

World Bank fears devastating 4.0 degree warming

November 19 2012, by Shaun Tandon



The smoke stacks at American Electric Power's Mountaineer coal power plant in New Haven, West Virginia. The World Bank has warned that global temperatures could rise by four degrees this century without immediate action, with potentially devastating consequences for coastal cities and the poor.

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Issuing a call for action, the World Bank tied the future wealth of the planet—and especially developing regions—to immediate efforts to cut [greenhouse gas emissions](#) from sources such as [energy production](#).

"The time is very, very short. The world has to tackle the problem of [climate change](#) more aggressively," World Bank President Jim Yong Kim said on a conference call as he launched a report conducted for the global lender.

"We will never end poverty if we don't tackle climate change. It is one of the single biggest challenges to social justice today."

The study said the planet could warm 4.0 degrees Celsius (7.2 Fahrenheit) above pre-industrial levels as early as the 2060s if governments' promises to fight climate change are not met.

Even if nations fulfill current [pledges](#), the study gave a 20 percent likelihood of a four-degree rise by 2100 and said that a three-degree rise appeared likely. UN-led [climate negotiations](#) have vowed to limit the rise of temperatures to no more than two degrees.

"A four-degree warmer world can and must be avoided. We need to hold warming below two degrees," Kim said. "Lack of ambitious action on climate change threatens to put prosperity out of reach of millions and roll back decades of development."

UN Secretary-General Ban Ki-moon said in a statement that the study showed the need to hold nations to their commitment, made last year in Durban, South Africa, to put in place a legally binding new [climate agreement](#) by 2015.

State of climate

Notable anomalies in 2011

■ Rain and snow ■ Sea and land ice melt ■ Temperature rise ■ Drought ■ Ozone layer



Graphic showing extreme weather events around the world in 2011 linked to global warming. T

The more than 190 nations in the [UN Framework Convention on Climate Change](#) start their latest annual talks on November 26 in Qatar.

[Global temperatures](#) have already risen about 0.8 degrees Celsius. The planet has charted a slew of record-breaking temperatures over the past decade and experienced frequent disasters some experts blame on climate change, most recently superstorm Sandy, which ravaged Haiti and the US East Coast.

The report said that, if temperatures rise by four degrees, regions will feel different effects—recent heatwaves in Russia could become an annual norm and July in the Mediterranean could be nine degrees higher than the area's warmest level now.

Under that scenario, the acidity of the oceans could rise at a rate unprecedented in world history, threatening coral reefs that protect shorelines and provide a habitat for fish species.

Rising sea levels could inundate coastal areas with the most vulnerable cities found in Bangladesh, India, Indonesia, Madagascar, Mexico, Mozambique, the Philippines, Venezuela and Vietnam, the study said.

"Many small islands may not be able to sustain the communities at all. There would be irreversible loss of biodiversity," Kim said.



Bangladeshi farmers harvest rice in a field on the outskirts of Dhaka in May 2012. According to a study issued by the World Bank, rising sea levels could

inundate coastal areas with the most vulnerable cities found in Bangladesh, India, Indonesia, Madagascar, Mexico, Mozambique, the Philippines, Venezuela and Vietnam.

The study found that the most alarming impact may be on food production, with the world already expected to struggle to meet demand for a growing and increasingly wealthy population that is eating more meat.

Low-lying areas such as Bangladesh, Egypt, Vietnam and parts of Africa's coast could see major blows to food production, with drought severely hindering agriculture elsewhere, the study said.

Flooding can also contaminate drinking water, increasing illnesses such as diarrhea.

The dire warnings were designed to encourage bolder action, but the report did not focus on potential steps.

Identifying one area, Kim called for less reliance on coal, which is the dirtiest major form of energy but is politically sensitive in the United States and China due to industry jobs.

Kim said that the World Bank was determined to support renewable energy in its lending, saying: "We do everything we can not to invest in coal—everything we possibly can."

The fight against climate change has faced political obstacles in a number of nations including the United States, where many conservative lawmakers have called action too costly and cast doubt on the science.

Kim, a physician and former president of Dartmouth College who was tapped for the World Bank by US President Barack Obama, said that 97 percent of scientists agreed that human activity was causing climate change.

"As someone who has lived in the world of science for a long time, 97 percent is unheard-of consensus," he said.

The report was carried out by German-based Climate Analytics and the Potsdam Institute for Climate Impact Research. The [World Bank](#) said it did not consider the study a substitute for next UN-backed scientific assessment on climate change expected in 2014.

More information: [phys.org/wire-news/114777826/4 ... f-a-future-with.html](https://phys.org/wire-news/114777826/4...f-a-future-with.html)

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