



ACTION ALERT

Climate Change

“What is at stake here is not just the extinction of animals but the extinction of Inuit as a hunting culture. Climate change in the Arctic is a human issue, a family issue, a community issue and an issue of cultural survival...Many small voices can make a loud voice.”

—Sheila Watt Cloutier, *Inuit Circumpolar Conference*¹

Our planet is warming and as a result some communities around the world, from the United States to the islands of the Indian Ocean, have become refugees of climate change. According to the United Nations Environment Programme (UNEP), “climate change is one of the most critical global challenges of our time.”² Scientists have documented evidence of climate change in regions around the world. Temperature changes, changes in glaciers, melting of permafrost, later freezing and earlier break-up of ice on rivers and lakes, changes in growing seasons, changing locations of certain types of plants and animals, declines in certain plant and animal populations, and earlier flowering trees are all occurring because of climate change.³ According to Klaus Toepfer, Executive Director of UNEP, “the potential consequences of climate change are profound...the questions is therefore not whether climate change is happening, but what to do about it.”⁴

According to a report published by the International Panel on Climate Change (IPCC), a panel established by the UNEP and the World Meteorological Organization (WMO) “to provide independent scientific advice on the complex and important issue of climate change;”⁵ “There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities...Human influences will continue to change atmospheric composition throughout the 21st century.”⁶ Global warming is “largely the result of emissions of carbon dioxide and other greenhouse gases from human activities including industrial processes, fossil fuel combustion, and in changes in land use, such as deforestation.”⁷ *The United States uses more energy than any other country in the world. The U.S. has five percent of the world’s population and it accounts for 25 percent of the world’s carbon dioxide emissions.*⁸ *U.S. greenhouse emissions rose 12 percent over the past decade and it is projected to continue to rise.*⁹

The earth undergoes a process called the greenhouse effect. During the greenhouse effect, sunlight passes through the atmosphere, warming the earth. In turn, the earth radiates this energy back towards space. As it passes through the atmosphere, greenhouse gases (water vapor, carbon dioxide, methane and nitrous oxide) absorb part of the energy, while the remainder escapes into space. This means that some of the sun’s energy becomes trapped – thus making the lower part of the atmosphere, and earth, warmer.¹⁰ As we add more greenhouse gases to the atmosphere, less of the energy can escape into space thus causing the energy to be trapped in the atmosphere which in turn causes the earth to warm even more. The earth’s temperature has increased an estimated 1.4 degrees Fahrenheit between 1900 and 2005. The past decade was the hottest of the past 150 years and the hottest 22 years on record have occurred since 1980, and 2005 was the hottest year on record.¹¹

As the temperature of the earth increases so do the frequency and intensity of extreme weather events such as drought, torrential rain, hurricanes, floods, typhoons, monsoon and forest fires. In a report published by the IPCC, it states that “the impacts of climate change will fall disproportionately upon developing countries and the poor persons within all countries, and thereby exacerbate inequities in health status and access to adequate food, clean water, and other resources.”¹² Some communities have already been forced to relocate because of changing climates and its impact on their homes. The melting and receding of sea ice and the rising of sea levels due to climate change will “touch everyone on the planet.”¹³ In August 2005 a small community of about 100 villagers living in the Pacific island chain of Vanatu were formally relocated to a higher elevated region after their coastal homes were repeatedly swamped by storm surges and aggressive waves linked with climate change.¹⁴ Another country in the Pacific Ocean, Tuvalu, just 4 meters above sea level, is seeking ways to deal with higher tides which are creeping further and further ashore. They have no interior regions to relocate to as the island is flat and all of the land they inhabit is a coastline. There are current discussions to move the entire population of 12,000 to Australia or New Zealand.¹⁵ It is estimated that today more than 50 percent of the world’s population lives in coastal areas and depends heavily on oceans and coastal resources for survival.¹⁶

In the United States, some communities in Alaska are experiencing first hand the effects of climate change. The Arctic region, which includes areas of Antarctica, the U.S., Canada, Greenland, Denmark, Finland, Iceland, Norway, Russia and Sweden, is considered by scientists to be the first region to be affected by climate change. The Arctic region has warmed at a higher rate than rest of the regions of the world. While the earth as a whole has warmed 1.4 degrees Fahrenheit, parts of the Arctic have warmed 4 - 5 degrees Fahrenheit since the 1950s, a rate about twice as fast as the rest of the world.¹⁷ The indigenous people living in these areas have been experiencing dramatic changes to their environment; an environment they depend heavily on for survival. The higher temperatures are causing glaciers and permafrost to melt.



