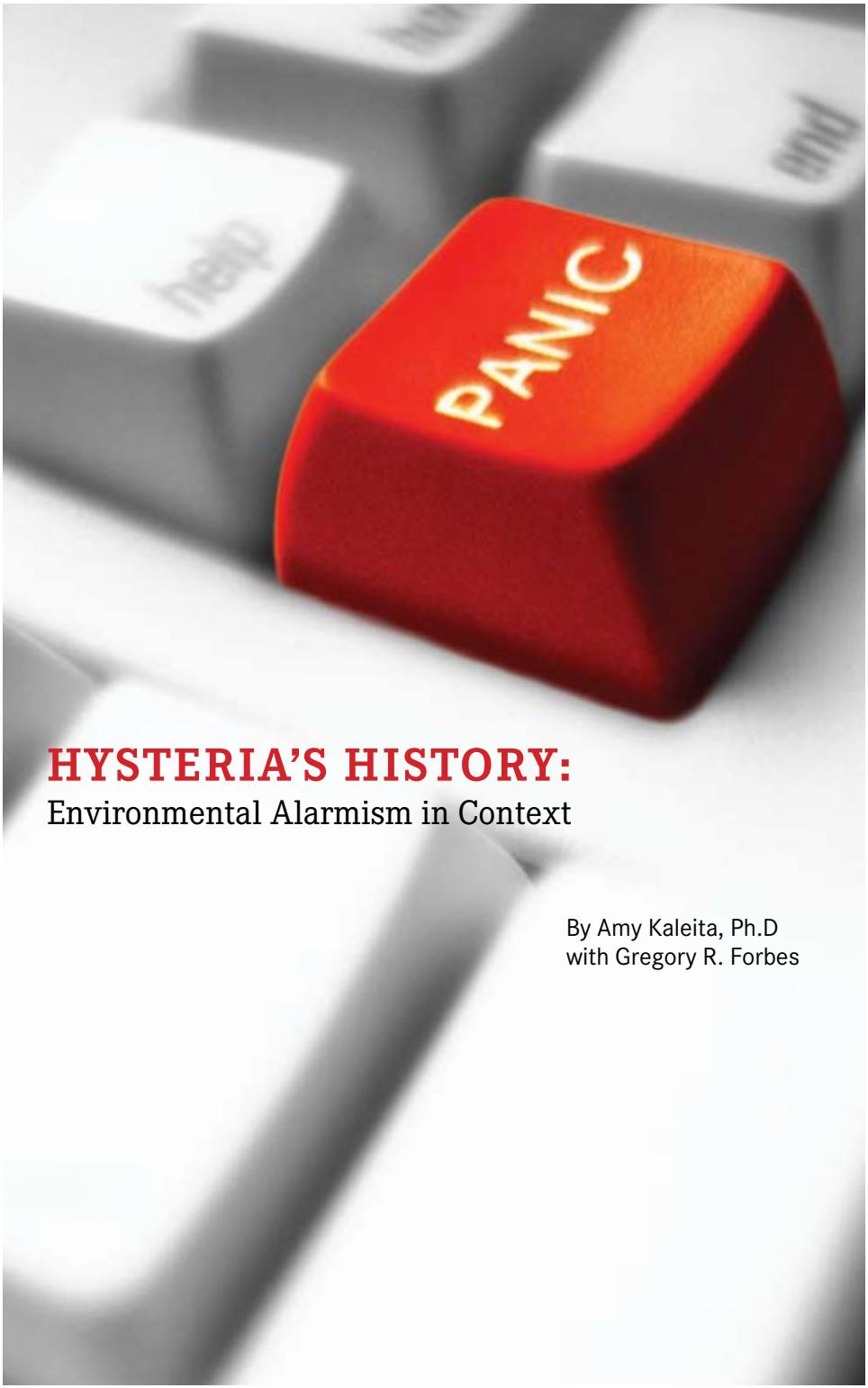

HYSTERIA'S HISTORY:

Environmental Alarmism in Context

By Amy Kaleita, Ph.D
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Introduction

Listening to the global-warming alarmists, one gets the idea that humanity faces a critical and certain danger from the rising global temperature, which will raise sea levels and swamp major cities, reduce arable land to desert, impoverish billions, and end civilization as we know it. One might further be convinced that the only means of heading off this catastrophe is to implement draconian restrictions on human activity of all kinds, from industrial production, to pleasant Sunday drives, to the most basic exercises of entrepreneurial freedom. The line between reversible phenomenon and inevitable doom is about to be crossed, say the alarmists, and only the venal and the blind deny the awful truth.

A person could almost be forgiven for believing all this. There is an entire industry devoted to the promulgation of climate-change hysteria. Well-known projects range from former Vice President Al Gore's Oscar-winning documentary, *An Inconvenient Truth*, to *Vanity Fair*'s "Green Issue," to profit-making but functionally ineffectual endeavors like TerraPass, which purports to enable the purchase of a "carbon neutral" lifestyle. Fighting global warming—and, as important, promoting belief in a specific, narrow, apocalyptic version of its existence and effects—is the cause du jour. The apostles of global warming falsely claim that the science is "settled," but in reality only the conventional media wisdom is settled. That conventional wisdom, enforced by the rhetoric and peer pressure of wealthy celebrities, leads almost universally to terrible policy making at all levels. Examples of poor and self-contradictory choices that stem from climate-change hysteria abound:

- The much-ballyhooed Kyoto Accords, dead only thanks to a forward-thinking U.S. Senate that rejected them 95–0, would have essentially halted all industrial progress in the developed world.
- Across the nation, various states give tax breaks to the owners of hybrid vehicles, under the assumption that those vehicles reduce greenhouse-gas emissions. However, the manufacture of hybrid vehicles releases more greenhouse gases than the manufacture of conventional vehicles.
- In California, the former and current state attorneys general have been squandering taxpayer money on a quixotic lawsuit against

nearly the entire automobile industry in North America—seeking damages for ills that have yet to occur.

