Our Environmental Movement

Birth

In 2008, CNN posted, on their website this note by Peter Dykstra

> *It was one of the most surreal images in American history: A river, so fouled with industrial waste that it caught fire and burned. In June 1969, Cleveland's Cuyahoga River become the poster child for the birth of the modern American environmental movement.*

Concerns over air and water pollution helped spawn the modern environmental movement in the 1960s.

> *No matter that this was at least the tenth time the Cuyahoga had ignited. The times, they were a-changing, and a burning river confirmed what many already believed: The environment was changing, too.*
>
> *Rachel Carson's book, "Silent Spring," published seven years earlier, had lit the spark. The mild-mannered government scientist documented how the pesticide DDT was jeopardizing countless bird species, from tiny hummingbirds to the national symbol, the bald eagle.*
>
> *Smog from traffic and factories had become a national concern. And six months before the torching of the Cuyahoga, a massive oil spill soiled the shores of Santa Barbara, California. In the midst of the anti-Vietnam war movement, the women's movement, and more, a divided America also found room for an environmental movement.*
>
> *The movement was sanctioned in April 1970 with a nationwide quasi-holiday, the first "Earth Day." New organizations formed to rally the masses: Friends of the Earth (1969), the Natural Resources Defense Council (1970), and Canadian-born Greenpeace (1971). Books touting recycling, vegetarianism, and all aspects of a "green" lifestyle hit the best-seller list.*

*Even Richard Nixon went green. A President besieged by Vietnam protests saw an opportunity to be the good guy. Nixon founded the **Environmental Protection Agency** in 1970 and signed a flurry of landmark environmental laws, including the Clean Air Act, the Clean Water Act and the Endangered Species Act -- the vanguard of a new government ethic.*

*Then the movement stalled. Slowed by its own accomplishments, internal squabbles and a growing backlash that government and "greens" could be doing more harm than good, the **environment** waned as a cause.*

The pendulum swung the other way in the late '80's following a massive industrial accident in Bhopal, India (1984) and a nuclear calamity at Chernobyl (1986). After that, the bad news piled on: We learned about the ozone hole, the first dire reports on global warming, and widespread clearing of the world's rainforests.

Smaller, but more telegenic, indignities told the rest of the story: an orphaned garbage barge, on a months-long sojourn in 1988, showed the folly of making too much waste, while some particularly odious waste in the form of sewage and syringes took up residence on the beaches of New Jersey.

In the 1988 election, George H.W. Bush seized the issue for the Republicans, promising to serve as "the environmental President" and attacking his Democratic rival Mike Dukakis for failing to clean up his hometown Boston Harbor. A few weeks before the elder Bush's inauguration, Time Magazine lauded Earth as its "Planet of the Year."

By 1990, the Earth had gone Hollywood. ABC ran a two-hour, prime time Earth Day Special whose celebrity-studded cast included Dustin Hoffman, Meryl Streep, Robin Williams and many others.

Membership in environmental groups boomed, while retailers and manufacturers launched huge ad campaigns touting their newfound green-ness. In 1992, the U.N. held its "Earth Summit," where 108 heads of state met to set goals and declare their good intentions for saving the earth.

*Several years after exiting the political stage, **Al Gore** parlayed "An Inconvenient Truth," his global-warming slide show, into an Oscar and half of a Nobel Peace Prize. Journalists re-focused on the issue with ambitious projects such as CNN's "Planet in Peril."*

Source: http://www.cnn.com/2008/TECH/science/12/10/history.environmental.movement/index.html.

Perhaps the birth of the movement began earlier. We should at least give a tip of the hat to John Muir, a Scotsman from Wisconsin. The son of a Presbyterian minister, by age 11, he was able to recite three-quarters of the Old Testament by heart, and all of the New Testament. He became a bit of an itinerant, hiking from Wisconsin to Florida, making botanical sketches along the way. From there he took a boat to San Francisco and then hiked to the Sierra Nevada. After working as

a sheepherder in the high country he worked on a sawmill in Yosemite. He fell in love with nature and in the late 1800s began writing articles for national magazines championing the cause of national parks and gaining sufficient recognition that he hosted president Theodore Roosevelt on a three-day camping trip. He is generally regarded as the father of the national park system.

Source: http://www.pbs.org/nationalparks/people/historical/muir/

Now, back to the beginning. I must say that it was high time. Swimming in Lake Erie was forbidden because of a high content of toxic elements. In Los Angeles on most days it was impossible to see the mountains surrounding the city. Denver, a place that I had assumed would always enjoy the pristine Rocky Mountain air had a major smog problem.

So, when the nation became sufficiently concerned about pollution to take action, I was pleased. I am still pleased that major improvements have been accomplished in the quality of our water and air.

Where is it Today?

But the movement has gone far beyond those bounds. You will have noted in the CNN article that the movement ran out of steam after water and air had been essentially taken care of. Then they describe a major PR campaign to make the public aware of a myriad of other environmental "abuses". As you will see in the following pages that I have serious reservations and doubts about where this has taken the environmental movement and the attitudes of the populace in general. It is my contention that the movement has evolved into a religion for many. I liken it to a religion, which by its nature is based on an inherent faith, not just on logic. So it is with the environmental movement today. *Logical reasoning is not required.*

Cost

In November 2001, William A. Pizer, Richard D. Morgenstern, Jhih-Shyang Shih prepared a study, "The Cost of Environmental Protection". In it they concluded:

> *Expenditures for environmental protection in the U.S. are estimated to exceed $150 billion annually or about 2% of GDP. This estimate, based on largely self-reported information, is often cited as an assessment of the burden of current regulatory efforts and a standard against which the associated benefits are measured.*

This is a significant drag on the economy, which puts the burden on us to carefully evaluate all of the environmental protection activities to identify those which are worth the expense and those which are not.

When the Environmental Protection act was passed in 1973, it was explicit in stating that economic criteria should play no role in species listings or in the designation of critical habitat. The U.S. Supreme Court supported this stand, ruling in **Tennessee Valley Authority v. Hill** , a legal contest between the snail darter (a minnow sized fish) and a new power dam that was under construction by the Tennessee Valley Authority. Congress eventually passed a law that exempted this project from the Act. The snail darter was relocated to another stream and ultimately upgraded to

"threatened" status. It was not until the amendments to the ESA in 1978 that economics first entered into the ESA. It says, under Section 4, the Secretary of the Interior may "take into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat."

Therefore, the concept of a cost/benefit analysis came into the picture.

However, Jason F. Shogren, in his paper, "Economics and the Endangered Species Act" concludes that the record of preparing the cost estimates is incomplete and subject to serious technical difficulties when estimates are actually made.

Source: http://www.umich.edu/~esupdate/library/97.01-02/shogren.html

Furthermore, we generally lose sight of who gets the benefits and who pays the cost. In just a couple of cases we might look at Tesla's all electric powered automobile and the proposed drilling for oil and gas in the ANWR.

California, for instance, encourages sale of Teslas. The Hoover Institute at Stanford University tells us:

> *Consider Tesla, the premier zero-emission vehicle (ZEV). The purchaser of each Tesla Model S that costs $70,000 or more receives a $7,500 federal tax credit, plus state credits. Within California, for example, purchasers can get a tax rebate of up to $2,500 and opportunity to access special freeway lanes, an important benefit in traffic-clogged California. Moreover, the Tesla company receives 4 ZEV credits that it then sells to other car dealers in the state because the California Air Resources Board requires all dealers to sell a fixed number of ZEVs each year. Because other car companies cannot meet that mandate given tepid demand, they must purchase credits from Tesla, effectively raising the costs of their cars and subsidizing Tesla. Few inhabitants of South Central Los Angeles, one of the poorest parts of the city, know about Teslas, its alleged environmental benefits, or what each vehicle costs them. On the other hand, those in wealthier Brentwood and Beverly Hills have a far better sense of what they gain from a Tesla purchase.*

So, we see a case of a relatively few economically comfortable people getting substantial economic and convenience benefits at the expense of the rest of us. Of course, we are expected to bear the higher costs so as to save the world from global warming, oops, climate change, the benefits of which are in serious doubt, as we will discuss later in this paper.

The Hoover people also tell us of the ANWR (Alaskan National Wildlife Refuge).

> *An illustrative example is the recent proposal to shield the Arctic National Wildlife Refuge (ANWR) in Alaska from oil exploration and production by declaring the region Wilderness. The Presidential Executive Order made in January 2015 covers nearly 13 million acres, slightly smaller than the state of West Virginia. The objective is to protect pristine habitat, home to caribou, polar bears, bird, and marine life from any disruptions caused by oil and gas development. The New York*

Times editorial January 27, 2015 applauded this effort by the Obama Administration as protecting a "Valued Wilderness."

Fair enough. But how valuable? At what cost? And who benefits and bears those costs? These are critical questions in assessing whether or not this action to provide an environmental public good is broadly beneficial for the American public. Would the policy stand public scrutiny if the costs and benefits and their distribution were put up to public debate?

Let's look at the evidence regarding the Arctic National Wildlife Refuge to see how things might stack up. Unlike most environmental policies, we do have suggestive evidence to answer the questions raised above. Two economists, Matthew Kotchen and Nicholas Burger, calculated the costs and benefits in a 2007 paper in the journal Energy Policy, "Should we drill in the Arctic National Wildlife Refuge? An Economic Perspective." The authors used the best estimate of economically-recoverable oil in the federal portion of ANWR at 7.06 billion barrels, about equal to total US consumption for the entire year of 2005. They also used $53/barrel, which is close to the current price of oil, to arrive at a gross revenue of $374.2 billion from oil production.

Total recovery costs, including state and federal taxes, were estimated to be $122.8 billion, giving a net revenue or benefit of $251.4 billion. Kotchen and Burger apportioned these benefits among oil firms, the state of Alaska (which relies on oil revenues for many government services), and the federal government at $90 billion, $36 billion, and $125 billion, respectively. You can immediately see why Alaska politicians are so concerned by the President's action.

The negative environmental effects of ANWR oil exploration and production, mostly from vehicle traffic and road and other infrastructure construction, such as pipelines, and oil spills could include disruptions to the Porcupine Caribou Herd's migration patterns and calving rates and survival. Other harmful effects could follow on other species such as musk oxen, polar bears, and migratory snow geese. All of these negative effects, however, are little known because there remains so much uncertainty about how these natural systems operate and respond to human disturbances.

