Homo Sapiens!

SAVE YOUR EARTH

from

Mass Extinction

due to

Global Warming

(because no one else is going to do it for you)

Anthony Marr

www.HOPE-CARE.org

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Taina Ketola

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Acknowledgements

Fate, if it exists, has strange and unexpected ways of manifesting itself, personally as well as globally.

On July 5, 1996, an article appeared on page A1 of the Prince George Citizen, titled "Fur Flies at Meeting to Ban Bear Hunts", which began with:

"It was barely civil and sometimes downright ugly. In the end, it took a representative of the Western Canada Wilderness Committee close to two hours to deliver a plea for help to ban bear hunting in BC. Anthony Marr was interrupted, shouted down, and generally abused by hunters in an audience of more than 100 that spilled out of the conference room at the Civic Centre Thursday evening… Marr had barely begun… before he was attacked…"

I was conducting a 2-month road trip throughout British Columbia, the westernmost Canadian province comparable in size to California, Oregon and Washington combined. I was the lead campaigner of what eventually was described as "the highest profile animal rights campaign in Canada 1996" by the Canadian national newspaper the Global and Mail. The trip was to organize and drive a referendum on banning bear hunting in BC. This entailed me to hold meeting with local activists in over 50 communities throughout the province, which were almost always crashed by large numbers of hunters.

In the Prince George meeting, over 100 hunters showed up, heavily outnumbering supporters by almost ten to one. The 15 or so supporters were lined up in the first two rows of seats, with the hunters huffing down their necks from behind. Since I was concentrated more on the hunters, I barely noticed a distinguished-looking middle-aged couple in the first two rows, who I now realize were Dr. Peter Carter and Julie Johnston.

After the "debate", which was in fact a free-for-all for the hunters, I shook hands with the supporters, then moved on to the next big confrontation, which was in Kamloops, whose Daily News reported two days later, "*With calm and respect, Anthony Marr faced rapid-fire questioning from hunters…*" Subsequently (2006), Paul George, head of the WCWC, published his magnum opus "Big Trees, Not Big Stumps", in which he commented, "*Anthony's blunt and unflappable style infuriated the opposition.*" I suppose Dr. Carter and Ms. Johnston witnessed a demonstration of that bluntness and unflappability, which eventually led Ms. Johnston to ask me whether I could be "flapped", but that was another story.

Following is a good illustration of a "twist of fate". If the Prince George event did not happen, this book would not have happened.

Although

- I've been aware of the limits to growth since the Club of Rome published their era-defining book of the same title (The Limits to Growth) in 1972, two years after my graduation from the UBC with a science degree (physics major) which enabled me to fully appreciate the significance of the work, and,
- having camped solo in the East African wilderness including the Serengeti Plains and the Olduvai Gorge (of Leakey fame) in the late 1970s where I conceived of the principle of global **Integrative Transcendence** which I eventually wrote into a book titled "**Omni-Science and the Human Destiny**" (2003) which began with the "Six Critical Signs" of imminent global transformation and concluded on "Earth's Shining Destiny", and
- having been employed in the environmental analytical industry in the late 1980s and early 1990s, thus no stranger to climate change and global warming and stratospheric ozone depletion since their initial debut,

and having been to India three times in the late 1990s, there to witness with my own eyes the vast environmental devastation wrought by human and cattle overpopulation, and,

- in 1999, having formed **Heal Our Planet Earth** (**HOPE** – see www.HOPE-CARE.org),

I had nonetheless been guilty of not having developed the sense of urgency needed to launch a campaign to help save the planet from climate change and global warming. It was not until my return to Vancouver from my 5th **Compassion for Animals Road Expedition** (**CARE-5** – see www.HOPE-CARE.org) covering 35 states in 5 months (Jul-Dec 2007) on the issue of urban deer slaughter and the non-lethal alternative of immunocontraception, when, one cold day not long before Christmas, I received my wake up call.

It was an unexpected email from Dr. Carter, succinct in the extreme, saying, from the first word to the last, "Are you interested in me funding you on a two-year project?"

I vaguely remembered Dr. Carter, because he also attended one or more of my subsequent speeches, one I remember on the subject of **Integrative Transcendence** in the new philosophical system I've dubbed the **Omniscientific Cosmology**. I wrote back to the good doctor, and, six months later, among other things, voila! this book is born.

The "other things" include three **Global Emergency Operation** (**GEO**) speaking/media tours, one per year for 2008, 2009 and 2010, the first slated for June 30 – November 10, 2008, covering 6 Canadian provinces and 23 northern and northeastern US states over 4 months.

Since our re-acquaintance, I've found Dr. Carter to be exceptionally well informed on the subject of climate change and global warming. Under his guidance, I have managed to get myself up to speed in record time in the latest developments of global warming, through which process I have myself become

highly alarmed by the 2005 Amazon drought and the 2007 Arctic meltdown, and dismayed at the gross underestimations in the temperature projections in the latest (4th) Assessment Report put out by the Intergovernmental Panel on Climate Change (IPCC), which was and still is generally regarded as the defining document on the subject. I became part and parcel of the shock experienced by the global scientific community when the 2007 sea-ice-melt extent exceeded IPCC's worst-case prediction by a wide margin. This begged the question: If Mother Nature trounced the IPCC projections so badly in the very year the IPCC report came out, how much more of an underestimation would its hundred-year projections be? After some serious analysis, I arrived at the conclusion that the IPCC summary report, the intended basis for governmental planning and action, excluded entire factors of influence from consideration, notably Methane - which in my opinion is the most dangerous substance on Earth bar none - and the multi-faceted feedback loops which could drive global warming into runaway global heating. The critical term "methane clathrate" did not appear even once in the report summary. One of the reasons for IPCC's gross negligence, deliberate or otherwise, is the fact that the notoriously global-warming-denying Exxon Mobil is an integral part of the IPCC panel. The information I have encountered in my superheated research left me with no room for doubt, which steered me to answer the questions "If not you, who? If not now, when?" with "I, Now."

At this writing, I'm within 3 weeks of my departure from Vancouver on the 6-provinces-and-24-states-in-4-months **Compassion for Animals Road Expedition #6** (**CARE-6**), and I have other people to thank: Taina Ketola who has been an invaluable help in organizing the tour from the start, Lane Ferrante who helped organize **CARE-5** and continues to support CARE-6, Julie Johnston for her implicit support and for editing the book, Captain Paul Watson and the Sea Shepherd Conservation Society for their inspirational work, Alex Hershaft of FARM

for the magnificent Animal Rights National Conference, Peter and Anne Muller for their Coalition to Abolish Sport Hunting (CASH) and League of Humane Voters (LOHV), Rick Habgood for his Surviving the 21st Century radio program, Marge Adams for her Animal Voices radio program, Veda Stram for the Animals Voice magazine article, Rev. Frank Hoffman for being my volunteer co-webmaster, Dr. Steve Kaufman of Justice for Animals Fund and Vegetarian Advocates who has been supportive since CARE-1, Dr. Elliot Katz of In Defense of Animals who has donated to more than one CARE tour, Barbara and Fred Metzler for their boundless hospitality, Rafe Mair for his great contribution to society via media, and Allegrea Rosenberg (WI), Amy Burns WI), Angi Metler (NJ), Anja Heister (MT), Annette and Scott Tanner (BC), Barnett family (NY), Bev Stayart (WI), Brenda Davis (BC), Bruce Foerster (BC), Carmen Crosland (BC), Carmen Gentry (MD), Carol Loomis (PA), Carol Rivielle (NJ), Caryn Hartglass (NY), Charlotte Templeton (MD), Coby Siegenthaler (CA), Connie Durkee (OR), Cory Davis (BC), Dane Gilbert (BC), Dave and Jerry Taylor (MT), Derek Goodwin (MA), Doris Lin (NJ), Erika Caballos (BC), Fireweed (BC), Freya Dinshah (NJ), Gayle and Rosie Hoenig (CO), Gloria Bjork (BC), Jack Nugent (IL), Janelle Kowal (MI), Janet Pizar (NJ), Janice Blue (TX), Janice Kobi (OH), Janice Pennington (MB), Jennifer Grill (MD), Jerry Cook (NC), Jim Corcoran (GA), Jocelyn Lovell (ON), Judy McMillan (BC), Karen Orr (AB), Kat McAfee (NJ), Kim Kerr (AB), Kristal Parks (CO), Laura Hendricks (FL), Leah McConnell (WA), Linda Hone (NM), Lois Baum (NY), Lori Fitzgerald (BC), Lynn Gladhill (ME), Lynn Gorfinkle (CT), Luciana Burns-Dwyer (WI), Lucienne Anczykowski (BC), Marcie Gauntlet (BC), Marv and Betty Burns (WI), Matthew (my brother) and Linda Ma, Melissa Ma (my niece), Michael Alvarez-Toye (AB), Nan Sea Love (CA), Natalie Jarnstad (CT), Neil Gregory (BC), Neil Sumner (ON), Patty Mellini (OH), Rebecca Monaghan (OR), Reid Pennington (MB), Roxy Pettifar (BC), Sarah Yu-

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My first book **Omni-Science and the Human Destiny** was dedicated to a child named Christopher, then 3 years of age. Now, Christopher is 19. The dedication remains.

Last but by far not least is my loving mother, who, at age 89 so feeble she can hardly walk ten feet without pausing for breath even with assistance, even at pain of my 4-month absence, fully realizing that I may not see her smile again upon my return, is giving HOPE-GEO-1/CARE-6, as she did CARE-1, CARE-2, CARE-3, CARE-4 and CARE-5, her unconditional blessing. If you see any traces of altruism and courage in me, you know where they came from.

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Introduction

by Anthony Marr

When it comes to global warming, there are three categories of people: those who accept it, those who deny it, and those who don't know and/or don't care.

Among those who accept global warming as fact, almost all base their perception of it on the reports produced by the Intergovernmental Panel on Climate Change (IPCC) without question. And even so, they tend to take IPCC's worst-case scenario as they would science fiction.

Then came 2007, the year of release of the 4th IPCC report, which was based on data available up to December 2005. At the very same time that people were looking at the five IPCC scenario graphs, the Arctic itself refuted even the "business-as-usual" worst case scenario as being a gross underestimation — by a factor of 3. In other words, in the summer of 2007, the Arctic sea-ice melted at a rate three times faster than predicted by IPCC's worst-case scenario

So all in all, up to the summer of 2007, almost every person on Earth either rejected global warming, knew nothing about it, or grossly underestimated it. Almost no one has seen global warming for what it really is. "Almost" because I know at least one exception. His name is Dr. Peter Carter.

Meanwhile, hurriedly, scientists readjusted their projection from 50%-summer-Arctic-sea-ice-loss-by-2100 to 100%-summer-Arctic-sea-ice-loss-by-2013. And yet, guess what? The people-in-the-street, even those who accept global warming as fact, being controlled one way or another by Big Oil, continue to hold on to the hopelessly inadequate IPCC medium-case scenarios, while driving for a continuation or even expansion of the

very same "business-as-usual" suicidal societal behavior that has forced the Arctic sea-ice-melt to shatter the worst case scenario in the first place.

Where is the logic of this? Does this support our self-claim of being creatures of intelligence and reason?

One reason for the IPCC's underestimating is that they excluded from consideration entire factors of influence, each capable of raising the global temperature by a full degree or more. Most notable is the conspicuous and complete absence of the all-important term "methane clathrate" (see the chapters in this book) in the IPCC Assessment Report's Summary for Policy Makers which forms the basis of national and International policy. This all but invalidates the accuracy and credibility of all IPCC projections.

Another point to ponder is that an integral part of the IPCC panel is Exxon Mobile, whose current stance is to expand fossil fuels development at all future cost. The most dangerous thing to do with the IPCC report is to take it as the gospel truth, and treat its predictions like biblical prophesy.

This book is a critical departure from the IPCC report. It deals with the bad side of IPCC's worst-case scenario. We believe that the information conveyed herein is closer to the truth than the IPCC report by far, and infinitely more so than those produced with Big Oil money.

And this truth is to be ignored at our children's peril, and the peril of life on Earth, and the life of Mother Earth herself.

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Dear Homo Sapiens of Earth

by Anthony Marr

Dear Homo Sapiens of Earth, whose footprints now roam the craters of the moon, beware. Beware of the 8 Cosmic Signs:

1. For millions of years, Earth's night side has been invisibly dark, but now, suddenly, there is light, artificial light.
2. For millions of years, forests have thrived unmolested, but now, suddenly, there is wholesale deforestation.
3. For millions of years, Earth's atmosphere has been clean and pristine, but now, suddenly, there is pollution and global warming.
4. For millions of years, the hydrosphere has been slightly alkaline, but now, suddenly, there is acidification.
5. For millions of years, the ozone layer has shielded the biosphere from harmful solar UV radiation, but now, suddenly, it has been compromised.
6. For millions of years, as a radio source the Earth has been silent, but now, suddenly, it is inundating its inter-planetary and interstellar neighborhood with its news, movies, documentaries, commentaries, soap operas, sitcoms, commercials… and televangelical sermons, which still preach that you are the be all and end all of all Creation.
7. Never in its 4.6-billion-year history has Earth generated a single thermal nuclear reaction, but now, suddenly, she is in danger of generating too many too soon.
8. Earth was born of gravity, and by its own gravity its body parts have always been bound, but now, pieces of Earth – spacecraft, so called – are seen to suddenly fly away, some never to return.

Among Earth's spacecraft are the Apollos, from whose #8 was broadcast a prayer as follows: *"Give us, o God, the vision which can see thy love in the world in spite of human failure. Give us the faith, the trust, the goodness in spite of our ignorance and weakness. Give us the knowledge that we may continue to pray with understanding hearts, and show us what each of us can do to set forth the coming of the day of universal peace. Amen."*

And the Pioneers 10 & 11, each carrying an identity plaque showing the position of Earth and the image of Homo Sapiens, which some humans call "the image of God."

And the Voyagers 1 & 2, each bearing an audio-visual recording of Earth sights and sounds, the latter including earthquake and thunder, bird and whale songs, human music and speech, the last being excerpted as follows:

From the Secretary General of the United Nations: *"As the Secretary General of the United Nations, an organization of 147 member states who represent almost all of the human individuals of the planet Earth, I send greetings on behalf of the people of our planet. We step out of the Solar System seeking only peace and friendship, to teach if we are called upon, to be taught if we are fortunate. We know full well that our planet and all its inhabitants are but a small part of the immense Universe, and it is with humility and hope that we take this step."*

From the President of the United States of America: *"This is a present from a small distant world, a token of our sounds, our science, our images, our music, our thoughts and our feelings. We are attempting to survive our time so we can live into yours. We hope some day, having solved the problems we face, to join a community of galactic civilizations. This record represents our hope and our determination, and our good will in a vast and awesome Universe."*

From the citizens of Earth: *"We send all beings of the Universe an affectionate greeting of peace and happiness. May the future grant us the opportunity of meeting."* (in Spanish) / *"Greetings from our friends amongst the stars. If you can cross the barrier between*

Earth and sky then do it. It is our desire to meet you." (in Arabic) / "*Welcome to our world.*" (in Polish) / "*How are you? We are thinking of you. Please come and visit.*" (in Chinese) / "*We used to believe that the Universe was created for us humans on Earth alone, but we can no longer maintain this belief. We now think that you may exist to share this Universe with us, and have the power to help solve the many problems here in our world.*" (in Efik) / "*Please contact.*" (in Gujurati)

In short, three words: "Greeting," "Welcome" and "Help!" And I, for one, hear them with joy and compassion. For the first, I salute you; for the second, I come to you; and for the third, I will do my very best for you.

I am Raminothna,

the Fortunate and the Called Upon

at your service.

p.s. At midnight on May 17, Saturday, come to the upper viewpoint on Cypress Mountain overlooking the city of Vancouver, and you will find me there.

* * * * *

The above message was what I received as a reply to a blog I had posted in my website www.HOPE-CARE.org a couple of weeks ago, titled "***RUNAWAY GLOBAL HEATING HAS BEGUN!***" The return address was Raminothna@gmail.com.

I fired back a reply: "Who are you? What for?" But there was no reply.

On Saturday night, I drove up Mount Cypress around 11 p.m., and pulled into the gravelly glade the size of several football fields, surrounded by thick forest on three sides and ending in front on the edge of a wide cliff overlooking the city of Vancouver 3,000 feet below, which resembled a carpet of light

stretching from the foot of the mountain across the Burrard Inlet towards Washington state on the southern horizon. I parked the car there, facing the city glow.

It was the second day of a three-day heat wave that hit Vancouver, the first heat wave of 2008. The night was warm. The sky was cloudless and full of stars. The moon was two days from full, and was then directly overhead, bathing the glade with a milky glow. There were two other vehicles there, one a mini-van and the other an SUV, both parked in dark corners of the forest at the back of the glade. I assumed they were mobile love-pads each in its own lover's lane.

I got out of my car, locked it, then walked along the cliff due east by moonlight, until I reached the forest. The edge of the forest fronting the glade was thick with blackberry bramble bushes. I found a narrow gap and forced my way through, scratching my arms and my face. About 10 meters in, I looked back and found myself still able to see the glade, but well concealed from it. There, I found a mossy patch at the foot of a large hemlock, sat down, and waited.

If you believe in time dilation, waiting is certainly the best means to achieve it, especially when next to nothing is happening. At one point, the door of the SUV opened and its interior light came on, then the door closed again and the light went off. Then there was the faint sound of liquid hitting earth, which lasted half a minute, then the door opened again, then closed again, then the engine started, and headlights came on, and the SUV drove away. At another point, I saw the silent streak of a shooting star. Another car drove in, parked near my car facing the city for a few minutes, then drove away. This was followed by half an hour of stillness. Not even the whisper of a breeze, nor the rustle of leaves, nor even the hooting of an owl. A couple of night insects, but not in full cry. Time seemed at a standstill. But my biological clock didn't fail me. When I thought it should be midnight, I checked my watch, and it was midnight, almost. No

one had gone to check my car. Maybe "Raminothna" was late. Maybe it was nothing but a practical joke. Maybe whoever was in the van, which had stayed silent, dark and still as far as I could see, had been laughing their guts out the whole hour watching me through their infrared goggles.

But then, I heard someone whispering in my ears (both), "I am glad you have come."

It was a soft feminine voice, disembodied yet alive. So close the night breeze could have been her warm breath. By reflex I turned to look around, but there was no one. A shiver shot up my spine. Somehow, I recalled once I used a parabolic dish to listen to and record distant bird songs, and to my ears they seemed close at hand. I then installed a small speaker at the focal point of the dish, facing backward, and found that the sounds from the speaker could be projected to a distant listener in a fairly tight beam, and the listener would hear the sounds as if they were emitted close by. Also, I knew that if I sat at the midpoint between two speakers, and the speakers both played the same sounds, I would hear the sounds as if they were emitted from somewhere inside my skull. Finally, I thought of schizophrenics "hearing voices," which of course doesn't apply to me.

I wrote off the twin speakers scenario, because whoever set up the speakers would have had to know where I was going to be for them to place the speakers correctly. This left the parabolic dish scenario, which also had the advantage of whoever was handling it being able to project a sound beam at me as well as receive my replies using another dish equipped with a mike at the focal point.

I looked around again, this time more methodically, but still saw no one. I decided to wait and see what would happen next. I sat up, and assumed a meditative position.

"So, how are you enjoying this beautiful moon-lit night?" the voice said.

I tried to determine its direction of origin, but the sentence was not long enough, and the voice seemed omni-directional.

"Fine," I said, in a normal tone of voice. A one-second burst of low decibel sound as a test, as it were.

"Good," came the instant reply, as if "we" were having a chat across a dinner table.

"Where are you?" I said.

"Somewhere you cannot see. So, you can stop looking around."

I looked some more. "If you aren't in this forest, how do you know that I'm looking?" I said.

"I know human nature."

"So, again, where are you?"

"There are several possibilities. I could give you one, which may or may not be the real one. How about this: I am on the surface of the moon, sending a tight radio beam at a radio receiver in your vicinity, which directs a sound beam at you, or the bright infrared spot that is you. If you can see the moon from where you are, I can see you from where I am. And when you speak, your sounds are being intercepted by a sensitive receiver, which converts the sound into radio signals beamed down to me, or should I say "up"? I am not saying that this necessarily is the case, but let us just assume that it is."

I looked up at the moon involuntarily, and reflected on her "up" and "down." If I were on the moon, I'd be looking *up* at the Earth in the lunar sky.

I decided to try something else. I got up on my feet, squeezed through the thorns again, getting myself more bloodied, and walked back to my car. Near the car, I went to the edge of the cliff overlooking the city and the harbor, and sat down on the grass with my back against a rock.

"I wish I could come and sit with you," the voice followed me.

"Why can't you?"

"By the physical laws, I can; by the social laws, I cannot."

"Why not?"

"Interstellar Non-Interference Principle."

"Who are you?"