- The Low Carbon Fuel Standard recently promulgated by the governor of California will have the unfortunate effect of promoting the use of ethanol in the state's fuel supply. Ethanol reduces fuel efficiency, which means drivers will need to burn more fuel to go the same distance. Further, because of ethanol's corrosive effect on pipelines, the reformulated gasoline containing ethanol must be transported by road in tanker trucks, thereby releasing more greenhouse gases than the pipeline transport of comparable amounts of ordinary gasoline.
- The city of San Francisco recently banned the use of plastic bags in city businesses, partly on the assumption that because those bags are manufactured from oil-based products, they represent the end result of a global-warming—abetting manufacturing process. In reality, the manufacture of paper bags releases more greenhouse gases than the manufacture of plastic bags.
- A self-proclaimed "megalomaniac" writer in New York City has dubbed himself "No-Impact Man" and is leading his wife and child on a spurious quest to have a "carbon footprint" of zero. Among his extreme measures, undertaken after viewing *An Inconvenient Truth*, is the cessation of any use of toilet paper in his home.

These examples are just the tip of the iceberg when it comes to the bad ideas and terrible decisions that result from environmental hysteria. The tragedy of this hysteria is twofold: it is often a detrimental perversion of the truth—and *it has all happened before*.

CHAPTER I:
We Will Kill All the Birds, and Probably All the Other Animals, Too

Most people will recognize the name of biologist-turned-author Rachel Carson, whose 1962 book, *Silent Spring*, is credited with launching modern environmentalism. But Carson was simply the most successful in a long line of environmental activists convinced that human beings were on the cusp of eliminating various animal species altogether.

In 1887, the Audubon Society claimed, "There will soon not be a bird of paradise on earth, and the ostrich has only been saved by private breeders. Man will not wait for the cooling of the world to consume everything in it, from teak trees to humming-birds, and a century or two hence will find himself perplexed by a planet in which there is nothing except what he makes."[1]

In 1898, a headline in the *New York Times* proclaimed, "THE DESTRUCTION OF BIRDS; New York Zoological Society to Publish the Results of an Extensive Investigation. LARGE DECREASE REPORTED… Many Species Are Becoming Extinct. Decrease in Bird Life in 30 States."

In 1907, a story in the *New York Tribune* mourned the "Passing of the Chihuahua Dog," which it characterized as "a curious little creature, popularly supposed to be a cross between the prairie dog and the jack rabbit."

All of this came to a head with the publication of Carson's *Silent Spring*. The book was selected by the Book-of-the-Month Club, endorsed by Supreme Court Justice William O. Douglas, and was on the *New York Times* best-seller list for several weeks. It sparked widespread outcry over the impact on the environment of synthetic pesticides and other chemicals. Carson specifically noted the effect of the insecticide DDT (Dichloro-Diphenyl-Trichloroethane) and warned of a "silent spring" in which "no birds sing."

Some have theorized that the public was ripe for her arguments by the time *Silent Spring* was published. Carson made pesticides sound like a looming threat very similar to another threat of which people were already aware, and terrified. Ralph Lutts, reflecting on the success of *Silent Spring*, noted:

> She was sounding an alarm about a kind of pollution that was invisible to the senses; could be transported great distances, perhaps globally; could accumulate over time in body tissues; could produce chronic as well as acute poisoning; and could result in cancer, birth defects and genetic mutations that may not become evident until years or decades after exposure. Government officials, she also argued, were not taking the steps necessary to control this pollution and protect the public. Chemical pesticides were not the only form of pollution fitting this description. Another form, far better known to the public at the time, was radioactive fallout"[2]

Lutts went on to point out that the radioactive isotope Strontium-90, a long-lasting component of nuclear fallout, was the first pollutant Carson mentioned in *Silent Spring*. Mentions of that and other radioactive substances are sprinkled throughout the book.

There was an element of truth to Carson's warnings about the effect of DDT on bird populations. In the late 1960s, some researchers concluded that exposure to DDT (or rather, its breakdown byproducts) caused the thinning of eggshells in some bird species, especially raptors such as eagles and peregrine falcons. The thinner eggshells were more delicate and less able to protect the chicks; thus many did not survive.

Even so, these findings remain an item of some controversy. A number of studies have shown little, if any, relationship between DDT consumption and eggshell thickness in many bird species.[3] Some analysts contend that most of the evidence Carson gives for the deleterious effects of DDT on bird populations is anecdotal or from uncontrolled observational studies.

And Carson's work undeniably contains elements of unbridled alarmism. For example, Carson notes that, "like the robin, another American bird, [the bald eagle] seems to be on the verge of extinction." In fact, the robin population has never seriously been considered to be in any sort of jeopardy. At the same time Carson's book was published, a noted ornithologist was reporting robins to be the most abundant bird in North America.[4]

Silent Spring launched a whole series of hysterical claims about DDT and other chemicals. Some said that birds were dropping dead right out of the sky[5] or falling "out of the trees in by the thousands."[6] In fact, DDT is not known to be directly toxic to any species outside of some insects.

Some people still believe DDT is carcinogenic, or harmful to humans in some other way. Although most chemicals can be carcinogenic in extremely

large doses, no study has ever specifically found a link between DDT exposure and cancer incidence in humans, not even when volunteers were fed, on a daily basis, three times the quantity of DDT the average American ingested annually.[7]

The public pressure created by the popularity of Carson's book took its toll. The use of DDT was banned in the United States in 1972, despite a general lack of evidence of its effect. Following the ban, the U.S. Agency for International Development (USAID) threatened to stop foreign aid to any country using the chemical. When the World Bank sent aid to fight malaria, it stipulated that DDT could not be used.

Those decisions halted lifesaving efforts to combat malaria in many parts of the world. With the use of DDT in Venezuela, cases of malaria had dropped from more than eight million in 1943 to 800 in 1958. In India, cases had dropped from more than 10 million in 1935 to under 300,000 in 1969. In Italy, cases had dropped from more than 400,000 in 1945 to only 37 in 1968.[8] Today, malaria infects an estimated 350–500 million people annually, killing approximately one million every year. Most of the victims are young children in sub-Saharan Africa.[9]

Eventually, common sense about DDT began to revive. In 2006, the World Health Organization called on developing countries, particularly in Africa, to begin indoor spraying of DDT to fight malaria.[10] A small number of malaria-plagued countries were already using DDT, backed by a 2001 United Nations treaty. Environmental Defense—ironically, a key member of the anti-DDT campaign in the 1960s—now endorses the indoor use of DDT for malaria control, as do the Sierra Club and the Endangered Wildlife Trust.