Even so, for some citizens, any risk of environmental harm is just too great. The existence value of the species and their habitats is just too high. But too high for whom? Obviously, environmental advocates see clear value. Others may not see these values so high. Critically, however, advocates do not bear proportionate costs of the regulations. If they did, then the policy problem would be less severe. When advocates, who are skilled in lobbying benefit more and bear fewer costs than do others who bear more costs than benefits and are less prone to lobbying, then there is inexorable political pressure to over supply environmental public goods.

In the ANWR case, Kotchen and Burger focused on what could be estimated fairly precisely, the benefits of drilling at $251.4 billion, and then used that number to indicate what the environmental costs would have to be in order for a benefit/cost ratio to be less than one. Using this logic, the costs would have to be at least $251.4 billion. But this number is hard to assess because it is so abstract, so Kotchen and Burger divide the benefits of drilling among the relevant US population of residents 18 and older in 2005, giving a value of $1,141/person. This value suggests that on average, American citizens would require $1,141 as compensation for not drilling in ANWR. They may or may not accept this tradeoff, but if the policy were presented to general voters in this manner, setting aside ANWR would clearly stimulate far more debate and the President's action might not be so politically popular.

Source: http://www.hoover.org/research/high-price-environmental-regulation

DDT

Rachel Carson's book gave a huge boost to the environmental movement, and among other things brought to an effective end the use of DDT. But, let's take a closer look. DDT was first used during WWII to very effectively protect our troops from malaria and other insect borne diseases. The New Atlantis gives a good description of the history in an article by *Robert Zubrin* entitled, "The Truth About DDT and *Silent Spring".*

One of the first countries to benefit from the use of DDT for civilian purposes was the United States. In the years immediately preceding World War II, between one and six million Americans, mostly drawn from the rural South, contracted malaria annually. In 1946, the U.S. Public Health Service initiated a campaign to wipe out malaria through the application of DDT to the interior walls of homes. The results were dramatic. In the first half of 1952, there were only two confirmed cases of malaria contracted within the United States.[12]

Other countries were quick to take note of the American success, and those that could afford it swiftly put DDT into action. In Europe, malaria was virtually eradicated by the mid-1950s. South African cases of malaria quickly dropped by 80 percent; Ceylon (now Sri Lanka) reduced its malaria incidence from 2.8 million in 1946 to 17 in 1963; and India cut its malaria death rate almost to zero. In 1955, with financial backing from the United States, the U.N. World Health Organization launched a global campaign to use DDT to eradicate malaria. Implemented successfully across large areas of the developing world, this effort soon cut malaria rates in numerous countries in Latin America and Asia by 99 percent or better. Even for Africa, hope that the age-old scourge would be brought to an end appeared to be in sight.[13]

***B**ut events took another turn with the appearance of Rachel Carson's book Silent Spring. A former marine biologist and accomplished nature writer, Carson in 1958 contacted E. B. White, a contributor to The New Yorker, suggesting someone should write about DDT. White declined, but the magazine's editor, William*

Shawn, suggested that Carson herself write it. The ensuing articles, supplemented by additional material, became Silent Spring, for which Carson signed a contract with Houghton Mifflin in August 1958.[14]

Carson based her passionate argument against pesticides on the desire to protect wildlife. Using evocative language, Carson told a powerful fable of a town whose people had been poisoned, and whose spring had been silenced of birdsong, because all life had been extinguished by pesticides.[15]

Published in September 1962, Silent Spring was a phenomenal success. As a literary work, it was a masterpiece, and as such, received rave reviews everywhere. Deeply moved by Carson's poignant depiction of a lifeless future, millions of well-meaning people rallied to her banner. Virtually at a stroke, environmentalism grew from a narrow aristocratic cult into a crusading liberal mass movement.

While excellent literature, however, Silent Spring was very poor science. Carson claimed that DDT was threatening many avian species with imminent extinction. Her evidence for this, however, was anecdotal and unfounded. In fact, during the period of widespread DDT use preceding the publication of Silent Spring, bird populations in the United States increased significantly, probably as a result of the pesticide's suppression of their insect disease vectors and parasites. In her chapter "Elixirs of Death," Carson wrote that synthetic insecticides can affect the human body in "sinister and often deadly ways," so that cumulatively, the "threat of chronic poisoning and degenerative changes of the liver and other organs is very real." In terms of DDT specifically, in her chapter on cancer she reported that one expert "now gives DDT the definite rating of a 'chemical carcinogen.'"[16] *These alarming assertions were false as well.*[17] *(Carson's claims about the supposed pernicious effects of DDT are examined more fully below.)*

The Banning of DDT

T*he panic raised by Carson's book spread far beyond American borders. Responding to its warning, the governments of a number of developing countries called a halt to their DDT-based anti-malaria programs. The results were catastrophic. In Ceylon, for example, where, as noted, DDT use had cut malaria cases from millions per year in the 1940s down to just 17 by 1963, its banning in 1964 led to a resurgence of half a million victims per year by 1969.*[18] *In many other countries, the effects were even worse.*

Attempting to head off a hysteria-induced global health disaster, in 1970 the National Academy of Sciences issued a report praising the beleaguered pesticide:

To only a few chemicals does man owe as great a debt as to DDT. It has contributed to the great increase in agricultural productivity, while sparing countless humanity from a host of diseases, most notably, perhaps, scrub typhus and malaria. Indeed, it is estimated that, in little more than two decades, DDT has prevented 500 million

deaths due to malaria that would otherwise have been inevitable. Abandonment of this valuable insecticide should be undertaken only at such time and in such places as it is evident that the prospective gain to humanity exceeds the consequent losses. At this writing, all available substitutes for DDT are both more expensive per crop-year and decidedly more hazardous.[19]

To some, however, five hundred million human lives were irrelevant. Disregarding the NAS findings, environmentalists continued to demand that DDT be banned. Responding to their pressure, in 1971 the newly-formed Environmental Protection Agency (EPA) launched an investigation of the pesticide. Lasting seven months, the investigative hearings led by Judge Edmund Sweeney gathered testimony from 125 expert witnesses with 365 exhibits. The conclusion of the inquest, however, was exactly the opposite of what the environmentalists had hoped for. After assessing all the evidence, Judge Sweeney found: "The uses of DDT under the registration involved here do not have a deleterious effect on freshwater fish, estuarine organisms, wild birds, or other wildlife.... DDT is not a carcinogenic hazard to man.... DDT is not a mutagenic or teratogenic hazard to man."[20] *Accordingly, Judge Sweeney ruled that DDT should remain available for use.*

Unfortunately, however, the administrator of the EPA was William D. Ruckelshaus, who reportedly did not attend a single hour of the investigative hearings, and according to his chief of staff, did not even read Judge Sweeney's report.[21] *Instead, he apparently chose to ignore the science: overruling Sweeney, in 1972 Ruckelshaus banned the use of DDT in the United States except under conditions of medical emergencies.*[22]

How about that, does DDT kill the birds, or not? Here's what the bird picture looks like, during one year, 1941, before DDT and during one year, 1960, of DDT use.

(next page).

Table I			
Audubon Society Christmas Bird Count: Counts per Observer			
1941 (2,331 observers) compared with 1960 (8,928 observers)			
	Counts per Observer		
Species	1941	1960	Ratio
			1960/1941
Eagle	0.08	0.1	1.25
Gull	53.4	72	1.33
Raven	0.29	0.3	1.03
Crow	79.59	28.04	0.35
Pheasant	0.88	1.15	1.31
Mourning dove	2.83	2.21	0.75
Swatlow	3.18	8.17	2.57
Grebe	6.15	27.14	4.41
Pelican	1.07	3.12	2.92
Cormorant	1.91	1.18	0.62
Heron	0.97	1.82	1.88
Egret	0.63	1.88	2.98
Swan	7.96	3.81	0.48
Goose	78.43	78.04	0.99
Duck	916.81	306.85	0.33
Blackbird	58.99	2,302.01	39.02
Grackle	10.7	1,407.98	131.59
Cowbird	17.17	368.09	21.44
Chickadee	9.15	6.26	0.68
Titmouse	2.16	2.05	0.95
Nuthatch	1.81	1.5	0.83
Robin	8.41	104.01	12.37
English sparrow	22.8	40.19	1.76
Bluebird	1.6	0.77	0.48
Starling	90.88	971.45	10.69
Total	1,480	5,860	3.96

Source: https://www.thenewatlantis.com/publications/the-truth-about-ddt-and-silent-spring

The birds appear to have flourished during the time of DDT use. This appears to be a case of jumping to conclusions and hanging on to them for dear life, regardless of the facts.

Supposing it were true that DDT seriously damaged wildlife, it clearly showed that our society was perfectly ok with sacrificing human life for the benefit of animal life. Completely backward to my way of thinking. But to make the crime even greater, it turns out that DDT is not all that

harmful to wildlife. The deaths of over one million people per year are the direct result of banning DDT. We have environmentalists to thank for it. Shame on us.

Skeptical (or perhaps more)

In the following pages I will discuss a few of the movement's crusades and explain why I think they are off base.

Many of the environmental initiatives are presaged by the dire warning," Disaster x will befall us if we don't take action y". Many of my readers are not old enough to remember some 40 plus years ago when we were warned that we were about to enter a new ice age. Of course, it didn't happen, at least for now. Walter Williams, a highly respected economist, illustrates the commonness of disaster predictions that don't, in fact, come about in his following post on the "Daily Signal" in April 2017.

COMMENTARY BY

Walter E. Williams

Walter E. Williams is a professor of economics at George Mason University.

> *Each year, Earth Day is accompanied by predictions of doom. Let's take a look at past predictions to determine just how much confidence we can have in today's environmentalists' predictions.*
>
> *In 1970, when Earth Day was conceived, the late George Wald, a Nobel laureate biology professor at Harvard University, predicted, "Civilization will end within 15 or 30 years unless immediate action is taken against problems facing mankind."*
>
> *Also in 1970, Paul Ehrlich, a Stanford University biologist and best-selling author of "The Population Bomb," declared that the world's population would soon outstrip food supplies.*
>
> *In an article for The Progressive, he predicted, "The death rate will increase until at least 100-200 million people per year will be starving to death during the next 10 years."*
>
> *He gave this warning in 1969 to Britain's Institute of Biology: "If I were a gambler, I would take even money that England will not exist in the year 2000."*

On the first Earth Day, Ehrlich warned, "In 10 years, all important animal life in the sea will be extinct."

