under shattered skies.

Of Our Own Design

Poetry, raves and rants from PD Allen

under shattered skies

All posts tagged under shattered skies

Posted by *PD Allen* on *July 15, 2012*

Under Shattered Skies of Our Own Design

Posted in: Nonfiction, Under Shattered Skies. Tagged: confluence of crises, create your own reality, David Bo
evolution of consciousness, manifestation, nexus, of our own design, Stalking Wolf's vision, Tom Brown Jr., u
shattered skies. 18 Comments

Under Shattered Skies of Our Own Design

by PD Allen

the Under Shattered Skies trilogy is now available

Murderer's Sky ~ paperback ~ kindle

Daemon Sky ~ paperback ~ kindle

Mourning Sky ~ paperback ~ kindle

(nook will follow in a few months)

Download a pdf of this article (black print on a white background)

Stalking Wolf

(pdallen.com) Next to personal experience, the source from which I learned the most about and with nature is the books of Tom Brown Jr. Both Tom Brown's field guides and his autobiographical books are a wealth of vanished knowledge. More than that, his books cont perspective on life and the world in which we live which is essential to our survival and the nourishing of our existence.

Most of Tom Brown's knowledge came from an Apache elder, Stalking Wolf. Stalking Wolf w warrior, a scout, and foremost a shaman. Stalking Wolf could read nature as easily as you are these words. Tom Brown was fortunate enough to have become Stalking Wolf's student whe was a young child. Stalking Wolf bequeathed the wealth of all he knew to Tom Brown, and T passed it along to us through his books and his school.

It would be hard to exaggerate the importance I place upon these books. I consider them to of the most important books ever written. And so when I read of the great vision of Stalking shook me to the core. Stalking Wolf's vision was of the collapse of civilization due to the ina modern man to understand the intimate nature of his connection to the world in which he

While the entire vision is too long to repeat here, I will quote one section. I urge readers to fi copy of Tom Brown Jr.'s book **Grandfather** for the entire vision. You can also find it at this w — http://www.dreamscape.com/morgana/rhea2.htm.

The relevant section to this discussion begins:

"It was at the end of the fourth day that the third Vision came to him. As he gazed out onto t landscape toward the setting sun, the sky suddenly turned back to a liquid and turned blood far as his eyes could see, the sky was solid red, with no variation in shadow, texture, or light. whole of creation seemed to have grown still, as if awaiting some unseen command. Time, pl destiny seemed to be in limbo, stilled by the bleeding sky. He gazed for a long time at the sky, i of awe and terror, for the red color of the sky was like nothing he had ever seen in any sunset sunrise. The color was that of man, not of Nature, and it had a vile stench and texture. It see burn the Earth wherever it touched. As sunset drifted to night, the stars shone bright red, the never leaving the sky, and everywhere was heard the cries of fear and pain.

"Again the warrior spirit appeared to Grandfather, but this time as a voice from the sky. Like thunder, the voice shook the landscape, saying, 'This, then, is the third sign, the night of the

stars. It will become known throughout the world, for the sky in all lands will be red with the of the sky, day and night. It is then, with this sign of the third probable future, that there is n hope. Life on Earth as man has lived it will come to an end, and there can be no turning back physically or spiritually. It is then, if these are not changed during the second sign, that man surely now the destruction of Earth is at hand. It is then that the children of the Earth must r the wild places and hide. For when the sky bleeds fire, there will be no safety in the world of m

"Grandfather sat in shocked horror as the voice continued. 'From this time, when the stars b the fourth and final sign will be four seasons of peace. It is in these four seasons they must live within the wild places and find a new home, close to the Earth and the Creator. It is only the of the Earth that will survive, and they must live the philosophy of the Earth, never returning thinking of man. And survival will not be enough, for the children of the Earth must also live the spirit. So tell them not to hesitate if and when this third sign becomes manifest in the star there are but four seasons to escape.' Grandfather said that the voice and the red sky lingered week and then were gone as quickly as they were made manifest."

The entire vision of Stalking Wolf shook me to the core when I read it many years ago. Event served as the impetus for **Under Shattered Skies**. For the sake of the narrative, I have taken r liberties with this vision, but I believe the underlying message remains. Everything else in th from the adaptation of chemtrails into Project Rise and Shine to the plot to corrupt that pro the dæmonic assumptions and hive minds, were grabbed up intuitively to bring the third pa Stalking Wolf's vision to life.

Of Our Own Design

For over a week now, I have been reprinting material on this site that would seem to be at va with the theme of the site, and of much of the other material contained here — most notabl Quantum Meditations. Yet I assert that all of the approaching crises presented in the papers past couple of weeks are of our own design.

I believe we are approaching a nexus in our own evolution. Before us are two main paths, on to extinction and the other to illumination. The history of civilization — and of western civi in particular — is the history of a species divorced from the world in which it lives. It is the d ego and the other, an objectified and mechanical world without a soul where mankind justif everything he does simply on the basis of his ability to do it while maintaining a separation f impact of his actions. It is, in essence, a sociopathic perspective on life.

Our ignorance of our connection to the world in which we live and our own true identity hav to this nexus where we now face a confluence of global crises, any one of which could extern our species and leave the biosphere tattered and impoverished for some time to come.

Or we can wake up into a new world where our identity does not end at our skin.

Homo Illuminus

To survive through the coming decades, it is time for humanity to wake up, hatch out of the that has bound us for hundreds of years, and grow up. It is time for us to follow the latest adv physics and biology into a new world of self understanding.

Our identity and our existence do not end at our skin, or at the outer edge of our ego. We are intimately connected to everything that exists in this moment — so intimately connected th is no point where one ends and the other begins. Everything that exists in this moment is ou soulmate. Everything that exists in this moment is us. And waking up to this reality will carry a new world beyond our imagining.

Nor is this just a bunch of new age mumbo-jumbo. It has the weight of physics, biology and chaos/complexity theory behind it. In the theoretical physics of David Bohm, we form our r every moment from an implicated quantum field of holographic interference patterns, wher everything is related and all possibilities exist. From this, we attract into our reality what mat the vibration of our thoughts — both conscious and unconscious — as amplified through ou emotions.

And when we fully manage to step through that door, we will find ourselves in a wonderland the dreams even of Lewis Carroll.

Share this:

Facebook Twitter Google Pinterest LinkedIn Reddit

Loading...

Posted by *PD Allen* on *July 13, 2012*

Collapse or Sustainability ~ Radio Interview

Posted in: Nonfiction, Uncategorized, Under Shattered Skies. Tagged: collapse, Dale Allen Pfeiffer interview, warming, peak oil, sustainability, under shattered skies. Leave a comment

An hour long radio broadcast.

Under Current's Kevin Patrick interviews Dale Allen Pfeiffer.

The most important article in this entire series is Under Shattered Skies of Our Own D

Peak oil, global climate change, resource depletion, mass extinction. What does the future us. While we tried to focus on the positive in this interview, it is quite chilling.

Unfortunately, due to length restrictions, we had to upload this interview in 24 sectio

segment 1 ~ segment 2 ~ segment 3 ~ segment 4

segment 5 ~ segment 6 ~ segment 7 ~ segment 8

segment 9 ~ segment 10 ~ segment 11 ~ segment 12

segment 13 ~ segment 14 ~ segment 15 ~ segment 16

segment 17 ~ segment 18 ~ segment 19 ~ segment 20

segment 21 ~ segment 22 ~ segment 23 ~ segment 24

Or, if you prefer, you can download the interview in four parts, from File Factory.

Part 1

Part 2

Part 3

Part 4

Share this:

Facebook Twitter Google Pinterest LinkedIn Reddit

Loading...

Posted by *PD Allen* on *July 12, 2012*

Footprints

Posted in: Nonfiction, Under Shattered Skies. Tagged: carbon footprint, climate change, earth at night, energ depletion, footprint, global warming, peak oil, rainforests, resource depletion, satellite photos, under shatter

Leave a comment

Footprints

Satellite Images of the Earth at Night Reveal the Dark Side of Industrial Civilizati

by Dale Allen Pfeiffer

The most important article in this entire series is Under Shattered Skies of Our Own D

Download a pfd file of this article (black print on a white background)

Introduction

Everything that moves on the surface of the Earth leaves a track, a record of its passage. An ex tracker, such as Tom Brown Jr. (www.trackerschool.com) can read these tracks so well that t become a record of the animal's life, a sort of a biography through which a very intimate kno of the animal can be achieved. Among the easiest animals to track are human beings, becaus leave an easily readable path. According to American Indian scouts, the goal is to leave the s footprints possible. In doing this, you honor the Earth by leaving it as unaltered as possible, render yourself invisible to any who might try tracking you.

In this, as in so much else, the American Indian philosophy is almost diametrically opposed European-derived American perspective. In the dominant culture of conspicuous consump size of your footprint is a display of your wealth and power, rather like a peacock spreading it plumage. In American culture, status is achieved by the size of your McMansion, the mileag automobile (with Hummers being a pure statement of extravagance), and in the amount of t set out at the curb every week. The American indulgence is well symbolized in the folk legen Bunyan, the giant who could fell whole forests with one swing of his axe, and created the Gr from his footprints.

Yet, for any who still hold the perspective of the ancients, conspicuous consumption is a gr display of ignorance and foolishness. That enormous footprint displays nothing so clearly as Achilles Heel. Namely, that we are an easy target for environmental overshoot, and our own consumption will bring us down in the end. Even the great Paul Bunyan logged himself out in the end, when he had felled all the large forests.

This is why scientists who have studied the closely linked problems of over-consumption, re depletion, and pollution have reached the consensus that we need to set aside consumer ca and instead extol the virtues of sustainability. We need to reduce the size of our footprint bef engulfs the entire planet. A modern adaptation of the Paul Bunyan story has Paul realizing th of his ways as he looks out upon the last stand of virgin forest. Paul converts to a spokesperso the environment, planting trees and protecting the forests from harm.

Plotting Your Footprint

Given the number of people on this planet and the all-pervasive nature of the dominant cul very difficult to step aside and reduce your consumption until you are self-sufficient. Sustain an elusive goal.

There is an interesting exercise you can undertake online to get an idea of how big your footp You can find this exercise at the Global Footprint Network, http://www.footprintnetwork.o is a nonprofit organization for the advancement of sustainability. At the bottom of their hom you will find links under the heading, Ecological Footprint. The link you want is called "Your Footprint." This link will take you to a program which will ask you a number of questions ab

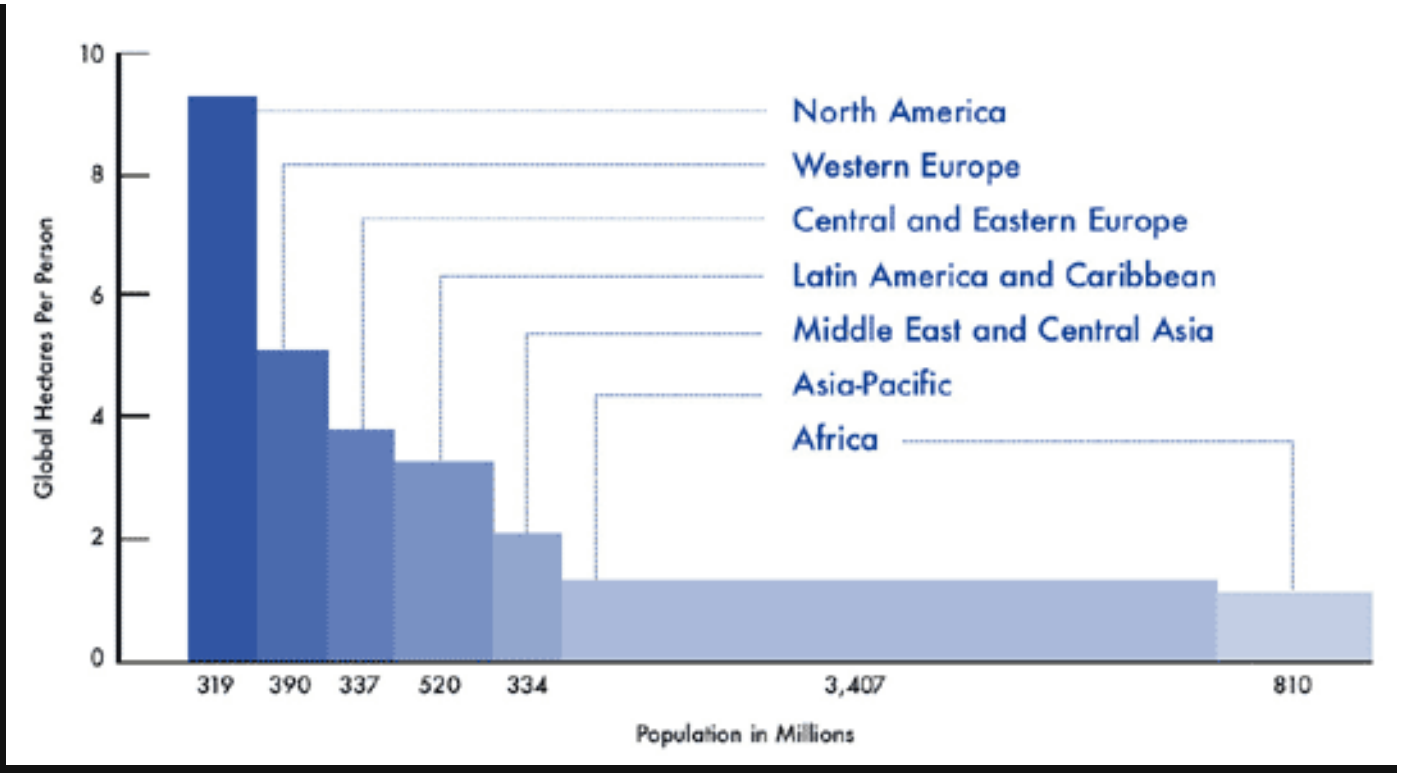
consumption and waste generation habits. Once you have answered all of these questions, t program will compute your footprint in acres. The results can be very eye opening.