The truth is that birds are still with us. In fact, over the last several decades, great strides have been made in terms of species preservation in the United States. In June 2007, the bald eagle was removed from the U.S. list of threatened and endangered species, and environmental groups believe the bald-eagle population will continue to grow. While some credit the DDT ban with this success, it is generally held that the leading causes of decline in bird populations are habitat disruption and hunting—not chemical use. Yet a documented effect of the DDT ban is in the death of millions of people.

But the hysteria lives on. Al Gore claims, "More species of animals and plants are now vanishing than at any time in the past 65 million years."[11] The American Museum of Natural History asserts, "Scientists rate biodiversity loss as a more serious environmental problem than the depletion of the ozone layer, global warming, or pollution and

contamination… This mass extinction is the fastest in earth's 4.5-billion-year history and, unlike prior extinctions, is mainly the result of human activity and not of natural phenomena."[12]

The lack of any reliable metric for assessing biodiversity hampers attempts to understand its true state nationally and globally.[13] As a result, the most alarmist projections are made without any supporting evidence, and not surprisingly these receive the most media attention.

CHAPTER II:
We Will Turn Our Planet Into an Empty Starving Wasteland

"We are moving towards the twilight of civilization,"[14] and with "[a]nother century like the [twentieth,] civilization will be facing its final crisis,"[15] according to Fairfield Osborn in his 1948 book, *Our Plundered Planet*. Resource alarmists have been shouting statements like this for over a century. They see a severe drought and exclaim that the productive capability of the earth is dwindling and that deserts will take over the world. They write propaganda books like Frank Herbert's *Dune*, meant to show society the "doom" soon to come, in the cloak of a sci-fi adventure novel.[16] They take advantage of farmers who fought to survive the Dust Bowl, like a Kansas farmer who concluded that the "whole Great Plains region is already lost to desert that can not be reclaimed through the plans and labors of men."[17] The alarm was displayed prominently in a *New York Times* story titled, "World Seen Facing Food Shortage Due to Lack of Arable Lands."[18]

Some hysteria was understandable during the 1940s and '50s. America had suffered its worst productivity disaster, the Dust Bowl of the 1930s, and images of dust clouding the sun as far east as Washington, D.C., were still vivid in the public memory. The Dust Bowl was a wake-up call that spurred farmers to take greater care in their agricultural practices. Profit and surplus today are worthless if the land is underproductive or even unusable tomorrow.

Because the farmers heeded that call, the Dust Bowl, far from dooming the country to famine and desert, demonstrated the ability of man to learn, progress, and overcome. The once-feared desert lands of the North American Great Plains have long since returned to productivity. Indeed, they are some of the most productive agricultural lands in the world.

Yet some alarmists continue to ignore these advances. In *The Population Bomb*, Paul Ehrlich claimed that "the agricultural value of Iowa farmland, which is about as good a land as we have, is declining by 1 percent per year."[19] If this prediction had been accurate, the productivity of Iowa fields would have decreased by 40 percent since Ehrlich's book was released in

1968. Instead, annual per-acre wheat yield has increased from 33 bushels to 66, corn yield from 89 bushels to 166, and soybean yield from 29.5 bushels to 50.5.[20]

Alarmists consistently ignore or deny the ability of humans to learn, grow, and advance socially and technologically. Swiss biochemist Ehrenfried Pfeiffer clearly states this alarmist view: "Production, rationalization and technicalization have reached a 'saturation.' They can not be increased."[21]

Yet time and time again we see agricultural production records being broken. Human ingenuity and scientific advances help us better manage our acres and plant higher-yielding varieties that are drought, pest, and disease resistant. Every continent has seen an increase in yield in the last 40 years—with, of course, localized differences. Crop yield worldwide has increased for every commodity type, including fruit by 31 percent, rice by 63 percent, vegetables by 37 percent, and wheat by 148 percent.[22]

Though soil is one of the most important resources for human existence, another resource has become essential to almost every society and economy around the world: oil. As with food, oil is the target of dire predictions of its impending and unavoidable scarcity.

If you do a Google search of "peak oil" you will find about 4.8 million entries, many dedicated to sounding the alarm of oil shortages. "Peak oil" supposedly represents the point in time when the peak of world crude-oil production will be reached, after which production will enter a terminal decline. Once we have run the pump dry, society will begin to collapse as the effects of oil shortages become a grim reality.

Predictions of oil shortages have run throughout the last half-century. In 1943, U.S. Secretary of the Navy Frank Knox predicted a serious oil shortage by 1944 and oil exhaustion in the United States by 1963.[23] In 1947, the *New York Times* wrote, "Every so often the fear of an oil shortage developing in the United States gains prominent mention. At present, such a campaign is in full swing." The article explains that the unprecedented demand for oil will cause a shortage of energy.[24]

The same warnings were still being proclaimed more than two decades later. In 1974, *National Geographic* published "Oil, the Dwindling Treasure." In this article, M. King Hubert, a U.S. petroleum geologist and strong advocate of the "peak oil" concept, claimed peak oil would be reached by 1995.[25] Three years later, the CIA reported that peak oil would be reached by 1987, leading to higher prices and worldwide shortages of gasoline, heating oil, and jet fuel.[26]

More recently, a few big hitters in the oil industry have begun to claim that peak oil has been reached. T. Boone Pickens, the founder of Mesa Petroleum, the world's leading independent oil and gas producer, said, "The majors, they talk about plenty of oil and that they can produce more, but if you look at ExxonMobil, ChevronTexaco, BP [British Petroleum], all the production [is] going down every year. They don't replace and they don't add to production, but they say there's plenty of oil around."[27] Matthew Simmons, chief executive of the energy-investment company Simmons & Co. International and an advisor to President George W. Bush, predicts peak oil will be reached soon. Simmons claims that Saudi Arabia's pumping capacity is running out, despite Saudi assertions to the contrary.[28]

Pickens and Simmons also warn that the increased demand in the developing world, specifically China and India, will accelerate the use of current reserves, cause demand to surpass supply, and create a worldwide shortage. In 2004, the *Toronto Star* quoted the British energy secretary as predicting that the coming oil crisis will be "the sharpest and perhaps the most violent dislocation [of society] in recent history."[29]

