

THE TWENTY-NINTH DAY

Adapting to Climate Change

By Dan Armstrong

In 1992 George H. W. Bush signed the United Nations Framework Convention on Climate Change. This treaty requires technical reports from signatory nations every four years. The first two U.S. reports came from the Clinton administration. In May of 2002, the Bush administration sent the third of these Climate Action Reports to the United Nations. To the chagrin of President Bush and an administration that is heavily connected to the petroleum industry and has repeatedly questioned the validity and significance of climate change, the EPA's report articulated far-reaching and potentially devastating climatic effects resulting from the burning of fossil fuels. Though the report was written by the President's own people, he immediately distanced himself from its message, saying first that he had read it, then that he hadn't. In any case, the rift between the President and the EPA offers a critical insight into the Bush administration's environmental position and the real dilemma of climate change.

While the wording is necessarily cautious and technical, the magnitude and significance of global warming is clearly established in the report's sixth chapter *Impact and Adaptation*. Plain and simple, the report tells us that climate change has already begun. Even should we stop burning fossil fuels today, because of the "long lifetimes of greenhouse gases already in the atmosphere, the momentum of the climate system are projected to cause climate to change for more than a century." In that period, temperatures "in the contiguous United States would rise 5 to 9 degrees Fahrenheit." "The central tier of states would experience climate conditions roughly equivalent to those now experienced in the southern tier, and the northern tier would experience conditions much like the central tier." Soil moisture content across the grain belt would decrease by a third or more. Critical snowpack in western mountain regions would diminish, impacting reservoirs, flood protection, power production, and the sustainability of many mountain habitats. Some Alpine meadows in the Rocky Mountains would dry up and disappear completely. The

sugar maple would migrate north out of the U.S., and changes in large-scale forest processes, “such as fire, insects, droughts, and disease, could put forest productivity in jeopardy.” Though just a sampling of what the report anticipates with continued global warming, it amounts to a particularly dour environmental prognosis coming from a conservative Republican Administration.

Perhaps now, with our 9/11 baptism to global conscious, we’ve come of age. Perhaps now, with that larger, darker perspective, we are better prepared to understand the dead seriousness of the environmental facts of life that for so many years have been under publicized or denied. When fully considered, there is a grimness about the size of the planet and our industrial society that preludes from that September morning awakening. The six billion people living on Earth have tipped the natural balance of the biosphere. We’ve changed the dynamics of the weather. Though it sounds like B-grade science fiction or as improbable as American Airlines Flight 77 being flown deliberately into the Pentagon, *Climate change is real*. It is a clear and present danger that with time will become more vast and invasive than terrorism. Our President’s stance is that we can adapt with these changes and that free market forces will take care of each problem as it arises. Unfortunately, microbes, bacteria, and insects will adapt much more quickly to these changes than will we or our markets. With its cautious language, the 2002 U.S. Climate Action Report hesitantly elucidates a sobering vision of the twenty-first century and an inane shortsighted response to the predicament. According to the Action Report, we will adjust to the warmer temperatures with “the increased availability of air conditioning.” We will adjust to the increased number of violent weather events with more accurate meteorology. But, in general, we will adapt to the manifold challenges of global warming through the genius of capitalism—probably with the same kind of results achieved through the deregulation of the energy industry.

Climate Change is the capstone of environmental concern. It touches on every aspect of the planet’s health from air pollution to over-population to soil loss to genetic diversity. That the Bush administration EPA has confirmed the reality of this problem should open the eyes of all who have dismissed environmental priorities. This cannot be ignored nor minimized. The greenhouse effect is real. *Man-made hydrocarbons are changing the chemistry and physical*

properties of the atmosphere. The planet is warming. The polar caps are melting. The weather and the seasons are changing. Include that the climatic systems of the planet are intimately tied to the rhythms and physiology of all living things and the seriousness of the situation becomes manifest. Stir the weather and you stir everything else on the planet with it all the way down to the chromosomes. If you can find a copy, take the time to read this latest Climate Action Report. (It was initially available at www.epa.gov/globalwarming.) Push aside all the preparatory remarks and bulky qualifications and read it. The report amounts to a detailed primer in environmental science. And clearly we have a problem.

Paul Erhlich, author of the 1968 benchmark alarm *The Population Bomb*, once compared slowing population growth to stopping a large freighter at sea. Even after the engines have stopped, even after the engines have reversed, due to its great momentum, the freighter continues to plow forward through the water for many miles. Similarly, should the birth rate on Earth drop below 1.0 tomorrow, because of the human numbers and age profile, population would continue to increase for another fifty years. The President's report tells us it is the same for climate change. The damage has been done and maintains a huge forward momentum. We will add five to nine degrees to the Earth's surface temperature in the next hundred years no matter what we do. Add that to the diminished cooling effects of shrinking polar ice caps, the continued loss of forests, and more and more asphalt and concrete, the whole warming cycle becomes a positive feedback loop. But such warnings be damned. The world's most egregious producer of greenhouse gases will keep right on burning fossil fuels at higher rates every year. We will adapt says our President. The free market will iron out the wrinkles. We might also consider colonizing Venus.

In the same year as Erhlich's influential book, a group of concerned international businessmen and scientists formed the Club of Rome to initiate a study entitled "Project on the Predicament of Man." They funded an MIT research team to create a computer program to model the impact of civilization on the Earth's ecosystem. Trends in population, industrialization, food production, pollution, and nonrenewable resources were plotted through the twenty-first century. In 1972, this work was published under the title of *The Limits to Growth*. Nine million copies were sold in 24 different languages.

With no changes in the economic and environmental policies of those times, the MIT model projected a complete economic and/or environmental collapse by the year 2100.