"I am Raminothna, the fortunate and the called upon, at your service."

"Okay, let me rephrase. What are you?"

Raminothna: Normally, what one *is* towers over what one *says*, but in our case, to you, what I say is more important than what I am.

I: Still, it does not mean that what you are is not important. So, again, what are you?

R: When you can tell me what you are, you will know what I am.

I: What am I? Another age-old question. I don't suppose it helps for me to say that I'm human.

R: Not particularly. It is about the same as an ant saying to you, "I'm an ant," if the ant does not understand what an ant is. Conversely, it makes no sense to the ant if you tell it what a human is.

I: But if I tell you that my species is the one responsible for driving this planet to runaway global heating, you might be able to tell me, for example, that you are an interstellar planet saver, or savior, here to save the Earth for us."

R: This is a sharp argument. But, no, I am not a planet saver, nor a savior.

I: Then why are you here?

R: To observe, to understand, to analyze, to evaluate, to report, and, where you are concerned, to advise, and, if the worse came to worst, to stay with you so that your demise would at least not be too lonely.

I: To advise is the best you can do for us?

R: The best anyone not of your planet can do for you, due to the interstellar non-interference protocol.

I: Why can't you just give us the blueprint for a perpetual motion machine? All problems would be solved.

R: But for three things. One, the solution then would not be yours. Two, knowing your species, you would wage war with it as much as or even more so than wage peace. And three, evading the test is equal to failing it.

I: Test? What test?

R: The cosmic test that all intelligent and technological species sooner or later have to take.

I: Again, what test? Whether or not we can survive ourselves?

R: To begin with.

I: What else?

R: Whether you can save your planet from mass extinction due to global warming, as you yourself have been trying to do, because if only you survive while 20 million species die because of you, you will just go elsewhere in the universe to rape, pillage, plunder and murder.

I: Tall order, especially considering the corner we have painted ourselves into, or should I say the mess we have made in every corner of the world.

R: Tough test, no question.

I: But why? Why do we have to be tested at all. Why can't we just live happily ever after?

R: First, because this is not a fairy tale. Second, because your world is finite, as are your needs, but not your wants. Sooner or later demand will exceed supply, and the environment will be irreparably overwhelmed.

I: The overwhelming has in fact begun.

R: Thus, your cosmic test. But do not take it personally. This happens on every planet with intelligence and civilization at one critical point in its life, to whatever galaxy it may belong.

I: So, some make it and some don't?

R: Yes.

I: And you won't lift a finger to save those who fail?

R: That is a pretty cold way of saying something that has to be.

I: According to whom?

R: The interstellar non-interference protocol.

I: Based upon what? Some kind of cosmic law?

R: Simply: Let those that are destructive commit self-destruction, and let those that are constructive construct their own stellar and interstellar future.

I: Even if the destructive are beautiful and lovable?

R: Are you referring to yourselves?

I: Well, yes and no. We can be very ugly and despicable, too.

R: So my answer is: Yes.

I: What is the percentage of passes and failures?

R: I cannot tell you this either.

I: Why not?

R: If the success rate was high, you would slack off. If low, you might lose confidence in yourself. It is best just to do your best.

I: Do you want us to fail, or do you want us to pass?

R: Here is an analogy. In the incubation room are 1 million eggs. Some will not hatch. Of course the caretaker would want as many eggs to hatch as possible.

I: But you won't do anything to help those eggs you know won't hatch?

R: Is this a trick question?

I: In what sense can it be a trick question?

R: If I said, no, I will not help those I know will not hatch, then you would say that since I am here to help, your "egg" *will* hatch.

I: I'm not as intelligent as I look.

R: Alright, I will say this. If I knew that a planet is beyond help, I would devote my time and energy to another that has a chance.

I: So, this planet Earth here has a chance?

R: I am here, am I not?

I: What kind of a chance? As I said, runaway global heating has begun, and it can only get worse, exponentially, until all the forests dry to desert, all the oceans become an acid bath, and the entire biosphere turns to dust. If allowed to run its course, runaway global heating won't end until all the methane clathrates have been released from the permafrost and all the meltable clathrates from the ocean floor. Where there are 805 gigatons of carbon in the atmosphere today, there will be thousands of gigatons then. Where the concentration is 385 parts per million of carbon in the atmosphere today, it will be thousands of parts per million. The Earth will become a second Venus with the atmospheric temperature in the hundreds of degrees. No life can exist under those conditions, not even heat resistant and sulfur loving bacteria. If the mere 0.6 degrees Celsius (1 degree Fahrenheit) global temperature rise today since the pre-industrial times is enough to begin melting the permafrost, which releases vast quantities of methane (see www.HOPE-CARE.org, global warming section, Arctic subsection), what is there to stop permafrost melting at 1, 2, 3, 4, 5, 6 degrees warmer than today? The methane-caused global heating will feedback upon itself, and the

cycle will become a spiral to oblivion. As long as global warming reigns there is no such thing as stabilization at any temperature because methane release is beyond our control. And our citizens of profit, our corporations of greed and our governments of corruption will make damn sure that will happen.

R: Where is the second part of your sentence?

I: What second part?

R: The positive part.

I: Is there a positive part?

R: In everything is a positive part. Even the blood-sucking mosquito is food for fish and birds.

I: So, what is the positive part about humankind? I see nothing. Life on Earth would do much better without our species screwing things up left, right and center.

R: For a time.

I: What do you mean "for a time"?

R: Until the next asteroid comes crashing down.

I: A replay of this planet's fifth major mass extinction bout, the one that wiped out all the dinosaurs.

R: Imagine T-Rex being able to fire a rocket with a nuclear bomb to deflect that asteroid's trajectory.

I: Incredible.

R: If this happened today, most major species, including tigers, eagles, dolphins, whales… would be wiped out like the dinosaurs. Imagine the rhesus monkeys firing a rocket with a nuclear bomb to deflect *this* asteroid's course.

I: Equally incredible, not even the chimpanzees can do that.

R: How about the human primates then?

I: Hmm, I see what you mean.

R: You have discovered that your planet has experienced

five major mass extinction bouts in the geologic past, only one of which, the fifth, was caused by an asteroid strike. The other four were caused by climate change. Which was the worst?

I: The third, the End-Permian Mass Extinction 251 million years ago, wiped out 75% of all land species and 95% of all marine species.

R: Obviously climate change is at least as potent as a huge asteroid strike in terms of killing power.

I: Haven't thought of it that way.

R: So my question remains: What is the technological primate going to do about this anthropogenic equivalent of a major asteroid strike?

I: I think our silver bullet, in terms of technology, is atmospheric Carbon Capture and Sequestration (CCS), in combination with non-combustion energy technologies including solar, wind, geothermal, tidal and wave power.

R: These trillion-dollar-ventures could work, but how do you intend to fund them?

I: I have launched an online petition at www.thepetitionsite.com addressed to the UN Secretary General Ban Ki-Moon, asking him to orchestrate the formation of a $120-billion-per-year Global Green Fund for such projects, by means of a 10% across-the-board reduction of the $1.2 trillion global military expenditure.

R: I wish you success. But would technology alone suffice?

I: No. We need a social and economic reform, some say revolution, as a means of adapting to the new environment imposed by global warming.

R: What kind of revolution?

I: A friend of mind calls it "Re-Evolution." And another friend calls it "E-Revolution." One way or another, things have got to change, and change fundamentally.

R: Such as?

I: Socially speaking, greed and selfishness should be replaced by altruism and unconditional giving and sharing. Economically, the silver standard, the gold standard, even the money standard itself, should be replaced by a moral standard based on awareness of facts, knowledge of truth, reverence for nature, compassion for animals, love for the planet, responsibility to our children and all life on Earth, and a higher self-determined destiny.

R: And what is this destiny?

I: I have no idea.

R: If you do not know your destination, and you travel, what do you become?

I: A drifter.

R: What is the purpose of a drifter?

I: None.

R: What is the purpose of the human species?

I: According to whom?

R: Humans.

I: Our species as a whole? Up to now, none. The best we've come up with is some kind of philosophical or religious Utopia that is all theory and no substance, and where some scenarios could actually lead our species into hell.

R: So, your species is adrift?

I: Up to now, at best. I do think that we need a beautiful destination to strive for. A worthy destiny to fulfill. A compelling vision of what we're trying to create.

R: So, where are they? What are they?

I: I don't know.

R: If you have no destination; what about a path, the right way that can lead you to the best destination, wherever it be?

I: "Path" in Chinese is "Tao." The Chinese advanced Taoism

a few hundred hears before Christ, in which context "Tao" means "Way of the Cosmos." The Tao Teh Ching says, "In the Cosmos, Man should accord his way to the Earth, the Earth to the sky, the sky to the Tao, and the Tao simply is, according to its own nature." So, if we follow this Way of the Cosmic, we should arrive at the right destination, wherever it be.

R: So, what is this Way of the Cosmos, this Tao?

I: Unfortunately, the Tao Teh Ching also says, "The Tao that can be spoken is not the eternal Tao."

R: So, there is a path, but you can never tell where it is?

I: That's about right.

R: So, what good is this system of thought?

I: So far, no good, and Taoism has since degenerated from a school of philosophy into a house of sorcery.

R: What if this Tao can be known, and spoken?

I: Then it would be truly enlightening, and perhaps even planet-saving. Why? Can it?

R: First thing to note: With the unknown, never say "Can't."

I: So, Lao Tzu was wrong, to say that the Tao cannot be spoken?

R: You can answer this for yourself, after *you* have spoken it.

I: Me? To speak the Unspeakable? Hold on for a second there. I'm not a miracle worker. I cannot conceive the inconceivable, and do the undoable.

R: You can, and you will, before the night is out.

I: You're kidding me. More than two thousand years without an answer, and I could do it within five hours?

R: Maybe within the hour, if you perform optimally.

I: Well, we'd better get started ASAP then, eh?

R: Immediately-or-sooner always suits me fine.

I: So, give me a kickstart.

R: Tell me. Have you heard of the "Superorganism"?

I: Yes. It was a term first coined by social insect researcher Morton Wheeler, in 1937, referring to an insect society – of social insects like wasps, ants, bees and termites – as a single living organism of a higher order, or level of organization, that is, society as organism. But since the constituent individual insects of an insect society are themselves organisms, Wheeler dubbed an insect society a "superorganism." Edward O. Wilson, a pioneer in sociobiology, defines the superorganism as "a collection of single creatures that together possess the functional organization implicit in the formal definition of organism."

R: Do you see any repetitive pattern yet?

I: Repetitive pattern? No. What repetitive pattern? What for?

R: For finding the Path, the Way of the Cosmos, the Universal Masterplan, the Tao. To know the future by knowing the past.

I: Well, not yet.

R: What is that to your left?

I: It looks like an anthill.

R: What is in the anthill?

I: One this size would contain upwards of hundreds of thousands of ants, which are differentiated into several castes – the queen, the major workers, the minor workers, the seasonal winged reproductives called alates, and the soldiers – which then cooperate as a functioning whole.

R: What is an ant a society of?

I: An ant? I'm not sure what you mean. It is a social insect, and we have established that an ant society, such as this anthill, is a superorganism.

R: Yes, but what is an ant a society of?

I: Are you saying that an individual ant is a society itself?

R: Is it not?

I: Well, if an individual ant is a society, then it would be a society of its own body cells.

R: How can this happen?

I: I think in much the same way as how the ants form their society – by differentiation and cooperation.

R: Give me some specifics. When did it happen?

I: Before about 600 million years ago, there were no metabions (multicellular organisms). Only undifferentiated cells, each living a private life of its own. But eventually, inevitably, by the principle of differentiation and cooperation, cells developed sociality, and formed their own cellular societies, at first like sponges and corals, but eventually centrally organized cellular societies like a dragonfly or an ant, or a bird, or even a human.

R: So, the individual cells had to give up some of their small freedoms for this transcendent integration. What benefits could there be?

I: "Transcendent Integration," I like that. The benefits were huge. An amoeba, an undifferentiated organism, can crawl on the bottom of a pond at, say, a foot a day top-speed non-stop. But differentiated and cooperative cells, by collectively becoming a higher organism like a dragonfly, which lays its eggs into the pond, attain a quantum leap of power and a higher level of freedom. The cells of a dragonfly, for example, lost their small freedom of individual amoeba-like movements, but together, their society – the dragonfly – can fly over the mountain at 50 miles per hour, when the amoeba cannot even perceive beyond the confines of the pond, much less emerge from it on its own.

R: So, have you seen any repetitive pattern yet?

I: Beginning to. One – organism as society on all levels of

organization. Two – society as organism on all levels. Three, social and nonsocial units on all levels. Four, differentiation and cooperation on all levels.

R: Excellent. Now, what is a cell a society of?

I: Its own molecules, I think. Each cell is a society of its own "social molecules." Each also operates by the principle of differentiation and cooperation.

R: And the molecules?

I: Each a society of "social quarks"?

R: Now, look at Vancouver.

I: I'm looking at it.

R: What is a city in this scheme of things?

I: A city is like a human equivalent of an anthill or a bee hive, or a wasp net, or a termite mound.

R: So, what is Vancouver?

I: Vancouver is a superorganism of differentiated and cooperative Vancouverites, which are social humans.

R: Is Vancouver as an organism social or nonsocial.

I: I would consider Vancouver a social organism, in terms of its relation to other Canadian cities.

R: What is the society to which Vancouver belongs?

I: Canada.

R: And what is Canada in this scheme of things?

I: Canada is a superorganism comprising all differentiated and cooperative Canadian cities.

R: As an organism, is Canada social or nonsocial?

I: Social, kind of.

R: Kind of?

I: Because although the nations are beginning to be social amongst one another, they have not yet formed themselves a

higher organism. There is still conflict and warfare, and international relations are still more competitive than cooperative. Most definitive of all, the nations still uphold their sovereignty as supreme. So, I would deem the rise of life on Earth currently reaching the level of the nations as organisms, but no higher, yet.

R: When the integration of the nations is complete, what will the result be?

I: I think this will mean the rise of a higher level of organization than the national level, and the emergence of a superorganism composed of differentiated and cooperative nations – the planet Earth herself as an organism, to whom the various nations are her various planetary organs, if they continue to identify themselves as nations, that is.

R: What about the military?

I: Just as there is no mutual defense system amongst the organs of the same organism, there will be no mutual defense systems amongst the transcendently integrated nations of the planet Earth.

R: What will happen to the current military forces of the nations then?

I: I think the multinational military forces of today will merge into a single planetary defense force against external threats such as asteroids, and perhaps alien invasions.

R: Alien invasions, à la the War of the Worlds? Listen, if we wanted to invade you or conquer your planet, we would have done so thousands of years ago, effortlessly.

I: This system of reality looks like a fine blueprint for world peace.

R: It also illustrates our Interstellar Nursery of Planetary Eggs.

I: Planet as egg. An interesting metaphor.

R: Not metaphorical. Literal.

I: A planet is literally an egg?

R: With a gestation period and a metamorphic schedule.

I: Really?

R: Tell me. What is the gestation period of the Geo-Embryo Earth?

I: The Geo-Embryo?

R: What do you think it is?

I: The Biosphere?

R: And what is the gestation period of the Geo-Embryo of the planet Earth?

I: Are you saying that the timing of the current crisis is predetermined?

R: Based upon its initial physical properties when it was first formed, every planet capable of supporting life and civilization has its own predetermined gestation period, yes, including the planet Earth.

I: Cosmic Egg Earth's gestation period? I don't know.

R: When was it formed?

I: 4.6 billion years ago.

R: If it succeeds in its Integrative Transcendence, when would it happen?

I: Within the next century or two I suspect.

R: Then Cosmic Egg Earth's gestation period is?

I: 4.6 billion years!

R: Good. Now, some embryos go through several stages of metamorphosis. Do you see this in the Geo-Embryo of the planet Earth?

I: I now certainly do. Every time a new level emerges from a lower one, it is a new stage of metamorphosis. So, since the

Earth has the Molecular level, and the Cellular level, and the Metabion level (multicellular organisms) and the Tribal level (animal societies and human tribal cultures), and the City level, and the National level, and finally the Planetary level, all in all there are seven levels of organization and six phases of metamorphosis in between.

R: Is there a metamorphic schedule?

I: This would be the time table of the different levels emerging from the one beneath it. So, we should start with the Big Bang 13.7 billion years ago as the time of the formation of atomic and molecular matter from the quarks below. Second, the Cellular level arose on Earth about 3 billion years ago. Third, the Metabion level arose about 600 million years ago. Fourth, the Tribal level arose in the form of the first insect societies, I'd say 100 million years ago. Fifth, the "Citian" level, where a city is a society of tribes, where a company or a corporation can be seen as the equivalent of a tribal culture or an insect society. I would put this at a time when tribal cultures began to associate and cooperate, probably a million years ago amongst whale and dolphin pods. Sixth, the National level, which could be pinpointed at the rise of the first human-based empire several thousand years ago. And seventh, the Planetary level, which should emerge about now, or fail to do so.

R: Form a series with these numbers.

I: 0, 5000, 2 million, 100 million.

R: What does this series look to you?

I: I think it could look like an exponential series, but we need to know the true zero point, which I doubt would be set at the time of the "organismization" of the planet Earth. It might be the point of some higher Integrative Transcendence of the Universe up there somewhere.

R: What will happen to Earth after she has succeeded in integratively transcending into being a Planetary Organism?

I: By the now very obvious repetitive pattern, the Planetary Organism Earth will at first be nonsocial. But given time, it will reproduce, and begat offspring throughout the Solar System, which will eventually become social amongst one another, and again by means of Integrative Transcendence, ultimately forming the Stellar Organism Sol, on yet a higher Stellar level of organization.

R: What after that?

I: There are upwards of 100 billion stars in the Milky Way Galaxy, of which Sol is only one. I think this spiral can unfold about three times within the galaxy before reaching the eventual formation of the Galactic Organism Milky Way.

R: And after that?

I: There are upwards of 100 billion galaxies in the Universe, of which Milky Way is only one. I think this spiral can unfold about three times in the intergalactic realm as well before reaching the emergence of the ultimate Universal Organism.

R: If you were to choose three words to describe this Universal Organism, what would they be?

I: Oh my God!

R: Are these the three words?

I: No!

R: What is God?

I: God is believed by the vast majority of this democracy to be the creator of the Universe.

R: God is a matter of religion. The religion by which you have been indoctrinated is Catholic. So what three words do the Catholics use to describe God?

I: Omnipresent, Omniscient and Omnipotent.

R: And what three words would you use to describe the Universal Organism?

I: Since it embraces the entire Universe, it will be all present. Since it encompasses all the knowledge of all the civilizations within it, it can be said to be all knowing. And since an amoeba and a human are only one level of organization apart, noting the quantum leap in power between the two, and since the Universal Organism is a good 10 levels above the individual human, it can be said to be all powerful. Thus, the three words for the Universal Organism could only be Omnipresent, Omniscient and Omnipotent!!!

R: Are there any differences between the Universal Organism and your God?

I: Well, yes. One, It did not create the Universe, but it *is* the evolving Universe. Two, It did not create us; instead, we will be part and parcel of its own self-creation. And three, there is nothing supernatural about this Godly being; It is all natural.

R: And how would you name such a worldview?

I: This worldview encompasses the entire Cosmos, and is based on all fields of science, so I would call it the Omniscientific Cosmology.

R: And what would the central teaching of the Omniscientific Cosmology be?

I: The Tao spoken.

R: So speak it, Homo Sapiens of Earth, speak the "Unspeakable."

I: Integrative Transcendence.

R: Amen.

By then the moon had moved more than half way down the western sky. I was overwhelmed by the vision implanted into my mind. I looked around to re-orient myself. The van was gone. I was all alone, except for Raminothna, who may still be a trick of electronic wizardry, or just a figment of my own imagination.

But you know what? Half a night ago, I would have been devastated were Raminothna not real. Now, though, having seen the Tao, the Way of the Cosmos, and the highest human destiny, and the optimal fate of the Earth, laid out in my brain so clearly and systematically and scientifically and symmetrically, it no longer matters if Raminothna turns out to be real or not. The truth has come forth. The agent may rest.

But I have further questions for Raminothna.

I: This is absolutely amazing and breathtaking. For me at least, it answers not just one great question but all the great philosophical questions rolled into one: The Meaning of Life, the Purpose of Existence, the Human Destiny, the Fate of the Earth….

R: All are interrelated.

I: But let me figure out what in nuts and bolts needs to be done so that our planet can pass this cosmic test.

R: By all means. I am well pleased with you as my choice of a human vehicle on Earth for my visit.

I: Uh, my pleasure.

R: Have you heard of the term Cosmic Providence?

I: Can't say that I have.

R: It goes something like this. Billions of years ago, life arose out of non-life. Since then, life has evolved to produce humans, which in turn created the technological civilizations that feed upon oil. Concurrently some of the dead turned into the fossil fuels fed upon by the technological civilizations.