Despite all these claims, there is no evidence that peak oil has been reached or that there will be a long-term shortage of supply. In response to perceived oil shortages during the 1920s, the American Petroleum Institute announced that there were 26 billion barrels of oil in regions not yet fully explored and that ample reserves existed.[30] Similar headlines can be found today, including many announcements of new discoveries. Since 2000, numerous new reserves have been found around the world—at least three new fields in China,[31] a 4.5-billion-barrel reserve in Russia,[32] a 10-billion-barrel reserve in Mexico,[33] a 600-million-barrel field in Ghana,[34] and a new deep-water reserve in the Gulf of Mexico off the Louisiana coast that could yield up to 15 billion barrels.[35] Besides these new finds, the *Financial Times* reports that Iraq's reserves may be double those previously known, amounting to an additional 100 billion barrels.[36]

In 1971, proven oil reserves were at 521 billion gallons; in 2006, they were at 1,290 billion gallons.[37] The Cambridge Energy Research Association (CERA) has predicted that petroleum supplies will actually grow faster than demand until 2010.[38] Oil production and reserve levels have not yet dropped and are not likely to drop; supply constraints, where they exist, are issues of investment, geopolitics, and infrastructure.

CERA believes that higher oil prices will spur development of new technologies that will allow oil to be extracted from old fields. At least one company, Sneider Exploration Company, has been experimenting with one of these technologies and has found new life in old fields with economically viable extraction.[39]

At least as far back as 1926, alternatives to oil were being conceived. In that year the *New York Times* published an article that showed optimism and a lack of concern about oil scarcity: "A Synthetic Age Is Foreseen by Chemistry: Scientists at Williamstown Conference Promise That Substitutes Will Be Found for Everything That Man Needs if Natural Supply Fails—Some of the Marvels Achieved—Not Worried About Oil."[40] Another article quoted the chief petroleum engineer of the U.S. Bureau of Mines explaining that petroleum would last for many years to come and that coal and oil shale would meet all requirements when petroleum came to be in short supply.[41]

Fuel shortages have been experienced in many parts of the world throughout history, but the primary motivation for developing alternative fuel sources has often been not scarcity, but the marketplace. In some cases, non-fuel purposes were discovered for a particular fuel, and, as a result of the new demand, the price of the fuel increased, spurring the development of an alternative. In other cases, the limitations of the energy source meant that when a better source became available, it naturally supplanted the earlier one. Steam-powered machinery replaced animal power and wind for labor and transportation. Kerosene was found to be a better and more plentiful fuel than whale oil for artificial lighting. One of the most common energy sources for transportation today came from a desire to utilize industrial waste: gasoline was a by-product of the production of kerosene.

In fact, new and improved technology is a long-standing result of scientific advancement in the energy industry, as well as other natural-resource sectors. As economist Erich Zimmerman noted, "Knowledge is truly the mother of all resources."[42]

CHAPTER III:
We Will Overcrowd the Earth

Through much of modern history, overpopulation has been raised as a serious concern. In our own time, probably the most tireless exponent of the overpopulation theme has been the self-proclaimed propagandist Paul Ehrlich.

Ehrlich, an entomologist and professor of biological sciences at Stanford University, published his alarmist manifesto, *The Population Bomb*, in 1968. The book contains dire predictions for human civilization and advocates a number of radical solutions. The same year, Ehrlich and two colleagues founded the advocacy group Zero Population Growth, now known as Population Connection. The organization's mission is to lobby the public and Congress to reduce population growth through birth control and other methods, and to fund population-control research.[43]

The Population Bomb claimed that the earth was quickly becoming overpopulated. Ehrlich predicted that by the mid-1970s the world would be struck by severe famine and hundreds of millions of people would starve to death. Ehrlich strongly believed that the earth had reached its maximum capacity to support the growing human population, and that there was nowhere to go but down. The first line of his prologue states: "The battle to feed all humanity is over." Ehrlich continued, "At this late date nothing can prevent a substantial increase in the world death rate." He believed that any action taken at that point to prevent the increase would only "provide a stay of execution." He blamed man's "swollen head" for the environmental and societal disaster that he anticipated.

Ehrlich used absurd numbers to overwhelm the reader. For example, he explained that if population growth went unchecked for another 900 years, there would be 600,000 billion humans on earth, which equates to a population density of 100 people per square yard covering the entire surface (land and sea) of the earth.[44] Ehrlich also predicted that the deterioration of the environment would cause greater misery and more deaths than the shortage of food.[45] He included in his book a number of future scenarios; in every case, war, disease, famine, and hatred for the United States are prominent.

Actually, Ehrlich's book was based on two sound principles: the concepts of resource scarcity and carrying capacity. Resources are limited, and their availability is affected by demand for their use. As the population grows, there is more demand for resources. As a necessary resource becomes scarce, the population becomes limited by the available amount of that resource. Resource scarcity can make an environment reach its carrying capacity, which is the limit to the number of individuals that can be sustained indefinitely on a given set of resources.[46] Ehrlich based his book on the idea that there is a worldwide carrying capacity and that the human race was close to it or had reached it by 1958.[47]

However, he failed to consider multiple issues. First, a population will level off once carrying capacity has been reached, stabilizing its birth and death rates. This suggests that mass starvation would not occur, but rather equilibrium would be reached based on the available resources. Second, carrying capacity is specific to a fixed environment. Changes in the environment can increase or decrease the carrying capacity. So, for example, when resources are scarce in one part of the world, it is possible to supplement those resources from elsewhere and extend the ability of the environment to maintain a population. Examples of supplementation can be seen today when food aid is supplied to countries suffering from shortages, and when global trade helps ensure sufficient supplies of necessary goods. Third, in the case of many resources, there may be factors that can modify the supply of the resource or the need for it. For example, new crop varieties and farming practices are continually being developed to increase yields, thus expanding the supply of necessary resources.

Ehrlich provided some radical solutions to his predicted population crisis. He specifically called for the creation of a federal Department of Population and the Environment with the power to "take whatever steps are necessary to establish a reasonable population size in the [United States]."[48] He encouraged the use of sterilizing agents in the public water and/or staple food supply to temporarily stop population growth, and he strongly suggested compulsory birth control. He encouraged gender determination to ensure that all first-born children would be boys; this would reduce the female population and guarantee that couples desiring a male offspring would not have to have more than one child.[49] He envisioned abortion as an essential tool in population control.[50] He also supported the use of taxation to discourage couples from having large families. He wanted to eliminate the child tax exemption and instead create an increasing tax liability for every child in a family. He supported a "luxury" tax on all child-related items, such as diapers, strollers, and cribs.[51]

Since *The Population Bomb* was published, the world population has increased from just over 3.5 billion to 6.6 billion.[52] However, the population has not been growing exponentially, as Ehrlich insisted it would. Population growth in 1960 was estimated to be two percent, but it has dropped to under one-and-a-half percent today and is expected to drop to one-half of one percent by 2050, according to the U.S. Census Bureau.

