

RIISING ARCTIC TEMPERATURES LEAD TO GLOBAL ENVIRONMENTAL CHANGES

November 10, 2004

The Arctic is warming at a faster pace than any other part of the world, according to a new report – the most complete evaluation of the Earth’s northern cap – released Monday.

A rise in temperature around the North Pole is melting large areas of Arctic ice, causing dramatic weather changes and declines in populations of polar bears and walruses, among other changes, scientists say.

While Arctic warming has been going on for decades and has been studied before, this is the first thorough assessment of the causes and consequences of the trend. The report supports the broad but politically controversial scientific consensus that global warming is caused mainly by heat-trapping greenhouse gases.

"While some historical changes in climate have resulted from natural causes and variations, the strength of the trends and the patterns of change that have emerged in recent decades indicate that human influences, resulting primarily from increased emissions of carbon dioxide and other greenhouse gases, have now become the dominant factor," according the report.

The findings are likely to increase pressure on the Bush administration, which has acknowledged a possible human role in global warming but says the science is still too murky to justify mandatory reductions in greenhouse-gas emissions.

The Arctic Climate Impact Assessment

The Arctic Council, a group made up of Canada, the United States, Russia, Sweden, Finland, Norway, Denmark and Iceland, commissioned the 140-page Arctic Climate Impact Assessment (ACIA). Nearly 300 scientists worked on the study, as did elders from the native communities in the region.

The group found that the region’s temperatures have risen almost 2 degrees Fahrenheit in the last 100 years, which is twice the global average. Average winter temperatures have risen 4 degrees. But in specific areas of Alaska and Russia the temperature changes have been more dramatic – an 11-degree increase in winter temperatures since the 1970s.

The rising temperatures have decreased the amount of the ocean that is covered by ice to the lowest amount ever recorded. The Greenland ice cap and other Arctic glaciers could disappear in summers by 2060-2100, according to scientists, who worry that the resulting rise in ocean levels could cause flooding at ocean coasts all over the world.

Impact on Indigenous peoples

The impact on the people living in the Arctic has been dramatic. Indigenous people report hunters falling through melting sea ice; declining polar bears, walruses, ice-living seals, and reindeer – all

primary sources of food; and difficulty traveling in roadless areas where there is no snow for sleds and snowmobiles.

In some more developed areas, the permanently frozen layer of earth -- the permafrost -- has melted, destabilizing buildings and causing roads to crack.

Many young people in the area face increased chances of skin cancers and immune system disorders due to heightened exposure to ultraviolet radiation – estimated at about 30 percent higher than any earlier generation.

“Global warming connects us all,” Sheila Watt-Cloutier, a Canadian Inuit who chairs the Inuit Circumpolar Council, told the Los Angeles Times. “The Arctic is the world’s health barometer, and the Inuit are the mercury in that barometer.”

Why?

Most of the warming is blamed on increased use of fossil fuels like crude oil, natural gas and coal, which create greenhouse gases. Greenhouse gases have increased in the atmosphere by almost 30 percent since the Industrial Revolution. Fossil fuels, which are used in cars, factories and power plants, make up 80 percent of the world’s energy use.

The Arctic is especially vulnerable to warming because snow and ice reflect heat and when they melt, the dark ground and water accelerate the warming by absorbing heat.

"The polar regions are essentially the Earth's air conditioner," explained Michael McCracken, president of the International Association of Meteorology and Atmospheric Sciences. "Imagine the Earth having a less efficient air conditioner."

Some positive impacts

Although much of the report is negative, it does contain some positive outcomes from the increased temperatures in the Arctic. Some species, such as the Arctic char fish, could flourish. The growing season for wheat in Canada could become longer and certain sea routes, such as the Northwest Passage and the Northern Sea Route near Russia, could open up, easing access to oil and gas deposits.

The scientific study released Monday will be followed by a policy recommendation, set for release on Nov. 24.

Many in the scientific community think that the United States will try to block any strong policy proposals that might impact U.S. jobs and the economy.

James Connaughton, chairman of the White House Council on Environmental Quality, said the administration is spending \$10 billion a year on research into climate change and related issues, but "strongly opposes any treaty or policy that would cause the loss of a single American job."

--Compiled for NewsHour Extra by Annie Schleicher

© 2004 MacNeil/Lehrer Productions