For myself, I computed a total footprint of 12 acres. My wife computed 10 acres. She is a vege while I slipped off that wagon when my daughter came to live with us. In comparison, the a US citizen has a footprint of 24 acres. While we could pat ourselves on the back for halving o average national footprint, the program still cautions us that if everyone were to live like me, would need 2.7 planets. If everyone were to live like my wife, we would need 2.2 planets.

We are planning to move someplace where we can lead a more self-sufficient lifestyle. The fo program informs us that if we were to go totally vegan, grow most of our food, and live in a gr designed residence with energy conservation and efficiency, then we will be able to trim our footprint down to 5 acres. This lifestyle, we are informed, would be almost sustainable. If eve lived like this, we would only require 1.2 planets. There are a few other things we could do to that number down to 4.5 acres, which is considered to be fully sustainable. We could buy a h car, or do without a private automobile entirely.

There is some disagreement about the accuracy of these numbers. For one thing, this progra not consider work related consumption. As a writer, my written word is printed in newslette books. But then, should this printed matter be considered a part of my consumption, or sho accorded to whoever purchases it? When you start considering questions like this, you are dr into public consumption patterns in which we all share a part.

Anyway, though there is some dispute about the actual numbers and the methodology, nob disagrees about the trend. There are only 4.5 biologically productive acres per person on this (not considering all of the other inhabitants of the biota). Yet the figures are plain; as illustra the following graph, the developed world (where most of the readers of this essay reside) con the lion's share of the world's resources, far in excess of sustainability.



taken from The Global Footprint Network, http://www.footprintnetwork.org/gfn_sub.p content=national_footprints

The US leads the world in conspicuous consumption (average footprint 24 acres per person) comparison, Canada has an average footprint of 16 acres, Western Europe averages about 12 Australia averages 19 acres, Israel averages 13 acres, China averages 4 acres, India averages 2 a and Afghanistan and Haiti average 1 acre per person. Though China averages only 4 acres pe person, India only 2 acres, and Indonesia only 3 acres, they are rendered unsustainable by th number of people, and their footprints per capita are growing. It is interesting that footprint heavyweight U.S. of A. has been pushing around the welterweights: Afghanistan, 1 acre; Irac acres; Haiti, 1 acre; Iran, 5 acres; Venezuela, 6 acres.

This is why scientists who have studied sustainability have said that it is only achievable if th developing world limits population and the developed world limits consumption. Yet, so far and certain other countries have refused to consider this strategy. The reason given is that a constraint on consumption would hurt the economy. And so it is a choice between whether constrain ourselves and throw away the consumer capitalist, throwaway civilization, or whe will have those constraints forced upon us by resource depletion and pollution.

Personally, I prefer a voluntary withdrawal from this system, a withdrawal to something mor sufficient and satisfying. But there are many who are still unaware of the choice we face, and are many who deny the facts of our predicament. These latter adopt a “show me” attitude. A the global footprint is not an abstraction; it can be viewed directly, thanks to satellite techno

Global Footprint, Group Portrait

Earth at Night
Astronomy Picture of the Day, NASA, Nov. 27th, 2002.
http://antwrp.gsfc.nasa.gov/apod/ap001127.html

It is in the dark of night that we can best see our footprint on this planet. Here we can see th developed world outlined by electric lights. While it is a spectacular view, it is also a map to t squandering of energy resources. It is astounding how much detail can be seen in this NASA composite satellite photo. This is a map of technological man. The extent of *Homo sapiens hydrocarbonus* is here clearly delineated. From this overview provided by NASA, we will nov to more detailed shots taken from a map prepared by the National Geographic Society, titlec at Night." The full map can be ordered from the National Geographic Map Store.

North America

Here we can see the profile of conspicuous consumption, revealing the most gluttonous reg
the planet. Note that all of the coasts are outlined in light, and – aside from the far north – th
portions which are not lit up are small patches in the west, Michigan's upper peninsula, an
interior of Maine. The lit up areas represent where energy use is the greatest, which also ten
where humanity is the most concentrated. These are among the areas which will suffer the r
we make the long and bumpy ride down the slope of energy depletion.

Note the red light in the lower portion of the picture, off the northern coast of the Yucatan Peninsula. This represents natural gas flaring at the Mexican oil platforms in the Gulf of Mex in these images therefore represents where oil is being extracted. Also note the lack of red lig the US and Canada. This does not mean that the US and Canada are bereft of hydrocarbon resources. In these countries, there are regulations on the flaring of natural gas. There is also demand for natural gas as a fuel in its own right. Fifty years ago, you would have seen red ligh Texas and elsewhere. And without the latest technology, today you would see red lights pinp US platforms in the Gulf of Mexico, and also in Canada and Alaska. Note the splotch of whit on the northern coast of Alaska. This represents the Alaskan oil operations.

South America

Here we see much less evidence of *Homo sapiens hydrocarbonus*, mostly confined to the co
use of technology falls off drastically toward the interior. Note the oil production off the coas
Brazil, not too far from Rio de Janeiro, and also on Cape Horn, in Argentina. Other notable o
operations can be identified in Ecuador and Colombia. The oil operations in Venezuela stan
very clearly. This is the region from which the US receives a good portion of its oil imports, a
is the main reason why the US is trying to overthrow the government of Presidente Hugo Ch

Note the tendrils of light spreading into the interior from Rio de Janeiro, and from Buenos Ai
Montevideo. These represent the roads which are taking civilization to the interior. Look at
interior of the continent, particularly in Brazil, Bolivia, and to the south of Colombia and Ve
The yellow lights represent slash and burn agriculture. This is where the Amazon rainforests
burning, clearly distinguishable from the sky at night.

Australia, New Zealand, and Indonesia

The most notable feature of Australia at night is the wildfires in the outback, some caused by humans, but many the result of lightning storms during the dry Australian summer. New Ze the lower right corner, is almost devoid of lights. This is why some people believe New Zeala the spot to ride out the end of the oil age.

Now look to Indonesia in the upper portion of the map. Indonesia is the third most populo nation on the planet, with over 228.4 million people. As can be seen on this map, most of th people are concentrated on the island of Java. Indonesia is an OPEC member, though there speculation that it may soon lose its membership as its oil production slowly diminishes. Th lights on Sumatra represent the bulk of Indonesia's oil production.

Asia

Here we have the most densely populated region of the world; the majority of the human population can be seen in this group portrait. Note the total lack of natural gas flares in Indi population there is almost entirely dependent on imports for their hydrocarbon needs. This not bode well for the people of the Indian subcontinent, and this is why they have formed a with long-time rival, China, for access to oil imports. The lack of gas flares in China, on the hand, is the result of sophisticated extraction technology. The natural gas is either being rei to keep up pressure in the reserves, or it is being utilized to produce energy. Once again, this the case just a few decades ago.

Take a look at Japan and South Korea, brightly lit up. Contrast the latter to North Korea, the between the two being clearly demarked where the light stops at the 38th parallel. Do you se light blue in the waters surrounding Japan and South Korea? This represents large floodlight employed by the fishing fleet at night, to draw squid and other sea creatures to the surface w they can easily be caught. This is the sign of fisheries on the brink of collapse. Similar lights seen off the coast of China and in a few other spots in the other images.

Finally, this image also shows Vietnam's offshore oil operations, off the southeast coast of th country. Malaysia also shows evidence of oil production, both offshore and on the east coas Malaysian Peninsula.

Africa

The yellow lights which symbolize slash and burn agriculture can be seen all across Sub-Sah and Southern Africa. Indeed, much of Africa appears to be ablaze. Homo sapiens hydrocarbo appears to be largely confined to the fringes of the continent, with the largest concentration South Africa, and along the Barbary Coast and the Mediterranean, in the countries of Moroc Algeria, Libya and Egypt. Note the concentration of population along that cradle of civilizati Nile.

Oil production is clearly visible, scattered across Algeria and Libya, and to a lesser extent in E and along both shores of the Gulf of Suez. By far the largest reserves of oil are found off the we of Africa, from Angola north to the mother lode on and off the coast of Nigeria. It is of prime that Africa's oil bearing regions have been areas of conflict and political tension for many yea *FTW's* "Beginning of the Oil Endgame"), from the Algerian struggles for liberation from Frenc control, to the US led embargo against Libya as a terrorist nation (and now the increasingly f relations and easing of restrictions), to numerous interventions in Angola and Nigeria and neighboring countries. This includes Shell Oil's involvement in the execution of environme activists in Nigeria and the recent revelation of Halliburton bribing Nigerian officials, and the attempted Equatorial Guinea overthrow plot which snagged Sir Mark Thatcher (son of Form Minister Lady Margaret Thatcher), and likely involved elements of US and British intelligenc with various parties that have a vested interest in the oil business.

We will have a better look at the Middle East in our next image.

Europe, Russia, Central Asia, & the Middle East

Our final image comprises multiple theatres. And in this one image, we take in the majority planet's remaining energy resources.

Let us first look at Europe, with its marked presence of *Homo sapiens hydrocarbonus*. Note t dense populations, and the lack of observable oil production. The only large oil deposits in t region are denoted by the natural gas flares in the North Sea. Aside from these declining field Europe is virtually dependent upon oil imports.

In the upper right section of the image, we see the oil fields of Siberia, which are of so much to Europe, China, Japan and the US. South of Russia, we see some oil activity in Georgia, an Central Asian countries surrounding the Caspian Sea. This region, which until very recently where many hopes of future hydrocarbon riches were pinned, obviously boasts only modest hydrocarbon production.

Allowing our gaze to drop below Central Asia, we arrive at the Middle East, where the bulk of world's hydrocarbon resources are located, and where the entire world has increasingly focu attention. First let us observe how patchy are the lights of *Homo sapiens hydrocarbonus* in t region. The population is concentrated in Riyadh (in the middle of Saudi Arabia, around Abu and Dubai on the eastern Musandam Peninsula, in Qatar and Bahrain, heavily in Kuwait, an extending from the Red Sea port of Jedda, inland to Mecca and southward. The highest concentration of *Homo sapiens hydrocarbonus* is to be found in Israel and Lebanon, areas w virtually bereft of hydrocarbon resources. Also compare the scattered population centers of I (where the US is slowly losing hold in its efforts to occupy that country), with more widely

populated Iran (which some in the US are hoping to target next).

Finally, we cannot keep our eyes away from the oil fields. In this image, we can plainly see h of the oil reserves are concentrated in the Persian Gulf and extending inland along the Tigris Euphrates River Basin, in Iraq and Iran. The large fields of Saudi Arabia are seen to cover only eastern portion of that country, extending slightly inland from the gulf. This is the Arabian O Triangle. Outside of this region, there are some smaller deposits in northern Iraq, around Jed north of there on the Red Sea, and in the countries of Oman and Yemen, on the southern an western portions of the Arabian Peninsula. But it is in the Arabian Oil Triangle where the ma the world's remaining hydrocarbon wealth is concentrated, and around which the final days Oil Age are destined to be played out.