One part of Ehrlich's prediction has apparently come true, as famine has occurred in parts of Africa, but this "proof" is illusory. The African famines have been caused by war and politics, not by a lack of available food. Economist Amartya Sen, who won the Nobel Prize in Economics in 1998, demonstrated that in many cases of famine, food supplies were not significantly reduced; rather, the cause was political and social inequalities in food-distribution systems.[53] Furthermore, the proportion of chronically underfed persons in developing countries fell from 36 percent in 1970 to 20 percent in 1990.[54] Population growth has far exceeded deaths from famine or any other cause.

In 1990 Ehrlich published a new book, *The Population Explosion*, to reiterate his theory. This volume demonstrates that the failure of his previous predictions has not deterred Ehrlich from predicting new human catastrophe. Indeed, he updated his estimate of famine-related deaths from hundreds of millions of people to billions.[55]

Ehrlich's ideas are not fully original. He strongly echoes the Reverend Thomas Robert Malthus, author of the 1798 *Essay on the Principle of Population*. That essay stated that "the power of population is indefinitely greater than the power in the earth to produce subsistence for man."[56] The Malthusian theory assumes the concept of absolute scarcity, in which resources are used at an increasing rate until they are completely exhausted.[57] It also assumes that productivity increases only arithmetically, whereas population increases exponentially; these factors taken together will lead to subsistence living and ultimately starvation.[58]

These hypotheses have not been borne out historically, and modern critics have pointed out that Malthusian models are based on incorrect assumptions and do not account for feedbacks such as the effect of scarcity on prices.[59] Nonetheless, Karl Marx pointed out that Malthus's theory of population and scarcity had greatly influenced economic theory. He considered Malthus's work nothing more than a "sensational pamphlet," and "yet what a stimulus was produced by this libel on the human race!"[60] Why did such a flawed theory have such sway? Marx noted that the French Revolution created an environment in which propaganda could flourish, and proponents of certain political interests used Malthus's essay to further their political and social agendas.

Much the same is true of Ehrlich's writings in our own day. *The Population Bomb* was a best-seller and is considered a seminal work for the zero-population-growth movement. Referenced in many environmental and resource policy books,[62] it influenced public policy on environmental issues through the 1970s. It has also been credited as a factor in obtaining widespread approval for the birth-control pill in the United States.[63] Ehrlich's book introduced the concepts of "overpopulation" and a "population bomb" into the public consciousness. The concept of overpopulation is now taught in some of our schools,[64] and some couples decide to limit the number of children they have, or to have no children at all, not for personal reasons but because they are concerned about overpopulation.[65]

Although the theories of Malthus and Ehrlich have been proved wrong, it is possible to find groups, such as Population Connection and Negative Population Growth,[66] that still support them. Though some groups look only to lobby, others look for a little more. The Voluntary Human Extinction Movement calls on people to stop having children altogether.[67] The Church of Euthanasia is a non-profit group with the sole purpose of "restoring balance between Human [sic] and the remaining species on Earth." Its members are asked to sign a pledge that they will not procreate and that they will live by or support the group's four pillars: suicide, abortion, cannibalism, and sodomy.[68] The organization offers a list of essential readings, which include *The Population Bomb* and *Our Plundered Planet*, and it helps adherents live up to its motto, "Save the planet, kill yourself," by providing information on methods of committing suicide.

But the population-control movement is not limited to fringe groups. The United Nations Population Fund (UNFPA), for example, claims that "stabilisation" of the human population is crucial given the contribution it would make "towards the achievement of sustainable development."[69] The former executive director of UNFPA said the goal of the program was "stabilisation of the world population at the lowest possible level, within the shortest period of time."[70]

And yet, there is no evidence that population growth is inherently unsustainable. There is no correlation between a nation's population density and its per-capita gross domestic product (GDP). Furthermore, an analysis of commodity prices from 1900 to 2003 reveals that, despite significant global population growth during this time, the relative prices of virtually all primary commodities have fallen since the beginning of the twentieth century.[71]

CHAPTER IV:
We Will Freeze Ourselves! We Will Cook Ourselves!

In the 1970s, increased scrutiny of global climate patterns revealed that estimates of global temperatures had been declining since the mid-1940s. For the most part, the scientific community recognized the trend but also acknowledged its inability to make predictions of related and forthcoming climate change, because of a lack of understanding of the issue. In 1975, the National Academy of Sciences (NAS) included climate change in its assessment of major questions in need of more research, noting, "The climates of the earth have always been changing, and they will doubtless continue to do so in the future. How large these future changes will be, and where and how rapidly they will occur, we do not know."[72]

While these discussions were taking place in the scientific community, the media caught wind of the story. As reported in the popular press, the situation was much more dire than it appeared in the scientific literature, the science was much more settled, and global cooling was an indisputable fact. On June 24, 1975, *Time* magazine published a story titled, "Another Ice Age?" The story stated: "However widely the weather varies from place to place and time to time, when meteorologists take an average of temperatures around the globe they find that the atmosphere has been growing gradually cooler for the past three decades. The trend shows no indication of reversing. Climatological Cassandras are becoming increasingly apprehensive, for the weather aberrations they are studying may be the harbinger of another ice age." The article noted a number of side effects of the coming ice age: violent storms in the Midwest, a sharp reduction in global food production, and continuing drought.