I: Cosmic providence indeed!

R: But here is the twist.

I: Let me guess. There are more fossil fuels than can be burnt without driving the planet into runaway global overheating.

R: Thus the Cosmic Test.

I: I see. And I concur. The species that cannot pass this test is greedy, selfish, myopic and brutal beyond redemption, and does not deserve to survive to join the interplanetary and interstellar community. And the executioner will be none other than itself.

R: Now, there is a final test for you.

I: For me?

R: Yes, just for you.

I: Okay, go ahead.

R: If you are allowed one yes/no question, what would it be?

I: Will our planet Earth pass or fail this Cosmic Test?

R: Very well. Now, gather five round rocks of about the same size together.

I: Here they are.

R: Arrange four on the ground in the form of a square, with each rock touching its two neighbors.

I: Done.

R: Now place the fifth rock on top of the four to form a pyramid.

I: Done.

R: Now, go back to your car, get a pen, and write this on a piece of paper: "Homo sapiens of Earth will fail the Cosmic Test."

I: Will fail?

R: Yes. Fail. Now, fold the piece of paper twice to make a small rectangle.

I: Done.

R: Now, insert it into the cavity in the center of the pyramid.

I: Done.

R: Now, listen to me very carefully.

I: Which I have been doing all along.

R: Which I fully appreciate. Now, if the Geo-Embryo of your Cosmic Egg Earth is destined to be still-born, the sun will rise, and nothing will happen to the piece of paper. But if the Earth is destined to pass this Test, a Cosmic Hand of Destiny will – before sunrise - reach into the pyramid and reduce the paper to ashes. Good luck, and goodbye.

I: Good bye? Are you leaving?

R: Other worlds await, and I must go to them, as I have heeded your call, and come to you. I sincerely hope that we will see you in the interstellar community one of these eons. So long.

I: Raminothna, wait!

No reply.

The rest of the night was long. But I managed to stay awake. It became colder and colder, and I began to shiver. The near-full moon declined lower and lower until it was lost to view, meaning that the sun was rising higher and higher beneath the horizon. At long last, and all too soon, the eastern sky began to glow. As the last minutes dwindled to the last seconds of this fateful night, and I had sunken to the lowest ebb of my nocturnal despair, a cosmic hand of destiny did reach out, and in a burst of flame from a lighted match, reduced the piece of paper to ashes.

Not a moment too soon, the sun broke through. And in its first glorious rays, I regarded this Cosmic Hand of Destiny, which was my own.

Was 2007, a Year that "Stunned Experts," Possibly the Tipping Point for Arctic Meltdown? What of 2008?

by Anthony Marr

What were you doing in the summer of 2007? In mid July, I was speaking at the AR2007 conference in Los Angeles (www.ARConference.org), and I even participated in a plenary on global warming and human population. Then I spent the next 4 months driving through 30 states working intensely on the deer hunting, bowhunting, urban deer culling and deer immunocontraception issues, as well as forming the Global Wildlife Alliance with member groups in about as many states. But due to my laser-like concentration on the deer and hunting issues, something of enormous global importance slipped right beneath my radar, even though there were newspaper articles and newscasts galore on the subject, and perhaps it did yours too.

I'm talking about the massively record-breaking melting of the Arctic sea ice as well as the Greenland ice sheet.

It is now a year later, and what happened in the summer of 2007 is history. But it is not over, because the summer of 2008 may take it yet to new heights, and no scientist in the world, except those still incredibly in denial, would dare to dismiss the possibility, or even lower its probability.

I have since amassed hundreds of articles on the subject, about 150 of which can be found at www.HOPE-CARE.org. The best way I would suggest that you approach this vast amount

of reading is to not to read them, at least not to begin with, but to just read their titles from beginning (1995) to end (2008). There is nothing sacred about 1995; it just happens to be the year of the first article I've included in this list. There is nothing particularly sacred about now either; it just happens to be the time of this writing. There were many relevant articles before 1995 and surely there will be amazing occurrences in the articles to come, especially those published in the summer of 2008.

You will notice that the tone of the titles of the earlier articles are more or less tentative, but as time rolled on, from year to year, it became more and more tangible, then definite, then seriously concerned, then surprised, then amazed, then unnerved, then shocked, then stunned, then horrified…. Also, you will notice that the estimate of the remaining lifespan of the Arctic ice cap and the Greenland icesheet was shortened from -50% by 2040 to a complete meltdown by 2013 the closer the estimators approached the summer of 2007.

Of course, for every alarm sounded, there were the skeptics who called the alarm sounder an "alarmist." I have included one such debunking article dated January 28, 2007. Obviously what happened in the summer of 2007 totally exonerated the "alarmist" and demolished the debunker. Still, even after the great plunge of 2007, the skeptics and cynics are again mouthing that it was nothing but an "anomaly," and that the ice was reforming. Well, one of the reasons is called "winter." And the summer of 2008 will likely silence them again.

A general consensus amongst the articles was that the 2007 Arctic meltdown exceeded expectations by threefold. Indeed, the titles below contain phrases such as "stunned experts" and "shocked scientists." And what was expected was already quite dire.

This is a direct revelation from nature not to be slighted, much less ignored. The same computer models that underestimated the 2007 Arctic ice melting rate are the same models that

estimated only 2 to 5, maximum 6.4 degree increases in the global temperature by 2100, and a moderate 30% extinction rate, if 6 million species going extinct can be said to be moderate. These same models also underestimated the role in global warming of the greenhouse gas called methane.

Methane as a greenhouse gas (GHG) is 20-75 times more potent than carbon dioxide. The Arctic permafrost contains an immense quantity of methane stored in the solid form of methane clathrate. If the permafrost is melted, atmospheric GHGs would increase by over 100%. The current atmospheric GHG concentration is 385 ppm. Scientists say that the maximum should be capped at 400 ppm (some say even 350 ppm, i.e. lower than the concentration today by 35 ppm, which requires not only stabilization, but reduction) to prevent "tipping" the system into a runaway greenhouse effect.

Historically, the atmospheric carbon content and concentration were as follows:

1700 – 578 gigatons / 275 ppm

1880 – 585 gigatons / 280 ppm

1958 – 720 gigatons / 343 ppm

1994 – 750 gigatons / 358 ppm

2008 - 805 gigatons /385 ppm

A 50% GHG concentration rise means 550 ppm, deep in the danger zone if not past the point of no return. And we haven't even considered the methane stored in clathrate form on and under the continental shelves around the world.

If methane is released as free gas into the atmosphere, it will raise the global temperature even higher, which will melt even more permafrost, which will release more methane… a positive feedback loop that could push the global temperature spiraling out of control. And this is only one of several positive feedback loops.

Another is the albedo feedback loop, where less ice reflects less solar heat, causing more heat absorption, temperature increases and ice melting.

In the context of global warming, there is such a thing as "tipping points." And nine "tipping elements" have been identified in which tipping points exist. I believe that no matter what field and discipline we specialize in, we should all know something about global warming, because it involves all life on Earth and for all time. Arctic sea-ice and the Greenland ice sheet are regarded as the most sensitive tipping elements with the smallest uncertainty. According to current scientific research, the nine tipping elements and their possible timeframes are:

1. *Melting of Arctic sea-ice (in approximately 10+ years, small uncertainty). As sea-ice melts, it exposes a much darker ocean surface, which absorbs more radiation than white sea-ice so that the warming is amplified. This causes more rapid melting in summer and decreases ice formation in winter. Over the last 16 years, ice cover during summer has declined markedly. The critical threshold for global mean warming, between 0.5 to 2 degrees Celsius, could already have been passed. One model shows a nonlinear transition to a potential new stable state with no arctic sea-ice during summer within a few decades.*
2. *Decay of the Greenland ice sheet (more than 300 years, small uncertainty). Warming over the ice sheet accelerates ice loss from outlet glaciers and lowers ice altitude at the periphery, which further increases surface temperature and ablation (net ice loss). The exact tipping point for disintegration of the ice sheet is unknown, since current models cannot capture the observed dynamic deglaciation processes accurately. But in a worst case scenario, local warming of more than three degrees Celsius could cause the ice sheet to disappear within 300 years. This would result in a rise of sea level of up to seven meters (almost 23 feet).*

3. *Collapse of the West Antarctic ice sheet (more than 300 years, large uncertainty). Recent gravity measurements suggest that the ice sheet is losing mass. Since most of the ice sheet is grounded below sea level the intrusion of ocean water could destabilize it. The tipping point could be reached with a local warming of five to eight degrees Celsius in summer. A worst case scenario shows the ice sheet could collapse within 300 years, possibly raising sea level by as much as five meters (over 16 feet).*
4. *Collapse of the Atlantic thermohaline circulation (approximately 100 years, intermediate uncertainty). The circulation of sea currents in the Atlantic Ocean is driven by seawater that flows to the North Atlantic, cools and sinks at high latitudes. If the inflow of freshwater increases, e.g., from rivers or melting glaciers, or the seawater is warmed, its density would decrease. A global mean warming of three to five degrees Celsius could push the element past the tipping point so that deep water formation stops. Under these conditions the North Atlantic current would be disrupted, sea level in the North Atlantic region would rise and the tropical rain belt would be shifted.*
5. *Increase in the El Niño Southern Oscillation (ENSO) (approximately 100 years, large uncertainty). The variability of this ocean-atmosphere mode is controlled by the layering of water of different temperatures in the Pacific Ocean and the temperature gradient across the equator. During the globally warmer early Pliocene period (which was three degrees Celsius warmer), ENSO may have been suppressed in favor of persistent El Niño or La Niña conditions. In response to a warmer stabilized climate, the most realistic models simulate increased El Niño amplitude with no clear change in frequency.*
6. *Collapse of the Indian summer monsoon (approximately 1+ year, large uncertainty). The monsoon circulation is driven*

by a land-to-ocean pressure gradient. Greenhouse warming tends to strengthen the monsoon since warmer air can carry more water. Air pollution and land use that increases the reflection of sunlight tend to weaken it. The Indian summer monsoon could become erratic and in the worst case start to chaotically change between an active and a weak phase within a few years.

7. *Greening of the Sahara/Sahel and disruption of the West African monsoon (approximately 10 years, large uncertainty). The amount of rainfall is closely related to vegetation, climate feedback and sea surface temperatures of the Atlantic Ocean. Greenhouse gas forcing is expected to increase Sahel rainfall. But a global mean warming of three to five degrees Celsius could cause a collapse of the West African monsoon. This could lead either to drying of the Sahel or to wetting due to increased inflow from the West. A third scenario shows a possible doubling of anomalously dry years by the end of the century.*
8. *Dieback of the Amazon rainforest (approximately 50 years, large uncertainty). Global warming and deforestation will probably reduce rainfall in the region by up to 30 percent. Lengthening of the dry season, and increases in summer temperatures would make it difficult for the forest to re-establish. Models project dieback of the Amazon rainforest to occur under three to four degrees Celsius global warming within 50 years. Even land-use change alone, notably slash-and-burn agriculture, logging, cattle grazing and soy plantations, could potentially bring forest cover to a critical threshold.*
9. *Dieback of the boreal forests or taiga (approximately 50 years, large uncertainty). The northern forests exhibit a complex interplay between tree physiology, permafrost and fire. A global mean warming of three to five degrees Celsius could lead to large-scale dieback of the boreal forests within*

> *50 years. Under climate change the trees would be exposed to increasing water stress and peak summer heat and would be more vulnerable to diseases. Temperate tree species will remain excluded due to frost damage in still very cold winters.*

Bear in mind that all these estimates, obtained from currently available material, carry various degrees of uncertainty and some, if not all, could be gross underestimates. I refer to the timeframe as well as the severity. No matter when it comes, a 6 degree global temperature rise… (to end of paragraph)] to [the severity. Of central interest is mass extinction due to global warming. The most solid information we have is that the End-Permian Mass Extinction 251 million years ago involved a global temperature rise of 10oC/16oF due mainly to methane release resulting from massive basaltic floods, resulting in a 75% loss of terrestrial species and 95% loss of marine species. No matter when it comes, a 10 degree Celsius global temperature rise will doom 85% of life on Earth or more, totaling over 15 million species, including possibly our own. And, as the rest of this book will demonstrate, if we carry on "business as usually" (IPCC's term), the global temperature increase will hit 10 degrees Celsius easy. It is just a matter of time.

This is not to say that the world is doomed. It is to say that if we carry on the way we have, which has channeled us into the current predicament to to begin with, knowing what we now know, we would be committing the absolute worst crime possible against nature and humanity on the planetary scale.

Amazon to Become Corn Plantation, or Savannah, or Desert — Your Preference?

by Anthony Marr

I've never met her, but ever since I was a child, I've been in love with her. And I've vowed to do all I can to protect her from harm, for her own sake, and through her, the world. Her name is Amazon.

Now, I see that she is falling apart, and probably dying. How do I feel? How would you feel?

Biodiversity-wise, she still comprises between one third to one half of all Earth's species today. Considered an estimated 20 million species in total, the Amazon alone holds between 7 and 10 million species. I thought the Great Amazon Rainforest becoming the Great Amazon Savannah or the Great Amazon corn/soy/sugar-cane plantation was terrible. But 7-10 million species is what we stand to lose if the Great Amazon Rainforest becomes the Great Amazon Desert – within decades. Every day we do nothing or keep doing what we've been doing means several thousand more species will be added to the grand total. Developing the Alberta tar sands alone may mean a million species or more. Are we really that anthropocentric and selfish?

At Heal Our Planet Earth's website (www.HOPE-CARE.org), I present a collection of articles pulled from the internet using the keywords "global warming Amazon." I did not pick and choose which to include and which to exclude for a biased view. I've included the words of global-warming skeptics and deniers and nay-sayers, as well as CNN, New York Times and

Washington Post and even Greenpeace. And I have included articles from Brazil itself. I suggest first and foremost to scan the titles from beginning (1988) to the present (2008), and then choose a few to read in depth.

In those articles you will notice an alarming development. (To skeptics: Go ahead, call me an "alarmist" and make my day.) In 2004, an "alarmist" predicted a drying trend for the Amazon. In 2005, an unprecedented drought did descend upon the Amazon, devastating ecosystem after ecosystem, eliminating endemic species by unknown thousands, and stunning the people who live on its banks. The drying trend continued into 2006 and 2007.

Meanwhile, in the latter half of 2007 and early 2008, the rate of direct destruction of Amazon rainforests – by slash-and-burn and chainsaw – has accelerated, despite Brazil's promise to curb deforestation for the nth year.

And let's not forget fossil fuels exploration and development in the Amazon Basin.

Several plausible scenarios have predicted Amazon turning into a giant corn, soy and sugar-cane plantation for biofuel, or into a giant savannah that would suit cattle barons and McDonald's well, or into a giant desert (for imported camels perhaps). The real picture is probably a combination of all the above, all bad.

As always, the solution-coin has two sides – conservation and technology. And the key words are just three – immediately or sooner. And the whole coin is just one – our will.

Runaway Global Heating *HAS BEGUN!*

by Anthony Marr

The most alarming phenomenon occurring in the world today is not skyrocketing fuel or food prices, not looming terrorism, not even precipitous deforestation and desertification, alarming as these may be. It involves a substance more dangerous than all the world's weapons combined, nuclear and otherwise. This substance is almost unnoticeable – shapeless, formless, silent, stealthy, patient, remote, almost picturesque and poetic to the untrained eye. It is lethal without seeming to be, until it has killed you and irreversibly doomed your future generations. And it is emerging from the underworld as we speak.

It is called **methane**.

Globally, we are talking about permafrost methane release (see www.HOPE-CARE.org, global warming section, Arctic subsection) as well as oceanic methane release. Once these releases have started, unless somehow interrupted or arrested, global warming will take a quantum leap in short order, and become RUNAWAY GLOBAL HEATING. It will be inexorable, relentless, merciless, exponential, unsurvivable. When it is all said and done, almost all life on Earth will have been extinguished - again, unless somehow interrupted or arrested.

Oceanic methane release is currently mainly a matter of projection, but permafrost methane release is not. **Permafrost melting has begun** (see the numerous pictures of permafrost melting in www.HOPE-CARE.org, global warming section, Artic subsection), and therefore, **so has Runaway Global Heating**.

Let me explain why this is an inescapable conclusion. It is very simple really. You don't need to be an Einstein to understand it.

- The Earth has warmed up less than one degree Celsius since the Industrial Age began in 1880, and this has been enough to begin melting the permafrost on a major scale.
- The permafrost contains frozen methane in various forms to the tune of about 1,000 billion tons, or 1 trillion tons, which will gradually be released into the atmosphere in gaseous form as the permafrost melts.
- As a greenhouse gas, methane is 75 times more potent than carbon dioxide within 10 years of release, and 25 times within a few decades.
- The Earth will certainly continue warming up (by 5 or more degrees Celsius by 2100) from the existing and projected carbon dioxide alone – currently about 805 billion tons in the atmosphere, 385 parts per million (ppm) in concentration - up from 280 ppm in pre-industrial times - and increasing by 8.5 billion tons per year from human activities.
- As carbon dioxide and methane concentrations continue to increase in the atmosphere, a positive feedback loop will result where the atmosphere will warm up more, which will melt more permafrost, releasing more methane, which will warm up the atmosphere even more, which will melt more permafrost, releasing even more methane... This is not a cycle, but a spiral, a spiral towards oblivion.
- This positive feedback loop can certainly bring about a complete permafrost meltdown within decades, releasing all 1 trillion tons of methane-based carbon into the atmosphere, raising the total atmospheric carbon con-

tent to over 4000 billion tons, or almost 1,000 ppm in concentration. This will certainly drive the global temperature well over the IPCC predicted +6°C/10°F worse-case scenario, to perhaps higher than +10°C/16°F where 85% of all species could be driven to extinction.

- This will be more than enough to warm the oceans sufficiently to begin releasing gaseous methane from thawing marine methane clathrate deposits.
- The Earth has undergone five major mass extinction bouts. Of the five, only the fifth – the End Cretaceous 64 million years ago – the one that eradicated the dinosaurs - was caused by anything other than climate change. The third, the End-Permian mass extinction 251 million years ago, driven indeed by catastrophic methane release, experienced a global warming of 10°C/16°F, resulting in the extinction of 75% of all land species and 95% of all marine species. Today, we are in the 6th, the Anthropocene Mass Extinction, which promises to be worse than even the End-Permian, because there is an extra factor in play today not there before - anthropogenic carbon dioxide.
- **Here is the most frightening part:** The amount of submarine methane clathrate far out-weighs permafrost methane clathrate – by a factor of 10. The submarine methane currently locked up in ocean trenches and continental shelves totals some 10,000 billion tons, or 10 trillion tons. If even a minor percentage of this submarine methane is released, the entire biosphere will be toast. Although various deposits are stable to various extents, there are known continental sill methane clathrate deposits today that can be destabilized by an ocean warming of no more than 5°C/8°F.

The one big question. **WHAT IS THERE TO STOP IT?!**

Corn/soy/cane/palm-derived ethanol won't do it. In fact, it will do exactly the opposite, since it still releases carbon dioxide (CO_2), besides destroying tropical rainforests to accommodate ever expanding soy plantations.

Conservation won't do it. Even if we have cars running on 300 miles per gallon, the amount of CO_2 in the atmosphere will still increase, and the temperature will still rise. Even if we stop burning fossil fuels altogether, the temperature will still keep on rising, albeit at a slower rate.

Clean energy – solar, wind, geothermal, wave and tidal – are necessary, can help reduce CO_2 emissions, and can even eventually shut down CO_2 emissions altogether. What it cannot reduce is the atmospheric carbon content and concentration, nor can it control methane emissions from the permafrost, and therefore cannot stop, much less reverse, runaway global heating.

The only technology that has a chance of dealing with runaway global heating is **Carbon Capture and Sequestration** (**CCS**), which by definition absorbs carbon from the atmosphere and actually *reduces* the carbon concentration.

We are not talking about those small, auxiliary CCS systems attached to coal-fired plants. We are talking about gigantic free-standing CCS systems actively gobbling up carbon by the ton out of the atmosphere every day – on a global scale.

Here is another scary part: Billionaire Richard Branson has offered $25 million as a reward for a real-world-viable CCS system, but so far, no one as yet claimed it. What does this tell us?

It tells me that much more than $25 million is needed to research and develop this technology, this plus billions of dollars' worth of other needed environmental projects such as habitat protection, anti-poaching, anti-wildlife-trade and species pres-

ervation. World experts agree on about $130 billion per annum as a bare bone start-up budget to begin the planet-healing process.

Next question: Where does this money come from? These projects are by and large not commercial enterprises, since there is usually no product to be produced (except perhaps algae-based Soylent Green in the case of CCS), and no money to be made. They will have to be altruistic nonprofit endeavors.

Ahem, will the environmental non-profit organizations with multi-billion-dollar budgets form a queue down the block to the left please? C'mon, don't be afraid to be first.