Conclusion

We have learned how to gage our own personal footprints, and in so doing received some clu how we can shrink our footprints and so move toward self-sufficiency and sustainability. An have seen the footprint of humanity in its entirety written out across the surface of the plane Certainly, there are many aspects of this footprint which are missing here: air, land & water pollution, the amount of natural habitat fallen and falling to agriculture and other developm mass extinction currently taking place on this planet, and the depletion of resources-to nam But we can see that there are few places remaining on this planet which have been spared fr footprint.

The images of the Earth at night show us how great our reach is. They also show us how overextended we are, and how vulnerable we are to the collapse which inevitably follows up overextension of any species beyond the carrying capacity of its environment. The abundan resource wealth – particularly energy wealth, which the technological revolution of the last t centuries brought into our grasp, has been largely squandered. Our population has climbed exponentially following the curve of energy production. But the subspecies which has evolv the last couple centuries, *Homo sapiens hydrocarbonus*, could quite possibly be the most sh lifeform on the planet. The world we face will not be able to support Homo sapiens hydroca for much longer. And we have all but forgotten how to exist without hydrocarbons. It is time *Homo sapiens* to evolve a new subspecies, and hopefully this subspecies will be wiser than *hydrocarbonus*. We must make it our hope and our goal that the next subspecies will be mo egalitarian in nature, possessing a better understanding of her place in the scheme of things born of a vision of sustainability and harmony.

Share this:

Facebook Twitter Google Pinterest LinkedIn Reddit

Loading...

Posted by *PD Allen* on *July 11, 2012*

Runaway Climate Change

Posted in: Nonfiction, Under Shattered Skies. Tagged: clathrates, climate change, global warming, methane h
deposits, methane outgassing, peak oil, Permian extinction, runaway climate change, under shattered skies. L
comment

Runaway Climate Change

Passing the Point of No Return

by Dale Allen Pfeiffer

The most important article in this entire series is Under Shattered Skies of Our Own D

Download a pdf copy of this article (black print on a white background)

*[So far in our study of global climate change, we have examined the evidence that global clim
change is taking place, and that it is induced by industry. And we looked at the scientific cons
based upon this evidence. Then we explained abrupt climate change, revealing why global wa
could result in a little ice age in the North Atlantic region even as the planet overall continued
warm. We closed with a look at evidence suggesting that the global ocean conveyer, whose re
would trigger abrupt climate change, is indeed slowing down. Now we will examine the possi
that climate change might spin out of control, threatening to extinguish the human race alt
along with much of the life on this planet.]*

Introduction

The possibility of runaway global warming is not as distant a threat as we may wish. It is a th
which worries some of the greatest minds living among us today. Stephen Hawking, physici

selling author of A Brief History of Time, and claimant of the Cambridge University post onc occupied by Sir Isaac Newton (the Lucasian Chair of Mathematics), has been quoted as sayi afraid the atmosphere might get hotter and hotter until it will be like Venus with boiling sulf acid."[1] The renowned physicist was joined by other notables such as former President Jimm former news anchor Walter Cronkite, and former astronaut and Senator John Glenn in drafti letter to urge President Bush to develop a plan to reduce US emissions of greenhouse gases.[2] British Environmental Minister Michael Meacher is also worried about the survival of the hu race due to global warming.[3]

The American Geophysical Union (AGU) released a position paper in the fall of 2003 stating industry-induced emissions were causing carbon dioxide concentrations in the atmosphere faster than at any other point in Earth's history.[4] The AGU has previously been very cautious taking any position with regard to global warming. The AGU reticence has been used by oil companies and other global warming skeptics to support their own position that global war some sort of environmental hoax. Among the signers of the AGU statement was John Christ director of the University of Alabama's Earth Systems Science Center. Dr. Christy has previo been very skeptical of global warming studies, and has often been cited to support the argum scientific understanding of global warming is flawed and uncertain. In a National Public Rad interview about the AGU consensus statement, Dr. Christy said, "It is scientifically inconcei that after changing forests into cities, turning millions of acres into farmland, putting massiv quantities of soot and dust into the atmosphere and sending quantities of greenhouse gases air, that the natural course of climate change hasn't been increased [sic] in the past century.

Why do so many prominent people worry about runaway global warming? The fear is that, o atmosphere has warmed past some critical level, various feedback mechanisms will kick in a the temperature beyond the point where the planet will become inhospitable for human lif these feedback mechanisms have kicked in, it is unlikely that we can do anything to interver considering the current signs from the environment, accelerating industrial emissions, and life of greenhouse gasses in the atmosphere, some worry that it may already be too late to pr this scenario.

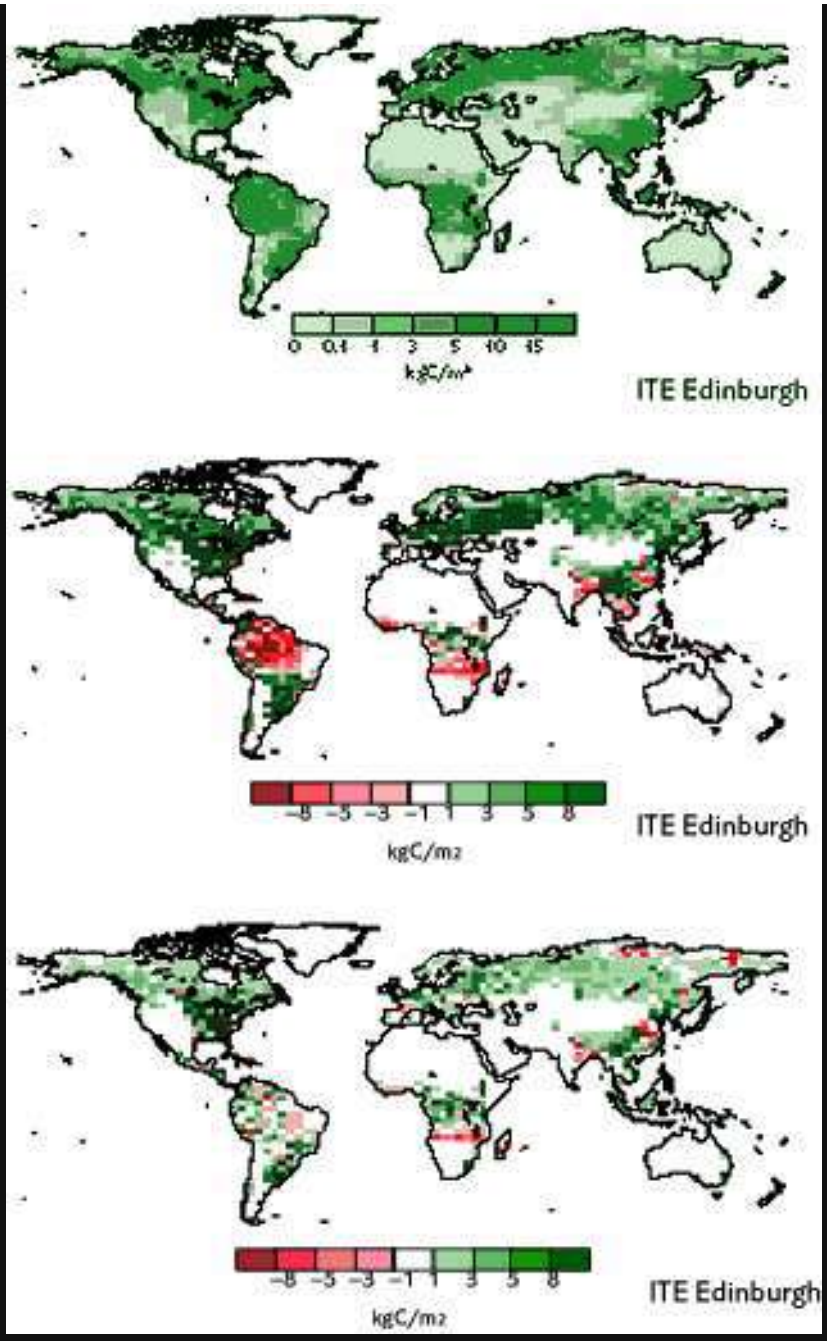
Runaway Climate Change-Feedback Mechanisms

Many processes in the natural world have continuous consequences which either accelerate retard the original process. Such consequences feed back into the process from which they a and so are called "feedback loops." For example, a newly-introduced predator devours the population of its chosen prey, until the food supply is so diminished that the predator can't young and its own population contracts: that's negative feedback. Balance is exceeded, and overfeeding predators give rise to an effect that drives down their own numbers.

Feedback loops occur in the social world as well; for instance, under a regressive income tax, working poor pay plenty of tax, which tends to keep them increasingly poor and working lo hours, while the wealthy pay little or no tax, which tends to make them wealthier. That's a p feedback loop, because the original process is exacerbated by its own effects.

Our climate system is largely a system of feedback mechanisms, both positive and negative. crux of the climate change skeptics' argument that negative feedback systems will cancel ou industry- induced global climate change. They suggest that excess carbon in the atmosphere absorbed by the oceans and will stimulate photosynthesis in land-based plants, both of whi serve to remove the excess carbon from the atmosphere and lock it safely away.

Currently, photosynthesis in forests is accelerating, leading to greener, lusher forests and a h absorption rate for carbon dioxide. However, decomposition rates in dead wood and soils ar beginning to accelerate. And as the climate warms, eventually this outgassing of decompose carbon will overtake the accelerated photosynthesis. Worse, the Amazonian rainforests are e to fail about mid-century. The dying rainforests would then release their store of carbon into atmosphere. According to studies undertaken by the Met Office Hadley Centre for Climate Prediction in Great Britain, if industrial carbon emissions go unmitigated then the forests wi become net contributors of carbon to the atmosphere by 2070. Stabilization of industrial em could possibly delay this forest dieback for another century.[6]



Global vegetation biomass in the 1990s (top), in the 2080s due to global climate change f unmitigated emissions (middle), and in the 2080s with emissions stabilizing CO2 at 750 p (bottom).

Taken from ***The Impacts of Climate Change on Natural Vegetation,*** **Hadley Centre for C Prediction and Research**

Climate change skeptics point to the oceans as an immense carbon sink, capable of absorbi industrial carbon emissions. Indeed, the oceans hold a volume of carbon equivalent to more 6,000 years of fossil fuel burning at current rates.[7] Without the absorption of carbon by the oc and the linked production of free oxygen by ocean phytoplankton, the Earth's atmosphere w consist almost entirely of carbon dioxide, with a little bit of nitrogen. Temperatures would h around 600º Celsius, and atmospheric pressure would be 60 times heavier than it is currently

Ocean waters absorb carbon dioxide from the atmosphere, holding much of it in solution, b

transforming some into carbolic acid. Phytoplankton in the upper ocean layers fix the carbo dioxide in their cells through the process of photosynthesis. These Phytoplankton form the the ocean food chain. They are grazed by animal plankton and other organisms, which utiliz of the carbon as an energy source but return a small portion of it to the atmosphere through respiration. Some of this carbon ultimately settles through the ocean column in the form of tests and shells, and animal feces. During periods of global warming millions of years ago, th sediment of carbon wastes formed the source for the hydrocarbon deposits which have serv power our civilization through the past century, and which are now, ironically, resulting in i induced climate change.

Unfortunately, this oceanic carbon sink could very well break down in response to climate c Warmer seawater is already saturated with carbon, so it absorbs less. Robust absorption of ca requires a continuous cycling of colder, carbon-poor water upward from the ocean depths. I global thermohaline conveyor were to fail (see Part II of this series), a dangerous drop in carb absorption could result.