On April 28, 1975, a little article on the observations appeared in *Newsweek*. Titled "The Cooling World," it noted "ominous signs that the Earth's weather patterns have begun to change" and cited "a drop of half a degree [Fahrenheit] in average ground temperatures in the Northern Hemisphere between 1945 and 1968." The article continued: "The evidence in support of these predictions [of global cooling] has now begun to accumulate so massively that meteorologists are hard-pressed to keep up with it." It warned of an array of disastrous (and now familiar-sounding) consequences: "resulting famines could be catastrophic," "drought and desolation," "the

most devastating outbreak of tornadoes ever recorded," "floods, extended dry spells, long freezes, [and] delayed monsoons." *Newsweek* claimed: "The present decline has taken the planet about a sixth of the way toward the Ice Age." In 2006, 31 years later, *Newsweek* reflected on that article, noting that it had been "so spectacularly wrong about the near-term future" but insisting that "the story wasn't 'wrong' in the journalistic sense of 'inaccurate.' "

But the damage was done. Other major media outlets rushed to jump on the bandwagon. A May 21, 1975, headline in the *New York Times* said, "Scientists Ponder Why World's Climate Is Changing; A Major Cooling Widely Considered to Be Inevitable." *Time* put "The Coming Ice Age" on its cover. The November 1976 issue of National Geographic had a lead article on global cooling. In the late 1970s, several popular books on the topic were published, including *The Weather Conspiracy: The Coming of the New Ice Age*.[73]

The global-cooling stories of the 1970s were not really new. However, they were extremely successful in gaining widespread public attention, despite not having widespread scientific backing. In truth, media stories of impending catastrophic climate change have a long history. On October 7, 1912 (notably, several months after the sinking of the *Titanic*, caused by a collision with an iceberg), a headline on page one of the *New York Times* reported that a well-known professor "Warns Us of an Encroaching Ice Age." On September 10, 1923, *Time* warned, "The discoveries of changes in the sun's heat and the southward advance of glaciers in recent years have given rise to conjectures of the possible advent of a new ice age." However, the conventional wisdom on such matters can change quite quickly, and on March 11, 1929, the *Los Angeles Times* responded to its headline question "Is another ice age coming?" with the answer, "Most geologists think the world is growing warmer, and that it will continue to get warmer."

Today, of course, the scientific community is more concerned about a warming of global temperatures than a cooling, and media attention has followed, although the term "global warming" has been generalized to "climate change" to account for the variety of existing or potential effects.

In the media, global warming causes everything. A brief perusal of stories from the last several years reveals that warming has been blamed for a huge array of problems, including increased teenage drinking,[74] stray cats,[75] poison ivy,[76] and sharks.[77] More seriously, global warming has also been blamed for widespread malnutrition and outbreaks of disease,[78] Hurricane Katrina,[79] and the crisis in Darfur.[80]

The concern over climate change is certainly rooted in sound scientific research, where theoretical and observed linkages between atmospheric concentrations of greenhouse gases and increasing global temperatures

have been repeatedly demonstrated. There are good reasons to continue to investigate the issue.

However, although our understanding of climate dynamics has improved in the last three decades, the NAS's 1975 warning about our limited knowledge of the issue remains largely valid. The most recent analysis by the UN's Intergovernmental Panel on Climate Change (IPCC) noted that "progress in understanding how climate is changing in space and in time has been gained through improvements and extensions of numerous datasets and data analyses, broader geographical coverage, better understanding of uncertainties, and a wider variety of measurements." But the IPCC also clearly identified where particular projections have a high degree of uncertainty.[81]

Even so, the so-called "consensus" of the scientific community is often used as justification for reporting the most extreme theories: if all the scientists are in agreement, then even the most unlikely of outcomes is a possibility. Disturbingly, alarmist reporting on the science of climate change is now considered by many to be the most appropriate way to communicate this complicated issue to the public.

Even scientists, normally known for their caution, are beginning to be affected by this attitude. In a recent article in the journal *Science*, several climate scientists discuss their concern that the "consensus approach," used by the IPCC to synthesize and summarize the state of knowledge, doesn't go far enough to impress upon the public "the extreme end of the range of possibilities." And the Spring 2006 *SEJournal*, published by the Society of Environmental Journalists (SEJ), argued *against* balance in the discussion.

Arguments such as these send the dangerous message that it's acceptable to present extreme viewpoints without providing either the larger context or an assessment of the likelihood of extreme outcomes. The SEJ's suggestion is particularly troubling given the wide range of results and conclusions in climate science.

CHAPTER V:
Lessons from the Apocalypse

Apocalyptic stories about the irreparable, catastrophic damage that humans are doing to the natural environment have been around for a long time. These hysterics often have some basis in reality, but are blown up to illogical and ridiculous proportions. Part of the reason they're so appealing is that they have the ring of plausibility along with the intrigue of a horror flick.

In many cases, the alarmists identify a legitimate issue, take the possible consequences to an extreme, and advocate action on the basis of these extreme projections. In 1972, the editor of the journal *Nature* pointed out the problem with the typical alarmist approach: "[Alarmists'] most common error is to suppose that the worst will always happen."[82] But of course, if the worst always happened, the human race would have died out long ago.

When alarmism has a basis in reality, the challenge becomes to take appropriate action based on that reality, not on the hysteria. The aftermath of *Silent Spring* offers examples of both sorts of policy reactions: a reasoned response to a legitimate problem and a knee-jerk response to the hysteria.

On the positive side, *Silent Spring* brought an end to the general belief that all synthetic chemicals in use for purposes ranging from insect control to household cleaning were uniformly wonderful, and it ushered in an age of increased caution on the appropriate use of chemicals. In the second chapter of her famous book, Carson wrote, "It is not my contention that chemical insecticides must never be used. I do contend that… we have allowed these chemicals to be used with little or no advance investigation of their effect on soil, water, wildlife, and man himself."

In this passage, Carson seemed to advocate reasoned response to rigorous scientific investigation, and in fact this did become the modern approach to environmental chemical licensure and monitoring. An hour-long CBS documentary on pesticides was aired during the height of the furor over *Silent Spring*. In the documentary, Dr. Page Nicholson, a water-pollution expert with the Public Health Service, wasn't able to answer how long pesticides persist in water once they enter it, or the extent to which pesticides contaminate groundwater supplies. Today, this sort of information is gathered through routine testing of chemicals for use in the environment.

However, there was, as we have seen, a more sinister and tragic response to the hysteria generated by *Silent Spring*. Certain developing countries, under significant pressure from the United States, abandoned the use of DDT. This decision resulted in millions of deaths from malaria and other insect-borne diseases. In the absence of pressure to abandon the use of DDT, these lives would have been spared. It would certainly have been possible to design policies requiring caution and safe practices in the use of supplemental chemicals in the environment, without pronouncing a death sentence on millions of people.