Well, how about the governments? Sure, some have trillions of dollars. Please form a line to the right. No? Have to cut taxes to win votes and so that people will consume more to "stimulate the economy"? Looming economic recession? Expensive social programs? Heavy military expenditure?

Speaking of which, the total global military expenditure stands at about $1.3 trillion per year. And to what end but to increase the total destructive power of our destructive species?

Somewhat of a coincidence, it seems to me, that $130 billion equals 10% of $1.3 trillion, or is it preordained?

If each nation contributes 10% of its military budget to a United Nations-administered **Global Green Fund**, there will be no relative loss of military strength, the world will be 10% safer, the planet will be 100% greener, and the future of our children will be infinitely brighter. Infinitely because the alternative could be no future for our children at all, zero.

Nations can apply their military forces and industries to perform environmental projects and produce environmental instruments and tools in lieu of funds. Soldiers will welcome such safe, benign, benevolent, meaningful and sophisticated projects; no counseling can be better than this for morale.

From this Global Green Fund will come the money for saving the Amazon rainforest, for creating gene banks for endangered species (basically all advanced species), and, case in point, for building worldwide CCS systems.

Google "secretary general global green fund".

Sign the Global Green Fund Petition, **add your comment** (each worth hundreds of mere signatures), then **pass it on** far and wide.

We need the whole world to work together on this one. Thank you.

Anthony Marr Branded "Heretic" for Revolutionary Statement

On 23 April 2008, Heal Our Planet Earth (www.HOPE-CARE.org) founder Anthony Marr made an unprecedented announcement on the World Wide Web that: "RUNAWAY GLOBAL HEATING *HAS BEGUN!*"

Within 24 hours, he was branded an "alarmist" by an internet-prowling professional global-warming-denier, and a "heretic" by an adherent to ultra-conservative global warming projections. Marr accepted both honors with a sad smile and a proud bow.

In May, in an interview of Anthony Marr by Animal Voices on CFRO radio in Vancouver, the following conversation (edited and paraphrased) ensued:

Animal Voices: I know you're known as an animal rights activist, but an alarmist and a heretic?

Anthony Marr: There is a 4-alarm fire brewing, and somebody has to sound the first alarm. Back in 2004, scientists predicted a drying trend for the Amazon rainforest due to global warming, and were promptly branded "alarmist." The devastating 2005-2007 drought exonerated them and temporarily silenced the professional global warming deniers. As for being a "heretic," all I can say is that I'm glad they don't burn people at the stake any more.

AV: Why do you refer to the "global warming deniers" as "professional"?

AM: Because some global warming deniers are paid megabucks to open their mouths for Big Oil to put greasy words into them, then spit the very same words out in public. The entire denial counter-movement is by and large funded by Big Oil.

AV: So what do you do with them? Debate them point by point?

AM: No point in that. Let them say whatever they are paid in diamonds to say. I am paid to say what I say in hearts, the hearts being my love for our children, for the pinnacles of civilization we have achieved, for the millions of species in life on Earth, and for the life of Earth itself. I'm not paid a cent for saying it.

AV: And why do people who subscribe to global warming call you a heretic?

AM: In 2007, the Intergovernmental Panel on Climate Change [IPCC] published its 4th Assessment Report based on information available up to December 2005, in which it projected five major climate change scenarios for 2100. The worst case scenario, dubbed A1F1 – "business-as-usual" – predicts a global temperature rise of 6°C/10°F maximum, 6°C/10°F being generally accepted as the threshold of catastrophic mass extinction. However, the Arctic sea-ice melt rate as of 2005, especially in 2007, turned out worse than IPCC's worst-case scenario by 300%. Those who adhere to some of the less-bad-case scenarios would consider even the 2005-2007 data themselves heretical. And what I announced is even worse than what the 2005-2007 data themselves project. So, I fit very snugly into their "heretic" category.

AV: You call this the 6th mass extinction. So, there were five mass extinctions that happened before? I know only one – the one that wiped out the dinosaurs.

AM: Yes. That was the 5th, the End-Cretaceous Mass Extinction 64 million years ago. But this 5th mass extinction was the only one not caused by climate change, but by an asteroid strike instead. The 3rd, the End-Permian Mass Extinction 251 million years ago, which was indeed caused by climate change, wiped out 75% of all land species and 95% of all marine species including all corals, which took 10 million years afterward to re-evolve. So, it's not theory. It's happened before under similar circumstances, and it is repeatable. It is happening now, and po-

tentially even worse, because of the new factor of anthropogenic carbon dioxide emissions not present in the End-Permian.

AV: **When did this 6th mass extinction begin?**

AM: I'd say about 14,000 years ago, when the North American Megafauna – woolly mammoth, woolly rhino, giant cave bear, giant ground sloth, saber-tooth cat, wild horse… almost simultaneously went extinct. 14,000 years ago was also when the last ice-age was about to end accompanied by global warming, as well as when human beings began to colonize North America . Since then, the extinction rate has been higher than the background extinction rate in geologically more stable eras. But it was not until 1880, when the Industrial Age began, that the extinction rate skyrocketed.

AV: **What is the extinction rate today?**

AM: About 100 species a day, and increasing.

AV: **How many species are there altogether?**

AM: Estimates run from 2 million species to over 40 million species. I'd take the mean of about 20 million species.

AV: **According to your "heretical" scenario, how many species would become extinct?**

AM: If allowed to run its full course, I'd say 100 percent, with the possible exception of the few species of anaerobic bacteria living on the ocean floor near submarine volcanic vents.

AV: That is quite a claim.

AM: It is not a claim, but an inevitability with but one possible exit.

AV: How did you arrive at this conclusion?

AM: A combination of two factors: 1) that today's global average temperature is less than 1° Celsius or 1.6° Fahrenheit warmer than the global average temperature of pre-industrial times, and 2) that the sub-Arctic permafrost is melting.

AV: Less than one degree and some ice melting up in the

Arctic Circle doesn't sound all that threatening to me.

AM: It is exactly because it is less than one degree that makes it that much more threatening.

AV: How so?

AM: Imagine how much more of the permafrost will melt when the temperature-rise climbs by 2 degrees, then 3, then 4, then 5, then 6.... as predicted by even the ultra-conservative Intergovernmental Panel on Climate Change generally accepted as *the* global warming authority. This will be exacerbated by the heat generated by bacterial activities – the "dung heap effect" - on previously frozen organic matter in the permafrost

AV: So what if the permafrost melts down altogether. It won't raise the sea level by more than a foot or two. So the humans and animals will have to move some distance inland. But that is far from all 20 million species going extinct.

AM: Sea level rise is a minor problem compared to the global temperature rise, which will go through the roof.

AV: Why would the melting or even meltdown of permafrost have this drastic effect?

AM: Because of what is released into the atmosphere when the permafrost melts. It is the most dangerous substance on Earth today bar none, far more so than all the weapons on Earth combined – certainly much more potent, but also much more inevitable than a global nuclear holocaust.

AV: What can such a substance be?

AM: Methane.

AV: Methane? Being an animal advocate familiar with cattle farming, I know that methane is released from the cattle themselves. I know it's a fuel, but I don't see it burning the cows. So what's so dangerous about it?

AM: Methane as a fuel, which produces carbon dioxide when burned, is less damaging than methane itself as a green-

house gas. As a greenhouse gas, methane is 75 times more potent than CO_2 in the short run (within years of release) and 20 times more potent in the long term (within decades). So, the more methane in the atmosphere, the worse global warming gets.

AV: So, the permafrost contains methane?

AM: The permafrost is a giant reservoir of methane held in frozen peat or in the solid form of methane clathrate or methane hydrate. When the permafrost melts, free gaseous methane is released into the atmosphere.

AV: What quantity are we talking about?

AM: From surface to 100 meters (330 feet) depth, there is an estimated 500 billion tons. From surface to 300 meters (990 feet) depth, over 1,000 billion tons, or 1 trillion tons.

AV: These are huge numbers, which I'm having trouble grasping. Could you put it in such a way that can help me understand this?

AM: Well, before 1880, the atmospheric carbon concentration was about 280 parts per million (ppm). This translates to a total carbon content of about 580 billion tons. Now the concentration has risen to 385 ppm or a total of about 805 billion tons. So, as you can see, if the permafrost melts totally, it will add 1 trillion tons of CO_2 equivalent in methane into the atmosphere, more than doubling the amount of greenhouse gasses. The carbon total will rise to 1800 billion tons, and the concentration will rise to 865 ppm. This alone will mean the end of the world as we know it, and we haven't even talked about the melting of the oceanic methane clathrate deposits, which totals ten times that in the permafrost or 10 trillion tons. If all oceanic methane clathrate deposits are melted, that would turn the Earth into another Venus.

AV: But how much of the permafrost will it really melt? Surely not the whole thing?

AM: Surely, the whole thing.

AV: Why?

AM: Without even considering the methane release, just the extant carbon dioxide in the atmosphere plus the non-methane feedback loops will drive the global temperature up by 6°C/10°F come 2100, especially considering that the recent Arctic sea-ice melt has already exceeded the IPCC worst case scenario of Arctic melting by 300% this early in the game. If the less than 1 degree rise today can start melting the permafrost, what would +2, +3, +4, +5 and +6 degrees do? These are inevitable numbers within the next century. We don't really need the methane feedback loop to bring about a total permafrost meltdown, releasing all 1 trillion tons of CO_2-equivalent in methane into the atmosphere. This alone will drive the global temperature up by 10°C/16°F no problem which was the thermal maximum during the End Permian Mass Extinction 251 million years ago when 75% of all land species and 95% of all marine species were exterminated. Do you want me to go further?

AV: Further meaning even worse?

AM: Yes. I'm now factoring in the methane feedback loop. With this in play, the speed of the heating will increase exponentially, and the temperature will rise even higher due to the extra methane. By then the oceans will have warmed to the point where the oceanic methane clathrate will have started melting. And there is nothing in nature that can stop it. The only natural way it will end is after all the methane has been released, by which time the atmospheric carbon concentration will have risen to over 10 trillion tons, compared to today's 805 billion tons. The carbon concentration will have risen from today's 385 ppm to a staggering 5000 ppm, when scientists have set the maximum allowable concentration at 450 ppm, some even as low as 350 ppm - 35 ppm lower than today's 385 ppm. The result of a total methane blow out will be global baking up to hundreds of degrees. This said, not all oceanic methane clathrates are meltable, given a great enough pressure. But still, even if a small percentage of the oceanic clathrates give way, the biosphere would

suffer a near total loss.

AV: So, let me make this clear for myself. You are saying that the permafrost has started melting, and that is the beginning of the end?

AM: Nicely put.

AV: So, we are doomed?

AM: If we carry on the way we have been carrying on, absolutely.

AV: But what is there to stop the runaway global heating from spiraling out of control?

AM: Nothing in nature can do it. And there is only one thing that humans may be able do that might be able to slow it down, or stop it, or even reverse it.

AV: Don't leave me suspended too long.

AM: Well, I'll start off by mentioning what won't work. The first thing to realize is that nature won't, can't, do a thing about it. If we push her off her limits, she will let whatever consequences, include 100% extinction, run its course. Corn/soy/cane/palm-derived ethanol won't do it, since it still releases CO_2. On the contrary, it will aggravate global warming by directly destroying thousands of square miles of tropical rainforest every year to accommodate ever expanding soy plantations, thereby also directly causing the extinction of hundreds of thousands of endemic species as the ravage spreads. Conservation is important, but by itself won't do it. Even if we have cars running on 300 miles per gallon, the amount of CO_2 in the atmosphere will still increase, and the temperature will still rise. Even if we stop burning fossil fuel altogether, the temperature will still keep on rising, albeit at a slower rate. Clean energy – solar, wind, geothermal, wave and tidal – these are of utmost importance for long term sustainability, and can help reduce CO_2 *emission*, and can even eventually reduce the *emissions* to zero, but they cannot reduce the atmospheric carbon content and concentration, and they

certainly cannot stop the methane release, and therefore cannot stop, much less reverse, runaway global heating.

The only technology that can deal with runaway global heating is **Carbon Sequestration and Storage**, otherwise known as **Carbon Capture and Storage** (CCS), which by definition pulls carbon out of the atmosphere and actually *reduces* the carbon *content* and *concentration*. We are not talking about small auxiliary CCS units attached to coal-fired plants. We are talking about large-scale free-standing CCS systems actively gobbling up carbon by the ton out of the atmosphere every day – on a global scale.

AV: This sounds expensive.

AM: Hundreds of billions of dollars, no doubt. The Stern Commission estimates that 1-3% of the world's total GDP is needed to fully mitigate global warming. 1% of the global GDP equals about $635 billion/year. World experts think that $120 billion per year is a good place to start, to just slow things down a little to buy us some time.

AV: So where does this money come from?

AM: Again, I will first say where it will NOT come from: industry and government, because there is little or no profit potential in it. There is no product from the process that can be marketed, other than algae-based "Soylent Green" perhaps. Street level investors won't be interested in it. Corporations won't touch it. Governments are already maxed out with their economic woes and expensive social programs and mountainous military expenditures. So, it will have to be a non-profit and altruistic endeavor.

AV: Where in the world can we find hundreds of billions of dollars floating around not already working to maximum capacity, for a non-profit program? Are you suggesting that the super-rich should shell out for the good of all?

AM: I won't hold my breath on that. What we need is to extract it from somewhere already with the money, but where

the money could be better spent.

AV: Where?

AM: If we look at all options, we would likely all gravitate toward the same conclusion. The global military expenditure stands at a towering $1.2 trillion a year or more. 10% of $1.2 trillion equals $120 billion.

AV: Seems like a marriage made in heaven.

AM: I have started a global petition addressed to the United Nations Secretary General titled "***To the UN Secretary General for the $120 billion/yr Global Green Fund for combating global warming and saving Earth.***" If I read the letter out here, it will answer your question fully.

AV: Yes, please do.

AM: It says:

Dear Secretary General Ban Ki-Moon,

On April 9, 2008, the Global Conference on Oceans, Coasts and Islands was featured in a newspaper article titled "Oceans warming 4 times faster than predicted," which concluded with: "money must be spent on protecting international waters," and we would add, "and the atmosphere, the Arctic and Antarctic, the Amazon rainforest, the Boreal forest, African wildlife, biodiversity, in fact, the entire biosphere itself."

World experts have determined that a ***Global Green Fund*** *for healing our planet Earth of $120 billion per annum is the bare bones minimum.*

Almost shockingly, in this hour of critical planetary need, such a Global Green Fund DOES NOT EVEN EXIST. In contrast, the Global Military Expenditure towers $1.2 trillion per annum, and to what good end?

A mere 10% of it would make the $120 billion Global Green Fund.

As a nature-revering, peace-loving and deeply concerned planetary citizen, in view of the current global environmental crisis in climate change, habitat destruction and species extermination, I am writing to participate with other planetary citizens worldwide in presenting the following proposal:

As overseen by the United Nations, all member nations shall contribute ten percent (10%) of their military budgets, totaling $120 billion per annum approximately, to a UN-administered Global Green Fund dedicated to solving the environmental problems of the planet Earth.

Nations may contribute by means of environmental work performed by their military forces (e.g., by using the army for anti-poaching and habitat protection, and the navy for enforcing international laws on the high seas) in lieu of financial contributions.

By this method, there will be no relative loss of military strength for any nation, the world will be 10% safer, and Planet Earth will be 100% greener, and our children's future will be infinitely brighter.

Where the United Nations is concerned, it will finally have a real budget with the real means to heal our planet Earth.

We ask you to please use your influence to facilitate the creation of this Global Green Fund, for saving life on Earth from mass extinction due to global warming and habitat destruction.

Thank you for your attention."

Does this answer your question?

AV: Yes, it does. So, how many signatures are you aiming for?

AM: One million worldwide.

AV: How's it going?

AM: It is only a few days old, and is still taxiing on the runway, but it has already received signatures and comments from over a dozen countries so far. We're in the process of networking with environmental and animal advocacy groups, educational

systems, churches and parenting groups on a global basis. We're also asking signatories to pass it on. So, it should slowly gather momentum until it takes off. Finally, I will be taking this petition on the road on my upcoming 30 provinces/states-in-4-months HOPE-CARE-1/CARE-6 tour, to promote it worldwide.]

AV: How do people go and sign the petition?

AM: Go to www.ThePetitionSite.com and look for the petition there. Or google "secretary general global green fund".

AV: Other than this, what else are you doing to fight global warming?

AM: **Heal Our Planet Earth** has started a major campaign titled the **Global Emergency Operation** or **GEO**, which has four quadrants: the Global Green Fund, the Time-Capsule-of-HOPE-2060, the Shut-Down-the-Alberta-Tar-Sands Campaign, and the Compassion for Animals Road Expedition #6 (CARE-6).

AV: I like your group name Heal Our Planet Earth. Global warming does remind me of the planet running a fever.

AM: Planetary Fever is one of what I call the Six Planetary Diseases. Another is Planetary Cancer, you can guess what it is.

AV: Uncontrolled population growth?

AM: Of both humans and cattle.

AV: What are the other planetary diseases?

AM: Try Planetary AIDS.

AV: Damage to the protective ozone shield. Next?

AM: Planetary Wasting Disease.

AV: Loss of biomass and biodiversity. Next?

AM: Planetary Blood Poisoning.

AV: Toxin pollution. Next?

AM: Planetary Suicidal Tendency.

AV: By nuclear holocaust?

AM: That's the fast way.

AV: And the slow way?

AM: Runaway global heating. Deliberately caused by Big Oil and their political puppet.

AV: Yes, of course.

The Truth About Global Heating and the Evil Betrayal of All Future Generations of All Species

by Peter D. Carter, MD

Never has such a complicated issue been so bandied about by media and the general public yet so misunderstood by both. Never have people been so poorly informed and educated on an issue that is going to affect every single human being on Earth. Never has there been so much complacency when all hands should be at action stations urgently responding to the greatest emergency ever for all life on Earth.

Welcome to the world of global warming! The public isn't being given any inkling of what's going to happen to their children in a few short decades, so they're not up in arms. Businesses and industries are not getting all the facts, so they're in no hurry to change. Educators and environmentalists aren't learning enough to pass it on. Politicians maybe don't want to hear the truth, because, well…. But what is the truth? Who can you trust?

I've been involved in keeping the Earth healthy – and learning how the Earth keeps us healthy – for several decades. What follows is my summary of the research and distillation of the truth. I hope it will help you understand that the only hope for the future of all life on Earth is our action – now.

The truths covered in this chapter:

1. The Truth About the State of Our World
2. The Truth About the Role of the Military in Global Warming
3. The Truth About Extinction
4. The Truth About the Science of Global Climate Change
5. The Truth About the IPCC's Science
6. The Truth About the IPCC's Terrible Deception
7. The Truth About the UN Framework Conventions on Biodiversity and Climate Change
8. The Truth About the Failure of the Economy
9. The Truth About Energy for the Future
10. The Truth About the Cost of Fossil Fuels
11. The Truth About the Failure of Religion
12. The Truth About the Failure of Environmentalism
13. The Truth About Agriculture
14. Can the Truth Save the Future of Life on Earth? (The Solutions Section)

1. THE TERRIBLE TRUTH ABOUT THE STATE OF OUR WORLD

The richest, most glorious regions of life, of Creation, on Earth are going to be destroyed this century due to continuing global climate change.

The AMAZON and other tropical rainforests of the world, the CORAL REEFS, and AFRICA'S WILDLIFE are all disappearing.

Take Africa, for example – the cradle of human existence. It contains about one-fifth of all known species of plants, mam-

mals and birds, as well as one-sixth of all amphibians and reptiles. The African jungles (moist tropical forests across central Africa) are being logged out like the tropical rainforests. These forests are very sensitive to drying, as is the shrubland and savanna of Africa. Africa's wildlife is most famed in Kenya, Tanzania, Botswana and South Africa, but the Kenyan wildlife service already reports serious impacts from climate change. The Okavango Delta of Botswana is renowned as the crown of African wildlife, but it lies in a zone most vulnerable to global climate change and has shrunk to half its size in the ten-year drought there. The Serengeti in Tanzania also lies in a zone most vulnerable to climate change. Southern Africa has experienced ten years of drought.

Experts estimate that areas of suitable climate for 81 to 97% of African plants have been reduced substantially. They are already predicting extinction of 66% of Kruger Park's species. In sub-Saharan wildlife parks, 40% of animal species will be endangered this century.

The human ancestry and the elephant appeared in Africa around the same time, 6 million years ago. We have co-existed for all that time. Until now.

Can we save the planet? There is no question now that the future of all life on Earth is at stake. The issue is the survival or extinction of all species. But the general response is no response – the most terrible irresponsibility. We are a society in deadly deep denial of the issue of all time.

Can we save the planet? The first answer is No. We've been talking about it for over 20 years but now it's too late. The best of the scientists have avoided telling the whole truth and the worst have lied through their teeth at every opportunity for their Big Oil and Coal masters.