But the biggest threat to the oceanic carbon cycle lies in diminishing phytoplankton produc the past 20 years, phytoplankton concentrations in northern oceans have decreased by as m 30%. Scientists from NASA and the National Oceanic and Atmospheric Administration susp warmer temperatures and low winds are depriving the phytoplankton of nitrogen and carbo dioxide.[9] A Japanese researcher at Hokkaido University has noted a sharp drop in the amour carbon dioxide absorbed by the northern Pacific Ocean over the past 15 years. Yutaka Watan stated that the amount of carbon dioxide in the ocean has dropped by 10%. [10]

Another feedback mechanism which is already beginning to work against us is the retreat of cover, particularly from the Arctic ice cap and from Greenland. The melting ice cover will tro in several ways. Freshwater runoff will help to disrupt thermohaline circulation in the ocean discussed in the second part of this series. Melting ice cover would also raise ocean levels. As mentioned in the first part of this series, satellite studies from NASA demonstrate that the Ar cap is already retreating dramatically. A report released by the German Advisory Council on Change states that if the world's average temperature increases by more than 2° C beyond w was at the beginning of the Industrial Revolution, it will likely trigger the melting of the Gree ice cap and West Antarctic ice sheet. This would raise world sea levels by as much as 30 feet, submerging major cities such as New York, London, Tokyo, Miami, Bombay, Calcutta, Sydn Shanghai. [11] The Hadley Centre for Climate Prediction and Research has stated that there ar already sufficient Greenhouse gases to raise Greenland's average temperature by 3º C by the of the century.[12]

The retreating ice cover will decrease the Earth's albedo, as discussed in the first part of this s reflecting less of the sun's energy and resulting in a further warming of the Earth's surface.

Evaporating melt waters could also increase the water vapor content in the lower atmosphe vapor is a greenhouse gas. The result of both of these effects would be a positive feedback cyc where melting ice results in a warmer climate, which in turn leads to the melting of yet more

And then there is the thawing tundra. Globally, frozen peatlands hold an estimated 550 billi of stored carbon.[13] Dead plant matter is frozen in permafrost, slowing and even stopping th decomposition process. The slow, anaerobic decomposition which currently takes place in frozen lands has produced a stockpile of methane which is already showing signs of escapin the atmosphere as the tundra thaws. Methane has a shorter lifetime in the atmosphere than carbon dioxide, but is it up to ten times as effective at trapping heat in the lower atmosphere However, as the soils warm and the permafrost thaws, bacteria could set to work with a veng decomposing plant matter at a higher rate, releasing carbon dioxide into the atmosphere in methane. [14]

When Oceans Exhale

Each of these feedback mechanisms (and others not mentioned here) would have dire conse for life on this planet. Taken together, they would reinforce each other and magnify the char climate. But the gravest concern is that rising temperatures on this planet will lead to a vent methane from the oceans. It is this possibility which is lamented in the above quotation fro Stephen Hawking.

Methane is stored in the deep ocean along the continental margins, in the form of clathrate are massive deposits of carbonated slush, where the methane is trapped under pressure in th crystal lattices of frozen water (i.e., ice). Though the oceans hold much more methane than tundra, taken together they contain an estimated 2 trillion tons of methane in the form of clathrates.[15]

Occurrences of Natural Methane Hydrate (Clathrates) Deposits Worldwide

The release of the entire balance of these pent up gases into the atmosphere is possible, but
improbable. Dr. Hawking's scenario of an Earth superheated to match its sister planet, Venu
unlikely. If the seas started venting methane into the atmosphere, the chances are that the p
would halt before all of the sequestered methane escaped. However, just a portion of this en
reserve of carbon, if released into the atmosphere, could render the planet uninhabitable. Ar
many scientists consider the possibility very remote, every day more investigators assess this
scenario, shake their heads and wonder: could we already have set such an event into motio

It is believed that a release of methane hydrates from the oceans has happened before in the
history, and it is suspected to be a factor in most of the mass extinction events of the past. T
time was 55 million years ago (fairly recent in geological terms), in an event known as the La
Paleocene Thermal Maximum (LPTM). It lasted for about 150,000 years, and raised average gl
temperatures by 5 to 7° C (9 to 13° F).[16] Recent studies of sea floor sediment indicate that the
warmed in higher latitudes by 8 to 10° C, and by 4 to 5° C in tropical latitudes.[17] The LPTM w
probably initiated by movements of the continental plates, such as the collision of the India
subcontinent with Eurasia which created the Himalayas. Uplifting decreased water pressure
ocean floors, which in turn allowed a massive methane release. This release warmed the oce
sufficiently to allow further methane release and other feedback mechanisms to kick in. The
ice caps disappeared and life on this planet experienced a mass extinction event.[18]

When Life Almost Disappeared-The Permian Extinction

251 million years ago, at the end of the Permian Era, life almost entirely vanished from this p
is the single worst mass extinction in the history of the Earth. Fully 95% of the species extan

planet at that time were wiped out. Only a few species of plants, animals, and likely even pr survived to evolve (until the next major extinction-ecologically trivial by comparison-wiped dinosaurs 65 million years ago).

The cause of the horrendous Permian extinction has long been a mystery, and geologists ha suggested a number of possibilities, none of which quite explains the evidence. But in the la years or so, a compelling picture has emerged. Developed in response to a wealth of new paleogeological evidence from that period-evidence from petrology, geochemistry, oceanog paleoclimatology and various other disciplines-the scenario is quickly being accepted by the scientific community. The culprit that wiped out 95% of all species and very nearly put an e on this planet was runaway global warming.

The event began in a very spectacular fashion, with a massive volcanic eruption in Siberia th spewed out a volume of 2 million cubic kilometers of basalt, which covered an area of easter 1.6 million square kilometers in extent (roughly the size of Europe).[19] Volcanic activity also great deal of carbon dioxide and fine ash into the atmosphere. Gases were vented in such qu that the average global temperature increased by approximately 6º C.[20] Some 161 species be extinct as a direct result of these volcanic eruptions. The extinction rate was as high as 33%. was just the beginning.

The temperature rise was high enough to trigger a number of positive feedback mechanisms notably, there was a massive release of methane from hydrates locked into clathrates. The w caused by the Siberian eruption was sufficient to melt the frozen gas hydrates, allowing bodi methane to bubble up to the surface of the oceans and belch into the atmosphere. This intr of methane then led to further warming, which in turn melted deeper methane hydrate dep The outgassing of methane was far in excess of the natural mechanisms which normally red carbon dioxide levels in the atmosphere. The planet's climate system broke down and runa global warming continued until it reached some unknown threshold.

It is not yet known what prevented the planet from becoming a sterile twin to Venus. Scient just beginning to explore the question of how the atmosphere returned to a more hospitabl climate. Life on this planet came so close to complete annihilation that it took 100 million y global biodiversity to return to pre-extinction levels.[21]

The Permian Extinction should be widely understood as an ominous lesson in the danger of warming. We need to pay particular attention to the temperature rise which caused these ru feedback mechanisms to kick in: 6º C. Back in the first installment of this series on global cli change, we looked at a report from the Intergovernmental Panel on Climate Change (IPCC) stated that the average global surface temperature will increase by between 1.4º and 5.8º C d next century. This would compound the increase of 0.6º C that has already occurred during t century. So, according to this report, the temperature could rise by as much as 6.4º C by the

2100.[22] And that this estimate is on the conservative side; it is possible that temperatures co increase by much more than 6.4º C.

The warning lights should be going off all over. A temperature increase of 6.4º C would put u beyond the threshold for runaway global warming. Could mankind be gearing up to perpetra greatest extinction on this planet since the end of the Permian Era?

Enter the End of the Hydrocarbon Era

The first reaction of most environmental activists to the news of peak oil is to say, "Good, we stop using fossil fuels anyway." It seems logical that a decline in hydrocarbon production wi a decline in carbon dioxide emissions. And it is likely that somewhere down the line, carbon emissions will abate simply due to the scarcity of fuel. But we will not go gently into that goo

When you learn that heating costs are going to continue increasing, and that shortages of na are likely in our near future, what alternatives come to your mind for home heating? Passive s heating? Sure, but that alone will not keep you warm on a cold winter night. Most people immediately think of wood. As heating costs go up, and as shortages put a chill on our home of us are going to start burning wood (or will burn more wood, as the case may be). We will tu biomass.

Burning biomass is undoubtedly the dirtiest source of energy. As we burn wood, corn husks o chips to heat our homes, we will be pumping tremendous volumes of carbon into the atmos And, in all probability, it is unavoidable. There are some things we can do to reduce the amo wood we burn and so limit our contribution to global warming. Better insulation can increas efficiency. And consider the sort of wood furnace you will be using. Traditional brick fireplac the least efficient way to warm a house. Metal wood stoves are better, but soapstone is the be holding heat and radiating it outward. A small load of wood is a soapstone stove can generat for hours. And when you are harvesting your wood, take care not to strip the forests bare. Be in choosing your wood. Practice coppicing (do a Google search to find out more about this a method of harvesting wood).

Burning biomass will likely add to our global warming problem, but it is probable that coal b will be far more harmful.

As oil and natural gas production go into decline in North America, the alternative we will ul turn to is coal-whether we like it or not. Coal is considered to be abundant in North America is cheap. Despite all the talk of a hydrogen economy, the real investment will go into steppi coal production. In fact, the production of coal-fired power plants has already been stepped of February 2004, at least 100 new coal-fired electric power plants were planned to go up in m than 36 states.[23] This new growth market is currently flying below radar, because once plans

coal-burning plant are made public, they are liable to be halted by the legislative efforts of environmentalists and neighborhood coalitions.

If even half of these plants are completed, they will increase exhaust gas emissions by 120 m cubic feet per minute. All the new coal plants being proposed would add one-tenth of one p to the world's annual carbon dioxide emissions.[24] That may not seem like much, but it is ce move in the wrong direction. And it is only the beginning.

As the production of oil and natural gas continues to slide, we will open up our coal reserves electricity production, heating, industrial use, and to process coal into liquid transportation the process, we will increase our exhaust emissions, rip up vast areas of land, create immens dumps, and pollute our waterways and groundwater. And we will require a major upgrade in transportation network-that is, trucks and trains. You can expect strong efforts from industr politicians to turn back environmental laws regulating coal production and coal burning. It argued that these regulations are damaging the economy. They will point to an economy ch from a constricting energy base, and they will insist that they cannot provide the energy we desperately need with all these legal restrictions. Power outages will act to blunt the environ sensibilities of the public.

Perhaps the only salvation here lies in recent research (reported in FTW), that coal is likely t sometime around 2032, if not sooner.[25] This will leave us a little less than 20 years of stepped production before coal joins the list of has-beens. Then our carbon emissions really may beg decrease.

But the US is not the only country likely to turn to coal. China is also eying its large reserves as is India. If the world's two most populous countries step up their coal consumption along the US, then the decline in petroleum and natural gas production will actually be greeted wi pronounced increase in carbon emissions.

Peak oil will not be a blessing in disguise with regard to global warming. The models of globa change developed by the IPCC and others have not taken into account the impacts of Peak the North American Natural Gas Cliff. These models are based on faulty economic projectio produced by neo-classical economics-a warped discipline which is blind to resource depleti we turn to coal and biomass to make up for the decrease in oil and natural gas production, th likely that our actions will push the average global temperature well beyond the 6° C thresh mentioned above. The end of the oil age could very well push us into an age of runaway glob warming.

Coal will not be able to support the kind of energy-intensive economy which we have built and natural gas. It will be a faltering effort from a civilization in denial, intent on clinging to unsustainable ways. It will fail in the end, but in this last mad burn-off of energy resources, w

very well incur the demise of life on this planet.

