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THE WORLD BANK GROUP

Turn Down the Heat II: Climate Extremes, Regional Impacts, and the Case for Resilience

"The scientists tell us that if the world warms by 2°C -- warming which may be reached in 20 to 30 years -- that will cause widespread food shortages, unprecedented heat-waves, and more intense cyclones. In the near-term, climate change, which is already unfolding, could batter the slums even more and greatly harm the lives and the hopes of individuals and families who have had little hand in raising the Earth's temperature. Urgent action is needed to not only reduce greenhouse gas emissions, but also to help countries prepare for a world of dramatic climate and weather extremes." World Bank Group President Jim Yong Kim, June 2013

Background

Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience builds on a World Bank report released late last year, which warned the world would warm by 4 degrees Celsius (4°C or 7.2 degrees Fahrenheit) above pre-industrial levels by the end of this century if we did not take concerted action now, with dire consequences. This new report looks at the likely impacts of present day, 2°C and 4°C warming on agricultural production, water resources, coastal ecosystems and cities across Sub-Saharan Africa, South Asia and South East Asia:

- **Under current levels of warming,** significant climate and development impacts are already being felt. With temperatures at 0.8°C (1.4 ºF) above pre-industrial levels, the last decade has seen extreme weather events resulting in widespread human suffering and increasing economic damage across all regions. Sea levels have been rising more rapidly than previously projected. A rise of as much as 50 cm by the 2050s may already be unavoidable as a result of past emissions. Impacts could be felt much earlier. A rise of 15 cm, coupled with more intense cyclones, threatens to inundate much of Bangkok by the 2030s.

- **A warming of 2°C (3.6 °F)**, above pre-industrial levels, may be reached in 20 to 30 years. In *Sub-Saharan Africa*, food shortages will become more common. In *South Asia*, shifting rain patterns will leave some areas under water and others without enough water for power generation, irrigation or drinking. In *South East Asia*, the degradation and loss of reefs would diminish tourism, reduce fish stocks, and leave coastal communities and cities more vulnerable to increasingly violent storms and landslides.

- **As warming goes from 2ºC (3.6ºF) to 4°C (7.2 ºF),** multiple threats of more extreme heat waves, rising sea–levels, more severe storms, droughts and floods will have severe implications for the poorest and most vulnerable. In *Sub-Saharan Africa*, by the 2030s droughts and heat will leave 40% of the land now growing maize unable to support the crop. Rising temperatures could cause major loss of savanna grasslands threatening pastoral livelihoods. In *South Asia*, a potential change in the regularity and impact of the monsoon could precipitate a major crisis in the region. Events like the devastating Pakistan floods of 2010, which affected more than 20 million people, could become common place. Across *South East Asia*, rural livelihoods are faced with mounting pressures as sea levels rise, tropical cyclones increase in intensity and important marine ecosystem services are lost as warming approaches 4°C. Across all regions, the growing movement of impacted communities into cities could lead to higher numbers of people in slums and other informal settlements being exposed to heat waves, flooding, mudslides and diseases.

How we are helping

The World Bank Group believes urgent action is needed to reduce greenhouse gas emissions and to help countries build resilience and prepare for a world of dramatic climate and weather extremes. Partly in response to the findings of the two **Turn Down the Heat** reports, the WBG is stepping up its mitigation, adaptation, and disaster risk management work, and will increasingly look at all its business through a "climate lens."

- Today, the Bank **is helping 130 countries take action on climate change**. Last year, it doubled financial lending that contributes to adaptation. Increasingly, the Bank is supporting action on the ground to finance projects that help the poor grow their way out of poverty, increase their resilience to climate change, and achieve emission reductions. For example, the Metro Manila Flood Management Master Plan is looking at various climate change scenarios and proposes a number of future adaptation measures which aims to keep Manila safe from floods. In Niger, we are helping the government give farmers a chance to fight punishing drought through better irrigation.

- The Bank has been rapidly ramping up engagement in renewable energy and energy efficiency improvement. **The share of renewable energy in all our energy projects doubled over the last 5 years.**

- The WBG is working to support action by, and with, others to deliver solutions and **bold actions that will make the biggest difference** – to help cities grow clean and climate resilient, develop climate smart agriculture practices, and find innovative ways to improve both energy efficiency and the performance of renewable energies. It also works with countries to roll back harmful fossil fuel subsidies and help put the policies in place that will eventually lead to a stable price on carbon.

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