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Water that is normally sealed by ice is now open which is causing more storms. Federal officials in Alaska say that two dozen native villages are threatened by the ongoing changes in the environment.¹⁸ Shishmaref, an Inupiaq Eskimo village in Alaska has lost 100 to 300 feet of coastline over the past 30 years, half of it since 1997. The citizens of the village voted to move 12 miles away in order not to lose any more of their homes to the ocean. According to a recent article published in *Time* magazine, the U.S. Army Corps of Engineers examined relocating another Alaskan village with a population of 380, Kivalina, and calculated the cost to be \$100 million to \$400 million-about \$1 million for each resident.¹⁹ The Eskimo village of Newtok, Alaska, with 340 residents, will be flooded by the Ninglick River in as little as 10 years because of melting ice and permafrost, "and an ancient way of life will be erased."²⁰

Some scientists have argued that the current changes in climate are a natural cycle the earth is experiencing. 55 million years ago the Arctic was a warm shallow sea "that would have been ice-free without the intervention of a human-enhanced greenhouse effect." Other researchers indicate "natural variations may be playing a role in the picture seen now; but, as with other parts of the planet, it is the speed of change which alarms [us] as much as the change itself."²¹ Our activities today are accelerating climate change. Since the Industrial Revolution, carbon dioxide in the atmosphere has increased by 31 percent. In 20 years the world will consume 40 percent more oil than it does today.²² Cars and trucks in the U.S. emit 1.5 billion tons of carbon dioxide. That figure is more than what some countries emit from all of their sources combined. One quarter of all plant and animal species could face extinction by the end of this century.²³ Dr. Michael Oppenheimer, professor of geosciences and international affairs at Princeton University, stated in a documentary; "We are already committed to a certain amount of warming but the future lies largely in our hands. It's under our control, whether we get a modest warming that we can adapt to or whether warming gets out of control. To stabilize the climate we will need to cut emissions something like 80 percent..."²⁴

There are ways we can drastically reduce our carbon dioxide emissions. Saving electricity, finding alternative modes of transportation, recycling, adjusting your thermostat, using appliances that are energy efficient, using florescent bulbs, and planting trees are some basic ways to reduce greenhouse gas emissions. Finding alternative sources of energy is also key in reducing carbon dioxide emission. Brazil has set an example to the world by switching from gasoline to ethanol, alcohol fuel made from grasses and waste materials, to power its automobiles. This method reduces greenhouse gas emission by about 90 percent per gallon compared to gasoline.²⁵ To cut pollution, some schools in England have started using solar panels and wind turbines to provide energy for the school. In the U.S. in Portland, Oregon, the city took on the challenge of climate change and reduced carbon dioxide emissions by 13 percent while increasing its workforce by 16 percent. The city offered people more alternative ways to get to work through public transportation and implemented a green building policy for building developers who seek public funds. Developers must have certain green building standards, such as energy efficiency, in order to be qualified to receive public funds.²⁶ The Kyoto Protocol, the first binding international agreement for limiting greenhouse emissions, brought together nations from around the world to make a commitment to reduce their combined greenhouse emissions to 5 percent below 1990 levels by 2008 – 2012. 55 countries have ratified the Kyoto protocol and the first target was met in 2002. Although the U.S. was involved in drafting the Kyoto Protocol at the United Nations, it withdrew from the Protocol in 2001 indicating that it would damage the U.S. economy.²⁷



Do your part to reduce greenhouse gas emissions. Take some of the steps mentioned in the Action Alert. One energy saving step you can take is to use compact fluorescent light bulbs. By replacing three of your incandescent light bulbs with fluorescent ones you can get 10 longer hours of usages and save ¼ of energy, or 300 pounds of carbon dioxide. In addition, recycling 50% of your aluminum, glass, plastic, cardboard and papers will save 2,400 pounds of carbon dioxide per year.

