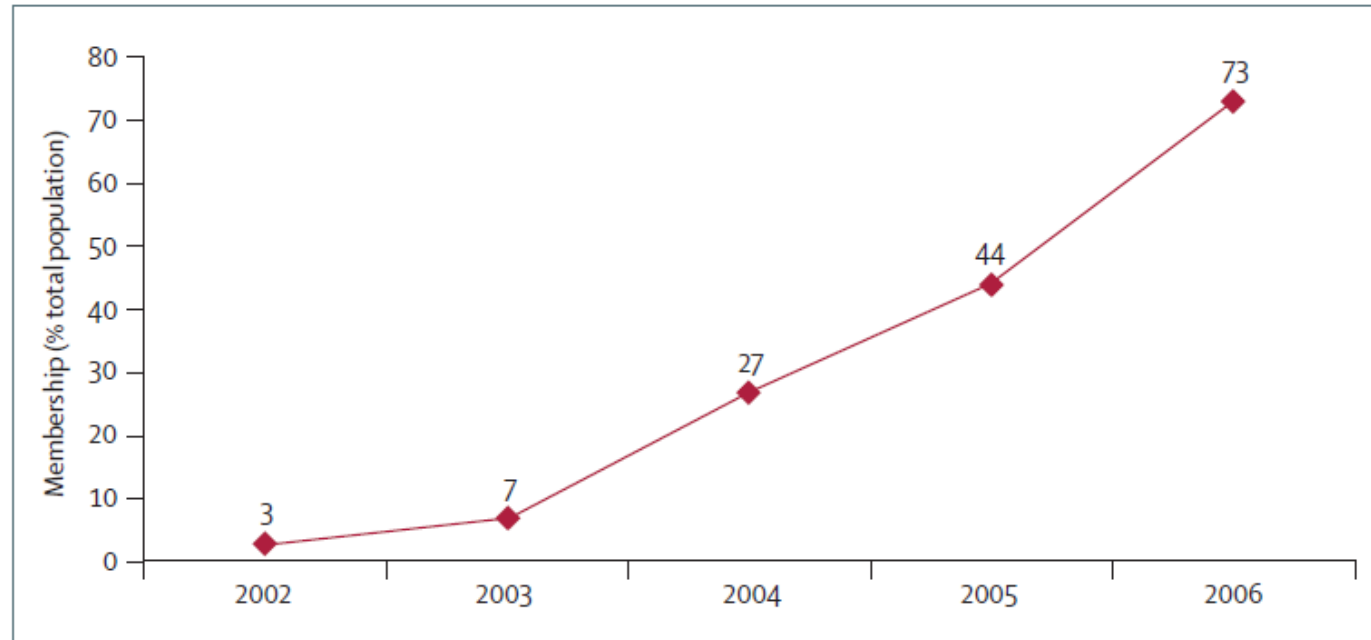


Figure 3: Scale-up of community-health insurance scheme
Reproduced from Basinga and colleagues with permission.¹⁸

Source: Logie, Rowson, and Ndagije,
The Lancet

Where is adaptation?

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SHOCK WAVES

Managing the Impacts of
Climate Change on Poverty

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

UNBREAKABLE

»» Building the Resilience of the Poor in the
Face of Natural Disasters

Stephane Hallegatte
Adrien Vogt-Schilb
Mook Bangalore
Julie Rozenberg