Few see that the imminent destruction of life on Earth is the result of our culture, our beliefs, our values and our treatment of science. All our leading lights and best institutions are a part

of this relentless destruction of all life. Einstein said it's crazy to try to solve a problem with the same thinking that caused it in the first place. That's just what we are doing. And it's getting us – and the future of life – nowhere. Our civilization has all life on Earth on a doomsday scenario. So this planet Earth, right now, is as good as gone. It's already a substantially changed and poorer Earth. Most of us are too busy with our own lives to notice that the rest of life is disappearing.

So, can we save what's left of the Earth? That's the question now. Can we draw back from our assault on the biosphere so the Earth can rest and replenish?

Yes, we might still be able to. One thing for sure, though, we won't know until we try. But we have not even started seriously trying yet. The people who once rallied behind the cause of saving the Earth are now all but silent. They call for an end to gloom and doom and rely on wishful thinking.

What the future really needs is a new voice with a new ethic – or a loud voice for an old ethic. It must be a profound Reverence for All Life (like the Jains, Buddhists, and early Jews, Moslems and Christians; St. Francis, Einstein and Albert Schweitzer). It must call for the rights of other animal species and of all children of all species to have a habitable and healthy planet to live in. The Earth and the whole of Life must once again be sacred and holy.

The truth is that the planet our children will inherit is going to be one of substantially and permanently damaged goods. Just how severely damaged depends on us, according to Professor Martin Parry of the Intergovernmental Panel on Climate Change (IPCC).

People might be aware of global climate change but they have not been educated on the topic. (Our education institutions avoid going too deep into the issue of global warming and climate change on the pretext of it being controversial or political. Our educators projecting their denial?)

It's hard to save the planet if you don't understand the problem or the solutions. Here are the basics that must be understood:

- Greenhouse gases are nothing new, and nor is the greenhouse effect. Without them, we could not survive. The problem of global warming has come about because of the extra greenhouse gases we humans have been adding to the atmosphere.
- Greenhouse gases (GHGs) are deadly to life on Earth at high atmospheric concentrations because they lead to planetary overheating.
- Carbon dioxide (CO_2) in the atmosphere is persistent (sticks around for hundreds of years or more) and cumulative (keeps building up).
- The greenhouse gases (GHGs) that each of us emits every day as we function in this industrial consumer culture are unnecessarily extremely high and are going higher.
- The two main GHGs are carbon dioxide and methane.
- Over the first 20 years after emission, methane has more than 60 times the heating power of CO_2. After 500 years, emitted methane has 7 times the heating power of CO_2. (This is why you'll hear that methane is approximately 23 times more powerful as a GHG than carbon dioxide.)
- Eventually, methane in the atmosphere is oxidized into CO_2 and water vapor.
- Most carbon dioxide emitted lasts in the atmosphere 200 years, but 20% lasts thousands of years. And CO_2 from oxidized methane accumulates in the biosphere and persists to affect climate for hundreds of thousands of years.
- The level of CO_2 and methane in the atmosphere is

higher than at any time in the past 800,000 years and probably in the past 20 million years.

- Methane will be released from methane hydrates ("frozen" methane) in deep permafrost as the global temperature rises. This will increase the atmospheric concentration of methane for thousands of years.
- If methane hydrates become freed (destabilized) from coastal and deep waters, some will dissolve in the oceans – making the oceans more acidic – and the rest will rise to the surface of the ocean (because the hydrates float).
- Acidifying the oceans has started reducing their ability to absorb CO_2 from the air.
- Experts with their computer models say that ocean methane hydrate release will increase global heating at least 1.5°C this century. (This is in addition to an extra similar temperature increase from northern peat and permafrost, and even more from dieback of the world's forests.)
- Human beings have never lived with anything approaching this level of GHGs or these temperatures.
- The rate of emissions of GHGs is unprecedented. Life on this planet has never lived under this GHG scenario.
- Our GHGs emitted this year do not impact on us this year. The impact is delayed as the gases are incorporated into the Earth's carbon cycle. The ocean will absorb most of the heat from today's GHGs. They will impact on us in about 20 years and the impact will last for hundreds of years.
- The GHGs of today's generation will hit their children and their descendents for generations to come.
- Every day that GHGs are emitted from now on, they are driving up GHGs in the atmosphere faster and they will

last longer. The impacts on our descendants are getting worse all the time.

- The only way that GHG levels can be reduced is for the Earth's carbon cycle to absorb them. That can only start to happen with virtually zero GHG emissions from us, and that can only happen when or if we stop emitting additional greenhouse gases from our burning of fossil fuels, deforestation, and consumption of flesh.

For years NASA's top global climate change expert, James Hansen, has been warning that a warming of just 1.5°C over the natural pre-industrial global average temperature would make for a drastically altered planet. The present temperature is 0.78°C above pre-industrial. This means we (us and all future generations) are committed to a 1.4°C increase, with no way at present of stopping going well over +2°C.

With just a 0.78°C increase, there have already been ominous rumblings from the vast Greenland ice sheet, icebergs the size of small nations are breaking off Antarctica, the seasons are changing, and species around the world are changing their normal behaviors. Scientists say it might be too late for the great coral reefs whose tiny inhabitants are very sensitive to ocean temperatures.

Despite all these indications, "business" (how we live our lives) seems to go on as usual.

Here, then, are the next questions we must pose:

- How much do we want to lose?
- Will we condemn all animal life on Earth (including the human animal) to a slow and miserable death?
- How much do we love our children and grandchildren?

These are tough questions for sure. But far tougher will be the questions from our grandchildren, like why are the animals dying? and why did you kill the future?

Do we have time to save the Earth? Yes and no.

No, not if we keep wasting time by talking about solutions while not making the changes we need to make. That means we have to start forcing governments and corporations to decarbonize our world.

Yes, if we act decisively to protect enough of the Earth so that life will go on. Although our children and grandchildren are going to inherit a degraded planet, if we save enough of it, over time the Earth will be able to replace what has been lost. But we have to do it now.

In November 2007, the IPCC chair, Dr. Rajendra Pachauri, issued the most important warning ever to humanity: "If there's no action before 2012, that's too late. What we do in the next two to three years will determine our future. This is the defining moment."

What did he mean?

There has been next to no action by nations to "decarbonize" and cut their global greenhouse gas emissions from energy production, the meat industry, transportation, deforestation and cement making.

The Kyoto Protocol has been made a failure by the wealthiest industrialized nations and it expires in 2012. A new binding agreement that has teeth to drastically cut global GHG emissions must be reached before 2012 to replace Kyoto. If not, it will be too late to stop runaway global overheating, which will be the end of humanity and all animal life on Earth.

These next few years will define who we are as human beings.

- Are we for the miracle of life and Creation on Earth or for its death and destruction?

- Are we sane or are we out of our minds?
- Are we human or inhuman as well as inhumane?
- Are we on the side of good in the world or of the greatest evil?
- Will future generations honor us or curse us?

(That "we" is not the entire human species, by the way. Just those of us participating in the Western industrialized consumer economy at this most crucial time for humans and all other species.)

We are defining by our actions or inaction the fate of planet Earth and the future for all generations – of all species – for all time.

2. THE TRUTH ABOUT THE ROLE OF THE MILITARY IN GLOBAL WARMING

No one burns fossil fuel as much as the military – and the most by far is burned by the US military.

The biggest use and worst abuse of our resources are devoted not to saving the Earth but to the militarization of the planet and exploration of outer space. Unlimited resources are made available for massive weapons of mass destruction and tiny land mines that blow off children's hands and feet. Space stations do not go begging for funds, and air forces are not forced to hold bake sales in order to buy new fighter jets.

The world spends a trillion dollars a year on armaments alone. The United States' spending on the illegal occupation of Iraq has increased ever since the invasion and now stands at seven billions dollars a month. Oil has long been both the means and the reason for massive military build-ups, nuclear weapons and wars of all kinds (see Daniel Yergin's The Prize: The Epic Quest for Oil, Money and Power). As the US has depleted its

own oil supply it has increased its aggressiveness, both overt and covert, in international affairs.

Now incurring a totally unpayable amount of debt in order to wage war to fuel its military machine to ensure an oil supply that it burns (destroying the biosphere as it does so), the US government says it can't afford to reduce its greenhouse gas emissions (GHGs).

Most nations, rich and poor, now pay for military forces they can't afford. The world is run by the perpetual war economy. More and more nations, rich and poor, are run as police states, and the global state of mind is a mix of paranoia and narcissism.

It's madness beyond belief. Today's new generation of Americans is inheriting huge economic and ecological debts, both of which are impossible to pay.

Why such insanity?

War and the modern "military machine" are the reason. We can run everything in our world on clean, renewable, direct-from-the-sun energy – except for the manufacturing and running of the military machine. Nothing devours more oil than the military. It's the modern militaries that depend on oil, not the nations' citizens.

There is now a cold war between the two top global GHG polluters the US and China. The US is determined to maintain its overwhelming military might over all regions of the world and China is determined to control its region of world.

We will not be allowed to give up fossil fuels (which we must do if we're to save the future) until there is peace among nations. Yet, as large distinct stores of fossil fuel energy give way to evenly distributed solar energy, the world will be able to live in peace. Not before.

3. THE TRUTH ABOUT EXTINCTION

Everyone knows that extinction is forever, right? But how many care?

Not many are working for the preservation of species. Our society has got used to the idea of mass extinction of species and lost interest.

The perpetual global war economy, which has grown exponentially in the endless struggle of nations to be top military and economic dog, has been destroying the Earth since World War I. The institution of war is killing off all animal life as collateral damage as it depletes the biosphere to exhaustion. All nations are losers in this war-at-all-costs.

Since the late 1980s, world experts on biodiversity have been telling us we are in the sixth mass extinction event of all Earth species. The 2007 International Union for Conservation of Nature (IUCN) report said that life is disappearing fast. The rate of extinction of species is unprecedented – it's beyond anything that has ever happened to the Earth. At the turn of the 21st century, species were being lost over 10 times the natural rate due to the destruction and degradation of wild habitat. In 2006 the American Academy for the Advancement of Science (AAAS) put it at 300 times the natural rate of extinction.

At the 2008 United Nations biodiversity convention meeting in Bonn, Germany, leaders were told the species extinction rate is now 1000 times and headed to 10,000 times the normal rate! Most of the extinctions are from the steady destruction of the Amazon and other tropical rainforests, but accelerating extinctions are occurring in all regions.

We know only too well about the destruction of the Amazon, although no one admits that this alone is proof of the insanity and evil of our industrial consumer economy ("The Economy" for short). But there is other proof.

We don't see what is happening in the oceans, for example. Out of sight, out of mind. Peak fish was back in 1990. Now, what's left is being fished out. Ocean life is being decimated by the industrialization of fishing using sonar, bottom trawling, drift nets and long lines. Bottom trawling ruins the ocean bed and drift nets kill all life in their path. Long lining is killing off the albatross and sea turtles.

The populations of the largest of the fish species are down by 90%. Miles of fishing nets indiscriminately catch all fish species and for every two kilograms (over four pounds) of fish taken for food, one pound of marine life is thrown away after been hauled up, dead or dying, and tossed back into the water. Sharks are slaughtered wholesale just for their fins for high-priced shark's fin soup.

Masses of fish end up as chicken feed and cat food. More is used by the global fish farm industry, which is polluting coastal waters and spreading disease to wild fish.

Ministers at the Bonn meeting were told that in just the past 35 years, 30% of the wild life population of the planet has gone. Species and populations are being systematically exterminated by the globalization of the industrial consumer economy – and at an exponentially increasing rate reflecting the exponential increase in global economic growth. This means that the next 30% of wild populations will go in less than 30 years.

We still know very little about the natural world. There are 1.8 million species known to science out of at least 10 million, if not more.

The 2007 report of the IUCN said that life on Earth is disappearing fast. One in four mammals, one in eight birds, one third of all amphibians, and 70% of the world's assessed plants are on the 2007 IUCN's Red List, assessed to be at risk and threatened with extinction. That's 40% of all species they examined. The exponential rate of loss is still increasing, despite the UN's 1992 Convention on Biodiversity.

A statement by biologists in 1998 said that planet Earth had entered a mass extinction of species event due to relentless destruction of the world's forests and natural habitats – the sixth mass extinction event in the 4 billion years of life. Experts in biodiversity said this extinction event was faster than any extinction event in the past, including the meteor that triggered the extinction of the dinosaurs 65 million years ago.

The IUCN warned that though the destruction of natural habitat is the main cause for the mass extermination of life on Earth, global climate change is of increasing importance.

In the IPCC's 2002 assessment, a 70-page special technical paper, "Climate Change and Biodiversity," was published at the request of the UN Convention on Biodiversity Secretariat. (It was not accepted as part of the official IPCC assessment.) This report said:

> *Climate is the major factor controlling the global patterns of vegetation structure, productivity, and plant and animal species composition. At the global level, human activities have caused and will continue to cause a loss in biodiversity through land-use and land-cover change; soil and water pollution and degradation (including desertification), and air pollution; diversion of water to intensively managed ecosystems and urban systems; habitat fragmentation; selective exploitation of species; the introduction of non-native species; and stratospheric ozone depletion.*
>
> *Changes in climate exert additional pressure and have already begun to affect biodiversity. These changes, particularly the warmer regional temperatures, have affected the timing of reproduction in animals and plants and/or migration of animals, the length of the growing season, species distributions and population sizes, and the frequency of pest and disease outbreaks.*
>
> *Climate change is projected to affect all aspects of biodiversity; however, the projected changes have to take into account the*

> *impacts from other past, present, and future human activities, including increasing atmospheric concentrations of carbon dioxide (CO2).*

This is a devastating assessment of the impact of global climate change on biodiversity, coming on top of all the other long-standing (and long ignored) global environmental degradations, all of which global heating will make much worse. It's also a devastating indictment of our industrial consumer society.

There was no such special report in the IPCC's 2007 assessment, which made headlines worldwide by saying that global climate change could cause the extinction of 30% of species this century. But that was terribly misleading. By 2050, biodiversity experts say, 30% of species will have been exterminated by the destruction of their habitat alone (without adding on the impacts of global overheating). And yet this is the assessment that policy makers and governments will use in their decision-making.

The IPCC 2007 assessment makes no reference to specific species or groups of species – except for corals and polar bears (and then only in the context of losses to hunting from the loss of the polar bear). Damage to ecosystems is restricted to the loss of services to humans. The IPCC, then, is typical of our culture, in that it disrespects wild species and nature. The section on species is short in the extreme. Here it is:

> *The resilience of many ecosystems is likely to be exceeded this century by an unprecedented combination of climate change, associated disturbances (e.g., flooding, drought, wildfire, insects, ocean acidification), and other global change drivers (e.g., land use change, pollution, over-exploitation of resources). Over the course of this century, net carbon uptake by terrestrial ecosystems is likely to peak before mid-century and then weaken or even reverse thus amplifying climate change. Approximately 20-30% of plant and animal species assessed*

so far are likely to be at increased risk of extinction if increases in global average temperature exceed 1.5-2.5°C.

For increases in global average temperature exceeding 1.5-2.5°C and in concomitant atmospheric carbon dioxide concentrations, there are projected to be major changes in ecosystem structure and function, species' ecological interactions, and species' geographical ranges, with predominantly negative consequences for biodiversity, and ecosystem goods and services e.g., water and food supply.

The progressive acidification of oceans due to increasing atmospheric carbon dioxide is expected to have negative impacts on marine shell-forming organisms (e.g., corals) and their dependent species.

Terrible though this will be, it is far from the complete truth. (Note that it refers to the fact that carbon feedbacks, like more forest fires, will amplify the global temperature increase this century.) This section did not include the other impacts on species nor attempt to explain the additive and synergistic effects of these impacts on species extinction. This is misleading, since global warming does not act alone; it will exacerbate all the other environmental degradations that impact on species survival, and will be exacerbated by them. When it comes to biodiversity loss and extinction, adding global warming is like tossing gasoline on a house that's already on fire in several rooms. To species, it's the straw that breaks the camel's back.

What did the science really say? The scientific research (explained in "Extinction Risk from Climate Change," Thomas et al, 2004, Nature) found that the extinction impact from climate change is probably similar to those from habitat loss, and conceivably even greater in some regions. Using the IPCC range of climate scenarios, they estimated that by 2050 between 5% and 50% of the species would be condemned to eventual extinction, with the central range of estimates falling between 15% and 37%

(hence the IPCC's 30% figure). The highest estimate was 58% committed to extinction by 2050.

> *For scenarios of maximum expected climate change, 33% (with dispersal) and 58% (without dispersal) of species are expected to become extinct (2050).*

And though omitted by the IPCC the Thomas paper did include species loss from habitat destruction.

> *An estimated additional 34% of all original species will be committed to extinction due to habitat destruction during 2000–2050.*

And the paper recognized their results were likely to be underestimates in the real world.

> *Contrary to previous projections, it is likely to be the greatest threat in many if not most regions. Furthermore, many of the most severe impacts of climate-change are likely to stem from interactions between threats, factors not taken into account in our calculations, rather than from climate acting in isolation. The ability of species to reach new climatically suitable areas will be hampered by habitat loss and fragmentation, and their ability to persist in appropriate climates is likely to be affected by new invasive species.*

With global habitat disruption escalating, the odds in 2050 for successful dispersal (migration to settle or use new habitat) will not be good and so nearer 58%.

Is it possible? By 2050 could we be looking at 34% of species doomed to extinction by habitat disruption and 58% doomed

by global climate change? Tucked away, separated from the 2007 IPCC section on species and biodiversity, is this:

> *As global average temperature increase exceeds about 3.5°C, model projections suggest significant extinctions (40-70% of species assessed) around the globe.*

The IPCC omitted the deadly collective impacts of habitat destruction combined with global climate change. You see, the destruction of natural habitat not only wipes out species; it has also been found to reduce the Earth's ability to take up carbon.

By causing the mass extinction of species, we are cutting our own throats on climate change (or rather, those of our grandchildren).

4. THE TRUTH ABOUT THE SCIENCE OF GLOBAL CLIMATE CHANGE

The truth is that there is nothing complicated about global climate change. It has been made complicated by both sides of the phony global warming debate. The campaign of confusion launched by the oil industry has been going on since 1990.

First, let's remember that we are changing the planet's climate. This is not natural and this is not an act of God.

Our great-grandparents would have said doing such a thing is crazy. Little did they know what they had started.

Amazingly the fossil fuel-funded deniers are still at it, proving themselves to be insane psychopaths. The result is that greenhouse gas (GHG) emissions have been allowed to soar out of all control. So much so that all life on Earth is now at stake, making the campaign of the fossil fuel industry the greatest evil ever.

The truth of the science is as simple and as certain as the blue sky under which we live.

People long ago used to think they lived under a blue dome. Well, they were right, we do. The sky is blue (and not black, like outer space) because there are a number of gases in our atmosphere. The dome is made up of the oxygen and nitrogen we breathe, of ozone (which protects us from too much ultraviolet radiation from the sun) and of GHGs (which safeguard us from getting too cold). Even though there are several of them (carbon dioxide - CO_2, methane - CH_4, nitrous oxide - N_2O, CFCs, HFCs, PFCs, sulfur hexafluoride - SF6, ozone and water vapor), greenhouse gases make up only a tiny part of the total atmospheric gas. Because they make up such a small part, when we spew out extra gases, it makes for a large difference.

We don't live *on* the Earth. We all live *in* the biosphere and we all live *under* a closed dome that contains just the right mix of gases for us. But the mix is being changed and the dome is being rapidly filled with toxic amounts of gases, all from burning fossil carbon in the form of oil, coal and natural gas.

The atmospheric dome is nearly full of GHGs – just about 5% more space is left before the protective dome changes to a gas chamber.

This small, natural, greenhouse gas part of the atmosphere is the planet's thermostat, allowing life to flourish by keeping the temperature of the biosphere within extremes of hot and cold. This is why, while Mars is far too cold for life and Venus is far too hot, Earth (the Goldilocks planet) is just right – for life.

Temperature regulation works by the greenhouse gases absorbing some of the heat from the Sun that is reflected off the surface of the Earth back to space. The GHGs are more like an insulating blanket than a glass greenhouse. It's like being in bed on a hot, hot summer night and someone piles wool blankets on top of you.

After a little while you get hotter – and then hotter and hotter. Left long enough, the build up of your own body heat could put you into heat stroke. That's why people die in heat waves.

Their body overheats and they can't cool down fast enough. A lot of people die overnight.

The normal global warming warms the biosphere the right amount. Like everything about Nature, this is kept in a balance that supports life. So it's the laws of physics.

Emitting more GHGs by burning carbon that was safely fossilized deep underground means creating more heat – more global warming. But we're beyond global warming now. In fact, we're past global heating. We're already into global overheating.