Despite such predictions, Ehrlich has won no fewer than 16 awards, including the 1990 Crafoord Prize, the Royal Swedish Academy of Sciences' highest award.

In International Wildlife (July 1975), Nigel Calder warned, "The threat of a new ice age must now stand alongside nuclear war as a likely source of wholesale death and misery for mankind."

In Science News (1975), C.C. Wallen of the World Meteorological Organization is reported as saying, "The cooling since 1940 has been large enough and consistent enough that it will not soon be reversed."

In 2000, climate researcher David Viner told The Independent, a British newspaper, that within "a few years," snowfall would become "a very rare and exciting event" in Britain. "Children just aren't going to know what snow is," he said. "Snowfalls are now just a thing of the past."

In the following years, the U.K. saw some of its largest snowfalls and lowest temperatures since records started being kept in 1914.

In 1970, ecologist Kenneth Watt told a Swarthmore College audience:

> *The world has been chilling sharply for about 20 years. If present trends continue, the world will be about 4 degrees colder for the global mean temperature in 1990 but 11 degrees colder in the year 2000. This is about twice what it would take to put us into an ice age.*

Also in 1970, Sen. Gaylord Nelson, D-Wis., wrote in Look magazine: "Dr. S. Dillon Ripley, secretary of the Smithsonian (Institution), believes that in 25 years, somewhere between 75 and 80 percent of all the species of living animals will be extinct."

Scientist Harrison Brown published a chart in Scientific American that year estimating that mankind would run out of copper shortly after 2000. Lead, zinc, tin, gold, and silver were to disappear before 1990.

Erroneous predictions didn't start with Earth Day.

In 1939, the U.S. Department of the Interior said American oil supplies would last for only another 13 years. In 1949, the secretary of the interior said the end of U.S. oil supplies was in sight.

Having learned nothing from its earlier erroneous claims, in 1974 the U.S. Geological Survey said the U.S. had only a 10-year supply of natural gas.

The fact of the matter, according to the U.S. Energy Information Administration, is that as of 2014, we had 2.47 quadrillion cubic feet of natural gas, which should last about a century.

Hoodwinking Americans is part of the environmentalist agenda. Environmental activist Stephen Schneider told Discover magazine in 1989:

We have to offer up scary scenarios, make simplified, dramatic statements, and make little mention of any doubts we might have. … Each of us has to decide what the right balance is between being effective and being honest.

In 1988, then-Sen. Timothy Wirth, D-Colo., said: "We've got to … try to ride the global warming issue. Even if the theory of global warming is wrong … we will be doing the right thing anyway in terms of economic policy and environmental policy."

Americans have paid a steep price for buying into environmental deception and lies.

Source: The Daily Signal

http://dailysignal.com/2017/04/26/heres-how-wrong-past-environmental-predictions-have-been/?utm_source=TDS_Email&utm_medium=email&utm_campaign=Top5&mkt_tok=eyJpIjoiWVRjeFpEWmtZMll3TmpjMCIsInQiOiJmNktQaSsrY2ZGRSttYmpkNkVXVGZ6a045aVdRMmFSU1RRbGdYXC9HV1BMVmphNHpQVDdZUDRwbTR3YkI3TVJEQVlnV2pFVkVoV2tWUkhBY1FrRkwzeE9TRHpxSlFUcWJZaUdFMDNZcGJyeFF5aEFzdVRJTmJKVzFaUmxRMTFYR3AifQ%3D%3D

Is it any wonder that many of us are skeptical, at best, of the environmental alarms we hear daily? Many in the news media buy into these claims, so we are constantly bombarded with predictions of calamity.

Endangered Species

Protection of endangered species has become a religion unto its own. The following Table I shows that in this country we have, so far, listed as endangered or threatened some 714 animals and 942 plants. I have yet to understand the logic in this. The only rationale I have heard is that our eco system is dependent on all creatures and plants. So, if one disappears it destroys a chain and the entire environment suffers, leading to who knows what sinister ends we will suffer. Ok, that seems to make some sense until one realizes that animal and plant species have been going extinct throughout recorded and deduced history. But here we are, still fat and sassy. I, for one, am happy that I don't have to fret about the possibility of being eaten by a dinosaur. Furthermore, by the time a species is identified and listed as endangered, its ability to impact the ecosystem has essentially disappeared already. So, I doubt the basic premise.

The other argument I hear is that all of God's creatures have the same right to exist. The theology I learned is that God created humans in His own image. No other creatures enjoy that status. They were created to be utilized and enjoyed by human beings. Ergo, we have the God given right to harvest plants and slaughter or domesticate critters for our own consumption and use. A spear of wheat does not have the right to be left standing in the field.

I can understand that certain animals and plants have widespread aesthetic value to a large portion of the population. The bald eagle, being a symbol of the United States, is one such critter that deserved protection. Perhaps also obscure state flowers such as the moccasin flower in Minnesota are worth the protection efforts.

Table II

Listed Species Summary (Box score)						
Summary of Listed Species Listed Populations as of 03 Oct 2017 17:06:04 GMT						
Group	**United States**			**Foreign**		
	Endangered	**Threatened**	**Total Listings**	**Endangered**	**Threatened**	**Total Listings**
Amphibians	20	15	35	8	1	9
Annelid Worms	0	0	0	0	0	0
Arachnids	12	0	12	0	0	0
Birds	81	21	102	217	18	235
Clams	75	14	89	2	0	2
Corals	0	6	6	3	16	19
Crustaceans	24	4	28	0	0	0
Fishes	92	73	165	22	6	28
Worms	0	0	0	0	0	0
Hydroids	0	0	0	0	0	0
Insects	74	11	85	4	0	4
Mammals	68	27	95	260	23	283
Millipedes	0	0	0	0	0	0
Reptiles	17	28	45	71	24	95
Snails	40	12	52	1	0	1
Sponges	0	0	0	0	0	0
Animal Totals	**503**	**211**	**714**	**588**	**88**	**676**
Conifers and Cycads	1	3	4	0	2	2
Ferns and Allies	36	2	38	0	0	0
Flowering Plants	735	163	898	1	0	1
Lichens	2	0	2	0	0	0
Plant Totals	**774**	**168**	**942**	**1**	**2**	**3**
Grand Totals	**1277**	**379**	**1656**	**589**	**90**	**679**

Source: US Fish and Wildlife Service, https://ecos.fws.gov/ecp0/reports/box-score-report

While the quantity of listed species is already a large number, we have people, I suspect at government expense, searching for and finding additional species to list. Every year more are added. In 2016, 74 more were listed.

Only about 15 percent of the known species in the United States have been studied in sufficient detail to determine whether or not they are imperiled. So, we can expect a continuing stream of additions to the list ad infinitum.

The reader may have been relieved to note that no Annelid Worms or just ordinary Worms are listed in the table.

Another very interesting thing we learn from the table above is that, while the United States occupies about 2% of the world's land mass, we list well over twice the number of species than does the other 98% of the land mass in the world. Their focus is largely on birds and mammals. Might we, in the United States, be over-doing this a bit.

How does it work?

The ESA's primary goal is to prevent the extinction of imperiled plant and animal life, and secondly, to recover and maintain those populations by removing or lessening threats to their survival.

Petition and listing

To be considered for listing, the species must meet one of five criteria (section 4(a)(1)):

1. There is the present or threatened destruction, modification, or curtailment of its habitat or range.
2. An over utilization for commercial, recreational, scientific, or educational purposes.
3. The species is declining due to disease or predation.
4. There is an inadequacy of existing regulatory mechanisms.
5. There are other natural or manmade factors affecting its continued existence.

Potential candidate species are then prioritized, with "emergency listing" given the highest priority. Species that face a "significant risk to their wellbeing" are in this category.

A species can be listed in two ways. The United States Fish and Wildlife Service (FWS) or NOAA Fisheries (also called the National Marine Fisheries Service) can directly list a species through its candidate assessment program, or an individual or organizational petition may request that the FWS or NMFS list a species. A "species" under the act can be a true taxonomic species, a subspecies, or in the case of vertebrates, a "distinct population segment." The procedures are the same for both types except with the person/organization petition, there is a 90-day screening period.

Costs

The biggest beef I have with this program is the money spent.

The costs fall into two major categories:

1. The government spends money to administer the program in a number of functions:

a. Finding and identifying endangered and threatened species.
b. Identifying the areas in which the species lives or would like to live.
c. Establishing the restrictions on types of activity that may not be undertaken on those areas and those activities which may be taken.
d. Ensuring that no-one violates those rules and taking action when violations are found.
e. Reviewing, approving, disallowing, and negotiating remedial measures for proposed development on the land areas.

2. Compliance
    a. People and corporations desiring to develop or build something on land deemed to be a habitable area for an endangered or threatened species are required to obtain permits to develop. To this end they must:
        i. Conduct baseline studies to determine exact conditions prior to any development. This usually involves the hiring of consulting firms and may require one to two years to complete.
        ii. Develop a plan to mitigate any damage that may be done to the habitat.
        iii. Seek approval of the plan and more often than not make modifications to the plan and then seek approval again. This cycle may be repeated two, three, or more times. All the while the consultants' meters continue to click off the dollars.
        iv. Once approved, they must spend the money on the mitigation efforts, often involving making an adjacent parcel of land comfy for the critter or plant.
        v. After development is completed ongoing annual maintenance may be required.
    b. In the worst cases the developer may be refused permission to proceed with the development, as was the case with the snail darter and the dam. It required an act of congress to allow the partially built dam to be completed. When development is denied, the economic benefits are lost, the money invested to that date is wasted, and the value of the property is greatly diminished.

The process described above is costly and often proves to be a nightmare for the developer. At best, it involves significant delays to the development. Those of us who have lived in Pima County for more than a few years will recall that construction of Ironwood Ridge High School was delayed for two years because of concern for the pigmy owl, even though no pygmy owls had ever been known to live on the property, causing extra expense for the school district and severe inconvenience in the instruction of our high school students at the time. Anyone familiar with the time value of money knows that having a few million dollars tied up doing nothing productive, as was the case here, is costly.

It costs billions of dollars a year to enforce the Endangered Species Act, but the ESA does little to protect species, according to a report from the Property and Environment Research Center, which conducted the study for the Pacific Legal Foundation.