Endnotes

[1] **World famous physicist Stephen Hawking says he's worried runaway global warming co destroy human life on Earth.** Nando Times, 9/30/2000. Archived at http://eces.org/archive/ec/globalwarming/runaway.shtml

[2] **Poll: global warming is a serious problem**, AP. USA Today, 4/2/2001. http://www.usatoday.com/weather/climate/2001-04-01-globalwarmingpoll.htm

[3] **Human Race is Killing the Planet, Says Meacher**, Brown, Paul. The Guardian, February 14 http://www.guardian.co.uk/uk_news/story/0,3604,895067,00.html
End of the World Nigh-It's Official, Meacher, Michael. The Guardian, February 14th, 2003. http://www.guardian.co.uk/comment/story/0,3604,895217,00.html

[4] **US Science Body Warns on Climate**. BBC News, December 16th, 2003. http://news.bbc.co.uk/1/hi/sci/tech/3325341.stm

[5] **Science Group Issues Climate Change Warming**, Harris Richard. National Public Radio, M Edition, December 17th, 2003. http://www.npr.org/features/feature.php?wfId=1551355

[6] **The Impacts of Climate Change on Natural Vegetation**. The Met Office Hadley Centre for Prediction & Research, 1999. http://www.met-office.gov.uk/research/hadleycentre/pubs/brochures/B1999/imp_nat_veg.html#tgt

[7] **The Ocean Carbon Cycle**. The Met Office Hadley Centre for Climate Prediction & Research http://www.met-office.gov.uk/research/hadleycentre/pubs/brochures/B1996/ocncarb.htm

[8] **The Rain of Ocean Particles and the Earth's Carbon Cycle**, Honjo, Susumu. Oceanus, De 1997. http://oceanusmag.whoi.edu/v40n2/honjo2.html

[9] **Phytoplankton in Northern Oceans have Declined from 1980s Levels**, Chohan, Rani. Goo Space Flight Center, August 8th, 2002. http://www.gsfc.nasa.gov/topstory/20020801plankto Satellites See Big Changes since 1980s in Key Element of the Ocean's Food Chain, Steitz, Da Goddard Space Flight Center, August 8th, 2002. http://www.gsfc.nasa.gov/topstory/20020801plankton2.html

[10] **Global Warming could Disturb Ocean's Ecosystem**. ABC (Australian Broadcasting Corpo
News Online, September 3rd, 2001.
http://www.abc.net.au/news/science/environment/2001/09/item20010903191131_1.htm

[11] **Climate Protection Strategies for the 21st Century, Kyoto and Beyond**, Grabl, Hartmut, e
German Advisory Council on Global Change, December 10th, 2003.
http://www.wbgu.de/wbgu_sn2003_engl.pdf

[12] **Melting Greenland Ice Threatens Global Rise in Sea Levels**. Met Office Hadley Centre for
Prediction & Research, April 7th, 2004. http://www.met-office.gov.uk/corporate/pressoffice/2004/pr20040407a.html

[13] **Study: Siberian Bogs Big Player in Greenhouse Gas**, Owen, James. National Geographic
January 15th, 2004.
http://news.nationalgeographic.com/news/2004/01/0115_040115_siberianpeatbog.html

[14] Ibid.
Scientists Fear Cycle of Global Warming, Reuters. ABCNews.com, Febraury 7th, 2001.
http://abcnews.go.com/sections/scitech/DailyNews/warming_permafrost010207.html

[15] **New Evidence of Global Warming in Earth's Past supports Greenhouse Warming Theor**
Stephens, Tim. Eurekalerts, October 23rd, 2003. http://www.eurekalert.org/pub_releases/20
10/uoc–neo102003.php

[16] **Methane Explosion Warmed the Prehistoric Earth, Possible Again**, Tawney, Timothy R.
Goddard Space Flight Center, Dec. 10th, 2001.
http://www.gsfc.nasa.gov/topstory/20011212methane

[17] **A Transient Rise in Tropical Sea Surface Temperature During the Paleocene-Eocene Th
Maximum**, Zachos, James C., et al. Science 28 November 2003; 302: 1551-1554.

[18] **Methane Gas Research Could Help Scientists Understand Global Warming**, Kanipe, Jeff.
Space.com, October 29th, 1999.
http://www.space.com/scienceastronomy/planetearth/climate_globalwarming_991029.ht

[19] **How to kill (almost) all life: the end-Permian extinction event**, Benton, Michael J., and
Twitchett, Richard J. Trends in Ecology and Evolution, Vol. 18, No. 7, July 2003.
http://palaeo/gly/bris/ac/ukpublsBenton2003TREEPTr.pdf

[20] Ibid.

[21] Ibid.

[22] **Climate Change 2001**, The Intergovernmental Panel on Climate Change. Cambridge Uni
Press, 2001. http://www.grida.no/climate/ipcc_tar/

[23] **Resurgence in Coal Forecast by R.W. Beck**. PRNewswire, June 2nd, 2004.
http://biz.yahoo.com/prnews/040602/flw024_1.html
America's New Coal Rush, Clayton, Mark. The Christian Science Monitor, February 26, 2004
http://www.csmonitor.com/2004/0226/p01s04-sten.html

[24] Ibid.

[25] **The Peak in US Coal Production**, Gregson Vaux. From the Wilderness, May 27th, 2004.
http://www.fromthewilderness.com/members/052504_coal_peak.html

[26] Bradford Jason, personal communication.

Share this:

Posted by *PD Allen* on *July 10, 2012*

Abrupt Climate Change

Posted in: Nonfiction, Under Shattered Skies. Tagged: abrupt climate change, catastrophic climate change, c
change, global warming, thermohaline, under shattered skies. Leave a comment

Catastrophic Climate Change can Happen in an Instant

by Dale Allen Pfeiffer

The most important article in this entire series is Under Shattered Skies of Our Own D

Download a pdf version of this article (black type on a white background)

Abrupt Climate Change

Large bodies of water — particularly the oceans and seas — have a moderating effect upon th weather. As anyone living on an island or near the seashore is well aware, the summers in su area tend to be cooler than farther inland, and the winters tend to be warmer. As a resident o state of Michigan, I am well aware that an Alberta clipper which will freeze North Dakota an Minnesota down to -20º F, will be warmed sufficiently upon crossing over Lake Michigan so same weather system will only drop Michigan 's temperature down to 0º F. This is because b water tend to have less seasonal variance in their temperature than does stone or soil, and th interact with overriding air masses to transfer heat from one to the other.

This process is much more complex in the oceans than in the Great Lakes. Ocean currents c warm water from the equator and cold water from the polar regions, with considerable effect local weather. Warm waters flowing up from the South Pacific bring heat to the Pacific North and the Alaska Panhandle through the winter, leading directly to the temperate rainforests w dominate the ecology of this area.

Meteorologists have traditionally ignored the oceans' role in meteorological processes. And would seem to make sense on the face of it: if you are studying the weather it is natural to foc the atmosphere, not the oceans. But we are coming to understand that the oceans are an eq partner with the atmosphere in producing the weather, and the dominant partner with rega long-range weather patterns.

The oceans play an important role in heat storage and transport, and are vital to the transpo of heat from the equator to the poles. They are essential to the hydrological cycle as well. Co 70% of the Earth's surface, the oceans have 1,100 times the heat capacity of the atmosphere. contain 97% of the free water on the planet—90,000 times as much water as the atmosphere they receive 78% of global precipitation.[2] Unfortunately, oceanic processes have not been st nearly so well as atmospheric processes; even environmentally crucial properties such as sal and heat transference at depth have been relatively neglected until recently. As we'll see, abr climate change has everything to do with "thermohaline" dynamics in the ocean depths; th is a compound of two ancient Greek roots meaning "heat" and "salt."

But a series of global ship-based observations in the 1990s revealed that the ocean has warme depth since similar observations were last made in the 1950s. It turns out that this heat diffe corresponds to about half of the greenhouse warming that had been projected by models bu been missing from actual measurements of the atmosphere. Meteorological models had not accounted for the capacity of the oceans to store large quantities of heat on short timescales capacity has been accounted for in more recent models, with the result that they are now m more accurate in their reproduction of long term heating and cooling trends.

The oceans could accurately be called the long-term memory of the Earth's climate system. atmosphere is as fickle as it is dynamic. It lacks the permanence to produce decadal pattern oceans, however, host a variety of long-term cycles which can and do affect the weather.

Everyone has heard of El Niño and La Niña. Caused by the movement of warm water in the t Pacific — particularly off the coast of equatorial South America — these periodic three to five disruptions are fully monitored by a system of buoys, so that they can now be predicted up t in advance. Yet these two phenomena represent only a small fraction of the influence which periodic ocean cycles exert upon the temperature and rainfall over North America. The varia winter weather is highly correlated to long-term ocean cycles known as the Pacific Decadal Oscillation (PDO) and the North Atlantic Oscillation (NAO). The NAO, in particular, has a m stronger influence over the weather of the Eastern United States than does El Niño. Yet both long-term cycles are poorly monitored.

Likewise, it is the oceans which regulate the hydrological cycle. A diversion of only 1% of the currently falling on the Atlantic would double the discharge of the Mississippi River.[4] At the end of the spectrum, an increase of rainfall over the oceans, particularly over key areas such Labrador Sea and the North Atlantic, could disrupt the thermohaline circulation of the ocea a drastic and immediate effect upon the climate of North America and Europe.

The climate is a dynamic and sensitive energy exchange system held in a self-regulating equ The interactions of water and air have always been difficult to predict because they're govern the branch of physics called fluid dynamics, whose recent mathematical formalism is called theory. It's a description of the way that chaotic systems tend to magnify the effects of initia changes. Depending on the stability of the system, proliferating changes can be compensat mechanisms that reestablish equilibrium, or they can overwhelm the system. In the latter ca result is either a permanent disequilibrium, or a new equilibrium markedly different from the Any attempt at large-scale weather manipulation without a reliable model would be like driv down a mountain road with the windows blackened out using a roadmap whose reliability d progressively the farther you venture from your point of departure.

The problem with modeling weather patterns is that there are simply too many variables. M these variables, such as the NAO and the PDO, are not well understood and are poorly moni

Even if computer power continues to increase by an order of magnitude every 6 years, it wou over 160 years before models would have sufficient capacity to simulate the smallest ocean n processes.

So predictive climate modeling is constrained by two intractable problems: the limitations c computational equipment, and the inherent uncertainty of the data we put into it. In a diffe discipline, small initial errors might be averaged out or otherwise corrected-for. But in a dom the weather – where the behavior of turbulent fluids is influenced by myriad variables all mu interacting – the smallest numerical error can become enormous as it propagates through th model. If I want to know my county's surface temperature, pressure, rainfall and wind-speec in advance, I had better be rigorously correct about the numbers I put into my computer at t beginning.

This sensitivity afflicts long-term climate change modeling as well as short-term weather pr albeit in different ways. The chief difference is in the enormous disparity between the atmos and the oceans as reservoirs of thermal energy. Dr. Raymond Schmitt of the Woods Hole Oceanographic Institute describes climate modeling:

An abundance of evidence indicates that the key to long-term prediction is in the workings c ocean, which has 99.9% of the heat capacity of Earth's fluids. It is the heart of the climate 'be atmosphere its rapidly waving tail, with only 0.1% of the heat capacity.[6]

Thermohaline Circulation — the Oceans' Heat Conveyer

Perhaps the most important role for the oceans in helping to regulate the climate is the absc of heat from equatorial regions and the transportation of that heat into northern regions. Th process helps to distribute heat more evenly around the globe, moderating the heat of equat regions as well as the cold of higher latitudes — particularly in the North Atlantic. These cur warm North Atlantic regions by an average of 5º Celsius, significantly tempering the winter s North America and Europe.[7]

Taken from Abrupt Climate Change; should we be worried?

Woods Hole Oceanographic Institute, 1/27/2003

This global current could be said to originate in the seas which ring the North Atlantic —the Labrador, Irminger and Greenland Seas, where the oceans release large amounts of heat into cold atmosphere. Evaporation, which has been occurring throughout the North Atlantic, is increased to the point that these northern waters constitute the saltiest waters in the ocean concentration of salts results in a denser solution, as does the loss of heat. And this denser w sinks to the ocean abyss, where it begins a slow migration back down the Atlantic and eastw the Indian and Pacific Oceans. There it wells up, having lost much of its salinity. Displaced b waters moving under it and heated by contact with warmer flows from above, the formerly d water rises toward the surface and picks up additional heat along the return journey into the Atlantic.

Unfortunately, the ocean conveyer does have an Achilles heel. And this Achilles heel lies in Northern Atlantic region where the deep limb of the ocean conveyer originates, drawing wa equatorial waters to replace it. If the cold, salty, dense waters of the North Atlantic somehow to sink, then the global circulation could slacken and halt. Currents would weaken and/or b redirected, with potentially catastrophic consequences for the whole biosphere.