To learn more about climate change and what you can do contact the United Nations Environmental Programme (www.unep.org) at (202) 785-0465, the World Wildlife Organization Fund (www.worldwildlife.org) at (202) 293-4800 or the Environmental Defense Fund (www.environmentaldefense.org) at (212) 505-2100

Write to your representative and senators in Congress and express your views on increasing funding for research in alternative sources of energy such as solar power, wind power, geothermal energy and biodiesel. To get contact information for your representative and senators call (202) 224-3121

Read *Book of Resolutions 2004* Social Principles ¶ 160 I. The Natural World; Social Policy Statements #5, Energy Policy Statement pp.77-82, #6 U.S. Energy Policy and United Methodist Responsibility pp. 82-83, #7 Environmental Justice for a Sustainable Future pp.83-89 and #10 Environmental Stewardship pp.97-103.

¹ UNEP/GRID-Arendal – Press Release. "Many Small Voices": Tropics and Arctic meet at Arctic Day. Nov. 30, 2005.

² United Nations Environmental Programme website. <http://www.unep.org/themes/climatechange/About/index.asp>

³ A Report of Working Group II of the Intergovernmental Panel on Climate Change. *Summary for Policymakers, Climate Change 2001: Impacts, Adaptation, and Vulnerability.*

⁴ Toepfer, Klaus. *Creating a Climate of Cooperation.* UN Climate Change Conference in Montreal: Creating a Climate of Cooperation. United Nations Environmental Programme.

⁵ International Panel on Climate Change website. <http://www.ipcc.ch/about/universes/basics.html>

⁶ Hblia, Beth. *Climate Change & Energy Briefing Paper.* Towards Earth Summit 2002 project for UNHED. Environment Briefing No. 2.

⁷ Pew Center on Global Climate Change. *Basis Science.* <http://www.pewclimate.org/global-warming-basics/basis-science/index.cfm?printVersion=1>

⁸ Home Office Box (HBO) documentary *Too Hot to Handle.* Executive Producer Laurie David.

⁹ Pew Center on Global Climate Change. *The U.S. Domestic Response to Climate Change: Key Elements of a Prospective Program.* In Brief

¹⁰ Australian Academy of Science website. http://www.science.org.au/news/016_01/bkcc.htm

¹¹ Pew Center on Global Climate Change. *Basis Science.* <http://www.pewclimate.org/global-warming-basics/basis-science/index.cfm?printVersion=1>

¹² Intergovernmental Panel on Climate Change. *Climate Change 2001: Synthesis Report. Summary for Policymakers.*

¹³ United Nations Environmental Programme. Press Release December 2005. *Pacific Island Villagers First Climate Change "Refugees."* December 6, 2005.

¹⁴ Ibid.

¹⁵ Jumeau, Ronny. No Island is an Island. *Our Planet, The Magazine of the UNEP.* Volume 15 No. 1

¹⁶ Lautenbacher, Conrad C. Oceans Need Mountains. *Our Planet, The Magazine of the UNEP.* Volume 15 No. 1

¹⁷ Pew Center on Global Climate Change website. *Global Warming & the Arctic – FAQ's.* <http://www.pewclimate.org/arctic-qa.cfm?printVersion=1>

¹⁸ Smeek, Dong. Inuit See Signs In Arctic Thaw. *The Washington Post.* March 22, 2006.

¹⁹ Roosevelt, Margret. Vanishing Alaska. *Time.* October 4, 2004.

²⁰ Tizon, Tomas Alex. Can One Man Turn the Tide? *The Los Angeles Times.* October 28, 2004.

²¹ Black, Richard. Earth-melting in the heat? *BBC News* website. <http://www.bbc.co.uk/2/hi/science/nature/4315968.stm>

²² Climate Change Fact Sheet. <http://www.camhsa.org>

²³ Home Office Box (HBO) documentary *Too Hot to Handle.* Executive Producer Laurie David.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

²⁷ BBC News website. *Q&A: The Kyoto Protocol.* <http://www.bbc.co.uk/2/hi/science/nature/4269921.stm>