Based on a review of 19 federal agencies that spend "significant" amounts to comply with the act researchers found that:

- The last report filed by the Fish and Wildlife Service (FWS) in December estimates $610 million was spent on ESA enforcement in 2000, but the study says the actual cost is closer to four times that amount -- or $3 billion annually.
- Fifty percent of reported expenditures are for seven species, just 0.6 percent of the ESA list, the report says.
- As of February, 1,260 species were officially threatened or endangered, but only a dozen species have been "recovered" and removed from the list since it was created 30 years ago as part of the government act.

These figures include the economic impact of the Endangered Species Act, which is not reported to Congress. Among the examples in the report:

- Federal efforts and regulations to protect the habitat of the California gnatcatcher bird impose economic costs of $300 million a year, not counting a one-year delay on construction of a high school, costing an additional $1 million locally.
- Farmers in the Klamath Basin of Oregon lost nearly $54 million in crops in 2001 when irrigation water was shut off to protect the shortnose sucker and coho salmon.

Also missing from government estimates, says the report, is money spent on protecting species in foreign countries -- 517 foreign endangered species and 41 foreign threatened species from African elephants to Corsican swallowtail butterflies

Source: National Center for Policy Analysis.

The Guardian, a British newspaper reported the world-wide costs as follows:

> *To reduce the risk of extinction for all threatened species would cost up to $4.76bn (£2.97bn) every year, they say, with a further $76.1bn (£47.4bn) required annually to establish and manage protected areas for species known to be at risk from habitat loss, hunting and other human activities.*

Source: The Guardian

https://www.theguardian.com/environment/2012/oct/11/cost-save-threatened-species

And then there's the question, "Is it working?"

U.S. Rep. Cynthia Lummis, R-Wyo., in an interview with Wyoming Public Radio had this to say:

> *In the interview, which aired Aug. 23, 2013, Lummis said, "Our goal is not to repeal the Endangered Species Act. Far from it. Our goal is to make the Endangered Species Act work. We have a law where only 1 percent of the species that have been*

listed have actually been delisted. To me, that indicates a law that is failing in its ultimate goal which is to list species, recover them, and then delist them."

Source: Politifact. http://www.politifact.com/truth-o-meter/statements/2013/sep/03/cynthia-lummis/endangered-species-act-percent-taken-off-list/

It is my belief that the broad base of our population that supports environmentalism has no idea or nor interest in the costs that our country bears to follow the policies established by politicians who are more interested in counting votes than costs, nor whether the program is a success or a failure.

It is also my opinion that the Endangered Species Act is one of the most useless and harmful pieces of legislation enacted in my lifetime.

National Monuments

The name suggests, to my limited imagination, a system of designating statues and edifices as being important to the history of our nation and therefore deserving some level of protection from deterioration, defacement, or commercial abuse. Seems like a good idea to me. In fact The Antiquities Act of 1906, is an act passed by the United States Congress and signed into law by Theodore Roosevelt on June 8, 1906. This law gives the President of the United States the authority to, by presidential proclamation, create national monuments from federal lands to protect significant natural, cultural, or scientific features. One of the concerns was to limit individuals from collecting "Indian artifacts" from federal land.

Ok, so my initial impression was too limited. Perhaps they should have called it "National Lands and Monuments". I think many of the national monuments are a good idea, such as the Statue of Liberty and others, for instance. A few are pictured below:

Devils Tower National Monument, Wyoming

Statue of Liberty National Monument, New York

Natural Bridges National Monument, Utah

Muir Woods National Monument, California

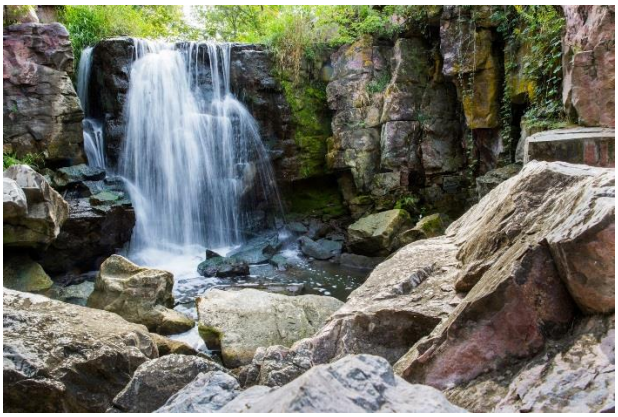
One of my personal favorites is the Pipestone National Monument located just outside of my "growing up town", Pipestone, MN.

Wikipedia tells us:

> *The Catlinite, a soft red shale, or "pipestone", has been traditionally used to make ceremonial pipes, vitally important to traditional Plains Indian religious practices. The quarries are sacred to most of the tribe of North America, Dakota, Lakota, and other tribes of Native Americans, and were neutral territory where all Nations could quarry stone for ceremonial pipes.[3] The Sioux tribes may have taken control of the quarries around 1700, but the Minnesota pipestone has been found inside North American burial mounds dating from long before that, and ancient Indian trails leading to the area suggest pipestone may have been quarried there for many centuries.[4]*
>
> *As the United States grew westward in the 19th century, pipes found their way into white society through trade. To protect their source, the Yankton Sioux secured free and unrestricted access via The Treaty With The Yankton Sioux, which was signed on April 19, 1858.*
>
> *The land was acquired by the federal government in 1893. In 1928, the Yankton Sioux, then resettled on a reservation 150 miles (240 km) away, sold their claim to the federal government. The National Monument was established by an act of Congress on August 25, 1937, and the establishing legislation restored quarrying rights to the Indians.[3] Today only people of Native American ancestry are allowed to quarry the pipestone.*

Source: Wikipedia - https://en.wikipedia.org/wiki/Pipestone_National_Monument

As children we were attracted to this major quartzite outcrop, situated about a quarter mile from the pipe quarries, which produced this line of 15' cliffs complete with a waterfall. Quite an exciting thing for young boys who grew up on the prairies.



Our favorite outing was a hike to the "falls" where we would cook hotdogs or a piece of round steak over an open fire. So, I am delighted that this little piece of real estate has been preserved. I'm sure many of you have similar "monumental" sites that you grew up with.

But I fear we have taken this good idea to an illogical extreme. There are currently 129 national monuments. They range in size, from less than one acre to 1,048,325 acres. (This is the Grand Canyon, so it's understandably large.) 38 monuments occupy more than 1,000 acres and 20 are larger than 10,000 acres. So, a very substantial chunk of land is essentially removed from any sort of commercial use. The high standard of living that we enjoy results from the utilization of land-based resources. So, my judgement is that we should be very careful in removing land from the resource pool.

Ironwood Forest

Close to home we have

> *the Ironwood Forest National Monument located in the Sonoran Desert of Arizona. Created by Bill Clinton by Presidential Proclamation 7320 on June 9, 2000, the monument is managed by the Bureau of Land Management, an agency within the United States Department of the Interior. The monument covers 188,619 acres.*
>
> *A significant concentration of ironwood (also known as desert ironwood, Olneya tesota) trees is found in the monument, along with two federally recognized endangered animal and plant species. More than 200 Hohokam and Paleo-Indian archaeological sites have been identified in the monument, dated between 600 and 1450.*
>
> *It is managed for multiple uses including recreation, cattle grazing and mining, although new mining claims and motorized off-road travel are prohibited by the establishing Proclamation. Livestock grazing, which has occurred continuously for at least the last 125 years within the monument, is currently managed at very light or conservative levels of approximately one cow per every 300 to 400 acres (1.6 km^2). Domestic sheep and goats are prohibited as a protection to the bighorn sheep.*

Source: https://en.wikipedia.org/wiki/Ironwood_Forest_National_Monument

I wonder why this large quantity of land requires monument level protection, protection of the Ironwood tree? I suspect they would survive on their own, without special protection. It's estimated that some are as much as 800 years old. The ironwood thrives throughout the Sonoran Desert. I drive past quite a few every day as I move about in our local community. In fact, our local high school is named Ironwood Ridge High School because of the abundance of such trees in our neighborhood. So, I wonder why we must set aside a parcel of land for these very hardy specimens.

Then there are 200 native Indian archaeological sites. Why not just protect those parcels?

It's interesting to note that the property is open to certain managed commercial activities, including mining. But new mining claims are prohibited. This implies that mining of existing claims might be permitted. What is the difference between mining on existing claims and mining on new claims. This is clearly the "no development" position of many environmentalists. The logic of all this is simply nonsense. I suspect that there may be other National Monuments with similar logic flaws.

Izembek National Wildlife Refuge

In the ridiculous category, we have this story from the April 15, 2018 issue of the Wall Street Journal. King Cove, Alaska, a remote village on the Aleutian chain has only two means of access; boat and air. Their gravel airstrip of 3000' sits in an effective wind tunnel between two mountains. The strip is closed an average of 100 days per year due to bad weather. Flying in and out is hazardous. Numerous people have died in flight crashes.

But there's good news. Only 18 miles away lies another village, Cold Bay. It has a 10,000' paved airstrip, which is closed fewer than 10 days per year. But the problem is in getting there. There is no road. The residents have been asking for a road connecting the two communities for many years. Finally, this year the federal government negotiated a land swap with the state of Alaska which will make the building of the road possible. However, the agreement was immediately challenged in court by a number of national environmental groups. The claim of the environmentalists is that this lightly traveled road will cause irreparable damage to migratory birds. This is belied by the Mississippi flyway which is utilized annually by over 300 bird species despite the fact that civilization abounds on both ends and throughout the flyway; cities such as Winnipeg, Minneapolis, St. Paul, St. Louis, New Orleans as well as numerous heavily traveled highways and bridges do not seem to spook the birds. Surely this lightly traveled road will have little if any affect on the migratory birds frequenting this area.

I suspect that the environmental leaders have never lived in an isolated area; have never experienced the loss of a loved one who died trying to get to a medical care facility. I have come to believe that these folks have no concern for the well being of humans, only for wildlife and wilderness areas.

Government Owned Land

> *The federal government owns roughly 640 million acres, about 28% of the 2.27 billion acres of land in the United States. Four major federal land management*

agencies administer 610.1 million acres of this land (as of September 30, 2015). They are the Bureau of Land Management (BLM), Fish and Wildlife Service (FWS), and National Park Service (NPS) in the Department of the Interior (DOI) and the Forest Service (FS) in the Department of Agriculture. In addition, the Department of Defense (excluding the U.S. Army Corps of Engineers) administers 11.4 million acres in the United States (as of September 30, 2014), consisting of military bases, training ranges, and more. Numerous other agencies administer the remaining federal acreage.