A major challenge in developing appropriate responses to legitimate problems is that alarmism catches people's attention and draws them in. Alarmism is given more weight than it deserves, as policy makers attempt to appease their constituency and the media. It polarizes the debaters into groups of "believers" and "skeptics," so that reasoned, fact-based compromise is difficult to achieve. Neither of these aspects of alarmism is healthy for the development of appropriate policy.

Further, alarmist responses to valid problems risk foreclosing potentially useful responses based on ingenuity and progress. There are many examples from the energy sector where, in the presence of demands for economy, efficiency, or less pollution, the marketplace has responded by developing better alternatives. That is not to say that we should blissfully squander our energy resources; on the contrary, we should be careful to utilize them wisely. But energy-resource hysteria should not lead us to circumvent scientific advancement by cherry-picking and favoring one particular replacement technology at the expense of other promising technologies.

Environmental alarmism should be taken for what it is—a natural tendency of some portion of the public to latch onto the worst, and most unlikely, potential outcome. Alarmism should not be used as the basis for policy. Where a real problem exists, solutions should be based on reality, not hysteria.

Endnotes

[1] From "Man the Destroyer," excerpted from *The Spectator* (London) and printed in *The Audubon Magazine*, 1(1), February 1887.

[2] Ralph H. Lutts, "Chemical Fallout: Rachel Carson's *Silent Spring*, Radioactive Fallout, and the Environmental Movement." *Environmental Review*, 1985, p. 212.

[3] J. Gordon Edwards, "DDT: A Case Study in Scientific Fraud." *Journal of American Physicians and Surgeons*, 2004, pp. 83–88.

[4] Roger Tory Peterson and the editors of *LIFE*, *The Birds* (New York: Time, Inc., 1963).

[5] Stickel, "Birds killed by DDT." *Annals of the New York Academy of Science*, 1971, pp. 162–171.

[6] Charles F. Wurster, "As Long as It Doesn't Kill Anybody," *Innovation Magazine*, January 1971, pp. 1–9.

[7] Hayes, "The Effect of Known Repeated Oral Doses of DDT in Man," *Journal of the American Medical Association*, 1956, pp. 890–897.

[8] Ronald Bailey, "Silent Spring at 40." *Reason*, June 12, 2002, online at http://www.reason.com/news/show/34823.html.

[9] Center for Disease Control and Prevention, http://www.cdc.gov/malaria/. Accessed 8 July 2007.

[10] World Health Organization News Release*: WHO gives indoor use of DDT a clean bill of health for controlling malaria*, September 15, 2006.

[11] Al Gore, *Earth in the Balance* (New York: Plume Books, 1993), p. 23.

[12] American Museum of Natural History, "National Survey Reveals Biodiversity Crisis —Scientific Experts Believe We Are in Midst of Fastest Mass Extinction in Earth's History," online at http://www.amnh.org/museum/press/feature/biofact.html. Accessed 1 July 2007.

[13] Michel Loreau et al., "Diversity Without Representation," *Nature*, July 20, 2006, pp. 245–246.

[14] Fairfield Osborn, *Our Plundered Planet* (Boston: Little, Brown, 1948), p. 194.

[15] *Ibid*., p. 37.

[16] Frank Herbert, ed., Introduction to *New World or No World* (New York: Ace Books, 1970), p. 5.

[17] Lawrence Svobida, *An Empire of Dust* (Caldwell, ID: The Caxton Printers, 1940), p. 203

[18] *New York Times*, "World Seen Facing Food Shortage Due to Lack of Arable Lands," October 3, 1946.

[19] Paul R. Ehrlich, *The Population Bomb* (New York: Ballantine Books, 1968), p. 47.

[20] United States Department of Agriculture, National Agriculture Statistics Service.

[21] Ehrenfried Pfeiffer, *The Earth's Face and Human Destiny* (Emmaus, PA: Rodale Press, 1947), p. 152.

[22] Food and Agricultural Organization databases.

[23] *New York Times*, "Knox Warns," June 26, 1943.

[24] *New York Times*, "Shift to Fuel Oil Raises a Problem," June 1, 1947.

[25] *National Geographic*, June 1974.

[26] *Washington Post*, "CIA Foresees Global Oil Shortage," April 16, 1977.

[27] Association for the Study of Peak Oil and Gas, "Boone Pickens Warns of Petroleum Production Peak," online at http://www.peakoil.net. Accessed July 9, 2007.

[28] Jon D. Markman, "Is Saudi Arabia Running Out of Oil?" *Real Money* (TheStreet.com), July 29, 2004, online at http://www.thestreet.com/_tsccom/funds/supermodels/10174679.html.

[29] Richard Gwyn, "Demand for Oil Outstripping Supply," *Toronto Star*, January 28, 2004, online at http://www.commondreams.org/views04/0128-10.html.

[30] *New York Times*, "Nation in No Peril From Oil Shortage," August 7, 1925.

[31] *People's Daily*, "New Oil and Gas Reserves Found," May 26, 2000, online at http://english.peopledaily.com.cn/english/200005/26/eng20000526_41659.html; *Xinhua News Agency*, "New Offshore Oil Reserves Found in Bohai Bay," March 29, 2006, online at http://www.china.org.cn/english/BAT/163759.html; *Xinhuanet*, "Major New Oil Reserves Found in Loess Region," May 28, 2004, online at http://www1.cei.gov.cn/ce/doc/cenm/200405310821.html.

[32] *Emerging Markets Economy*, "New Considerable Oil and Gas Reserves Found in Russia," October 6, 2004, online at http://findarticles.com/p/articles/mi_qn4174/is_20041006/ai_n12932956; Andrew E. Kramer and Heather Timmons, "Lukoil Finds Big New Field in Caspian Sea," *New York Times*, January 26, 2006.

[33] BBC, "Mexico Discovers 'Huge' Oil Field," March 15, 2006, online at http://news.bbc.co.uk/2/hi/americas/4808466.stm.

[34] BBC, "UK's Tullow Uncovers Oil in Ghana," June 18, 2007, online at http://news.bbc.co.uk/2/hi/business/6764549.stm.

[35] Steven Mufson, "U.S. Oil Reserves Get a Big Boost," *Washington Post*, September 9, 2006, online at http://www.washingtonpost.com/wp-dyn/content/article/2006/09/05/AR2006090500275.html.

[36] Ed Crooks, "Iraq may hold twice as much oil," *Financial Times,* February 18, 2007, online at http://www.ft.com/cms/s/23bedd7e-edd8-11db-8584-000b5df10621.html.

