

Report outlines global warming's effects

CNN.com, March 10, 2007

WASHINGTON (AP) -- The harmful effects of global warming on daily life are already showing up, and within a couple of decades hundreds of millions of people won't have enough water, top scientists will say next month at a meeting in Belgium.

At the same time, tens of millions of others will be flooded out of their homes each year as the Earth reels from rising temperatures and sea levels, according to portions of a draft of an international scientific report obtained by The Associated Press.

Tropical diseases like malaria will spread. By 2050, polar bears will mostly be found in zoos, their habitats gone. Pests like fire ants will thrive. For a time, food will be plentiful because of the longer growing season in northern regions. But by 2080, hundreds of millions of people could face starvation, according to the report, which is still being revised.

The draft document by the authoritative Intergovernmental Panel on Climate Change focuses on global warming's effects and is the second in a series of four being issued this year. Written and reviewed by more than 1,000 scientists from dozens of countries, it still must be edited by government officials.

But some scientists said the overall message is not likely to change when it's issued in early April in Brussels, Belgium, the same city where European Union leaders agreed this past week to drastically cut greenhouse gas emissions by 2020. Their plan will be presented to President Bush and other world leaders at a summit in June.

The report offers some hope if nations slow and then reduce their greenhouse gas emissions, but it notes that what's happening now isn't encouraging. "Changes in climate are now affecting physical and biological systems on every continent," the report says, in marked contrast to a 2001 report by the same international group that said the effects of global warming were coming. But that report only mentioned scattered regional effects. "Things are happening and happening faster than we expected," said Patricia Romero Lankao of the National Center for Atmospheric Research in Boulder, Colorado, one of the many co-authors of the new report.

The draft document says scientists are highly confident that many current problems -- change in species' habits and habitats, more acidified oceans, loss of wetlands, bleaching of coral reefs, and increases in allergy-inducing pollen -- can be blamed on global warming. For example, the report says North America "has already experienced substantial ecosystem, social and cultural disruption from recent climate extremes," such as hurricanes and wildfires. But the present is nothing compared to the future.

Global warming soon will "affect everyone's life ... it's the poor sectors that will be most affected," Romero Lankao said. And co-author Terry Root of Stanford University said: "We truly are standing at the edge of mass extinction" of species.



Smoke billows from chimneys at a power plant in Chifeng, Mongolia. Scientists say they are 90 percent certain global warming is caused by humans.

The report's findings

The report included these likely results of global warming:

- Hundreds of millions of Africans and tens of millions of Latin Americans who now have water will be short of it in less than 20 years. By 2050, more than 1 billion people in Asia could face water shortages. By 2080, water shortages could threaten 1.1 billion to 3.2 billion people, depending on the level of greenhouse gases that cars and industry spew into the air.
- Death rates for the world's poor from global warming-related illnesses, such as malnutrition and diarrhea, will rise by 2030. Malaria and dengue fever, as well as illnesses from eating contaminated shellfish, are likely to grow.
- Europe's small glaciers will disappear with many of the continent's large glaciers shrinking dramatically by 2050. And half of Europe's plant species could be vulnerable, endangered or extinct by 2100.
- By 2080, between 200 million and 600 million people could be hungry because of global warming's effects.
- About 100 million people each year could be flooded by 2080 by rising seas.
- Smog in U.S. cities will worsen and "ozone-related deaths from climate (will) increase by approximately 4.5 percent for the mid-2050s, compared with 1990s levels," turning a small health risk into a substantial one.
- Polar bears in the wild and other animals will be pushed to extinction.
- At first, more food will be grown. For example, soybean and rice yields in Latin America will increase starting in a couple of years. Areas outside the tropics, especially the northern latitudes, will see longer growing seasons and healthier forests.

Looking at different impacts on ecosystems, industry and regions, the report sees the most positive benefits in forestry and some improved agriculture and transportation in polar regions. The biggest damage is likely to come in ocean and coastal ecosystems, water resources and coastal settlements.

Africa, Asia to be hardest hit

The hardest-hit continents are likely to be Africa and Asia, with major harm also coming to small islands and some aspects of ecosystems near the poles. North America, Europe and Australia are predicted to suffer the fewest of the harmful effects. "In most parts of the world and most segments of populations, lifestyles are likely to change as a result of climate change," the draft report said. "Net valuations of benefits vs. costs will vary, but they are more likely to be negative if climate change is substantial and rapid, rather than if it is moderate and gradual."

This report -- considered by some scientists the "emotional heart" of climate change research -- focuses on how global warming alters the planet and life here, as opposed to the more science-focused report by the same group last month. "This is the story. This is the whole play. This is how it's going to affect people. The science is one thing. This is how it affects me, you and the person next door," said University of Victoria climate scientist Andrew Weaver.

Many -- not all -- of those effects can be prevented, the report says, if within a generation the world slows down its emissions of carbon dioxide and if the level of greenhouse gases sticking around in the atmosphere stabilizes. If that's the case, the report says "most major impacts on human welfare would be avoided; but some major impacts on ecosystems are likely to occur."

The United Nations-organized network of 2,000 scientists was established in 1988 to give regular assessments of the Earth's environment. The document issued last month in Paris concluded that scientists are 90 percent certain that people are the cause of global warming and that warming will continue for centuries.