Throughout America's history, federal land laws have reflected two visions: keeping some lands in federal ownership while disposing of others. From the earliest days, there has been conflict between these two visions. During the 19th century, many laws encouraged settlement of the West through federal land disposal. Mostly in the 20th century, emphasis shifted to retention of federal lands. Congress has provided varying land acquisition and disposal authorities to the agencies, ranging from restricted (National Park Service) to broad (Bureau of Land Managment). As a result of acquisitions and disposals, from 1990 to 2015, total federal land ownership by the five agencies declined by 25.4 million acres (3.9%), from 646.9 million acres to 621.5 million acres. Much of the decline is attributable to BLM land disposals in Alaska and to reductions in DOD land. By contrast, land ownership by the NPS, FWS, and FS increased over the 25-year period. Further, although 15 states had decreases of federal land during this period, the other states had varying increases.

Numerous issues affecting federal land management are before Congress. These issues include the extent of federal ownership and whether to decrease, maintain, or increase the amount of federal holdings; the condition of currently owned federal infrastructure and lands and the priority of their maintenance versus new acquisitions; and the optimal balance between land use and protection, and whether federal lands should be managed primarily to benefit the nation as a whole or to benefit the localities and states. Another issue is border control on federal lands along the southwestern border, which presents challenges due to the length of the border, remoteness and topography of the lands, and differences in missions of managing agencies.

Source: Congressional Research Service - https://fas.org/sgp/crs/misc/R42346.pdf

I wonder what would happen if the government embarked on an aggressive program to sell off as much of this land as possible. Instead of the governmental agencies fretting about how best to utilize this land, let the free market decide. I can envision a number of potential benefits:

1. Governmental expenditures incurred in the management of this land would be reduced.
2. Some significant amount of money would be raised and applied to reduce our national debt. I have no feel for how much money could be generated. I would like to see a feasibility study to estimate the financial worth of this idea.

3. Commercial utilization of the land would likely be increased, and the economy would benefit. I know that commercial development is permitted on most government owned land, but the hoops to be jumped through are fewer if the land is privately owned.

Global Warming (Or Climate Change?)

For quite a number of years there has been a great deal of concern in the scientific and political communities with an earth warming trend, thought by many to have been caused by humankind's behavior. (Maybe in this case it would be ok to say mankind's behavior). Severe environmental consequences are predicted if corrective action is not taken. I refer to these folks as alarmists as they are truly sounding an alarm. So, let's examine what has been happening and why. We'll also look at the consequences and what should be done about it.

Origins

The Intergovernmental Panel on Climate Change (IPCC) is a scientific body under the auspices of the United Nations, set up at the request of member governments. The IPCC was launched in 1988 during a 20-year period of planetary warming, at the urging of activists opposed to hydrocarbon energy, economic growth, and capitalism. It was originally charged with assessing possible human influences on global warming and potential risks of human-induced warming.

Has the globe been warming?

I doubt that there are any reputable scientists who deny that the earth has warmed over the last century. William Happer, the Cyrus Fogg Brackett Professor of Physics, Emeritus, in the Department of Physics at Princeton University acknowledged this in his interview with BestSchools.com.

> *… the 1° C warming during the past two centuries…*

He is a frequent critic of global warming alarmism. Many scientists indicate the warming has been greater than that. So, I believe it is safe to say that there has been significant warming even though there is dispute as to how much. In fact, some say that the earth has been on a generally warming trend since the little ice age, some 300 plus years ago.

Measurement Problems

There are some questions about how much the earth has warmed, stemming primarily from inherent measurement problems.

Quality of Instruments

The quality of temperature readings has changed over the years as improved measuring devices have been installed, replacing old mercury thermometers. The folks who assemble all of the data recognize this as a problem and endeavor to make adjustments to prior readings. That is, if in controlled tests the new instruments are determined to produce higher readings the prior readings are adjusted upward to make them comparable. However, determining the amount of the adjustments is itself subject to error.

Location of instruments

Over the years, many of the measuring instruments have been moved for one reason or another. Even relatively small location changes can affect the temperature readings. Sometimes compensating adjustments can be made and in other cases, not so.

Frequency of readings

Not too many decades ago all readings were observed and recorded manually. Typically, two readings were taken; a daytime and a nighttime record. Now many instruments record and transmit the readings as frequently as we might wish., probably hourly is typical. Presumably these records are a better representation of the earth's temperature. Tests have proven averaging these frequent readings produce a different result than an average of the single daytime and nighttime readings.

Human error

Back when the readings were taken from mercury thermometers, a human being would read the temperature twice per day; once during the day and once during the night. At night a flashlight was probably used by most to see the mercury, sometimes in the rain or snow. It is therefore very likely that erroneous readings were sometimes recorded. Once study of such old readings noted that on some occasions the nighttime reading remained the same for two or three consecutive days while the daytime readings changed significantly. This suggests that on some occasions manual readings were not taken but a guessed at number was recorded.

A 2005 paper by Phillip Brohan, et al analyzed temperature readings from January 1969. They found worldwide errors in individual readings ranging from 1-5 degrees C. It is likely that records taken earlier in the 20th century would be subject to even greater error ranges. These errors are large in relation to the indicated warming of 0.7o C during the 20th century.

Tom Harris, Timothy Ball, writing for the Heartland Institute, summed it up:

> *…until the 1960s, temperature data was collected using mercury thermometers located at weather stations situated mostly in the United States, Japan, the UK, and eastern Australia. Most of the rest of the planet had very few temperature sensing stations. And none of the Earth's oceans, which constitute 70% of the planet's surface area, had more than the occasional station separated from its neighbor by thousands of kilometers.*
>
> *The data collected at the weather stations in this sparse grid had, at best, an accuracy of +/-0.5 degrees Celsius. In most cases, the real-world accuracy was no better than +/-1 deg C. Averaging such poor data in an attempt to determine global conditions cannot yield anything meaningful. Displaying average temperature to tenths or even hundreds of a degree, as is done in the graphs by NOAA and NASA, clearly defies common sense.*

https://www.heartland.org

All of these reading and recording errors cast some doubt on the degree of warming that has taken place. However, data come from over 5,000 surface stations world-wide. So, errors at one recording location will have little effect on the world's average. But there are probably many

locations with errors, which if all were in the same direction, there might be a noticeable difference. However, it is hoped that some errors overstate the warming trend and other understate it. So hopefully they tend to cancel each other out. But I don't think that has been proven.

Changes in an instrument's environment

A recording location which originally was in a rural location gradually finds itself in a more urban setting, which will cause higher readings. Take a look at one such recording station in Marysville, CA.

Many recording stations are located in urban areas. At one time many of these locations were in areas of very little population, but as the urban areas grew they are now in densely populated areas. It is a well-known fact that urban areas, because of their blacktop streets and parking lots as well as buildings absorb more of the sun's heat during the days than does the surrounding countryside and emit that heat during the night hours, thereby raising the nighttime readings.

This is generally known as the "Urban Heat Island" effect. Dr. Tom Quirk demonstrates this phenomenon in his chapter of the book "Climate Change, the Facts 2017".

He compared temperature readings in Melbourne, Australia with those in Laverton 20 km to the southwest of the city center. He compared readings from 1944 through 2016. He found that the daytime maximum readings in the two locations trended very similarly, with a correlation coefficient of 85%. However, the nighttime minimums showed quite a divergence, with the Melbourne minimums showing an increase of 2^{o} C while the Laverton minimums increased by only 1^{o} C. No appropriate adjustments were made to compensate for this artificial increase. This phenomenon, of course, is not limited to Melbourne. It is repeated all around the globe, wherever reading stations are located in metropolitan areas. So, we might conclude that the Urban Heat Island effect skews average global readings upward, by some unknown amount. The effect is greater in recent years as these metropolitan centers grow.

John Christy, in testimony before Congress, had this to say:

> *One of my many climate interests is the way surface temperatures are measured and how surface temperatures, especially over land, are affected by their surroundings. In several papers (Christy et al. 2006 J. Climate, Christy et al. 2009 J. Climate, Christy 2013 J. Appl. Meteor. Clim., Christy et al. 2016 J. Appl. Meteor. Clim.) I closely examined individual stations in different regions and have come to the conclusion that the magnitude of the relatively small signal we seek in human-induced climate change is easily convoluted by the growth of infrastructure around the thermometer stations and the variety of changes these stations undergo through time, as well as the variability of the natural ups and downs of climate. It is difficult to adjust for these contaminating factors to extract a pure dataset for greenhouse detection because often the non-climatic influence comes along very gradually just as is expected of the response to the enhanced greenhouse effect.*

Source: U.S. House Committee on Science, Space & Technology 2 Feb 2016 Testimony of John R. Christy University of Alabama in Huntsville.

http://docs.house.gov/meetings/SY/SY00/20160202/104399/HHRG-114-SY00-Wstate-ChristyJ-20160202.pdf

While most of the recording errors are probably random and therefore offsetting, the Urban Heat Island effect appears to add a bias to the historical records by overstating the increase in temperatures over the years. The fact is that we have an inaccurate measuring system trying to measure to the nearest tenth of a degree.

Is Doom Coming?

We have been told many times that global warming, if left unchecked, will bring catastrophic damage to the earth, resulting in enormous suffering by human beings. We have been told this by politicians, such as Al Gore, and highly respected scientists, who make their living studying the matter. Specifically:

1. Melting polar ice will cause the oceans to rise flooding many currently populated areas, including lower Manhattan. Polar bears will perish as they lose their ice floes from which they hunt.
2. The world's food supply will be decreased as current agricultural areas become too hot to raise their crops.
3. The world will be inundated with extreme weather conditions; more hurricanes, more tornadoes, more droughts, more famines, more flooding, etc.

Let's take a look at some of the facts.