[37] U.S. Department of Energy, Energy Information Administration, Tables 11.5 and 11.10; *BP Annual Energy Outlook* (various).

[38] Rob Scherer, "One energy forecast: Oil supplies grow," *The Christian Science Monitor*, June 22, 2005, online at http://www.csmonitor.com/2005/0622/p25s02-wogi.html.

[39] Sneider Exploration Company, "New Oil in Old Places," presented at Pratt II Conference, San Diego, January 12–15, 2000.

[40] *New York Times*, August 22, 1926.

[41] *New York Times*, "Oil Shortage Talk Scored by Experts," November 26, 1926.

[42] Erich Zimmerman, *World Resources and Industries*, 2nd revised ed. (New York: Harper & Brothers, 1951), p. 10.

[43] Population Connection Web site, online at http:///www.populationconnection.org. Accessed July 9, 2007.

[44] Ehrlich, *The Population Bomb*, p. 18.

[45] *Ibid.*, p. 46.

[46] Cecie Starr and Ralph Taggart, *Biology: The Unity and Diversity of Life, 7th Edition* (Belmont, CA: Wadsworth, 1995), p. 808.

[47] Ehrlich, *The Population Bomb*, p. 37.

[48] *Ibid.*, p. 138.

[49] *Ibid.*, p. 139.

[50] *Ibid.*, p. 88.

[51] *Ibid.*, p. 136.

[52] U.S. Census Bureau: World Population Information, online a http://www.census.gov/ipc/www/idb/.

[53] Amartya Sen, *Poverty and Famines: An Essay on Entitlements and Deprivation* (Oxford: Clarendon Press, 1982).

[54] Food and Agricultural Organization. *The State of Food and Agriculture 2000: Food Security and Nutrition in the Last 50 Years* (Rome: 2000).

[55] Paul R. Ehrlich and Anne H. Ehrlich, *The Population Explosion* (New York: Simon and Schuster, 1990), p. 17.

[56] Meek, R (Ed.). *Marx and Engels on the Population Bomb, 2nd Edition*. (Berkeley, CA: Ramparts Press Incorporated, 1971), p.4.

[57] James R. Kahn, *The Economic Approach to Environmental and Natural Resources* (Orlando, FL: Dryden Press, 1995), p. 211.

[58] *Ibid.*, p. 411.

[59] *Ibid.*, p. 463.

[60] Meek, *Marx, and Engels*, p. 18.

[61] *Ibid.*, p. 88.

[62] Michael E. Kraft, *Environmental Policy and Politics, 3rd Edition* (New York: Pearson Education, 2004); Kahn, Economic Approach.

[63] Keith Greiner, "The Baby Boom Generation and How They Grew," *Chance: A Magazine of the American Statistical Association*, Winter 1994.

[64] World Population Awareness, Educational Materials and Literature, online at http://www.overpopulation.org/education.html; and Facing the Future, Teachers Corner, online at http://www.teacherscorner.org. Both accessed July 9, 2007.

[65] *Rocky Mountain News*, "Some Spurn Kids for Environment: Childless Couples Claim Overpopulation Is Reason They Remain 'Just Two,'" July 17, 1998.

[66] Negative Population Growth's Web site, online at http://www.npg.org/reading.html. Accessed July 9, 2007.

[67] Jerry Adler, "Earth: What Would Happen If Humans Vanished?" *Newsweek*, July 14, 2007, online at http://www.msnbc.msn.com/id/19762077/site/newsweek/.

[68] Church of Euthanasia's Web site, online at http://www.churchofeuthanasia.org. Accessed July 6, 2007.

[69] *UNFPA Annual Report 2002*, online at http://www.unfpa.org/about/report/2002/. Accessed July 22, 2007.

[70] Jaya Dalal, *Population: U.N. Agency Projects Record Income for 1996*, Inter Press Service, November 7, 1995.

[71] Nicholas Eberstadt, *Too Many People?* Sustainable Development Network, 2007, online at http://www.sdnetwork.net/files/pdf/Too_Many_People.pdf. Accessed July 16, 2007.

[72] U.S. National Academy of Sciences. *The 1975 U.S. National Academy of Sciences/ National Research Council Report*.

[73] The Impact Team, *The Weather Conspiracy: The Coming of the New Ice Age* (New York: Ballantine Books, 1977).

[74] Autumn Grooms and Ann Jungen, "'Alcopop Culture': More Area Middle School Teens Are Drinking," *La Crosse Tribune*, May 27, 2007, online at http://www.lacrossetribune.com/articles/2007/05/27/news/00lead.txt. Accessed July 1, 2007.

[75] Andrea Thompson, "Adoption Group: Cat Invasion Due to Global Warming," *LiveScience*, June 6, 2007, online at http://www.livescience.com/animals/070606_gw_pets.html. Accessed July 8, 2007.

[76] "Another Global Warming Gift: Itchier Poison Ivy," *MSNBC*, May 20, 2006, online at http:///www.msnbc.msn.com/id/13046200/. Accessed July 9, 2007.

[77] "Sharks in Alaskan Waters Could Herald Global Warming," *Ichthyology*, February 19, 2002, online at http://www.flmnh.ufl.edu/fish/sharks/innews/alaskasharks2002.html. Accessed July 8, 2007.

[78] Roger Segelken, "Death by global warming?: Climate change, pollution and malnutrition will increase disease worldwide, Cornell ecologist warns," *Cornell News*, February 18, 2000, online at http://www.news.cornell.edu/releases/Feb00/AAAS.Pimentel.hrs.html. Accessed July 9, 2007.

[79] Jeffrey Kluger, "Is Global Warming Fueling Katrina?" *Time*, August 29, 2005, online at http://www.time.com/time/nation/article/0,8599,1099102,00. Accessed July 9, 2007.

[80] Stephan Faris, "The Real Roots of Darfur," *The Atlantic Monthly*, April 2007, online at http://www.theatlantic.com/doc/prem/200704/darfur-climate. Accessed July 9, 2007.

[81] Intergovernmental Panel on Climate Change. *Climate Change 2007: The Physical Science Basis; Summary for Policymakers*. February 2007.

[82] Maddox, John. 1972. *The Doomsday Syndrome*. McGraw-Hill, New York, NY.

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