The scientists adjusted the five trends to display how various social responses could change this gloomy outcome. *If* zero population growth were attained by 1975, *if* industrial capital stabilized by 1990, *if* natural resources were consumed at one quarter the 1970 rates, *if* pollution were reduced to one quarter of 1970 quantities, *if* economic preferences were focused on education and health, *if* capital resources were radically shifted to food resources and retention of soil, a sustainable equilibrium between humanity and nature could be achieved. Were these *if's* not attained by the year 2000, and certainly we're not even close in 2002, it would be too late, by century's end, humankind would have to resurrect itself from some kind of globe-thrashing war, pandemic, famine, or all three. This report was panned by the critics and disavowed by its sponsors.

The Central Intelligence Agency solicited an independent investigation of the situation in 1974. The CIA report *Potential Implication of Trends of World Population, Food Production, and Climate*, declassified in 1976, issued an equally bleak prognosis that concentrated on the economics and politics of dwindling world food supplies. "There would be increasingly desperate attempts on the part of powerful and hungry nations to get grain any way they could," offered the Agency dryly. "The population problem would solve itself in the most unpleasant fashion."

In 1977, President Carter commissioned the Council of Environmental Quality to give the problem yet another look. The council's report, published in 1980 under the title of *2000 Global Report for the President*, came up with the same dark projection for the twenty-first century. But no one wanted to read this stuff any more. The report went nowhere.

Eleven years later, *Scientific American* published a special issue entitled "Managing Planet Earth." The topics addressed were all the same ones: water management, food production, atmospheric chemistry changes, genetic diversity, and our growth based world economy. The assessment was not a doomsday report. It offered hope for civilization and the planet—if things were addressed seriously and immediately. They weren't. And still haven't been—as exemplified by our President's response to his own Climate Action Report.

The point is we're denying our own science. For fifty years, our best minds have told us we have a problem. It's much like the intelligence failure in the World Trade Center incident.

Terrorist threats have been in the wind for years, but a *it-could-never-happen-here* mentality persisted. Surprise, surprise. In the same way, the grave implications of global warming have been in the headline of every environmental study since 1957—and still we proceed heedlessly into the future like a mob of teenagers in hot cars. Surprise, surprise!

We have used petroleum to fuel vast and sustained economic growth for a hundred years. But just like the tobacco industry's dirty little secret, there is a raw and carcinogenic reality at end of the line. We can no more pump billions of tons of carbon into the atmosphere than we can indefinitely suck carbon tars into our lungs. The denial is incredible. With purpose and legislation the production of every greenhouse gas in the U.S. has decreased over the last ten years except carbon dioxide, and, against all reason, that continues to increase as if there were no tomorrow.

Behind the years of lies and misinformation are the fear of an economic turndown and a powerful oil industry lobby. No American President dares to cross Wall Street. No American President dares to tell us that we can't drive our cars. No American President succeeds without continued economic growth—apparently at all costs. This is our dilemma. It's easier to continue burning fossil fuels than to make the abrupt and necessary changes. To hell with our children and grandchildren, economic recession today is more frightening than the effects of climate change tomorrow. It will take a leader or leaders of great vision and courage to compromise the immediate for the future.

Instead our President tells us we will remain an oil burning nation until the petroleum is all gone or it prices itself out of the market—let's say, in another twenty or thirty years. And then, after we have added another five or six degrees of momentum to the climate system, we will adapt. Those with the financial resources will survive the inconvenience. The others? Well, isn't there a population problem anyway?

Who cares that our dependency on Middle East oil clouds if not dominates our foreign policy? Who cares if the control of oil causes the world to be in a perpetual state of war? Who cares that there are safe, sane, and sustainable alternative sources of energy already available? There are profits to be made now while the getting is good. That's what it's all about. The genius of capitalism. Sad to say, global warming is as much related to greed as is the recent rash of white-collar crime and stock market fraud. Make no mistake about it, the sordid ethics we've seen from companies like Enron, Worldcom, and Global Crossing are the same that prevent our

country from responsibly facing the specter of global warming. It's profits now. The future be damned.

And it will be!

Never has there been a time when our world needed direction and purpose more than it does today. For some short time after the 9/11 tragedy, many nations came together to fight terrorism. A common threat brought an unprecedented international coalition. Perhaps we could all come together now for the challenge of climate change because that's the only way it can be reckoned with—all as one. We must realize that first we are earthlings, then we are members of nations. At the very least, the U.S. must sign the Kyoto Protocol. It may not be the best possible document. Its guidelines may be difficult or impossible to attain for most countries. But it is a step in the direction of unity and it is imperative that the U.S. enter into this coalition.

In direct opposition to this necessity, the Bush administration, layered through and through with self-interested oil men and women, running a foreign policy of war and intimidation, advocates Arctic Reserve oil drilling, dismisses the presence of arsenic in our drinking water, wants to cut more logging roads in our wilderness, and gives an in-your-face *no* to the Kyoto Agreement. Meanwhile the planet itself suffocates. Just like FBI or CIA intelligence reports lost to infighting and bureaucratic sniveling, so will this Climate Action Report be passed off as noise in the system. This is a huge mistake. If you have trouble with this, please read the report, then you decide. What should our priorities be?

Thirty years ago, the authors of the Club of Rome's *Limits to Growth* offered this image in hopes of impressing the need for prompt and appropriate stewardship of spaceship Earth:

Suppose you own a pond on which a water lily is growing. The lily plant doubles in size each day. If the lily were allowed to grow unchecked, it would completely cover the pond in 30 days, choking off the other forms of life in the water. For a long time the lily plant seems small, and so you decide not to worry about cutting it back until it covers half the pond. On what day will that be? On the twenty-ninth day, of course. You have one day to save your pond!

Read the report. It's wordy. It's dull. But the message is there. Give it a look.

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