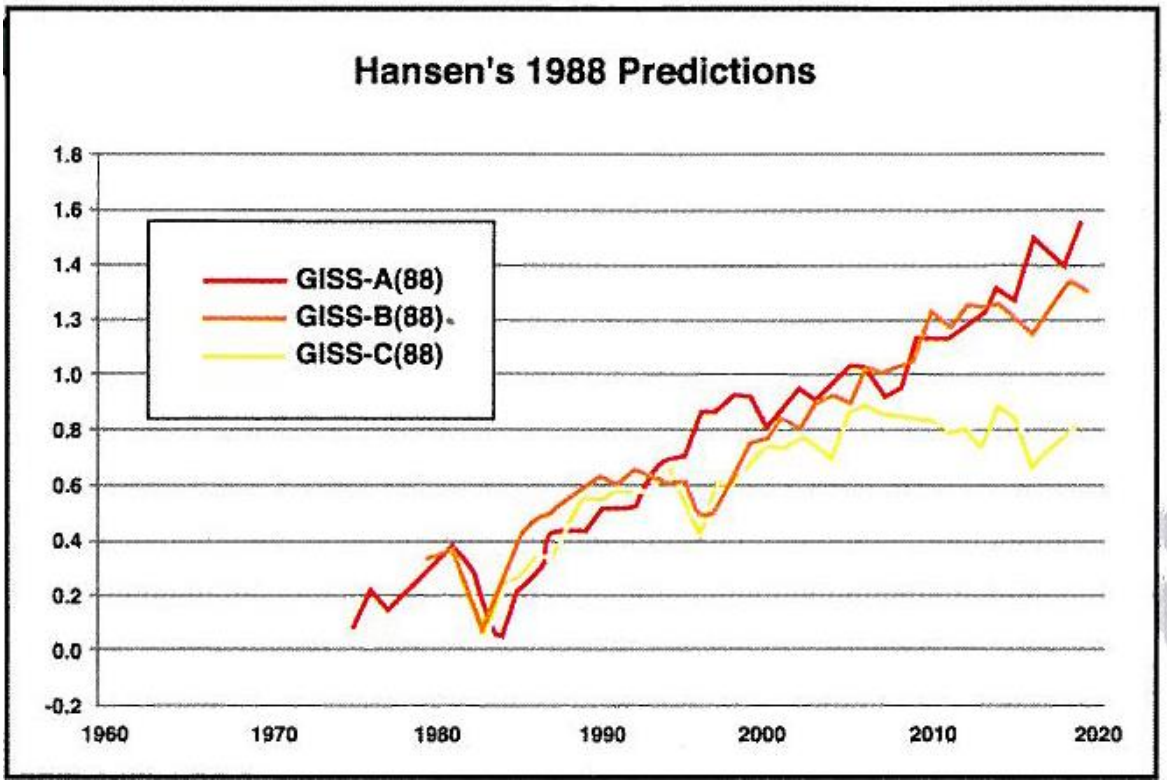
Accuracy of predictions

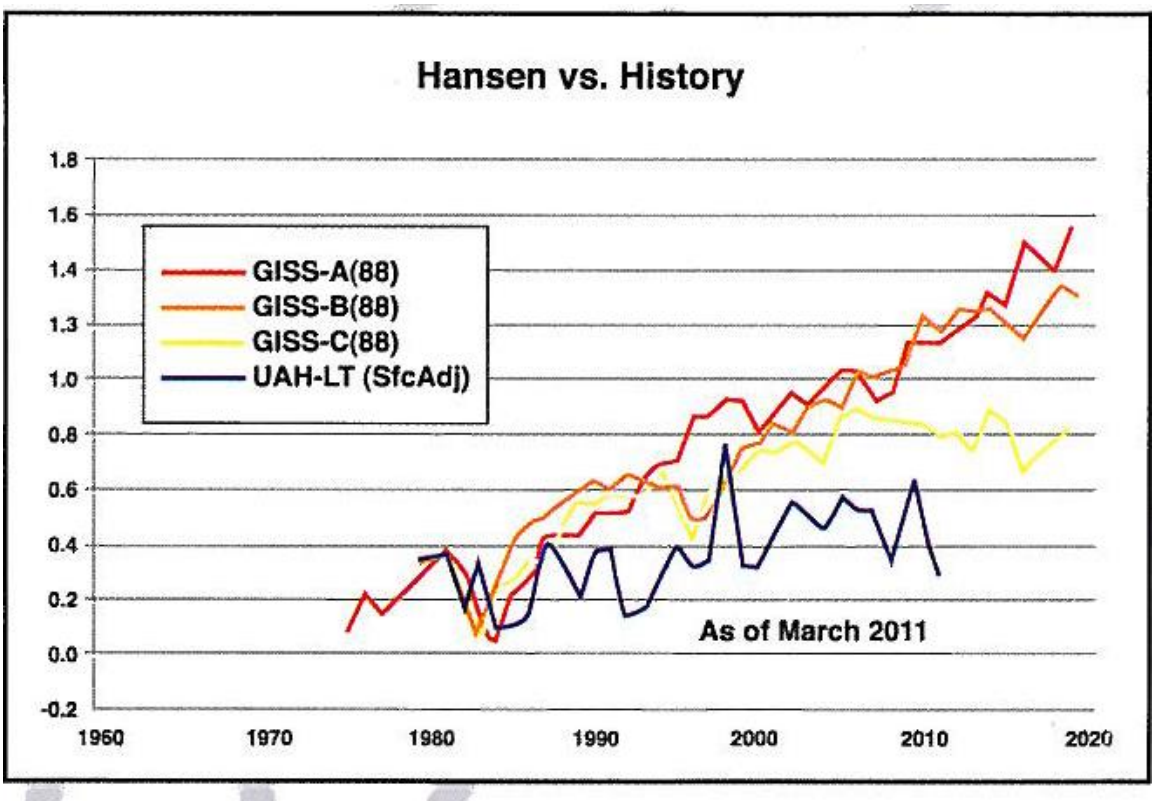
Numerous computer models portray past global warming and project future rises in temperature.

> *In 1988, Al Gore's favorite scientist, NASA's James Hansen, testified in front of congress about the impending doom the human race was facing from global warming.*

Hansen laid out three scenarios for what would happen with temperature in the future. Scenario A represents the worst case where the world ignores his words of wisdom and did absolutely nothing to stop the burning of fossil fuels and emitting carbon dioxide. Scenario B was slightly less apocalyptic, but still represented a deep and utter dismissal of Hansen's recommendations. Scenario C represented his best-case scenario and resulted in the lowest predicted temperature.

As you can see, from the two following charts, the actual global temperature was lower than even the best-case scenario that Hansen predicted, and it wasn't even close. The obvious conclusion is that the computer models Hansen used were far too sensitive to human beings' contribution to the climate.





The blue line in the second chart represents actual temperatures.

Source: Stu Burguiere writing for the Blaze.

Patrick J. Michaels, in his chapter titled, "Why Climate Models are Failing." In the book, "Climate Change: The Facts" tells us:

> *Over the 30-year period from 1984-2013 the models used by the IPCC predicted an increase of 2.6^{o} per century, while the observed value was 1.7^{o} a considerable difference.*

More and more climate scientists are acknowledging that their original models were too sensitive to the effects of carbon dioxide and are scaling back the sensitivity factor. In fact there is a great deal of uncertainty as to how significant greenhouse gases are in determining climate results, because, as we will see later there are a number of natural factors that affect our climate patterns. This leads me to suspect that the disasters are further down the road, if at all.

The culprit

The term "greenhouse gases" is a bit of a misnomer. Greenhouses maintain a warm climate by preventing heat from escaping via thermal convection. But heat can't leave our atmosphere by means of convection. It leaves via radiation. But greenhouse gases do, in fact, impede the loss of heat from the earth's atmosphere via radiation. When I first heard this I thought, "How can that be. Heat arrives from the sun via radiation. Why can't it leave that way?" A very simplified explanation is that the sun's shortwave emissions travel through the greenhouse gasses unimpeded,

but the earth emits longer wave emissions which are partially absorbed and re-emitted by the gasses. I think there is no scientific debate on this issue.

Of the greenhouse gasses, the most notorious is Carbon dioxide. Combustion of carbon-based fuels produce carbon dioxide (CO_2) which is released into the atmosphere, thus adding to the greenhouse gasses. Thus, it is concluded that human beings are responsible for the global warming. Shame on us.

The fact is that the concentration of CO_2 in our atmosphere has increased from around 280 ppm in the year 1800 to about 400 ppm in 2015. But, there is serious doubt as to how much this increase in CO_2 has contributed to the warming. To wit, note the following comments by William Happer, Professor of Physics, Emeritus, at Princeton University.

> *Some small fraction of the 1° C warming during the past two centuries must have been due to increasing CO_2, which is indeed a greenhouse gas. In equilibrium, the temperature increase should have been $\Delta T = S \log_2 (400 \text{ ppm}/280 \text{ ppm})$, where S is the equilibrium climate sensitivity. Without feedback, the theoretical sensitivity can be calculated to be very nearly S = 1° C, and the base-two logarithm is $\log_2 (400/280) = 0.51$. So, the feedback-free warming should have been $\Delta T = 0.51°$ C, or about half of the observed warming. The other half of the warming would have been due to natural causes, perhaps related to the recovery of the earth from the "Little Ice Age," which we will discuss a bit more below.*
>
> *The favored IPCC equilibrium sensitivity is S = 3° C, about three times larger than the feedback-free value of S = 1° C. So, the CO_2-induced warming from IPCC models should have been three times larger, or $\Delta T = 1.54°$ C, substantially more than the observed warming. To cope with this embarrassing overestimate, establishment models assume that much of the warming has been cancelled by aerosol cooling — for example, by small sulfate particulates from the combustion of high-sulfur coal and oil. Indeed, sulfate particulates from large volcanic eruptions, like that of the Indonesian volcano Tambora in 1815, are known to cause world-wide cooling for several years. But the devil is in the details, and many scientists who have looked carefully at the physics regard the aerosol corrections as largely a fudge factor, invoked by the global warming establishment to avoid admitting the equilibrium temperature rise from doubling CO_2 is much less than S = 3° C.*

Source:https://thebestschools.org/special/karoly-happer-dialogue-global-warming/william-happer-interview/

A bit technical, but I think you'll get the idea.

And then it turns out that CO_2 is a very small component of the green house gasses. Paul Driessen tells us:

About 90% of the "greenhouse effect" is from water vapor – another byproduct of burning fossil fuels, although it is not as politically convenient as CO2. Furthermore, roughly 95% of the annual addition to atmospheric CO2 levels is from volcanoes, subsea vents, and other natural sources.

Source: A report by Paul Driessen, with contributions by Marc Morano
Committee For A Constructive Tomorrow
ClimateDepot.com

It's interesting to note that CO_2 has been deemed to be toxic simply because it is a greenhouse gas. By that same reasoning, water vapor should also be so classified. Dear me, what will we be able to drink.

So, perhaps CO_2 isn't the evil factor that we have been led to believe.

Other Factors

All climate scientists will acknowledge that factors other than greenhouse gasses impact our temperatures and climate patterns. The most important probably is the sun's degree of irradiance. Others include the moon's position, a variety of sun cycles, changes in ocean currents and temperature.