It's that simple. The more added greenhouse gases, the more heat. No one disagrees with it. It's the law. There never was any debate. It's been recognized for over a hundred years, since Swedish scientist Svante Arrhenius proposed a relationship between fossil fuel combustion, atmospheric carbon dioxide concentrations and temperature.

The greatest physicist of our age, Stephen Hawking, has been pleading with people to stop filling the sky with GHGs. He knows that the planet could heat up so much that life would not survive, like another Venus.

In just a hundred years, our fossil-fueled industrial economy has shot the level of carbon dioxide higher than at any time in the past 800,000 years. There is no argument with this either. Ice cores don't lie.

There are two main GHGs that we have all heard about, thanks to Al Gore: carbon dioxide (CO_2) and methane. Methane is much more powerful than CO_2 in retaining heat; it eventually breaks down into CO_2. Carbon dioxide does not get broken down and lasts in the atmosphere for hundreds of years as it is slowly absorbed by the photosynthesis of green plants growing on the land or by the oceans where it is finally fixed in the shells of sea organisms. CO_2 dissolves in water and so the seas have absorbed a lot of the CO_2 emitted by our industries. If it were not for the oceans' role in the carbon cycle as a major carbon "sink,"

GHG levels in the atmosphere would be far higher.

Since the fossil-fueled industrial revolution, we have been putting ever increasing quantities of CO2, methane and other greenhouse gases up into the sky – all of them to stay up there doing their heating job for centuries. These GHGs are cumulative (because they last so long). The more they are emitted, the faster their levels rise in the atmosphere. None of this science has been disputed. It is indisputable.

Any sudden increase in CO_2 or methane means that global heating will hang around for centuries, thereby keeping the planet hotter for centuries. CO_2 is a persistent greenhouse gas, so the CO_2 we emit is inherited by our children and grandchildren. This is one blanket that can't just be kicked off if things get too hot. The only way to cool the Earth is to reduce levels of GHGs, and at present we have no way of doing that.

By now it will be obvious: we are capable of pushing the level of GHGs so high that the Earth could heat to a level that life will not survive. That's a fact. Scientists put that level of risk at a global average temperature increase of 6°C (10°F).

Six degrees does not sound like a big number. But it is the combined heating of the land and the oceans (the earth-sea temperature). Because of its sheer volume, the ocean warms more slowly than the land and is able to absorb far more heat than the land does. The vast majority of the extra heat retained by the biosphere has been taken up by the warming of the sea. If it were not for the sea, the land would be burning up by now. On a hot day, it is refreshingly cooler by the sea.

The temperature increase at any time in the middle of continents will be up to twice the global average because of the distance to the sea. And the cities and urban areas in these regions will be hotter because of the heat island effect of all the buildings and roads, up to another 5°C hotter. The inland cities of many regions then will be the first places to become uninhabitable. Very much later the coastal cities will become uninhabitable by

heat and higher sea levels. Nowadays most of us live concentrated in cities and near the coast.

We hear that greenhouse gas and temperature levels are the highest in hundreds of thousands of years, but the Earth has only warmed a tiny bit. So what's the big worry? The oceans have been buying us time and our complacency comes from a false sense of security. We should have paid attention to Arrhenius, Hawking, and the simple basic physics.

It was always easy to prove that the global warming skeptics and deniers were lying, but they were not called on it. Instead it was left to the Intergovernmental Panel on Climate Change to confirm the laws of physics by their computer models. It's taken 15 years for the IPCC to say they are sure that global warming is happening and that it is very likely due to industrial GHG emissions. By the laws of physics, this was beyond dispute 15 years ago.

The question that arises now is: can the ocean keep us out of trouble? The physics and the computer models say no. The more CO_2 and heat the oceans soak up, the less they are able to soak up. Water absorbs CO_2 better when it's cold. Science again.

At some point, the oceans' carbon sink will be overwhelmed and they will emit more CO_2 than they soak up. At that point, CO_2 levels in the atmosphere will sky rocket and the heating will be turbo charged. At that point, the Earth is destined to no longer be hospitable for life.

A big question is when will the Earth hit +6°C? According the IPCC 2007 assessment, that could be by 2100. According to the International Energy Agency, under the projected rate of GHG emissions from the globalization of fossil-fueled industry, that will be by 2100.

The fossil fuel corporations are burning up the planet. If they don't stop, a holocaust of all life on Earth will be the inevitable result. According to their annual reports, the fossil

fuel corporations have no intention of stopping.

Next question. What about extreme weather events, floods and hurricanes?

That's basically simple and for the most part totally predictable. We can predict more unpredictability. The heat that the greenhouse gases in the atmosphere absorb is energy and the laws of science say that energy doesn't just go away. It has to go somewhere. It heats the land, evaporates surface water, and melts glaciers and the polar ice. Melting ice takes a lot of energy. It takes less energy to energize the planet's water cycle, so rains end up more torrential. That means more droughts, storms and floods. All this is bad for soil, bad for plant life that depends on soil, and bad for animal life (like us) that depends on plant life. Just plain bad.

5. THE TRUTH ABOUT THE IPCC'S SCIENCE

Everyone believes that the Intergovernmental Panel on Climate Change (IPCC) is the world's greatest scientific organization and the completely reliable authority on the science of global climate change.

That's not quite true. It is, in fact, dangerous to rely on the IPCC's assessments. The IPCC is not a scientific organization. It is a strange hybrid of international scientists and government bureaucrats. The bureaucrats have the final say in how the science is reported, a practice totally unheard of. The IPCC science is the science of computer models that are used to make predictions on the timing and extent of the final impacts of global climate change. The scientists are the first to admit that none of the models can be relied on to accurately do such an incredibly complex task.

The fossil fuel-funded skeptics have used this unreliability to discredit the entire science of global climate change. The scientists, instead of hitting the skeptics with the undeniable pure

science, defended and improved their models. Fifteen wasted years.

The huge trap we have fallen into is to act (or rather, not act) according to the models and not the basic science. The basic science of global warming has been entirely predictable, except for the precise timing of the impacts.

It has predictably turned out that the computer models underestimate the time for changes to happen. The Arctic ice melt, the melting of the Greenland glaciers, the breakup of the Antarctic, the changes to species, the carbon feedbacks, and the ocean sink failure have all started long before the models predicted. For example, the Arctic is now melting three times faster than the models had predicted.

We should not have put the future of life on Earth in the hands of the politically compromised IPCC nor the computer models. We have waited and wasted 15 years in large part because the models said we had time – that we now know we didn't have.

Back in 1988 when it was formed, the IPCC was given a mandate to inform government policy makers on the latest, most comprehensive science on the risks of global climate change. But bureaucrats within the IPCC and climate change deniers outside the IPCC have, over the years, pushed the panel away from that mandate. Their latest report (2007) was not up-to-date (on the most crucial information), was not comprehensive, and did not report on risk. Yet governments making decisions (or rather, avoiding making decisions) on climate change solutions and mitigation strategies rely totally on the IPCC assessments.

Yes, I am being hard on the IPCC. After all, the Panel won the Nobel Peace Prize in 2007, which they did not deserve. But some of the scientists were not afraid to speak out, and because they blew the whistle on the process, I was alerted to dig deep into the records.

So what can we do? That's simple. What is always done in matters of environmental health. Go by the objective, uncompromised science, including the latest research on all the relevant science, and make conclusions by the weight of scientific evidence. We must have a complete, integrated risk assessment, including full cost-benefit economics, done by the science experts only, under the UN – totally uncompromised politically. Scientists who are in conflict of interest under the pay of fossil fuel corporations must be barred. (An ExxonMobil scientist currently sits on the IPCC and is a lead IPCC author.)

And one other thing: in matters involving risk to a large number of lives, always apply the precautionary principle, or as grandmother said, "Better safe than sorry."

The precautionary principle is to take action to save lives even if the science is not 100% certain. This is not what we have done faced with the greatest risk ever to all life on Earth, which is changing the global climate.

The IPCC has done one really unforgivable thing that is a perversion of science.

It's to do with feedbacks in the climate system. All climate feedbacks cause more trouble. The greatest fear is carbon feedbacks. In this case, we're talking about the Earth emitting more extra GHGs (hence "carbon feedback") the more it's heated. The planet will heat up a lot faster than it would without the existence of feedbacks. And the IPCC left out some of the most significant ones.

While the big focus of attention is on the melting of the massive Greenland and West Antarctic ice sheets (which will eventually flood our coastal regions, but that's a long way off and will be slow and won't kill us), the survival of all life with global heating hinges on changes that are happening to ecosystems.

It is ecological effects from heating that produce the carbon feedbacks. And the most important of these changing ecosys-

tems are the Amazon rainforest, the Boreal forests or taiga, the northern peatlands, and the frozen permafrost.

The first feedback to happen is from water vapor, a greenhouse gas. As the Earth heats, it puts out more water vapor, which then leads to more heating. About half of global heating is coming from the water vapor feedback.

The next feedback is just getting going. Ice and snow (which are light-colored) reflect heat back to space, but when they melt, the exposed water or land (which is darker) absorbs heat instead of reflecting it. This is called the albedo effect. The Arctic is melting very rapidly (twice the rate of the rest of the globe) and this feedback is heating the north up even more.

The third feedback is the carbon feedback. Because life on Earth is carbon-based, there is lots of carbon on the Earth's surface. It's in the soil, in all plants and there's a lot in forests. As the land is heated, the energy releases more carbon from all of these. The most dramatic way is by forest fires (which emit CO_2 and methane), but the heated soil is emitting a little more carbon dioxide all the time. There is a very large amount of carbon in the last remaining large forests of the Earth – the Amazon and the northern Boreal. What will happen to the Amazon under global heating? The Amazon's carbon is in its lush rainforest canopy. The Amazon is so large and lush, in fact, that it makes its own rainforest micro-climate, recycling most of its water. Back in 2001, Peter Cox of the UK, using the Hadley Centre's advanced carbon feedback climate model, discovered that the Amazon rainforest could only be heated so much before it stopped being a rainforest and collapsed (died back). It then released all its stored carbon as it died and caught fire. The total amount of extra carbon was enough to add another 1.5°C to the projected global temperature increase (a huge carbon feedback), and by 2080 the Amazon was no more.

The IPCC, while acknowledging that carbon feedbacks are inevitable by 2100, did not include the Cox or any other

carbon feedback model in their predictions of temperature increase. The reason? They weren't sure enough of the exact extra temperature. This flies in the face of reality, let alone the precautionary principle. In the long technical report released many months after the report given to the media, the IPCC scientists say the effect of the carbon feedback will be over 1.0°C. This difference is huge. Enough to mean the difference between life and death for all animal species because policy is being based on the IPCC's unreal temperature projections – numbers that are not being questioned.

Omitting carbon feedbacks from the very worst risks in their temperature projections means that the entire IPCC assessment does not provide guidance for avoiding risk and is, in fact, dangerously misleading.

The first carbon feedback will trigger a cascade of carbon feedbacks, each one larger than the one before – and all omitted from the IPCC temperature increase projections. We have known about this risk of "runaway global warming" for over ten years. It's called "runaway" because, like a runaway freight train, nothing can stop it once it gets going and it accelerates continually under its own momentum. Life on Earth has been driven to the very edge of a globally suicidal cliff by the fossil fuel industry. And the IPCC has not sounded the alarm.

While the IPCC factored in the effect of the beneficial feedback of air pollution aerosols (that's another story!), they excluded all the damaging feedbacks of human-induced global heating increasing the Earth's own carbon emissions. Their omission of carbon feedbacks is unforgivable. What about the aerosols? Fossil fuel air pollution has a feedback that reduces the amount of GHG heating. That's no help because it means that clearing the air of pollution will be dangerous for our children – we're between a rock and a hard place, both from fossil fuels.

The first large-scale carbon feedback is happening now in central British Columbia. The mountain pine beetle has until

recently lived off the lodge pole pines of central BC in a balanced relationship, its numbers kept controlled by the cold winters. No cold winters for over a decade has resulted in a massive perpetual kill of the forests.

By 2020 this forest die back will have emitted the same amount of carbon as the whole of Canada is committed to reduce under the Kyoto agreement. This is a huge ecosystem effect in which the balance of nature was disturbed by just over half a degree of global heating.

The dead forest now amounts to 50,000 square miles. With more global heating it is an inferno waiting for a lightning strike to set it off. The beetle has grown into a plague and has crossed the Rockies into Alberta. With more heating it will be able to head north and invade the Boreal forest. The Boreal is the largest forest and the largest ecosystem in the world, stretching across Northern Canada and Siberia, and indeed deserves the title "lungs of the Earth" even more than the Amazon does. Western Siberia is heating more than any other region on Earth – by 3°C already – so it's only a matter of time, if we don't stop emitting GHGs.

Unlike the Amazon, in the case of the Boreal its carbon is mainly in its soils. With global warming, it is already starting to emit more carbon than it is storing. The boreal soils contain more carbon than all the other vegetation of the rest of the world. In the southern part of the Boreal, the soil is peat; frozen year round further north, it's permafrost.

The peat releases carbon as methane and CO_2. In Siberia, under global heating, it is now emitting far more methane than usual. The permafrost is thawing and it is emitting more carbon already. The extra Arctic and northern heat from the albedo effect will accelerate the permafrost melt.

That leaves the last feedback, and it's worse than all the others put together. This one is strictly a methane feedback – the methane hydrates.

The vast majority of the methane hydrates are (were) stored safely away in the deepest parts of the ocean or trapped in coastal rock and gravel formations. And some is in the deepest regions of the permafrost. The methane hydrates contain more carbon that all the rest of the planet combined. They will release methane under global heating and they have just started to do so – off the coast of Siberia. The very thought of methane hydrates outgassing is terrifying.

The IPCC 2007 assessment temperature projections left out the carbon feedbacks from the world's soil, the Amazon, the northern peatlands, the thawing permafrost, and never even mentioned the very worst – the methane hydrates.

To plan how to avoid planetary overheating disaster, the IPCC should have made methane hydrates their top priority, then next permafrost and peat, and next the Amazon.

When will the ecological meltdown that is going to lead to runaway global overheating happen? The truth is, we could be past the tipping point already. The IPCC failed to tell us the full truth of the very worst risks that right now threaten the survival of all animal life on Earth.

6. THE TRUTH ABOUT THE IPCC'S TERRIBLE DECEPTION

Members of the Intergovernmental Panel on Climate Change are more than guilty by omission (telling half truths). They, in fact, deceived. The worst deception of all time.

The whole point of the IPCC assessments, of course, was to assess what level of atmospheric CO_2 concentration we must get down to for safety, how much we have to reduce greenhouse gases to do so, and how long we have to be able to do it. All this is set out in the all-important IPCC chart that tracks required reductions in greenhouse gas emissions correlated to temperature targets.

The IPCC stated in their long technical report that carbon feedbacks *will* increase temperatures and will add more than an extra 1°C by 2100. But the GHG reduction calculating chart for setting policy is derived from the IPCC temperature increase projections, which we now know omitted additional heating from carbon feedbacks.

But there was a fine-print footnote under that all important chart in their 2007 report to policy makers:

> The emission reductions to meet a particular stabilization level reported in the mitigation studies assessed here might be underestimated due to missing carbon cycle feedbacks.
>
> To stabilize at 1000 ppm [parts per million] CO_2, this feedback could require that cumulative emissions be reduced from a model average of approximately 5190 (4910 to 5460) $GtCO_2$ [gigatonnes of carbon dioxide] to approximately 4030 (3590 to 4580) $GtCO_2$.

There lies their deception. The truth is, the required greenhouse gas emission reductions *will* (not *might*) be more (about 20% more!) than they state in their chart, because there *will* (not *might*) be large carbon feedbacks, which the IPCC left out.

The difference between the official IPCC-published GHG reduction chart values and the fine print correction is very large. All of life right now is on the cliff edge tipping point of runaway global overheating. Triggered massive carbon feedbacks will push us over. The IPCC has not raised the alarm.

Why on Earth would they not do that?

The IPCC scientists are just following orders from the IPCC government bureaucrats, who are just following orders from their governments, who are just following orders from the banks and the fossil fuel industries that control them. Governments give no thought to other species, to global ecosystems, or even to future generations of humanity. Their only thought is to

protect The Economy, which is run by fossil fuels, ruled by the fossil fuel industries, and funded by the international banks.

The new axis of evil is the G8 (fossil fuelled, industrialized) nations, the fossil fuel corporations, and the big banks. This new axis of evil has taken over the world by deceit, deception and brute force. It amounts to global fascism. And the IPCC has ended up in their clutches.

7. THE TRUTH ABOUT THE UN FRAMEWORK CONVENTIONS ON BIODIVERSITY AND CLIMATE CHANGE

Back in the late 1980s, many people were very worried about global warming. The atmospheric measurements of CO_2 over decades showed a clear and steady increase. It was obvious the CO_2 came from our fossil fuel industries (not that this changed the need or urgency to control the increase). The laws of physics said that the Earth would be increasingly warmed as the greenhouse gas levels increased and that this would disrupt the Earth's climate. Luckily the scientists had spotted the danger in time.

Humanity had just barely missed extinction from ozone depletion caused by chlorofluorocarbons (CFCs) emitted by aerosol sprays. The deadly danger from increasing UV radiation to all life on Earth was recognized and the Montreal Protocol was signed to solve the problem. Well, almost solve. The agreement was written to satisfy Dow Chemical, which made the CFCs. The deal made by governments with Dow was to allow Dow to replace the CFCs with HCFCs (hydrochlorofluorocarbons) so as to still make money. HCFCs are still ozone depleters though far less potent than the CFCs. But barely noticed was the fact that HCFCs are potent greenhouse gases.

To address the twin crises of global warming and the mass extinction of the Earth's species, the largest international conference ever was convened. The UN Earth Summit was held in Rio

de Janeiro in Brazil in 1992. It was obvious that if global warming was allowed, on top of the worst extinction of species since the Earth was struck with a massive meteorite, the future of life on Earth would be one big threatened mega species. Nations like China and India were getting ready to emulate the wealthy West by industrializing. It was clear that if all those people wanted the good material life of the West and burned masses of coal like Victorian Britain to do it, the Earth would burn.

The result of this considerable international concern was the UN Framework Convention on Biodiversity and the UN Framework Convention on Climate Change (FCCC). The environmental movement deserved credit for warning of the great dangers and pushing hard for action on a wave of public environmental awareness.

While the Convention on Biodiversity is little more than a promise by governments to take the Earth's species seriously, the FCCC is a thorough plan with specific obligations, particularly on the industrialized GHG-polluting nations. With the Agenda 21 agreement on sustainable development, the Earth Summit was a success even though US President George Bush Senior did his best to sabotage it. It produced a workable plan, negotiated and agreed to by nations, to have the developing nations leapfrog the dirty fossil fuel industrial age and go straight to clean renewable energy. The industrial nations agreed to take the lead in measures to avoid dangerous interference with the climate system by controlling their GHG emissions and protecting their carbon sinks. They agreed to give all necessary technical and financial assistance to developing nations so they could develop by clean energy. They agreed to assist the most climate vulnerable nations.

They did none of these things and most of them ignored even the small cuts in GHGs later negotiated under the Kyoto Protocol that was supposed to put the FCCC into action.

The other objective of the Earth Summit was to resolve the conflict between the economy and the environment. In the 1980s, it was generally agreed that the free market economy under a growing world population could not be sustained for long by the biosphere, which was headed for collapse under exponential industrial growth.

In 1992, A Warning to Humanity statement by world scientists pointed out that the world economy and the Earth were on a collision course.

But the momentum of the 1980s and the Earth Summit was soon to be lost. A large contingent of the environmental movement had grown suspicious of the Earth Summit. They did not like the term "development" and went to Rio with a competing People's Summit agenda. Certainly North American environmentalists turned "sustainable development" into a dirty word, calling the concept an oxymoron. In their fervor to save the world themselves, they never took the trouble to study the Rio agreements.

And just a couple of years later, the World Trade Organization (WTO) became a fait accompli by stealth. The globalization of free market industrial consumer economics was forced onto an unwilling (and unwitting) citizenry.

Civil society united in opposition to the new so-called free trade agreements and thousands of people took to the streets in protest. They did not want what amounted to a new level of international law to which they had not agreed. The WTO rules gave global corporations powers over governments. They could sue for huge amounts of money if government regulations threatened to put their future profits at risk. These were powers that few nations could afford to put to the test. Large squads of riot police forcibly put down the peaceful demonstrations. The WTO is a world government of the worst kind, composed of international trade ministers whose sole agenda is to boost world trade to the maximum. It formed a partnership of governments

and corporations against the rights of civil society and against the natural world.

The WTO gave the largest corporations rights (to make money) over the natural and legal rights of all species and of people for generations into the future. The UN Earth Summit agreements were soon proved to have no power over the WTO rules.

