

Climate change is felt globally and risks are rising, U.N. panel says

The effects will be more severe and widespread if greenhouse gas emissions aren't cut, the report by scientists from 70 nations warns.

<http://www.latimes.com/nation/la-na-0401-climate-change-20140401,0,1584240.story#axzz2xWXlB6Jw>



Emissions rise from stacks at a thermal power station in Sofia, Bulgaria. (Dimitar Dilkoff / AFP-Getty Images / February 14, 2013)

By Tony Barboza

March 31, 2014 9:45 p.m.

Climate change is already affecting every continent and ocean, posing immediate and growing risks to people, an international panel of scientists warned Monday.

The longer society delays steps to cut the release of planet-warming greenhouse gases, the more severe and widespread the harm will be, said the [United Nations'](#) Intergovernmental Panel on Climate Change. The report, which collects and summarizes thousands of scientific studies, is the panel's starkest yet in laying out the risks facing nature and society.

Global warming threatens food and water supplies, security and economic growth, and will worsen many existing problems, including hunger, drought, flooding, wildfires, poverty and war, says the report by hundreds of scientists from 70 countries.

"Nobody on this planet is going to be untouched by the impacts of climate change," panel Chairman Rajendra Pachauri said at a news conference in Yokohama, Japan, where the [2,500-page assessment](#) was presented.

As the Earth warms, snow and ice are melting, rainfall is shifting, heat waves are growing more intense and water supplies are being strained. Plants and animals are moving to cooler areas, and in a few cases, have gone extinct because of climate change, the report says.

Oceans are rising and growing more acidic, hurting marine life and threatening coastal residents with more destructive storms. By century's end, climate change could displace hundreds of millions of people and cause trillions of dollars in damage to the world economy, the scientists say.

One of the panel's most striking new conclusions is that rising temperatures are already depressing crop yields, including those of corn and wheat. In the coming decades, farmers may not be able to grow enough food to meet the demands of the world's growing population, it warns.

Although the United States and other wealthy countries could probably adjust to the resulting surges in food prices, "this could really be devastating in terms of increased malnutrition and hunger" in the developing world, said Linda Mearns, senior scientist at the National Center for Atmospheric Research in Boulder, Colo.

Much of the burden will fall on the world's poorest people, who have done little to cause global warming. Coping with the effects could cost developing countries as much as \$100 billion a year, according to a World Bank estimate cited in the report.

Although developing countries face the greatest loss of life, wealthy countries will experience greater financial losses, the report said. North America, for instance, can expect increasing damage from wildfires, flooding and heat-related deaths as temperatures climb, rainfall intensifies and sea level rises.

"It's not the case that we in the rich world are protected and they in the poor world are not," said Chris Field, a scientist at the Carnegie Institution for Science and co-chairman of the group that drafted the report. "You just have to look at [Hurricane Sandy](#) to get a picture of that."

Scientists said their conclusions reflected growing evidence since the panel's last assessment, in 2007, that extreme heat, dwindling snowpack, heavy rainfall and other episodes were becoming more frequent and severe because of climate change.

The more emissions climb and temperatures rise, the greater the odds of irreversible consequences, the report warns.

"Once a low-lying small island nation is flooded due to sea level rise, there is no turning back for people who lived there," said Virginia Burkett, climate scientist at the U.S. Geological Survey.

The Earth has warmed by about 1.5 degrees since the late 1800s because of the buildup of carbon dioxide and other heat-trapping gases from burning fossil fuels, industrial activity, agriculture and deforestation. The U.N. panel [in September](#) projected temperatures will rise 2.7 degrees to 8.1 degrees if carbon dioxide levels in the atmosphere double, with sea level rising 10 to 32 inches by century's end.

The report is the second in a three-part climate assessment, the panel's fifth since 1990, and will form the basis for negotiations next year on a new global treaty to limit greenhouse gases.

The Obama administration responded to the study with a call for an "ambitious" new agreement to cut global emissions.

"Unless we act dramatically and quickly, science tells us our climate and our way of life are literally in jeopardy," Secretary of State John F. Kerry said in a statement.

The report outlines some positive developments, including that many nations are already taking important steps to adapt to the changing climate. Some regions are restoring coastal wetlands, adopting resilient crop varieties, building coastal flood barriers and protecting energy infrastructure from disasters.

"If we can get emissions down and slow the warming, then through effective adaptation we have a chance to come out of this in reasonably good shape," said Michael Oppenheimer, a climate scientist at [Princeton University](#). "If we don't, then I fear for the future."

tony.barboza@latimes.com

Twitter: @tonybarboza