

A Grandfather Thinks About Global Warming: Part One—Problems and Prospects

By Bill Whitaker

When the Frank Church Institute invited Al Gore to keynote its January 22 Boise State University Conference, *Global Warming: Beyond the Inconvenient Truth*, the prospect of 10,000 Idahoans turning out to listen to Gore probably seemed somewhat less likely than the Boise State Broncos winning the Fiesta Bowl.

Nonetheless, the Broncos won and, when 700 tickets for the Gore event were distributed in less than 10 minutes after the box office opened, his keynote was relocated to the university's 10,000 seat basketball arena. After distributing 785 more tickets to students and reserving 2,000 for students away for the holidays, all available tickets were snapped up at \$5 a pop in less than 6 hours. Lines at two box office locations were estimated at over 500 hundred persons each.

It looks as if global warming has become a hot topic in Idaho. On behalf of my grandchildren Fiona and Max and on behalf of all the children and grandchildren of our planet, I hope this is true. Their futures and the futures of all of us younger than about 60 may well depend on what is done to counter global-warming-related climate change over the next decade. . Fortunately, there are steps both large and small we can take to change our future. Some of these will be described in Part Two of this essay.

Our planet is getting hotter. This fact is not in question. Our most respected scientific bodies have concluded unequivocally that global warming is happening and we are causing it by our consumption of fossil fuels and destruction of forests.

Here's how it works. The sun sends solar energy to earth, warming us and making life possible. The rub is that while some solar radiation is essential, too little or too much creates problems. The earth is wrapped in a blanket of carbon dioxide and other "greenhouse gases" that affect how much solar radiation is trapped on earth and how much is reflected back into space.

During the relatively brief time that life has existed on earth the composition of the carbon blanket has gone through natural cycles affecting the earth's thermostat and warming or cooling our planet within a temperature range hospitable to life as we know it.

Cycles of warming and cooling are directly correlated with the amount of carbon dioxide in the atmosphere. Changes in the level of carbon dioxide are directly correlated to the coming and going of ice ages, to the rise and fall of ocean levels. Climate change killed

the dinosaurs and opened the way for birds and mammals, opened the way for human beings to become the dominant life form on planet Earth today.

In recent centuries humankind has multiplied with great success. As we have become the first species capable of remaking our environment, we are on the brink of becoming the victim of our success. The fossil fuels we burn, the forests we clear are increasing atmospheric carbon dioxide at rates our planet cannot sustain without dire consequences. Today's carbon blanket contains 25 percent more carbon dioxide than has ever before existed during the past 650,000 years.

As a consequence, more of the sun's energy is trapped by our atmosphere, increasing temperatures throughout the globe. Some areas, including polar regions, are increasing in temperature faster than others. Rising temperatures are melting the polar icecaps and raising sea levels. Since open seas and bare land reflect less radiation back into space than do ice and snow, even more heat is absorbed by the earth and we are creating a feedback cycle that speeds up the warming process.

Unless steps are taken to prevent polar icecap melting, during the lifetimes of our children and grandchildren rising sea levels are likely to inundate large areas of major cities such as New York, San Francisco and Alexandria, Egypt and much of Florida, the Netherlands, Bangladesh and Pacific island nations. Massive concentrations of people are clustered in coastal lowlands threatened by the sea. Millions may become climate change refugees stretching global social service resources beyond the breaking point.

Globally, nearly 1/3 of the arable land from which we feed ourselves could be flooded by rising seas, if global warming continues during our generation. Global warming has the potential for generating famine and starvation beyond biblical proportions.

Global warming is spreading the range of mosquitoes, mice and other pests that carry disease—contributing to outbreaks of hantavirus in the United States and dengue and yellow fever at ever higher elevations in Central and South America. Hotter days lead to unhealthier air and more smog, worse temperature inversions and more asthma.

Warmer seas result in more and stronger hurricanes. Storms like Katrina caused more than \$100 billion in damage to U.S. coastal areas in 2005. More than half the U.S. population lives within 50 miles of a coastline.

The last nine years have each been among the 25 hottest on record, a streak called "unprecedented in the historical record" by the National Climatic Data Center. As global temperatures rise, the number and duration of heat waves is expected to increase.