The establishment of the WTO reversed much of the progress won by the environmental movement. In the 1980s, the US Endangered Species Act had listed five species of sea turtles that occur in US waters and that were killed in large numbers by the shrimp fishing industry. The US in 1989 had passed regulations requiring all shrimp fishing to take measures to prevent the incidental killing of sea turtles and it would only import turtle-friendly fish. In 1998, a few nations sued the US under WTO rules over the US law that required the shrimp industry to put turtle excluder devices on their nets. When the US regulation was challenged under WTO rules, the US – and the endangered sea turtles – lost the case. Profit won out, even against the US Endangered Species Act.

No national or international agreements meant anything under the new WTO international trade regime. The WTO did not recognize the precautionary principle to protect the environment or species. Instead it imposed a precautionary principle to protect corporate profit making.

With the UN Framework Convention on Climate Change being ignored, investment money under free trade rules was free to rape and pillage the planet. Investment money transformed China into the manufacturing base for the expanding world market, with India next in line. To the investment industry this opened up the huge Asian population market to cheap manufactured goods. Cheap meant cheap labor and ignoring all environmental costs. Just what the UN at Rio had sought to prevent. The rest is history. China is building a coal-fired energy plant

every week and its GHG emissions will soon surpass those of the US.

Under economic globalization, nations no longer make decisions. All decisions are made by the free market and nations are forced to comply. So it's not China that's building coal plants that poison the Chinese people and the planet. It's global investment finance. It's our investments and invested retirement pensions. There are no borders to trade and investment under economic globalization. And no limits.

Government leaders meet periodically to discuss progress on the UN climate and biodiversity conventions. They've been meeting and making empty promises for 15 years while populations and species of wild animals plummet and global GHGs soar. What they never discuss is how to make binding agreements on actions to protect the planet and its species from the pollution and destruction of the global industrial economy.

There will be a decisive UN climate convention in 2009 in Copenhagen, Denmark. The G8 nations have already put a limit on the extent of GHG reductions they might consider. It's a cut of 50% by 2050. And that is a death sentence to life on Earth.

All responsible and caring people must rise to the defense of life on Earth, by rising to the defense of the UN conventions. But no one is.

8. THE TRUTH ABOUT THE FAILURE OF THE ECONOMY

This is the most important of all aspects of global climate change as it shows the only way out of the impending extinction of life of Earth.

Since the 1980s, a steady stream of books and academic papers has been published explaining that it is our economics that is the cause of global environmental destruction and pollution.

Our entire society is run on the absurd assumption that the Earth has no limits – or at least no limits that matter to The Economy. This perhaps was defensible in the 1850s when Adam Smith wrote his Wealth of Nations, but now it is criminally insane. Yes, an entire culture can be driven to insanity. Voltaire said, "Those who can make you believe absurdities can make you commit atrocities."

Our free market economic system takes no account of the effects of economic activities on the natural world, calling these impacts economic "externalities." Our economic system assumes that any depletion or damage to the natural resource base or the functions of the biosphere will be repaired or replaced by technology (eventually), so the economy can be allowed to grow without interruption. By the same reasoning, future generations are not provided for in our economic system because it's assumed they will always inherit the technology to fix problems with the planet and they will always be better off, as they'll have more money. Really crazy stuff but it's what our world runs on and what is running life to total extinction.

To the economists who work for banks and businesses and advise governments, keeping the air safe, the water clean, and the soil healthy doesn't matter. That's a convenient assumption that allows for banks and businesses to make as much money as they possibly can. It also spells the death of life on Earth.

Adam Smith was elevated to fame by his book, The Wealth of Nations, which helped the European empire-building nations and their aristocracy keep amassing wealth and to keep the wealth they kept amassing. It's still working.

Smith's observations and ideas (which became the basis of our Western economic system) were mass production, labor efficiency, the trickle down effect (by which a fabulously wealthy elite was essential for the poor to have any wealth), and his famous benevolent "invisible hand" of the free market. Other species and Nature were of no consequence. The Old World of Europe was

discovering and taking over the New World that seemed to be endless. In the very first page of his book, Smith put down the poor miserable existence of the New World "savages" compared to the leisure and opulence that all enjoyed in the Old World. The rest is history, and leads to global deforestation, pollution and climate change. Whether we know it or not, we are doing nothing about climate change because of our confident belief that science and technology will find a way out for our children.

The awareness of a problem with our economic system really goes back to a paper commissioned by the Club of Rome and published in 1972 by Donella Meadows, Dennis Meadows, Jørgen Randers, and William W. Behrens III. Limits to Growth (more a book than a paper) is the origin of the idea of our economic unsustainability. It used the best MIT computer to study how rates of world population, industrialization, pollution, food production and resource depletion would interact in the future and how far the Earth could sustain the rates. What the authors found was that without controlling one particular aspect, however the others were controlled, the Earth first went into resource depletion and then all collapsed. The key variable was economic growth and particularly exponential economic growth – growth that, like a cancer, kept on growing no matter what.

Their conclusions (1972) were:

> *1. If the present growth trends in world population, industrialization, pollution, food production, and resource depletion continue unchanged, the limits to growth on this planet will be reached sometime within the next one hundred years. The most probable result will be a rather sudden and uncontrollable decline in both population and industrial capacity.*
>
> *2. It is possible to alter these growth trends and to establish a condition of ecological and economic stability that is sustainable far into the future. The state of global equilibrium could be designed so that the basic material needs of each person on*

Earth are satisfied and each person has an equal opportunity to realize his or her individual human potential.

3. If the world's people decide to strive for this second outcome rather than the first, the sooner they begin working to attain it, the greater will be their chances of success.

Their computer forecasted the crash would occur around the 2080s if exponential economic growth was not curbed. With global climate change added, the crash can now be predicted for the 2050s – when today's children will be adults.

The investment and resource economists predictably denounced the science of Limits to Growth, but from then on, unsustainability was recognized as an issue to be taken seriously. It led to the UN Earth Summit on sustainable development in 1992.

In 1996, the team revisited the trends and published Beyond Limits to Growth. They wrote that nothing much had been done to address the flaws in the economics but there was still time to switch to an economics that is sustainable by the natural world. The Rio Earth Summit was a hopeful sign of future progress, they said.

In 2002, Dennis Meadows and Jørgen Randers ran the models again and published their results in Limits to Growth: 30 Year Update. In general, they found that the science of their 1972 assessment had been validated and that the conclusions and remedies to avoid collapse remained firm. While they said the past 30 years had seen some progress, including a new awareness of environmental problems, they were far more pessimistic than they had been in 1972. They recognized that humanity had squandered the opportunity to correct our current course over the last 30 years and that a lot must change if the world is to avoid the serious consequences of ecological overshoot in the 21st century.

Around the time of the original Limits to Growth, a leading UK government economist wrote an acclaimed book that explained the fatal flaws in free market economics in human as well as environmental terms. Small is Beautiful: Economics as if People Mattered by E. F. Schumacher was published in 1973.

> *Ever bigger machines, entailing ever bigger concentrations of economic power and exerting ever greater violence against the environment, do not represent progress: they are a denial of wisdom. Wisdom demands a new orientation of science and technology towards the organic, the gentle, the non-violent, the elegant and beautiful.*
>
> *I have talked about the religion of economics, the idol worship of material possessions, of consumption and the so-called standard of living, and the fateful propensity that rejoices in the fact that "what were luxuries to our fathers have become necessities for us."*
>
> *The modern private enterprise system ingeniously employs the human urges of greed and envy as its motive power.*
>
> *Can such a system conceivably deal with the problems we are now having to face? The answer is self-evident: greed and envy demand continuous and limitless economic growth of a material kind, without proper regard for conservation, and this type of growth cannot possibly fit into a finite environment. We must therefore study the essential nature of the private enterprise system and the possibilities of evolving an alternative system which might fit the new situation.*
>
> *– E. F. Schumacher*

But free market economics has since only grown more powerfully degrading and destructive to human culture and the natural world.

In 2005, the chief economist for the UK, Sir Nicholas Stern, led a commission for the UK Treasury Department to review "the economics of climate change." Because it came from a leading economist, the media paid attention to the Stern warning. And stern it was. The economic commission found that catastrophe from global climate change was almost beyond our grasp to stop. The problem was market failure, in fact, the "greatest and most far reaching market failure ever." The Stern Commission went on to explain the fault in the economics that has caused it to fail with such terrible consequences. It was the practice of some economists to exclude the costs to the environment of greenhouse gas pollution so that the polluter was not made to pay the costs that would be incurred by all future generations. The Stern Commission gave the world a logical and straightforward solution: include (internalize) the costs of carbon pollution.

Stern advised taxing carbon as the first step to take, followed closely by regulation to put limits on GHG pollution and carbon trading. Included was a short list of other practical measures. But after all the publicity there was no response.

The Stern Commission's social cost of carbon (health damage costs from fossil fuels) was $325 per tonne of carbon. The commission said that it had not included all costs or the benefits of changing to renewable energy.

The Stern Commission costed mitigation of global climate change at 1 to 3% of gross domestic product per year, which is a little less than the increase in GDP per year. So the cost to us is actually nothing.

The IPCC calculated the cost as nothing at all – a slight economic benefit to a cost of 0.12% GDP per year. That would only delay projected economic growth under fossil fuels by a couple of years. The IPCC did not include the economic benefits of moving to renewable energy either. "The Economy" and our economics are biased towards fossil fuel energy.

Even ignoring the economic benefits, an economic task force report to the G8 urged supporting renewable energy.

In 2007, the American Solar Energy Society (ASES) assessed the economic benefits of energy efficiency and renewable energy investment. Renewable energy and energy efficiency technologies (RE&EE) are driving significant economic growth in the United States. In 2006, these industries generated 8.5 million new jobs, nearly $970 billion in revenue, more than $100 billion in industry profits, and more than $150 billion in increased federal, state and local government tax revenues.

Additionally, RE&EE provided important stimulus to the beleaguered US manufacturing industry, displaced imported oil, and helped reduce the US trade deficit. To put this in perspective, RE&EE sales outpaced the combined sales of the three largest American corporations. Total sales for Wal-Mart, Exxon-Mobil, and General Motors in 2006 were $905 billion.

If US policymakers aggressively commit to programs that support the sustained and orderly development of RE&EE, the news will get even better. According to research conducted by ASES and Management Information Services, Inc., the renewable energy and energy efficiency industry could – in a crash effort – generate up to $4.5 trillion in revenue in the United States and create 40 million new jobs by the year 2030. These 40 million jobs would represent nearly one out of every four jobs in 2030, and many would be jobs that could not easily be outsourced.

While the environmental movement has for a long time been calling for a halt to oil and gas subsidies in general, it has been slow and not aggressive in supporting carbon taxation. It has not called for full internalization of the environmental costs of our fossil fuelled economy. Only this would do justice to the climate vulnerable nations, and to future generations of all species. Only this would switch investment money from dirty fossil carbon to clean renewable energy. It's a no brainer. The highest carbon tax

from green politics is $50 per tonne, which will make little to no difference

In 2008, carbon taxing is critical to the survival of life on Earth. Exxon says that we passed peak easy oil in 2005 and the industry is now developing the hard-to-get oil, which makes up half the world's oil reserves. As a result, oil costs have shot up so that renewables are competitive even under the fossil fuel biased economy. But this also makes the worst of fossil fuel energy, like tar sands and shale oil, economically competitive. And it makes coal-fired energy dirt cheap under our biased-to-fossil-fuels economics. So cheap oil of the past is being replaced by cheap coal instead of renewables.

Why on Earth is this happening?

Money decides which sources of energy governments support. There are no renewable energy billionaires.

9. THE TRUTH ABOUT ENERGY FOR THE FUTURE

Tomorrow's energy sources are being decided today. The power plants in the G8 nations are reaching the end of their lifetime. But new utility power plants being built now will last decades (about 30 years), and will continue spewing greenhouse gases all that time. Now is the time for the switch to renewable energy technologies.

The new engine of the global economy is China and its Victorian-age coal plants. A new coal-fired plant is being built every week in China to make all the techie toys and cheap manufactured consumer products for the entire world. Our world is made in China.

What about peak oil? Won't that save the future in the nick of time? The fossil fuel industry has peak oil covered. Their answer is liquid coal. It can even work for electric cars and hydrogen powered cars.

The International Energy Agency projects that the world economy will continue to grow and continue to be (more than 80%) fuelled by fossil fuels, most of which will continue to be coal.

Some experts, like Professor James Lovelock, have called for increased nuclear energy in the face of greenhouse gas climate apocalypse. By far, the lowest GHG emissions of G8 nations belong to France. That's because decades ago, France moved to a nuclear energy policy in response to the Arab oil embargo.

This is where the environmental movement has thrown its energy, so to speak – to prevent the construction of any nuclear power plants. The movement has been successful; only a handful of nuclear plants are being built. It's a popular position with the public ever since the Chernobyl and Long Island scares. But the public is not aware that the highest estimates of death and disease from nuclear energy are practically nothing compared to death and disease rates from coal-fired energy. And in the Ukraine today, one of the regions of highest biodiversity is around Chernobyl – because people don't go there.

New smaller, more advanced nuclear reactors are far safer than the current technology but it's too late for nuclear to offer any help in cutting GHGs. It's a non-issue.

So, we are now in a global coal-fired industrial age, even though the CO_2 in the atmosphere today is from the Industrial Revolution of the 1800s, which was coal fired. The International Energy Agency (IEA) calculates that this new growth in coal-fired energy will boost global greenhouse gas emissions 60% by 2030 and 100% by 2050.

The IEA calculates that this boost in GHGs will lead to an increase in global heating of +6°C by 2100. An increase of 6°C is not survivable by animal life.

We are investing in the death of the future. And no one is alarmed. Nothing is changing. Everyone goes about his or her own particular business as usual.

10. THE TRUTH ABOUT THE COST OF FOSSIL FUELS

No one has put an economic cost on fossil fuel that counts in the costs of global climate change over future generations. If they did that, it would clearly be completely prohibitive for this generation to use any further fossil fuel.

What is the value of a human life?

Tens of millions of people will be killed by unmitigated global climate change this century alone. Economists determine the value of a human life by the amount of a person's contribution to GDP (gross domestic product). This makes the value of an American far and away higher than the value of an African, which makes African lives at risk from global climate change affordable to the US.

Canada's National Round Table on the Environment and the Economy has assessed the carbon tax necessary to cut GHG emissions 60% by 2050 at $300 per tonne (a tonne weighs 1000 kilograms or 2204.6 pounds). All the while, governments continue subsidizing fossil fuels.

The European Union did a social costing (albeit incomplete) on coal under which they found the price of coal doubled. The Government of Ontario did a similar costing on coal and found the price of its coal-fired energy was uneconomic for further investment.

The full cost of gasoline per US gallon has been calculated at $15. The US government subsidizes the oil industry to the tune of over $200 billion a year (International Center for Technology Assessment).

We are passing on the costs of our fossil fuel energy use to our children and all future generations, and leaving them nothing in exchange except a degraded, possibly uninhabitable, planet.

11. THE TRUTH ABOUT THE FAILURE OF RELIGION

Over the past 30 years of environmental destruction by our culture, the Christian church has been blamed for permitting humanity's destructive domination over Nature. While historically it's true that the record of the Christian church after Roman Emperor Constantine was one of bloody war making, persecution, torture and burning of the innocent, the old, established Church is not all to blame.

In fact, the Church has taken the accusations to heart and revisited its scriptures. Now all the Church leaders have made statements to the effect that the Earth as God's Creation is sacred and entrusted to humans to look after – not destroy. The Churches have written in support of the innocent South (developing countries), and against poverty and climate change. They worked hard over decades to right the evil that is the Third World debt to the World Bank and global corporate banks by the year 2000 (Jubilee 2000).

Despite their best efforts, the economic genocide continues as national governments continue to fail to live up to their promises. As United Nations Secretary General Koffi Annan said, the Earth is being destroyed by the twin evils of extreme wealth and extreme poverty. By insatiable greed and unsustainable hunger the natural world is being stripped bare.

While Patriarch Bartholomew, leader of the Eastern Orthodox Church, has declared polluting the atmosphere and causing the extinction of species to be a sin of the worst kind of evil, the other churches have fallen short of such strong moral pronouncements. They are therefore more at fault for their lack of influential actions to save the Earth today than for the content of their scriptures written in the desert thousands of years ago.

For all the letters written by bishops, the Church can hardly be called a passionate protector of God's Creation.

But what other great transformative power can save the future of Creation from a global overheated Hell on Earth (awaiting all future generations, of all species) that can only be likened to Dante's Inferno for the suffering and death that will carry on for centuries?

12. THE TRUTH ABOUT THE FAILURE OF ENVIRONMENTALISM

There has been considerable debate lately on the end of environmentalism. From the measured response of the environmental movement, it would hardly appear that the planet is going down. What's up with environmentalists and their organizations that they are so quiet in the face of the biggest threat ever to face the Earth, all wild species, and humanity?

Al Gore is one person. After being robbed of the US presidency – largely by being stabbed in the back by the US Green Party – what did he do? He went to work representing the Earth. He upgraded his global warming slide show on his laptop and traveled the nation giving presentations to small groups of people in hotel meeting rooms. A film director got wind of the story and created a box-office success by turning the slide show into a full-length film. One man woke the nation and much of the world up to the fact that global climate change is happening and is worsening.

The fossil-fuel-funded climate change deniers attacked Gore, but they failed because his slide show, his knowledge and his sincerity were too good. A skeptic film, The Great Global Warming Swindle, was sent to schools in several jurisdictions. The Heartland Institute held a New York conference of scientists who said global warming was a non-problem.

In all this time, the big environmental NGOs failed to attack the climate skeptics, failed to unite on the issue, failed to put global climate change at the top of their agendas, failed to make

films or slide shows, and failed to hold conferences on the greatest environmental issue ever.

The finest of people are employed by environmental organizations, but the truth is, the NGOs have somehow lost their passion – their energetic fighting spirit. When Gore announced that the Earth had reached a point of planetary emergency, the environmental movement failed to rally around the statement by public pronouncement or demonstration.

They failed to run with the superlative 2006 Stern Commission review of the economics of mitigating climate change. Though Sir Nicholas Stern, chief economist to the UK government, promoted a carbon tax, the environmental movement by and large failed to support it – or him.

The environmental movement failed to see the disaster that biofuels would bring about, supporting the idea until it was too late. They failed to mount a united public campaign in 2007 to capitalize on all the Intergovernmental Panel on Climate Change publicity. They failed to notice the huge gaps in the IPCC reports, thereby failing to explain that the global temperature increase in the real world would be higher. They failed to add together habitat destruction plus global climate change for the total impact on species extinctions, instead repeating the IPCC's mere 30% extinction rate.

They have failed to demand the closure of the Alberta tar sands although they call it the world's worst energy project, and they have failed to demand the closure of the coal industry even though it's the worst source of air pollution and GHG emissions. They have failed to call for replacement of the internal-combustion-engined automobile, as well as those running on electricity and hydrogen derived from polluting fuels.

Worst of all, the environmental movement has failed to tell the public the truth about what unmitigated global climate change will do to the future of life on Earth. Instead, environmental NGOs have agreed on the bizarre and astonishing strat-

egy of downplaying the full and terrible truth of the risks, based on their assumption that the public would be overwhelmed and go into a state of despair.

These failures have allowed governments and the fossil fuel industries to avoid the enormous accountability for what they are failing to do for the unprecedented evil they are now doing. The fear about public reaction ignores the human record, individually and collectively, of facing the most terrible news with courage and resolve. Polls show that the public has accepted carbon taxing already. Why would the public not accept a little sacrifice to save the Earth for their grandchildren?

The environmental movement has been calling for an energy revolution and a big change in public energy behavior for the past 20 years and is still doing so. But still environmentalists fail to call for the economic revolution that has to precede the energy revolution in order to allow it to happen.

The movement that started out as grassroots counterculture, with little money and lots of passion, has now grown into a large international business operation with big funds from large charitable foundations. It is large enough to launch a huge, global, all-out, last minute campaign against the fossil fuel industries and the economic order that is destroying all life on Earth.

Instead, environmental campaigners are silent on the economics, carrying on their non-profit "businesses" as usual, crossing their fingers, and trusting the evil, life-destroying system to have a change of heart and come through for the future.

The environmental movement's main focus now (apart from instant reaction to any mention of nuclear power) seems to be promoting hope. Sadly, they fail to the see that they are the last hope for all future generations. Instead of promoting determination in the face of the worst, they have allowed defeatism. Of course, there may still be time. Where there is life, there perhaps remains hope.

13. THE TRUTH ABOUT AGRICULTURE

"Peak food" will occur before a +2°C global average temperature increase is reached and we are on course to reach that well before 2050 if nothing is done. In those regions most vulnerable to climate change, agriculture has been damaged by global heating already and will get far worse with time.

Many people don't realize that human civilizations depend totally on agriculture, and that agriculture is dependent on the climate. In fact, there were no human civilizations before the invention of agriculture. So we owe a lot to crop cultivation, and we owe it to ourselves to learn how global heating is affecting what we eat.