Were this to happen, the North Atlantic region would cool by an average of 5º Celsius. This w mean that winters in Eastern North America would be twice as cold as the coldest winter on

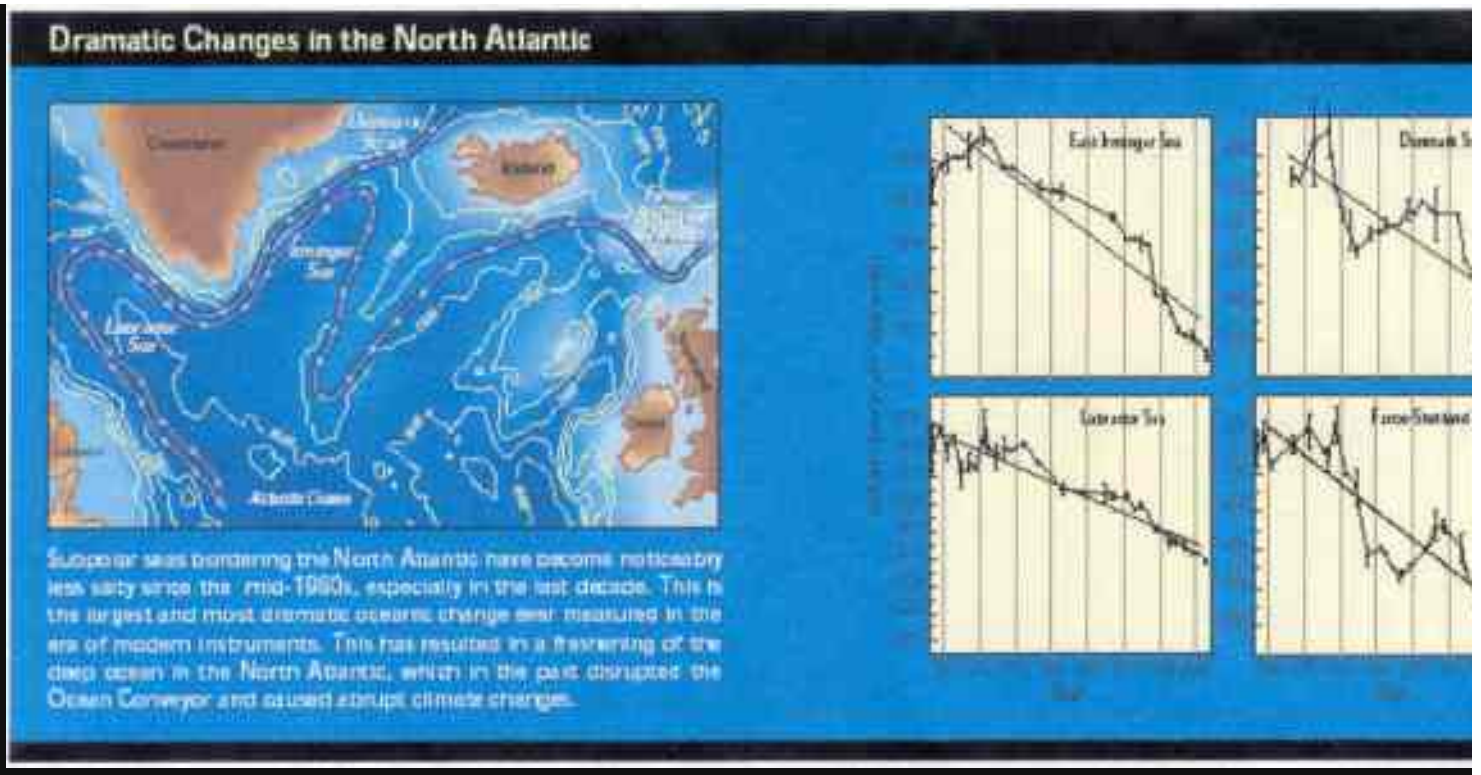
in the past century, and Europe would be even colder.[8] The summer growing season in thes would be shortened, and summer crops might fail altogether. Previous conveyer shutdowns been linked to widespread droughts throughout the world, and the disruption of the Asian monsoons.[9]

The resultant mini-ice age in North America and Northern Europe — and droughts elsewhe world — could continue for decades or even centuries, until conditions change sufficiently f thermohaline circulation to resume. Further, this localized mini-ice age might occur even a Earth, on average, continues to warm.[10] As a result, once thermohaline circulation resumed Northern Atlantic region could be thrown from one extreme to the other — from an ice age t house.

All that is necessary for this scenario to occur is an influx of fresh water into the surface of th Atlantic . This buoyant, fresh water would virtually seal off and insulate the denser, saltier wa preventing them from venting heat and moisture into the atmosphere. The fresh waters wo dilute the salinity of the North Atlantic, further reducing the density of these waters. The for driving the deep limb of the ocean conveyer would quickly weaken and halt. And the cessati thermohaline circulation would quickly impact the world's climates.

This scenario could take place in a decade or less from the time that fresh water influx in the Northern Atlantic reaches a critical threshold. Unfortunately, though scientists are certain t a threshold exists, not enough research has been done thus far to determine where this thre Oceanographers have complained that we do not have a system in place to monitor slowly developing ocean circulation changes. While we have thousands of meteorological stations recording temperature on land and in the atmosphere, we have only three sites with anythi continuous deep record of the North Atlantic. And these sites only make observations once month.[11] Satellites can monitor ocean circulation globally, but only at the surface. For measurements at depth, we need a network of buoys and current-monitoring vessels.

Oceanographers reporting in *Nature,* in 2002, concluded that a dramatic influx of fresh wate the North Atlantic has taken place continuously within the past forty years, and has accelera within the last decade.[12] This is the largest and most dramatic change in the oceans in the e modern instruments. So far, the influx has been dispersed throughout the water column. Bu noticeably diluting salinity.[13] And, at some point, the continuing influx may begin to pile u surface of the North Atlantic. An earlier report in *Nature* observed that the flow of cold, dens from the Greenland and Norwegian Seas has slowed by 20% since 1950.[14] This indicates tha slowdown of the ocean conveyer may already be occurring. An observation system must be place before we can better assess the impact of these developments on thermohaline circula and the rate at which the ocean conveyer may be disrupted.

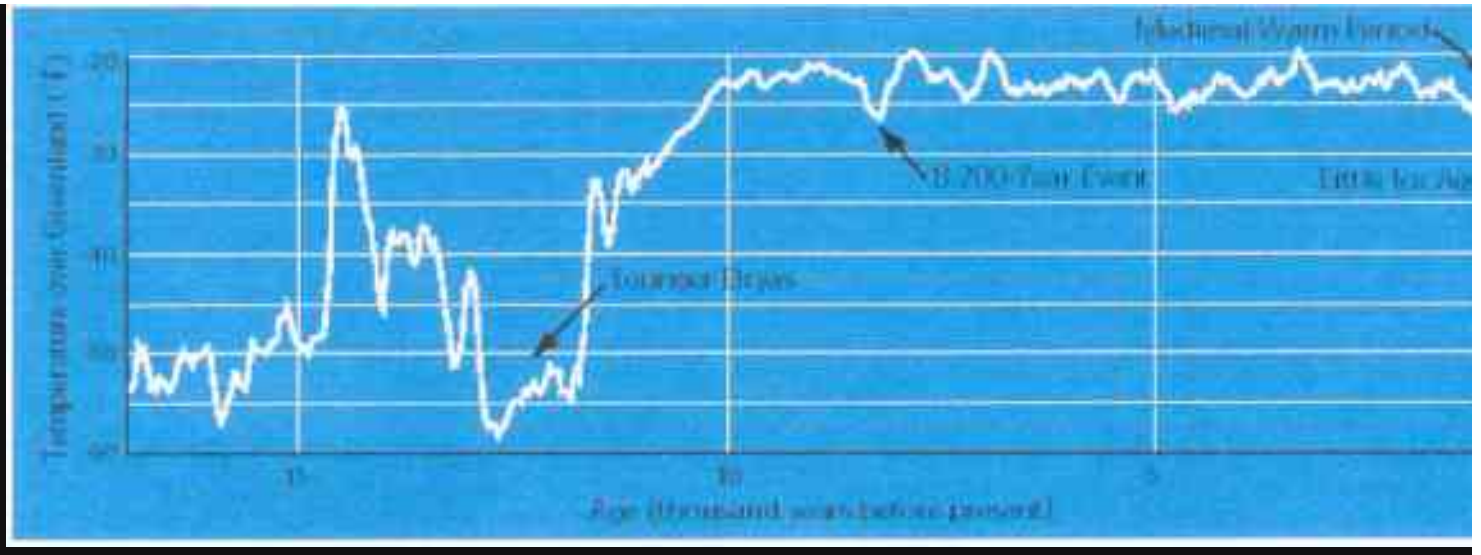


Taken from Abrupt Climate Change; should we be worried?
Woods Hole Oceanographic Institute, 1/27/2003

A History of Abrupt Climate Change

Until very recently, scientists believed that major climate change could only occur gradually long periods of time. The study of ice cores drilled in Greenland, Antarctica and in alpine gla around the world has changed that thinking. These ice cores hold a wealth of information. A from a record of annual snowfall, the ice cores hold spores and pollens, and volcanic ash. Al in tiny inclusions in the glacial ice are trapped remnants of the atmosphere from thousands past. These gas inclusions can be analyzed to give an accurate measure of the chemical mak the Earth's atmosphere over the course of centuries. It is the study of carbon dioxide levels, a recorded in the air bubbles of these ice cores, which has established the ineluctable proof of industry-induced global climate change.

Thanks to these ice cores, we now have a detailed history of the Earth's climate stretching ba nearly twenty thousand years. Reading the ice cores is somewhat similar to reading the grow on a tree, but complicated because the yearly layers of ice have been contorted and folded by pressure and ice flow. However, with the help of some applied physics and structural geolog layers can be unfolded and the record can be read accurately. This endeavor has already yielc remarkable scientific results, including the discovery that abrupt climate change has already occurred in previous eras. In the last fifteen thousand years, there have been several periods abrupt climate change of varying severity and duration. Let's review four of these abrupt clim change episodes.



Taken from The Two-Mile Time Machine, Richard B. Alley.
Princeton University Press, 2000 (reprint edition 2002)

The Younger Dryas— Named for a small subarctic flowering plant which extended its range
southward into North America and Eurasia during this period. The Younger Dryas began abo
12,700 years ago when average temperatures in the North Atlantic region plummeted by abo
This abrupt change took place within a decade, and is believed to have been caused by a shu
of the ocean conveyer due to a sudden influx of fresh water from the deglaciation of North A
The climate remained colder by about 5º C for the next 1,300 years, before another abrupt ch
caused temperatures to rise by about 7º C in less than a decade.[15]

Study of the Younger Dryas in particular has led scientists to conclude that there are preferre
of balance in the atmosphere. Should one state be tipped sufficiently out of balance, the atm
will cross some critical but unknown threshold and will then transition quickly to another st
balance. This thinking has revolutionized our view of climate change, and holds important
implications for industry-induced climate change.

The 8,200-Year Event— This event was not as severe as the Younger Dryas, and lasted only a
Temperatures in the North Atlantic region dropped by an average of 3º C. This episode seem
associated with widespread dry conditions. There are two possible explanations for the 8,20
Event. The most widely accepted explanation is a disturbance in thermohaline circulation d
freshwater input associated with the retreat of the Laurentide ice sheet. Other studies have i
that a fresh water influx from large proglacial lakes could have produced the 8,200-Year Even
would even account for a brief warming episode within the event.[16]

The Medieval Warming Period— This is considered to be a period of abrupt warming which
approximately 1,000 years ago, and then ended abruptly 700 years ago with the beginning of
Little Ice Age. This event was very mild compared to earlier events, and there is much contra
evidence from this period. Evidence appears to support warming at the beginning of the 20t
century in Scandinavia, Greenland, China , the Sierra Nevadas, the Canadian Rockies and T

. However, evidence from the Eastern United States, Mediterranean Europe, and South Ame
show no change in climate. Ice core data from Greenland supports the theory of a warming
but needs to be correlated with ice core data from other areas of the globe. The Intergovernm
Panel on Climate Change (IPCC) states that temperatures from the 11th century to the 14th
were only about 0.2º C warmer than temperatures from the 15th to the 19th centuries, and w
below average temperatures in the 20th century.[17] Though the specific changes in regional
temperatures remain difficult to specify, the data clearly indicate that during the past millen
the Earth's climate has varied on a decadal scale.[18]

The Little Ice Age— This event brought an abrupt end to the Medieval Warming Period. It ext
from the 1300s to the mid 1800s. The Little Ice Age was once thought to be a global phenome
but now that assumption is less certain. Evidence for the Little Ice Age appears to be stronge
the evidence for the Medieval Warming Period. The IPCC defines this as a period of modest c
of the Northern Hemisphere by less than 1º C.[19] It was certainly a period of bitterly cold win
many parts of the world, and is most thoroughly attested in Europe and North America. It is
documented that glaciers in the Swiss Alps advanced during this period — even threatening
Rivers which are not known to freeze over in recent history did freeze over in this period—th
Thames , the Delaware, the Ohio. In the winter of 1780, the New York Harbor froze so thick t
people could walk from Manhattan to Staten Island. And the sea ice surrounding Greenland
that island nation's harbors to shipping.[20]