The Chicago heat wave of 1995 left 739 persons dead. In the heat wave of 2003, 27,000 persons died in Europe, 14,000 in France alone. The 2006 record-breaking heat wave in California resulted in at least 56 deaths and killed many dairy cows and other livestock. Thousands of carcasses were dumped into landfills, a procedure usually outlawed as a threat to public health.

Warming temperatures are also affecting the winter tourism on which many western U.S. economies rely. Spring time mountain snow cover diminished an average of 29 percent in the Cascades and 16 percent in the Rockies while sites in Washington and Oregon had reductions of as much as 50 percent between 1950 and 1997.

Rising temperatures cause more precipitation to fall as rain rather than snow with serious implications for salmon fishing, irrigation and drinking water supplies—all heavily dependent on snow melt in the Pacific Northwest.

It is estimated that by 2030 there will be no glaciers left in Glacier National park.

While the climate changes that will result from unabated global warming are daunting, fortunately we still have time to stave off disaster. Steps we can take to counter the effects of global warming are discussed in part two of this article.

A Grandfather Thinks About Global Warming: Part Two—Actions We Can Take

by Bill Whitaker

(Part One of this article described the problems and prospects of global warming influenced climate change.)

The futures of our children and grandchildren and the futures of all of us younger than about 60 may well depend on what is done to counter global-warming-related climate change over the next decade.

Fortunately, there are steps that each of us can take as individuals to reduce future warming. We can take simple, cost-effective steps like replacing light bulbs with long-lasting, energy-efficient compact fluorescent or LED bulbs—saving 100 pounds of carbon dioxide per bulb.

We can keep the tires on our cars inflated properly and change our car's air filter when it is dirty—saving 1050 pounds of carbon dioxide per car per year. We can run our dishwashers only when they are full—and save 100 pounds of carbon dioxide. We can use post-consumer recycled paper—and save 5 pounds of carbon dioxide per ream.

We can turn our thermostats down 2 degrees in winter and up 2 degrees in summer—saving 2000 pounds of carbon dioxide annually. We can set hot water thermostats no higher than 120 degrees F, switch to a tankless water heater or add passive solar assisted hot water. We can take shorter showers and install low-flow showerheads.

We can buy locally produced produce and other products and insist on minimally packaged goods. If we need a new car, buy a hybrid or, better yet, carpool or bike when

possible. We can plant a tree—or three—and use a push mower to cut our lawn. We can caulk and weather strip and insulate our homes and replace single with double pane windows.

We can unplug electronics when not in use and replace old, inefficient appliances with energy-star rated newer ones. We can bring our own cloth bags when grocery shopping.

We can reduce consumption, re-use what we purchase, recycle what we can no longer use.

Most of these simple actions both reduce our carbon load and save money in the process. Properly inflated tires reduce the cost of operating a car. A low-flow shower head uses less energy to heat the water—saving as much as \$150 per year.

But individual actions are not enough. We need to be social worker activists, advocating to change public policies that will have major impact on the future we pass on to the next generation.

We can challenge elected officials at every level to support efforts to reduce the output of “greenhouse gases” and we can vote the rascals out if they persist in wrong-headed decisions. We can call for replacing tax subsidies for dirty energy with support for solar, wind, geo-thermal and bio-mass energy generation. Using such clean, renewable sources Idaho can generate five times the total electricity Idahoans currently consume without relying on a single coal-fired or nuclear power plant.

We can become better informed and share that information with our friends and neighbors, our faith groups and service clubs, with all the people we know.

Many groups and organizations are good sources of information about global warming.

Stop Global Warming www.stopglobalwarming.org provides news articles that have been published during the past three years. Its “virtual march” has enlisted more than 596,000 supporters demanding solutions to global warming.

Focus the Nation www.focusthenation.org is promoting a January 31, 2008 nation-wide, non-partisan discussion of global warming policy choices in more than 1,000 universities, colleges, high schools, businesses, faith and civic organizations.

The Alliance for Climate Protection www.allianceforclimateprotection.org , an educational group launched by Al Gore plans to spend millions of dollars to convince Americans that global warming is an urgent problem.

As the grandfather of Fiona and Max I am convinced that preserving the planet that is our only home must be the great work of our generation of social workers. The children and grandchildren of planet Earth are depending on us.

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