A busy year....
End poverty in all its forms everywhere

**TARGETS**

1.1
By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day

1.2
By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

1.3
Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable

1.4
By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance

1.5
By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

1.a
Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions

1.b
Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions
Ensure access to affordable, reliable, sustainable and modern energy for all

TARGETS

7.1
By 2030, ensure universal access to affordable, reliable and modern energy services

7.2
By 2030, increase substantially the share of renewable energy in the global energy mix

7.3
By 2030, double the global rate of improvement in energy efficiency

7.a
By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

7.b
By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support
Take urgent action to combat climate change and its impacts*

**TARGETS**

13.1
Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

13.2
Integrate climate change measures into national policies, strategies and planning

13.3
Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

13.a
Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

13.b
Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

* Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.
Strengthen the means of implementation and revitalize the global partnership for sustainable development

**TARGETS**

**Finance**

17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection

17.2 Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries

17.3 Mobilize additional financial resources for developing countries from multiple sources

17.4 Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress

17.5 Adopt and implement investment promotion regimes for least developed countries

**Technology**

17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism

17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed
17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology

**Capacity-Building**

17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation

**Trade**

17.10 Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda

17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries’ share of global exports by 2020

17.12 Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access

**Systemic issues**

*Policy and Institutional coherence*

17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence

17.14 Enhance policy coherence for sustainable development

17.15 Respect each country’s policy space and leadership to establish and implement policies for poverty eradication and sustainable development

*Multi-stakeholder partnerships*

17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries

17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships
Where are the trade-offs? Where are the synergies? How can we design smart policies?
Managing the Impacts of Climate Change on Poverty

Stephane Hallegatte, 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
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.
Flows into poverty
12% per year

Flows out of poverty
14% per year

Net flows
2% per year

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

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

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

Weather events keep people poor through asset and human capital destruction

Source: Krishna, 2007
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

1. Poor people are 50% more likely to be flooded
2. Poor people are 130% more likely to be affected by a drought
3. 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

based on Winsemius et al., forthcoming
Poor people are always much more vulnerable to natural hazards
Poor people have less access to support

<table>
<thead>
<tr>
<th></th>
<th>Saved at a financial institution</th>
<th>Average transfer from social protection</th>
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<tbody>
<tr>
<td>Indonesia</td>
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<td>8%</td>
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<tr>
<td>Non-poor</td>
<td>21%</td>
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Poor people have less access to support to cope and adapt

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<td><strong>Indonesia</strong></td>
<td></td>
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<tr>
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<td>$2/day</td>
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<td><strong>Malawi</strong></td>
<td></td>
<td></td>
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<tr>
<td>Poor</td>
<td>4%</td>
<td>$0.05/day</td>
</tr>
<tr>
<td>Non-poor</td>
<td>11%</td>
<td>$0.17/day</td>
</tr>
</tbody>
</table>

Indonesia: Poor = 8%, Non-poor = 21%
Malawi: Poor = 4%, Non-poor = 11%
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.
Then, we introduce climate change in these two scenarios.

And we explore what development can achieve to reduce future climate change impacts.
We use a harmonized database of 92 household surveys
Share of population living with less than 1.25 USD per day in 2030

Prosperity scenario

Less than 3% of global population below the extreme poverty threshold

Poverty scenario

11% of global population below the extreme poverty threshold
We add climate change impacts in 2030

- Agriculture prices and productivity changes affect farmers income and everybody’s consumption
- Natural disasters affect income (floods, etc.)
- Health: stunting, malaria, diarrhea (cost of treatment, lost days at work, children development)
- Temperature impact on productivity
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, especially in Sub-Saharan Africa and South Asia

Up to 122 million more people below the poverty line in 2030 due to climate change
Most of the impacts come from the agriculture sector. Overall, the negative impact of lower productivity on farmer incomes and higher prices on consumption dominate the positive impact of higher prices on farmer incomes.
Climate change is likely to magnify pre-existing inequality

![Graph showing correlation between income losses for the poorest 40% in each country and aggregate income losses. The linear regression equation is y = 1.4659x and R² = 0.54715.]

"Climate change is likely to magnify pre-existing inequality."
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.

Global average surface temperature change (relative to 1986–2005)

Source: IPCC 2014
Long-term climate change is likely to exceed adaptation capacity

Unmitigated climate change can threaten the convergence of poor regions to developed-country life standards, even with adaptation and trade.
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
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.

Policies can be designed to benefit the poor

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


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.

To deal with **short-term** impacts that cannot be avoided with emission reductions:
- **Rapid, inclusive, and climate-informed development**, with social protection and universal health coverage
- **Targeted adaptation interventions** such as flood management infrastructure and more heat-tolerant crops

To deal with **long-term** impacts that cannot be avoided with adaptation and good development:
- **Immediate and pro-poor emissions-reduction policies** that protect poor people against negative impacts
- **International support** to prevent the trade-off between poverty reduction and emissions reduction
MANAGING THE IMPACTS OF CLIMATE CHANGE ON POVERTY

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

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