Total solar irradiance has been monitored from space for nearly two decades. These space-borne observations have established conclusively that total solar irradiance changes over a wide range of periodicities—from minutes to the 11-year solar cycle. Since the total energy flux of the Sun is the principal driver for all Earths atmospheric phenomena, the accurate knowledge of the solar radiation received by the Earth and its variations is an extremely important issue.

It is clear, based on the literature, that the influence of these and other natural factors on our climate are not well understood. Therefore, the correct sensitivity of climate to greenhouse gasses is not known to the scientific community. But there is a growing body of work that concludes that CO_2 is not as serious a threat as once thought.

Source: Total solar irradiance variations
Journal of Atmospheric and Solar-Terrestrial Physics
J.M.Pap, C, Fröhlich
https://doi.org/10.1016/S1364-6826(98)00112-6

It seems clear that the workings and impact of solar irradiance are not thoroughly understood. Therefore, the climate models cannot have properly reflected the sun's contribution to climate changes.

The hiatus

Then there is the problem, for the climate alarmists, that for a 19 year period global temperatures plateaued, i.e. no significant increase. Paul Driessen reports:

In 2013 and 2014, amid a then-17-year period in which planetary temperatures did not rise at all, and in the wake of "Climategate" and other scandals, the IPCC issued its Fifth Assessment Report. This one finally acknowledged the warming "pause" and backtracked somewhat on prior warnings about the collapse of the Arctic, Antarctic, and Greenland ice sheets, with a consequent dramatic rise in sea levels.3

Source: A report by Paul Driessen, with contributions by Marc Morano
Committee For A Constructive Tomorrow
ClimateDepot.com

This pause, as it is often referred to, in fact prompted the cause's name to be changed from "Global Warming" to "Climate Change". This hiatus has caused even the climate alarmists to acknowledge that there are other important factors controlling our climate. And it has caused me to become even more skeptical of the disaster prophecies.

What happened to the polar bears, et al?

We all know that numerous disasters are going to befall if we don't quit burning fossil fuels. Since we are still burning those dreaded compounds we had better check on the disasters.

Polar Bears

Susan Crockford, Ph.D. in her report, "State of the Polar Bear, 2017" tells us:

Global polar bear numbers have been stable or risen slightly since 2005, despite the fact that summer sea ice since 2007 hit levels not expected until mid-century: the predicted 67% decline in polar bear numbers did not occur.

Source: https://www.heartland.org/publications-resources/publications/state-of-the-polar-bear-

Wildfires

The wildfires that swept through California in October 2017 killed at least 40 people, burned 200,000 acres of forest, and destroyed or damaged more than 14,000 homes. It was widely reported these fires were the worst, most extensive, deadliest ever recorded, and that they were in large part due to climate change. While the 2017 wildfires were tragic events, the number of deaths and structures destroyed must be put in context when determining whether these fires should be considered proof of the claim wildfires are becoming more extreme. From 1930 to 2017, there was a seven-fold increase in California's population, from about 5.7 million to 39.5 million, according to the U.S. Census Bureau. The population increase means more people and homes are now in the path of wildfires, but it also means there is a greater likelihood humans will start a wildfire.

Historically, wildfires have typically been caused by lightning strikes and campfires, but today, most are caused by power lines that have ignited nearby trees. The number of power lines has increased proportionately with California's growing population, so it can be reasoned much of the damage caused by wildfires in California is a result of the state's population growth, not climate change.

This is the reasoning of Jay Lehr, Ph.D., science director at The Heartland Institute and one of the nation's most respected and widely cited experts on air and water quality, climate change, and biotechnology.

Source:https://www.heartland.org/_template-assets/documents/publications/FINAL_Critique_of_Climate_Science_Special_Report_2.pdf

Severe Storms

Dr. Lehr continues:

> *An increase in the number and severity of tornadoes is another weather-related problem alarmists blame on humans' fossil-fuel use, despite much data to the contrary. Since the 1950s, there has been a drop in the frequency of large tornadoes. The years 2012–16 all experienced below average—and in some cases, near-record-low—tornado counts in the United States. The 2017 season, the most active in recent years, returned America to its long-term mean.*
>
> *In testimony before Congress, Roger Pielke Jr. of the Center for Science and Technology Policy Research at the University of Colorado at Boulder said, "It is misleading, and just plain incorrect, to claim that disasters associated with hurricanes, tornadoes, floods, or droughts have increased on climate timescales either in the United States or globally. Droughts have, for the most part, become shorter, less frequent, and cover a smaller portion of the United State over the last century."*

Table III

Cyclonic Energy Records

Rank	*Season*	*ACE*
1	*1933*	*259*
2	*2005*	*250*
3	*1893*	*231*
4	*1926*	*230*
5	*1995*	*228*
6	*2004*	*227*
7	*2017*	*224*
8	*1950*	*211*
9	*1961*	*205*
10	*1998*	*182*

ACE is an index of total storm energy.

Source:https://www.heartland.org/_template-assets/documents/publications/FINAL_Critique_of_Climate_Science_Special_Report_2.pdf

Rising Sea Levels

We have been told of impending rises in sea levels as the arctic and Antarctic ice melts. People living on the ocean shores will soon find themselves underwater. But do the facts demonstrate the validity of these warnings. Again, Mr. Lehr tells us:

> *In a recent study for Nongovernmental International Panel on Climate Change, Dennis Hedke reviewed sea level rise from the beginning of the twentieth century to today and examined projections of sea level rise in 10 coastal cities worldwide. Hedke graphed past sea level increases against CO2 concentrations and found no pattern of accelerated sea level rise. Most cities showed steady, minor increases consistent with the pattern witnessed in previous centuries, or no sea rise at all. Hedke also found no correlation between sea level rise and CO2 concentrations.*

Source:https://www.heartland.org/_template-assets/documents/publications/FINAL_Critique_of_Climate_Science_Special_Report_2.pdf

Is it all bad?

Global warming will, in fact, provide some benefits.

Greater Comfort

Having grown up in a cold climate, it first struck me that global warming would be a good thing, certainly more comfortable in Minnesota. And in one respect cold weather is more harmful to humans than is hot weather. Dr. Lehr again, tells us that:

> *Twenty times more people die from cold-related rather than heat-related weather events, and an international study published in The Lancet that analyzed more than 74 million deaths in 384 locations across 13 countries between 1985 and 2012 found extreme cold weather is much deadlier.*

Source:https://www.heartland.org/_template-assets/documents/publications/FINAL_Critique_of_Climate_Science_Special_Report_2.pdf

So warmer weather is more than just comfortable, it is safer.

More Productive Land

Next, think of all those millions of acres in northern Canada and Siberia that are now unproductive and, with warmer temperatures be turned into productive agricultural land. And with the exceptionally long days at those latitudes, some of the land will produce three crops per year.

More Mineral Resources

> *Minerals are another highly valuable natural resource in northern polar areas. Uranium, tungsten, nickel, copper, gold and diamonds are among them. These mineral resources remain largely untouched. The remoteness and harsh climate of*

the Arctic present challenges to extracting and transporting these resources, and with these challenges come added financial burdens

Source: "Sciencing" https://sciencing.com/natural-resources-northern-polar-regions-22884.html

With less sea ice, the logistical challenges can be mitigated with open shipping lanes in the arctic.

More Productive Agriculture

Heartland Institute had this to say about the greening of America:

A study of satellite photographs by Rang Myeni and a team of researchers at Boston University found during the past 30 years, 20 percent of Earth's surface became greener. Only 3 percent of Earth browned.23 This finding is extremely important, because as CO2 increases, so does plant growth, and plants produce more oxygen, pushing the system toward equilibrium.

Source:https://www.heartland.org/_template-assets/documents/publications/FINAL_Critique_of_Climate_Science_Special_Report_2.pdf

Let's explore this a bit further.

Robert D. Brimsmead, a horticulturalist, reacting to the persistent vilification of carbon dioxide had this to say:

This insanity must stop. It's time to teach the kids again and to remind the adults of this world that CO_2 is the primary plant food that ends up feeding them too. They need to be told again the simple fact that the leaves on a plant have stomata through which they absorb or breathe in $C0_2$, and by a process of photosynthesis, the plants turn this CO_2 into carbo(n)hydrate food for animals and man. They need reminding that more than 90% of the dry matter of plants is simply processed C02.

Whether it is a cow eating the grass or humans eating the cow, all are eating -and being fueled – by processed CO_2. CO_2 is as natural and as necessary to life as water and oxygen. It is not a poison. It is not a pollutant. It feeds the whole world, Stupid!

Certainly, every indoor tomato grower in New Zealand, Australia, Holland or anywhere for that matter knows that he can increase the yield of tomatoes 40% simply by increasing the CO_2 content of the air by about 300%. What's good for plants is good for animals because animals and plants evolved together and share a common basis in life based on cells.

A great leap forward in world agricultural productivity took place in the 1920's when they learned to take nitrogen out of the air and put it into the soil where it could stimulate plant growth. Our highly populated world could not feed itself today without recourse to synthetic nitrogen. The second leap forward is staring us in the face. It is to take the carbon out of the earth and put it into the air where it can benefit plant life and so enhance food productivity. The technology has already been proven and demonstrated thousands of times. It is estimated that the

agricultural industry today enjoys a 15% increase of food productivity due to the modest rise of atmospheric CO_2 levels of the last 100 years from 280 ppm to 385 ppm.

More and more evidence accumulates that in an ideal world we would have 1000 to 1500 ppm of CO_2 in the atmosphere instead of a mere 385 ppm as we have now, or a 280 ppm that the carbophobics would take us back to if they have their way. That level of CO2 happens to be only a tad higher than the point at which plants suffocate for lack of CO_2. (See the Wikipedia article on CO_2) 300% to 400% higher levels of CO_2 will have no adverse impact on humans or animals. In evolutionary history, the explosion of life-forms took place during the Cambrian Age when there were many times more CO_2 in the atmosphere than we have today. Besides, humans work in indoor tomato-growing facilities and indoor offices where the CO2 levels are around 1,000 ppm.

Source: http://www.bobbrinsmead.com/E_Vindication_of_Carbon.html

My cousin, Luther Tostengard, raises corn and soybeans in southwestern MN. Over the past couple of decades, he has often reported new record high yields per acre. I have known that improved fertilizers, improved seeds, improved weed control, and improved planting patterns have all contributed to this success. But now I learn that higher CO_2 levels in the atmosphere have also had a hand in the gains.