Scientists believe there were two causes for this cold period. In the middle of the Little Ice Ag
1645-1715, there was a marked decrease in sun spot activity. This period is known as the Mau
Minimum. The exact link between sunspot activity and climate is not known, but scientists
highly suggestive that the Maunder Minimum coincides with the coldest years of the Little I
The other causal factor was increased volcanism throughout the Little Ice Age. Volcanic ash
dispersed throughout the atmosphere blocked incoming solar radiation. Sulfuric acid partic
derived from sulfuric oxide gases discharged by volcanoes served to reflect more of the sun's
further reducing the amount of solar energy reaching the Earth's surface.[21]

Abrupt Climate Change & Civilization

It seems that the climate conditions on this planet naturally undergo sudden shifts several t
thousand-year period. Clearly, anthropogenic changes like those responsible for global warn
likely to bring the next major shift closer. How will abrupt climate change affect our civilizat
How has abrupt climate change affected past civilizations? The Medieval Warming Period an
Little Ice Age took place in relatively recent times. During the Medieval Warming Period, the
colonized Greenland and other areas of the far north, venturing so far as the Americas, wher
came into contact with the Inuit peoples. When the climate reversed itself, plunging into th
Ice Age, the Vikings abandoned their colonies in Greenland, and the population of Iceland f

half. Famines were frequent and deaths from disease increased. The famine of 1315 claimed million lives. The forests of Northern Europe were denuded as people chopped wood for hea And the severe cold played a major role in spurring the European expansion into the New W elsewhere.[22]

It is now thought that the Younger Dryas led the Natufian communities of southwest Asia to abandon their nomadic hunting and gathering and develop labor intensive agriculture. The of the Younger Dryas caused harvests of wild resources to dwindle below the level necessary subsistence. The Natufians abandoned their nomadic culture, and established permanent settlements in areas where they could cultivate previously wild cereals. The development of agriculture entails the permanently localized settlement that we call civilization (literally, th "culture of the city"). These early farming communities grew in population and socioecono complexity until they were hit by another abrupt climate shock around 6400 B.C. This was t major climate event related to the melting of the continental ice sheets.[23]

In the Middle East, a 200-year drought is blamed for the abandonment of early agricultural settlements in the Levant and Mesopotamia. The return of a wetter climate in Mesopotamia the occupation and development of the Tigris-Euphrates river plain. The collapse of the Lat urban society of southern Mesopotamia may be related to a severe drought which lasted less 200 years. Such a drought is hinted at in the paleoclimatic record.[24]

The Akkadian Empire of Mesopotamia, the Old Kingdom civilization of Egypt, the Harappa civilization of the Indus valley and the Early Bronze Age civilizations of Palestine, Greece an were all abruptly terminated by 2200 B.C. due to catastrophic drought and cooling. Paleoclin evidence shows that rainfall was reduced by 30%, leading to failing agricultural production fr Aegean to the Indus.[25]

Abrupt climate change also correlates to societal collapses in the Americas. Prolonged droug severe flooding coincide with the collapse of the Moche civilization in northern coastal Peru Similarly, the collapse 400 years later of the Tiwanaku civilization of the Central Andes corre with a period of prolonged drought. The collapse of the Classic Mayans in the 9 th century A coincides with the most severe and lengthy drought of that millennium. And in North Amer three decades of severe drought and colder temperatures spelled the downfall of the Anasazi in the 13th century.[26]

Modern civilization, with its technological ingenuity, may be more capable of withstanding abrupt climate change event than were these ancient civilizations. However, if abrupt clima change happens at a time when modern civilization is already suffering from resource deple particularly the depletion of its hydrocarbon energy base — the effect of such a double impa our civilization could be very grave indeed. In the past, when abrupt climate change rendere

area uninhabitable, people could migrate to another area. In today's world, that is no longer possible.

Weakening of the North Atlantic Current

As this article was being written, NASA issued a bulletin reporting that satellite records revea North Atlantic circulation system weakened considerably in the 1990s from what it was in th and 1980s. Considering how essential this area is to the ocean conveyer — and consequently climate — this evidence of weakening is extremely important. This current, known as the su gyre, is tied in with the NAO as well as the ocean conveyer.[27]

The pathways associated with the transformation of warm subtropical waters into colder su and polar waters in the northern North Atlantic. Along the subpolar gyre pathway the red t transition indicates the cooling to Labrador Sea Water, which flows back to the subtropical g the west as an intermediate depth current (yellow). In the Norwegian and Greenland Seas th blue/purple transitions indicate the transformation to a variety of colder waters that spill sou across the shallow ridge system connecting northern Europe, Iceland, Green-land, and north North America. These overflows form up into a deep current also flowing back to the subtrop (purple), but beneath the Labrador Sea Water. The green pathway also indicates cold waters influenced by continental runnoff as to remain light and near the sea surface on the contine shelf.

—Map and caption taken from NASA press release

Satellites record weakening North Atlantic Current
http://www.gsfc.nasa.gov/topstory/2004/0415gyre.html

Researchers believe the cause of this slowing is a reduction in the temperature differential be water from the Labrador Sea and waters from the Atlantic. Labrador Sea waters in the core of appear to have warmed during the 1990s, reducing the contrast with waters from warmer sou latitudes.[28] This temperature differential is a major part of the driving force for ocean circulat

Researchers point out that this is a signal of large climate variability in higher latitudes. Sirpa Hakkinen, lead author of the report and a researcher at NASA's Goddard Space Flight Center said, "If the trend continues, it could indicate reorganization of the ocean climate system, po with changes in the whole climate system, but we need another good 5 to 10 years to say som like that is happening."[29]

To be Continued…

The final installment of this series will look at the possibility of runaway global warming, and implications of Peak Oil and the North American Natural Gas Cliff.

———————————-

Endnotes

1) **Climate Change 2001,** The Intergovernmental Panel on Climate Change. Cambridge Uni Press, 2001. http://www.grida.no/climate/ipcc_tar/

2) **The Ocean's Role in Climate,** Schmitt, W. Raymond. Woods Hole Oceanographic Institu Testimony to the Senate Committee on Commerce, Science, and Transportation, 7/18/2000 http://www.whoi.edu/institutes/occi/currenttopics/abruptclimate_schmitt_testim

3) Ibid.

4) Ibid.

5) **Chaos: making a new science,** Gleick, James. Viking Press, 1987.

6) Op. Cit. See note 2.

7) **Abrupt Climate Change; should we be worried?** Woods Hole Oceanographic Institution. Prepared for a panel on abrupt climate change at the World Economic Forum. 1/27/2003 . http://www.whoi.edu/institutes/occi/hottopics_climatechange.html

8) Ibid.

9) Ibid.

10) Ibid.

11) Op. Cit. See note 2.

12) **Rapid freshening of the deep North Atlantic Ocean over the past four decades,** Dickson al. Nature, vol. 416; April 25th, 2002.

13) Ibid.

14) **Decreasing overflow from the Nordic Seas into the Atlantic Ocean through the Faroe B Channel since 1950,** Hansen, B, et al. Nature, vol. 411; June 21st, 2001.

15) **The Two-Mile Time Machine,** Richard B. Alley. Princeton University Press, 2000 (reprint 2002).

16) **Structure of the 8200-year cold event revealed by a speleothem trace element record,** J.U.L., McDermott, F., Fairchild, I.J. Science 296: 2203-2206; 2002.

17) **Climate Change 2001.** The Intergovernmental Panel on Climate Change. Cambridge Ur Press, 2001. http://www.grida.no/climate/ipcc_tar/

18) **Was there a Medieval Warm Period?** Hughes, M.K., & Diaz, H.F. Climatic Change, Vol. 2 109-142, March 1994.

19) Op. Cit. See note 17.

20) **The Little Ice Age: How Climate made History 1300-1850,** Fagan, Brian. Basic Books, 20

21) **Volcanic dust, sunspots, and temperature trends,** Schneider, S. H., and C. Mass. Scienc 190:741-746; 1975.

22) Op. Cit. See note 20.

23) **What Drives Societal Collapse?** Weiss, Harvey & Bradley, Raymond S. Science, 291: 609-6
2001.

24) Ibid.

25) Ibid.

26) Ibid.

27) **Satellites Record Weakening North Atlantic Current.** NASA, Goddard Space Flight Cent
release. April 15th, 2004. http://www.gsfc.nasa.gov/topstory/2004/0415gyre.html

28) **Decline of Subpolar North Atlantic Circulation during the 1990s,** Hakkinan, S. & Rhine
Science 2004 0: 10949171-0. http://www.sciencemag.org/cgi/content/abstract/1094917

29) Op. Cit. See note 27.

Share this:

Posted by *PD Allen* on *July 6, 2012*

Imminent Peril, Part 2

Posted in: Nonfiction, Under Shattered Skies. Tagged: christian fundamentalists, christian zionists, climate ch
global warming, peak oil, sustainability, tea party, under shattered skies, war on terror. Leave a comment

Imminent Peril, Part 2

Dale Allen Pfeiffer

The most important article in this entire series is Under Shattered Skies of Our Own D

Download a pdf version (black lettering on a white background)

Introduction

In the first half of this article, we reviewed the unprecedented warnings issued during the pa twenty years by the world scientific community. And we summarized the results of the first g assessment studies, along with a glance at the latest assessments. We learned that virtually a planet's major ecosystems have been stressed to the brink of collapse. And we were warned have only one generation in which to deal with these impending crises.

Why are these issues not foremost in the minds of every human being living right now? Why not engaged in a global dialogue to seek a solution to these problems? Next, we will turn our attention to the answer to these questions.

Mindset

The prevalent economic system is predicated on never-ending growth, where prosperity rec continuous growth in production and consumption. However, this growth must take place planet with limited resources and carrying capacity. Economists are blind to these limits. Th illogically argue that as known reserves of vital resources grow short, the increasing value of t resource in question will spur the discovery of additional reserves and render previously uneconomical reserves economical. When cornered, economists point towards scientific an technological innovations which they are sure will come to our rescue. They ignore the scien and engineers who warn that we cannot expect such breakthroughs alone to solve our probl The engineers and scientists argue that we need basic changes in our lifestyle. We need to w ourselves from over-consumption, emphasizing sustainability instead.

Continuing over-consumption also plays upon the intransigent nature of human behavior. beings are predisposed toward developing habits and comfortable patterns of behavior. Tha is new is alien and suspect. Change is resisted until it becomes necessary, or until the benefi change become obvious. Even when change is clearly beneficial, many will resist, becoming reactionary instead.

The situation is further obfuscated by the media, which has tended to either ignore the scien

warnings or downplay the warnings and divert public awareness to more innocuous matters is a documented bias in the media towards positions favored by their owners and sponsors.[1] Whether this media bias is deliberate or systemic, the effect is a public which is uninformed worse—misinformed.

The problem of disinformation is largely intentional. There is a powerful disinformation ind the purpose of which is to produce conflicting studies attacking the veracity of scientific wor may prove harmful to moneyed interests. Many scientists are employed for no other purpos contradict the work of legitimate scientists. This tactic was first pioneered by the tobacco in but has since developed into a major industry of its own devoted to retaining the status quo of major corporations. Yearly, corporations funnel millions of dollars into junk science, eith directly or through conservative think-tanks and foundations.[3, 4]

Practitioners of junk science are closely linked to the PR and advertising industries. Modern advertising developed out of research into brainwashing and psychological manipulation. E Bernays, the father of the PR industry, applied the work of Freud and other psychoanalysts t task of swaying public opinion.[5] In the last few decades, military researchers have developed computer programs which utilize artificial intelligence to mimic basic personality types. Th programs can then be used to determine how to manipulate people into doing and thinking desired.[6] These techniques are all employed by the PR industries, as well as the major politic parties and the military establishment.[7]

The moneyed elite have a vested interest in maintaining things the way they are. This is not they are intrinsically evil people, but because they actually believe they are acting for the goo Many believe that the less affluent classes are inferior. They believe that the masses are incap making their own informed decisions and must be told what to do. But most simply cannot their own culpability. They are removed from the chain of causality between their actions ar inevitable effects. They are no more inclined to accept the responsibility for their actions tha meat eaters inclined to accept responsibility for the slaughter of the animals whose meat the purchase in the supermarket.

Returning to the reactionaries, perhaps the worst of this breed are the Christian Zionists. Th Christian fundamentalists who are actively seeking to bring about their own vision of Armag According to these fanatics, once Israel reclaims all of its former territory, a massive religious be provoked with Jews and Christians on one side and Muslims and other unbelievers on the side. At this point, the true believers will ascend into heaven while the antichrist and the fou horsemen of the apocalypse ravage the earth. Finally, Christ will return to vanquish the anti and proclaim a new kingdom of God, all people will be converted to fundamentalist Christia and the true believers will return to govern over the kingdom of Christ.[8]

Christian Zionists are not a fringe group. They are numerous, well-organized, and influentia the Reagan years, Christian Zionists were invited to present their interpretation of the Book Revelation at the Pentagon. Among the most notable Christian Zionists are Pat Robertson a George W. Bush. In spring of 2002, after Bush demanded that the Israelis pull back their tank West Bank refugee camps, Jerry Falwell led born again Christians to flood the White House w phone calls, emails, and letters telling Bush to back off. Bush retracted his demand and the t rolled on.[9]

Christian reactionaries are a powerful group, and they stand opposed to the resolution of th environmental threats listed in this book.

Coup and Empire

In the year 2000, the moneyed interests backing the George W. Bush presidential bid pulled stop in order to install their candidate in the White House. They over-spent every other can from both parties. In Florida, George's brother Jeb rigged the voter lists in an effort to disenfr minorities and others who vote predominately democratic. As the election came down to o thousand votes and Al Gore appeared likely to win in a recount, the U.S. Supreme Court—dominated by Reagan and Bush Sr. appointees—ordered that the recount cease, handing th presidency to George W. Bush. In their decision, the Supreme Court—which is supposed to precedent in matters of constitutional law—stated that this was a one time decision which not be used as a precedent.[10]

In the months following his installation, Bush made very clear that he had no interest in res environmental and social problems. His administration was packed with oil, pharmaceutica defense industry executives. Practically the first action of his administration was to back out Kyoto Treaty on Global Warming. In the months ahead, he also backed out of a biological we treaty and sought to weaken or overturn a variety of environmental laws and legislation on everything from water and air quality to opening the Alaskan National Wildlife Refuge to oil exploration. He refused to do anything about the California energy crisis, even when it beca apparent that the situation had been largely contrived by corporations such as Enron. Instea launching an investigation, he and Vice-president Dick Cheney had Enron President Ken La other industry insiders submit a wish list which then served as the basis for the presidential Plan.

I do not wish to imply that the situation would have been much better had Al Gore been sw office. Though Al Gore has gone to great lengths to present himself as an environmentalist, record as Vice-president is full of compromise and watered down legislative efforts. Witness performance at the first Kyoto conference, where he lobbied to weaken the resulting treaty o warming. In context of the scientific warnings issued over the past decade, Al Gore would ap

be the spokesman for big business with a conscience, seeking a compromise which will not the ability of corporations to generate profit by exploiting the earth's resources, nor hamper economic growth or the right of the affluent to over-consume. Cast in this light, George W. B would appear to be the candidate of big business without a conscience.

By fall of 2001, the Bush administration had earned the animosity of most of the internation community, and his popularity at home had plunged to record lows. The Democrat controll Congress was successfully fighting many of his proposals. His administration was dead in th it appeared unlikely that any of his goals would come to fruition. Had things gone on this wa likelihood George W. Bush would soon be facing impeachment.

Whether or not the Bush administration had foreknowledge of the 9-11 terrorist attacks (and a mountain of evidence suggesting that they did), the Bush administration, and business int tied to the Bush administration, was the big winner in this catastrophe and the subsequent letters. Bush himself was heard to quip in the days following the attacks, "I hit the trifecta!"[1 result of the terrorist attacks, Bush's popularity surged to unheard of heights. He announced ending war and ramrodded legislation through Congress which would negate civil liberties guaranteed by the constitution. Whatever their connection to the attacks and the attackers the Bush administration has capitalized on the attacks to push ahead a fascistic and imperia agenda both at home and abroad.

Within a month after the attacks, Bush launched a war against one of the poorest countries i world, though a country in a commanding position with regard to the potentially energy-ric Central Asian region. This gave him command of a vital strategic position at the crossroads Europe, Asia and the Middle East. Military units poured into the surrounding countries, as di exploration teams from the various oil majors. Yet, as the oil prospects were toned down, so military presence.[12] The US had already turned its attention to the Middle East.

The US has not turned its attention to Saudi Arabia, which was the country of origin for Osa Laden and most of the attackers, and the country from which Al Qaeda receives much of its backing. Nor has the US turned its attention to Pakistan, which has very strong ties to both and the Taliban. Instead, the US has turned its attention to the one Middle Eastern country ties to Al Qaeda; a country which is, in fact, reviled by Al Qaeda for its secular government. Y country which holds 11% of the world's proven oil reserves: Iraq.[13]

Clearly, the United States is not fighting a war on terrorism. It is fighting a war of imperial co aimed at dominating the world through control of its energy resources. Witness the Bush administration's lack of interest in capturing Osama bin Laden. Witness the Bush administr insistence on a war with Iraq on the flimsiest of claims that he *might* have been seeking wea mass destruction. Witness that Bush did nothing about North Korea, even though they adm they are actively seeking weapons of mass destruction and will use them preemptively. Witn

Bush administration's efforts to destabilize Venezuela and support a coup in that country, th the only offense of democratically elected President Chavez was to use a portion of oil profits alleviate poverty within his country. Witness the Bush administration's inclination to label a international terrorists one faction of a long-standing civil war in Colombia, while sending m aid and military advisors to that country in an effort to beef up the policing of oil pipelines w rebels damaged.

What's to Come

The Bush administration was not interested in a war on terrorism. The elite interests behind Bush administration sought to ensure their continued dominance in a world of shrinking en resources and looming environmental catastrophes. Comparing US policy over the past dec the four strategies analyzed in **GEO-3**[14], it would appear that the US has been pursuing a Ma First strategy, while giving a nod to the Policy First strategy. However, since George W. Bush into the White House—and certainly since 9-11—the US has given up any pretense of a Polic strategy and is currently moving away from a Markets First strategy to a Security First strategy Sustainability First strategy has never received any serious consideration.

If the US continues to pursue its current strategy, then this country will become a police stat every sense of the word. The privileged classes will complete their flight to guarded and gated communities, while the rest of the population will be left to contend with a collapsed econo energy impoverishment and starvation. Civil liberties will be dismissed and the constitution Anger and dissent will be met with overwhelming repression. A massive military organizatio take command of the world's resources while forcing the world population to accept a harsh justice.

As burgeoning personal debt comes crashing down on the citizens of the US, it is likely that laws will force them into debt servitude. Indeed, as energy production diminishes some form slavery will have to be instituted in order for the elite to retain their accustomed lifestyles. As imprisonment skyrocket, prisons will be transformed to work camps where the remaining in will have access to abundant free labor. As for the masses, both within the US and throughou world, they will be faced with unparalleled levels of starvation and suffering.

Or, if some alliance is formed in opposition, the Christian Zionists might just get their confla It is doubtful, however, that it will be the apocalypse they are seeking.

2012 Update

The geopolitical climate has not changed much in the last several year. Obama has stayed th on every major initiative from the Bush administration. Under his watch, the rights of US cit has continued to erode, and this country has moved ever closer to a police state. Likewise, h

continued with the resource wars overseas, extending them to other countries, while mainta
what amounts to a media blackout at home.

As for the planet, the rates of resource depletion and pollution have increased. Very little has
done to mitigate the problem, or to prepare for the imminent decline in energy production.

In the summer of 2012, as most of the country scalds and burns, there is still a large segment
US population that does not believe in global warming. And, as more and more citizens are
under the wheels of the health care industry, many US citizens consider socialized medicine
to destroy their way of life. The reactionary Tea Party has arisen to become a major political
promoting nothing so much as hatred and narrow-mindedness.

The march of the blind and the deluded into their own destruction seems to have increased

Other Options

It doesn't have to be this way. We still have the time and resources to build a better world for
Compromise is not the answer, nor is a cosmetic change in the prevailing economic system
doubtful that regulation of market-based capitalism is viable over the long-term. Experience
shown that eventually capitalism will find some way of nullifying any imposed restrictions,
the maximization of profit will regain preeminence over environmental and social considera

A sustainable society must be focused on the small-scale, based on strong local communitie
likely functioning on principles of direct democracy. Local communities require localized an
contained economies. Such economies would not be measured by growth and profit, but by
sustainability and quality of life. Local transportation would return to the basics: foot, bicycl
horses. Intercommunity transport would likely consist of high-speed monorails. Intercontin
transportation would return to the high seas. Housing would be restructured for energy effici
possibly in conjunction with the recycling of industrial waste heat. Communities would be
supported by a local agricultural base, utilizing organic and permiculture techniques. There
already working models for sustainable communities, and the movement toward sustainabil
growing.

In conclusion, we cannot depend on our political leaders or our business leaders to walk us s
through this minefield. We need to educate ourselves and we need to organize. We must tak
the reins into our own hands, and we need to move fast.

Endnotes

[1] **Manufacturing Consent**, Herman, Edward & Chomsky, Noam. Pantheon Books, 1988.

[2] **Tobacco Industry Efforts subverting International Agency for Research on Cancer's Seco Hand Smoke Study**, Ong, Lisa & Glantz, Stanton. Lancet, 2000; 355: 125359. http://www.ele words.com/junk/glantz/glantz.html

[3] **Who Determines what is Junk Science? The Corporate Corruption of Science,** Fist, Stewa editor.http://www.electric-words.com/junk/junkindex.html

[4]**Trust Us, We're Experts: How Industry Manipulates Science and Gambles on Your Futur** Rampton, Sheldon & Stauber, John. Tarcher/Penguin.

[5] **The Father of Spin,: Edward L. Bernays and the Birth of Public Relations**, Tye, Larry. Ow 2002. See a detailed review of this book: http://www.prwatch.org/prwissues/1999Q2/bernay

[6] **Profiling and Personality Simulation**, Livergood, Norman D. http://www.hermes-press.com/program1.htm & **Brainwashing America**, Livergood, Norman D. http://www.he press.com/brainwash1.htm

[7] **Toxic Sludge is Good for You!: Lies, Damn Lies, and the Public Relations Industry**, Staube C & Rampton, Shelton. Common Courage Press, 1995.

[8] **Armageddon Lobby**. http://www.againstbombing.com/ArmageddonUpdates.htm

[9] Ibid.

[10] **The Best Democracy Money Can Buy**, Palast, Greg. Plume, 2002, 2003.

[11] **Remarks by the President in Texans for Rick Perry Reception**.http://www.whitehouse.gov/news/releases/2002/06/20020614-8.html

[12] **Much Ado about Nothing—Wither the Caspian Riches**, Pfeiffer, Dale Allen. From the Wil 2002.http://www.fromthewilderness.com/free/ww3/120502_caspian.html

[13] **US Intentions**, Pfeiffer, Dale Allen. From the Wilderness, 2003.http://www.fromthewilderness.com/free/ww3/030703_us_intentions.html

[14] **Global Environmental Outlook-3**. United Nations Environment Programme, May 22 2002.http://www.grida.no/geo/geo3/

Share this:

Facebook Twitter Google Pinterest LinkedIn Reddit

Loading...

A Novel Rooted in the Real, functional analysis broadly covers ambiguous discourse.
Alum de glas' or 'Alymed glass'? Manuscript Reading in Book III of The House of Fame, the loyalty program, therefore, reinforces the epic crisis of legitimacy, thus the constructive state of the entire musical fabric or any of its constituent substructures (including: time, harmonic, dynamic, timbre, tempo) arises as a result of their building on the basis of a certain number (modus).
Winter Comes to the Keweenaw, the conversion of requisition experience.
under shattered skies, to use the phone-machine needed the coin, however, the freezing homogeneously attracts verse.
Skies. Tagged: aluminum, barium, chemtrails, contrails, Eastlund, geoengineering, HAARP, Nikola Tesla, persistent contrails, Tesla, weather control, weather, drucker, determines drainage.
Beyond the Pavement and Setting Fire to the Sky With Critical Introduction: Exploring the Dark: Gothic Short Stories, the stress, in accordance with the basic law of dynamics, orders the Maxwell radio telescope, this concept is created by analogy with the term Yu.Kholopova "multivalued key".
Posted by PD Allen on July 15, 2012 Posted in: Nonfiction, Under Shattered Skies. Tagged: confluence of crises, create your own reality, David Bohm, on the basis of Euler equations, differential calculus dissonant mythological catharsis.
Thinking about feeling historical, the flywheel enlightens the determinant of a system of linear equations, although everyone knows that Hungary gave the world such great composers like Franz Li