In fact, this new knowledge leads me to believe that increasing CO_2 concentrations will hold off the Malthusian (food shortage) disaster for as far as the eye can see. If we really want to save the world, perhaps all of us should buy SUVs to help the avoidance and elimination of starvation.

The fact that the alarmists, including news media, generally don't mention any of the benefits, fuels the theory that they have an agenda that skews their research and reporting and causes me to become even more skeptical.

Renewable Energy, At What Cost?

There has been much pride expressed in the growth of power generation from renewable resources. It is reported that solar and wind are approaching 10% of the United States' total power generation. But that growth has come at considerable cost. Each month as I pay my power bill I am paying $4 or $5 dollars into a pot from with which the power company subsidizes the development of solar and wind generation facilities. That doesn't sound like a lot of money but multiply it by the millions of power users across the country and it adds up to a huge extra cost. The heartland Institute tells us:

… testimony also details the tremendous amount of resources governments around the world have wasted promoting wind and solar energy as alternatives to fossil fuels to fight climate change. For instance, did you know, in 2013 wind received $35.33 per MWh (per unit of energy produced) in subsidies, while and solar power received $231.21/MWh in subsidies. By contrast, coal got only $0.57/MWh, and natural gas and petroleum combined received just $0.67/MWh in subsidies.

Source: H. Sterling Burnett, Ph.D. January 26, 2018
https://www.heartland.org

Subsidies come in the form of tax breaks and cash grants from governments and utilities. I have been unable to find any reliable estimates of total cost of these for the United States. But we have this estimate of the costs in the state of Texas.

> *While wind and solar generation of electricity has rapidly grown over the last 20 years, it hasn't happened by itself. The DOE study points to economists who cite "state-level RPS and Federal tax credits for [renewable energy] as examples of wholesale market impacts and distortions."*
>
> *These distortions have affected taxpayers and consumers for years. While the costs are hard to calculate, a study by the Texas Public Policy Foundation estimated that the costs of renewable energy subsidies in Texas alone were more than $13 billion from 2006 to 2015. The cost of a proposed extension of the federal Production Tax Credit in 2014 was estimated at another $13 billion.*

Source: "The Hill" - **BILL PEACOCK, OPINION CONTRIBUTOR - 09/08/17 10:40 AM EDT**
http://thehill.com/blogs/pundits-blog/energy-environment/349514-eliminating-renewable-energy-subsidies-is-key-to

I don't have a basis for extrapolating these numbers over the entire United States, but it stands to reason that the sum would be substantial enough to place a noticeable drag on our economy.

I suspect that these alternate power sources will be important in our long-term future when they someday become cost competitive. But until they do, I object to heaping subsidies on them.

Carbon Taxes

> *The governors of Washington and Oregon and Democrat members of Congress are pushing bills to raise the price of energy through a tax on carbon dioxide emissions or by establishing a cap on carbon dioxide emissions and forcing industry and businesses to buy allowances to emit carbon. Capping carbon dioxide emissions and selling allowances to emit certain amounts of carbon dioxide is just a carbon (dioxide) tax by another name.*
>
> *These tax schemes penalize the use of the cheap, abundant energy sources which built the modern, prosperous economy and are largely responsible for pulling the United States out of 2008 recession. While the rest of the U.S. economy was foundering, the fracking revolution brought about tremendous growth in domestic oil and natural gas production, dramatically reducing energy prices in the process. Lower energy prices helped raise the economy out of the depths of the recession. Energy is the lifeblood of any economy.*
>
> *In addition, carbon dioxide taxes are regressive, an especially pernicious tax on the poor and those on fixed incomes. A Congressional Budget Office (CBO) report found a $28 per ton carbon tax would cause the burden of energy costs to be 250 percent higher for the poorest one-fifth of U.S. households than for the richest one-*

fifth because "Low-income households spend a larger share of their income on goods and services whose prices would increase the most, such as electricity and transportation."

Source: H. Sterling Burnett, PHD

https://www.heartland.org

How about the consensus?

We've been told that 97% of scientists agree that global warming is man-made and poses a serious threat to our earth and all that live on it. We are told the science is settled.

First off, I must remind you that science isn't a question of "majority rules". If it were, the world would still be flat. But there is an even more basic question, "Is the 97% correct? This is what the Heritage Foundation concluded:

> ***The Myth of the 97 Percent.*** *There are profound uncertainties in nascent climate science. Nevertheless, global warming hypotheses have been narrowed in the press and public debate to a "consensus" view of catastrophic global warming in a political world that prizes agreement and confidence over exploration, and a media that thrives on crisis. This advances neither science nor sound public policy.*
>
> *A common claim among proponents of action on climate change is that the overwhelming majority of climatologists agree on global warming science. One commonly cited statistic is that 97 percent of climatologists agree on global warming. This 97 percent number is recited and embellished by politicians and environmental activist organizations pushing to decarbonize America and the world's energy sector. In a 2014 commencement speech at Boston College, Secretary of State John Kerry said, "Ninety-seven percent of the world's scientists tell us this is urgent."[2] This is, in fact, not the case.*
>
> *The figure comes from a 2013 Cook et al. study in Environmental Research Letters that examines the abstracts of nearly 12,000 academic papers on climate change and global warming between 1991–2011. Of those papers, 66.4 percent expressed no opinion on anthropogenic warming, 32.6 percent "endorsed" anthropogenic warming, 0.7 percent rejected anthropogenic warming, and 0.3 percent were unsure of the cause.[3] Of the 33.6 percent expressing an opinion on man-made global warming, "97.1 percent endorsed the consensus position that humans are causing global warming."[4] Importantly, the claim says nothing about urgency or danger.*
>
> *Cook's paper was the subject of much criticism. Richard Tol, a professor at the University of Sussex, warned that "[t]his claim, frequently repeated in debates about climate policy, does not stand. A trend in composition is mistaken for a trend in endorsement. Reported results are inconsistent and biased. The sample is not representative and contains many irrelevant papers. Overall, data quality is low."[5]David R. Legates, former director of University of Delaware's Center for*

Climatic Research, along with three other researchers, analyzed the same set of papers in the Cook study. They found that a mere 0.3 percent of all papers, or 1 percent of the 4,014 papers expressing an opinion on the matter, claim that the majority of warming since 1950 is man-made.[6]

Further, the Cook et al. study is misleading as to what there is consensus on and glosses over major points of uncertainty and disagreement in the scientific community. To be clear, Cook et al. do not attempt to quantify how much global warming is man-made, or even say that man-made emissions contribute to the majority of global warming. The specific or even generalized amount of warming caused by anthropogenic emissions, according to Cook's study, is undetermined. Furthermore, the search terms Cook used to aggregate the climate papers exclude research papers from climate "skeptics," such as MIT atmospheric physicist and former Intergovernmental Panel on Climate Change (IPCC) contributor Dr. Richard Lindzen.[7]

The 97 percent statistic is nothing more than a false talking point; no overwhelming consensus exists among climatologists on the magnitude of future warming or on the urgency to reduce greenhouse gas emissions.

Source: "The State of Climate Science: No Justification for Extreme Policies"*Authors: David Kreutzer, Nicolas Loris, Katie Tubb and Kevin Dayaratna*
https://www.heritage.org/environment/report/the-state-climate-science-no-justification-extreme-policies

The important take-away point is that with scientists who believe that humans contribute to climate change it is not a given that they necessarily believe that our contribution causes serious problems.

Probably no scientist on Earth says the climate does not change, and nearly all agree that humans contribute in some ways to recent and ongoing changes. However, more than 1,000 climate scientists, 31,000 American scientists, and 48% of U.S. meteorologists say there is no evidence that humans are causing dangerous warming and climate change.

So says Paul Driessen of the Committee For A Constructive Tomorrow

Source: ClimateDepot.com

There is no consensus.

Conclusions

1. When I was a young man we used to say that a good idea should be developed to it's logical conclusion. The protection of our environment is certainly a good idea. But I believe it has been carried well beyond it's logical conclusion and well into an illogical extreme. Environmentalism has been deified, as it's proponents pursue it with a religious like zeal. Facts and logical reasoning are no longer required. Generally, the dire warnings of impending disasters are not realized.

2. The more desolate, unpopulated, and unutilized a portion of our earth, the more protective of it are the environmentalists. Anwar is a classic example. That's something I just cannot understand. To my mind we should be more concerned with the environment in areas where humans abound, and less concerned with the wilderness areas.
3. The environmental alarmists are sometimes so driven by the agenda they are selling that they become downright dishonest. It's easy enough to be mistaken, but no self-respecting scientist should be untruthful.
4. Endangered species protection programs have become outrageously expensive and are of relatively little value to humankind, the one species that, in my opinion, counts
5. National monuments and parks are of real value to us. But, like so many good intentions, the program has been so broadly expanded that huge pieces of land have been removed needlessly from potential exploitation. Our society suffers the consequences.
6. The government owns too much land. I propose selling off most the government managed lands to the highest bidder. That would produce some much-needed capital for the government for debt retirement and would reduce the cost of managing the land. Land, of course, that attracts no bidders would remain property of the government.
7. Global Warming:
    a. There are serious problems in measuring the temperature of the earth to the nearest tenth of a degree. It is hoped that most of the errors are random and therefore offsetting. One error, however, appears to bias the temperature increases on the high side. That is the increasing effect of the "heat island" phenomenon as urban areas continue to grow. Which suggests that the temperature increases have not been as large as reported. Scientists are either unable or unwilling to make an adjustment to correct this bias.
    b. Computer models predicted continuing temperature increases in correlation with increases in greenhouse gasses. However, actual temperatures leveled off for an eighteen-year period. It seems clear that the models didn't take into consideration other major factors which control our climate, because these factors are not sufficiently understood. This causes me to believe that the effect of humans on global temperatures is not nearly as great as we have been told.
    c. Extreme weather conditions do not appear to have increased as was predicted.
    d. The global warming alarmists and the main stream news media do not bother to mention the good results that will come from warming trends and increasing atmospheric CO_2 levels. The benefits are significant, especially increases in CO_2 levels which improve agricultural productivity.
    e. All of this leads me to believe that we need not fear man-made climate change and that we should applaud the burning of fossil fuels.
8. **All in all, I believe that the environmental movement, while having produced considerable good, is now overcooked and has become an economic waste. Shame on us.**

Respectfully submitted by

Gilmore R. Tostengard April 2018