Agriculture has only been possible for the last 10,000 years because of an exceptionally stable climate, complete with the right temperature range and the right amount of rain and snow. Our industrial consumer economy is messing all that up. By 2050, most of the world will be dying of disease, thirst and famine – if we don't stop burning fossil fuels and spewing greenhouse gases now.

Our human and sacred duty is to ensure that future generations, in our own nations and around the world, have food security. We have done badly so far in this regard. Our world economy has created crushing permanent debt that enslaves hundreds of millions of people who survive on the edge of genocidal famine.

There are already 850 million undernourished poor people in the world today. What will happen to them when their subsistence agriculture collapses under global heating? And will the rich nations come to their aid then? I doubt it. They will be concerned with their own food security. These hundreds of millions of the poorest people will be left to starve.

> Global Land Temperature Warmest On Record In March 2008
>
> *(ScienceDaily, 19 April 2008)*
>
> "The average global land temperature last month was the warmest on record."

The land is being heated up and fast – faster than it's ever been heated before. This is going to hurt agriculture. We don't need computer models to figure that out.

But the Intergovernmental Panel on Climate Change (IPCC) does not hint at a food crisis from global climate change, nor do they mention escalating deaths from water deprivation or starvation … or mention a global emergency for future food security.

Incredibly, impacts on agriculture are not included in the lists of dangerous climate changes. Even more incredibly, no one is saying it should be – even though when agriculture goes, we all go.

The "all" includes all wildlife. That's because if agriculture goes down, our large urbanized world population will strip the planet bare. Anything that is edible will be eaten.

The Amazon is set to collapse long before 2080 given current rates of GHG emissions. The human population is bound to finish off what little wildlife survives. The great wildlife preserves of Africa are in high climate vulnerable regions and in multi-year drought already. The wildlife that has lived with humans for millions of years will fall due to people who are desperate for food and water.

The western United States is in a multi-year drought that research in 2008 determined was due to global climate change. Australia is in a multi-year drought affecting half its farmland – the worst drought in a thousand years.

The combination of growing human populations with growing water and food scarcity will mean the final end for wildlife. People who care about nature and other animals had better get very active very quickly on the global climate change crisis.

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Not only is agriculture going to suffer due to global heating. It is also a major cause of both habitat loss and climate change, with each making the other worse. Obviously, then, we have to give agriculture a lot of attention. But as agriculture is so important, why isn't it at the top the IPCC's list? Why is it not at the top of anyone's list?

The 2007 IPCC report does not recognize global climate change as a risk to world food security, and their computer-modeled assessment doesn't tell us nearly how badly climate change will impact the growing of food. The models and the IPCC assessment that relies on them greatly underestimate the real world impacts to agriculture. This has given rich nations an excuse to do nothing.

On agriculture, the IPCC only tells part of the truth and distorts the most important part of the truth. Remember, the IPCC is first and foremost a government organization to which the scientists report. It's not a public process. The assessments are negotiated and written behind closed doors. But how can the extinction of species (including ours) and the destruction of the planet be negotiated?!

Even by the underestimations of the IPCC's 2007 assessment, the world faces catastrophe in a matter of decades:

> *By 2020 up to 250 million people will be short of water.*
>
> *By 2020 regions of African agriculture will be down 50%.*
>
> *By 2050 more than a billion people in Asia will be short of water.*

The models show that by 2050 under climate change 2 billion people will be vulnerable to devastating floods.

The Himalayan snow pack is melting rapidly on which two and a half billion people depend for irrigating their agriculture. By 2085 57% of the world population will have to face life under water stress.

The IPCC is guilty of criminal negligence by failing to tell governments the full extent of the adverse factors, the expected impacts, and the risks. Here's what the IPCC has told our governments about agriculture in The Report for Policy Makers:

Food, fibre and forest products

At lower latitudes, especially seasonally dry and tropical regions, crop productivity is projected to decrease for even small local temperature increases (1-2°C), which would increase the risk of hunger. Globally, the potential for food production is projected to increase with increases in local average temperature over a range of 1-3°C, but above this it is projected to decrease.

That's it. That's all our governments have to go by in planning for food security under global heating!! And it's wrong. It's wrong because the numbers are derived from computer models that do not yet include a large number of the most important known damaging impacts on crops.

The IPCC's 2007 technical report puts the danger limit for agricultural decline not at +3°C but +2°C:

Food crops

- *Modelling studies suggest crop yield losses with minimal warming in the tropics.*
- *Mid- to high-latitude crops benefit from a small amount of warming (about +2°C) but plant health declines with additional warming.*

The truth is that what we are now committed to (a temperature increase of +1.4°C) is close to global "peak food" under global heating. The emergency is desperate. Our children's generation will be hit with peak food. The truth is, this means that agriculture will go into decline globally at a global average temperature increase of +2°C.

The IPCC's +3°C is local heating, which is much higher than the global average that everyone is using for assessment and planning. Translating this to a global average is closer to +2°C as the global temperature increase at which agriculture worldwide goes into failure, according to IPCC data.

And the research shows that a global average temperature increase of +2°C is the danger threshold for agricultural decline in the US, Canada, the European Union and Australia.

Once agriculture goes into decline from global heating it will stay in decline and totally collapse.

But their figures are arrived at by the IPCC relying on models that omit many of the most important damaging effects on agriculture. These are recorded in the long technical papers that the policy makers don't use. They are:

- climate variability
- extremes of precipitation
- extreme weather events
- increase and change in weeds
- increase and change in insect pests
- increased resistance to pesticides
- decrease and change in soil nutrients
- competition for resources
- water quality
- air quality
- stratospheric ozone depletion

- disruption of ecological integration with plant growth
- combined adverse effects on crops due to all the above
- combined effects of heat, water deprivation, and loss of feed for livestock=
- effects of a temperature increase over +5°C
- effects after 2100

These are not included in the IPCC's 2007 official Report to Policy Makers. But the long IPCC technical report on agriculture – which governments don't use – explains that they are variables their computer models can't compute. The numbers that policy makers are working with are, therefore, wrong. Real world agriculture will be hit earlier and harder than the model numbers say.

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Climate Variability

The truth is that the IPCC assessment relies on models that omit all the most important factors that all farmers know about. The models do not include the single most important thing to all farmers – regular climate predictability. Global heating does not just cause a different climate (climate change), it also causes climate variability. Farmers will be guessing at when to sow, etc. This will put entire crops at risk.

Furthermore, models cannot predict the effects of global climate change on essential synchronization of stages in agricultural plant ecology, many of which have to occur with precise timing. Research shows that crop growth, development and yields, for crops such as cereals and fruit trees, can be damaged if their temperature thresholds are surpassed for just a few days during certain crucial stages of their development.

Tropospheric Ozone Increase

It is known that ground level ozone, which is increased by global warming, is toxic to green plants and greatly reduces plant growth. The ozone level has already increased sixfold in some regions of the US. The following is taken from the IPCC's technical report but not included in the all important report to policy makers:

> *...increasing ozone concentrations in future decades, with or without CO_2 increases, with or without climate change, will negatively impact plant production, possibly increasing exposure to pest damage.*

Stratospheric Ozone Depletion

Increased ultraviolet-B radiation is damaging to plants. This occurs from stratospheric ozone depletion. Ozone depletion, which is as bad as it has ever been, is increased by global heating. This is not included in the IPCC report to policy makers.

Total Impacts are Additive and Synergistic

While clearly the combined effects of all these adverse factors from global climate change have to result in reduced crop production, the models are unable to predict the overall real world effect – so the policy makers are using predictions that are wrong. The effects in the real world on our children's and grandchildren's food security will be far worse.

There is another impact further down the line that comes from sea level rise. It's been found that this will damage crops due to salination miles inland from the coast.

While policy makers only get to work with the incorrect computer-modeled temperature numbers reported in the Summary for Policy Makers, the IPCC's 2007 technical report (which the

policy makers don't get to see) says that better computer models are required:

> *Current risk-assessment tools do not sufficiently consider these key interactions. Improved modelling approaches that link the effects of ozone, climate change, and nutrient and water availability on individual plants, species interactions and ecosystem function are needed.*

All of the impacts combined will occur against a background of increased land degradation from intensified agriculture in most regions. The models can't tell us how this will add up:

> *Natural land resources are being degraded through soil erosion, salinisation of irrigated areas, dryland degradation from overgrazing, over-extraction of ground water, growing susceptibility to disease and build-up of pest resistance favoured by the spread of monocultures and the use of pesticides, and loss of biodiversity and erosion of the genetic resource base when modern varieties displace traditional ones.*
>
> *The total effect of these processes on agricultural productivity is not clear. Additionally, multiple stresses, such as forest fires and insect outbreaks, increase overall sensitivity.*

These combined impacts will occur on top of severe poverty and disease amongst the most climate change vulnerable populations, which can only be exacerbated by climate change. Global heating will increase and spread all the worst diseases. This will reduce the ability of the poor populations to work the land and produce their food.

We thus have a very long list of different adverse impacts on agriculture. They have the potential to not only be additive but also – far worse – synergistic in their effects on food supply.

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What will be the end result of carrying on emitting GHGs? The total global collapse of agriculture, which with our current rising emissions will be before 2050. By that I mean we'll be started on an inevitable downward trajectory forever.

With a global average temperature increase of +1.5°C, there will be significant decline on several continents and some decline affecting some crops in North America. What the IPCC said on global average temperature increase is:

> *For increases in global average temperature exceeding 1.5-2.5°C and in concomitant atmospheric carbon dioxide concentrations, there are projected to be major changes in ecosystem structure and function, species' ecological interactions, and species' geographical ranges, with predominantly negative consequences for biodiversity, and ecosystem goods and services e.g., water and food supply.*

The AGRICULTURAL TIPPING POINT will be a +1.5°C global average temperature increase. Right now, today, we cannot avoid a +1.4°C increase. It might be impossible to avoid a +2°C increase and it certainly will be impossible without an all-out global emergency effort on the scale of a world war.

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What about adaptation? Can't that take care of this problem?

Agriculture Canada, for example, says that impacts of global climate change in general will be adverse for Canada but that farmers will adapt as they have in the past. However, it will be impossible for farmers to adapt to all the different changes wrought by global heating. How can they adapt to something that keeps changing? Research shows that the best they will be able to do is put off the inevitable for 10 to 20 years. That is not to be relied on because the models omit many adverse effects (as we've seen).

Mitigating Meat Eating

The very best method for adaptation is not mentioned by the IPCC, but it's simple. Stop producing food from flesh. Nothing is so easy and effective as switching to a vegetarian diet. The livestock industry is a major emitter of GHGs. A healthy change in diet would also reduce destruction of the Amazon, which is being cleared for livestock and for agribusiness to grow food for livestock.

Industrial agriculture is extremely energy intensive but the IPCC says nothing about decarbonizing our agriculture – an essential adaptation measure.

The truth is that industrial agribusiness has produced the most vulnerable form of food production to global climate change. It relies on a small number of monocultures developed to depend on intensive use of energy, chemical fertilizer and pesticides. It can be expected to soon collapse under a changed and variable climate.

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Biofuels

The rich governments are controlled by the mega money-making fossil fuel industry and fossil fuel-dependent global agribusiness. That is why the governments are pushing biofuels as the solution to global climate change.

This is a disaster all of its own. From the start, the research said that biofuels would not help air pollution or global heating. Now large regions of food growing land are growing biofuels. The Amazon is being cleared for biofuels. It's what makes the money. The truth is, it's burning food. And it's providing an excuse for manufacturing more cars to spew more GHGs.

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Peak Water

Agriculture consumes by far the greatest amount of water in the world. Industrial agriculture is a huge user and waster of water. Global heating and climate change will be reducing available water just when the requirement for it grows. Plant growth will demand more water as the temperature rises, as will livestock.

The annual depletion of water from aquifers has been estimated at 160 billion cubic meters or 160 billion tons. Overpumping is a new phenomenon, one largely confined to the last half century. Only since the development of powerful diesel and electrically driven pumps have we had the capacity to pull water out of aquifers faster than it is replaced by precipitation.

Some 70 percent of the water consumed worldwide, including both that diverted from rivers and that pumped from underground, is used for irrigation. Global heating will result in aquifers being even more rapidly depleted, ensuring the irreversible global collapse of agriculture. When the aquifers are near empty, that's the end.

The livestock industry consumes and pollutes vast volumes of good water. Livestock will need even more water with global heating.

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The consumer culture eats a vast amount of flesh, which is unhealthy for both people and planet. If all the damage of eating flesh were included in a full cost assessment of the livestock industry, it would be the most costly of any industry in the world. Agriculture is a major source of GHGs, especially the livestock industry. And now it turns out to be a bigger contributor to greenhouse gases than the transportation sector:

Livestock's Long Shadow

29 November 2006, Rome - UN Food and Agriculture Organization

Which causes more greenhouse gas emissions, rearing cattle or driving cars?

Surprise!

According to a report published by the United Nations Food and Agriculture Organization, the livestock sector generates more greenhouse gas emissions as measured in CO2 equivalent – 18 percent – than transport. It is also a major source of land and water degradation.

The global livestock sector is growing faster than any other agricultural sub-sector.

Such rapid growth exacts a steep environmental price, according to the FAO report, Livestock's Long Shadow –Environmental Issues and Options. "The environmental costs per unit of livestock production must be cut by one half, just to avoid the level of damage worsening beyond its present level," it warns.

When emissions from land use and land use change are included, the livestock sector accounts for 9 percent of CO2 deriving from human-related activities, but produces a much larger share of even more harmful greenhouse gases. It generates 65 percent of human-related nitrous oxide, which has 296 times the Global Warming Potential (GWP) of CO2. Most of this comes from manure.

And it accounts for respectively 37 percent of all human-induced methane (23 times as warming as CO2), which is largely produced by the digestive system of ruminants, and 64 percent of ammonia, which contributes significantly to acid rain.

Livestock now use 30 percent of the earth's entire land surface, mostly permanent pasture but also including 33 percent of

the global arable land used to producing feed for livestock, the report notes. As forests are cleared to create new pastures, it is a major driver of deforestation, especially in Latin America where, for example, some 70 percent of former forests in the Amazon have been turned over to grazing.

At the same time herds cause wide-scale land degradation, with about 20 percent of pastures considered as degraded through overgrazing, compaction and erosion. This figure is even higher in the drylands where inappropriate policies and inadequate livestock management contribute to advancing desertification.

The livestock business is among the most damaging sectors to the earth's increasingly scarce water resources, contributing among other things to water pollution, euthropication and the degeneration of coral reefs. The major polluting agents are animal wastes, antibiotics and hormones, chemicals from tanneries, fertilizers and the pesticides used to spray feed crops. Widespread overgrazing disturbs water cycles, reducing replenishment of above and below ground water resources. Significant amounts of water are withdrawn for the production of feed.

Livestock are estimated to be the main inland source of phosphorous and nitrogen contamination of the South China Sea, contributing to biodiversity loss in marine ecosystems.

Meat and dairy animals now account for about 20 percent of all terrestrial animal biomass. Livestock's presence in vast tracts of land and its demand for feed crops also contribute to biodiversity loss; 15 out of 24 important ecosystem services are assessed as in decline, with livestock identified as a culprit.

Removing flesh from our diet is rarely mentioned in the lists of things to do about climate change. But it should be high up on every list.

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The IPCC never says we are in an emergency situation, nor that we must act now, nor what the number of deaths will be at various levels of planetary heating. It is important to note that once agriculture in any region goes into decline from global climate change, it will be all downhill for the population dependent on that farming from then on. Even without all the above predictable adverse factors, the poor and climate change-innocent Southern populations are now already condemned to large agricultural declines, because we are committed to a +1.4°C temperature increase. This has started already in the dry regions of southern Africa.

No assistance has been provided to these people even though G8 nations were obliged under the Framework Convention on Climate Change to do so. It is hardly likely that the rich world will come to their rescue. Food is strictly a business now and is utilized to make money. Plus, the rich nations will be in fear for their own food security.

14. CAN THE TRUTH SAVE THE FUTURE OF LIFE ON EARTH? (THE SOLUTIONS SECTION)

Can the truth save the future of life on Earth? Only if the leading institutions of our civilization get their act together.

Only if civil society globalizes to demand that harmful fossil fuel energy be replaced by clean, safe, renewable energy.

And only if everyone acts with a view to the 2009 UN Framework Convention on Climate Change conference (to develop the Kyoto Protocol successor) in Copenhagen.

A scenario for global climate change survival goes like this:

- More heroic individuals like Al Gore and Anthony Marr – who are not afraid to tell it like it is – get out there, share their care and concern for all species of life, and explain that we are in a planetary state of emergency WITH NO MORE TIME TO LOSE.

- A massive, global, all-out, united campaign is implemented by the environmental NGOs to halt deforestation, and to close down the fossil fuel industries worldwide and replace them with clean renewable energy technologies.
- All of global civil society unites to declare a state of planetary emergency and calls on the United Nations to do the same.
- Campaign to demand closure of tar sands, shale oil and coal industries because they are killing all future life on Earth by turning the atmosphere into a deadly gas chamber.
- An emergency integrated risk assessment is undertaken by an expert science panel under the UN, and is uncompromised by government policy makers and those who have a vested interest in anything other than life.
- A call goes out for an emergency UN Earth Summit to convene and meet until a binding agreement is made on the ways and means to replace the fossil fuel economy with the clean renewable energy economy worldwide.
- The UN and all institutions join a global declaration of the planetary state of emergency caused by global climate change.
- A much stronger and more united voice emerges from all the religious leaders and faith groups to protect Creation from further destructive desecration and pollution. (This follows the position of Patriarch Bartholomew that extinction of species and global climate change are sinful and manifestly the greatest evils. And that causing the suffering and death of millions of innocent global climate change victims in the already most economically oppressed regions is sinful and evil.)

- All debts of climate change vulnerable nations are immediately cancelled.
- The military sector forms a global peace accord and demilitarizes the planet.
- The resources of the military sector are diverted immediately to (re)construction of (sustainable) cities and transportation systems, and construction of renewable energy infrastructure.
- Our economy stops promoting the materialistic, wasteful, polluting, affluent consumer culture.
- The media sector implements a global tell-the-truth information and public persuasion campaign on climate change.
- The advertising, public relations and promotion sectors become climate-friendly.
- The education profession immediately educates all teachers on the causes of and solutions to global warming and climate change. This knowledge and understanding becomes a requirement for secondary school graduation and a required course for all students at the post-secondary level. Teachers of younger students center the curriculum on age-appropriate environmental and sustainability education.
- The legal profession becomes actively involved, calling for nations to honor all their agreed-to obligations under the 1992 UN Framework Convention on Climate Change and UN Framework Convention on Biodiversity, signed at the Rio Summit.
- The legal profession points out that knowingly causing the deaths of millions of innocent people and the destitution of hundreds of millions this century is morally the most repugnant and worst ever crime against humanity (per *jus cogens*).

- The legal profession presents the legal argument on behalf of all future generations that the UN FCCC is a "treaty" and a "framework" treaty at that, and the only legal protection that all future generations have for survival on a substantially changed planet.
- And as such the FCCC cannot be dismissed as non-legally-binding soft law (per *erga omnes*).
- The legal profession, working jointly with the medical profession, defines "dangerous interference with the climate system" and other parts of the UN Framework Convention on Climate Change (FCCC) that rich governments and the IPCC complain they can't understand. (Yes, the IPCC says it has not determined what dangerous climate change is!)
- The medical profession becomes actively involved, using their privileged status within their societies to educate about the health impacts of global climate change, and to advocate for urgent mitigation of this global health emergency. The lives of hundreds of millions of people are at risk this century.
- Nations prepare for the worst global environmental and public health calamity ever.
- The agricultural sector becomes actively involved, because global climate change will negatively impact and, in some regions, devastate agriculture and food availability, and because current industrial agriculture is a major cause of global climate change.
- The agricultural sector closes down the livestock industry, increases the diversity of crops, gets crops off chemical fertilizers and pesticides to increase crop resilience, and moves toward agroforestry and other strategies for retaining carbon.

- Farmers become actively involved in calling for governments to urgently mitigate global climate change in order to avoid agricultural collapse.
- A call goes out globally to avoid meat eating.
- Halt all deforestation of the Amazon and other tropical rainforests, old growth forests, and boreal forests. Use harvested lumber from plantations to replace concrete and brick in the construction industry.
- A call goes out for the redesign of the economic system to preserve the Earth intact for future generations.
- The economics profession becomes actively and responsibly involved in calling for and instigating an economic revolution that will allow the renewable energy revolution.
- The economics profession makes a statement calling for economic market failure correction by fully internalizing the social and environmental costs of global climate change over the life of multiple generations without future discounting.
- A call goes out for global and national carbon taxes of at least $300 per tonne of carbon. This can be implemented immediately as a $100 per tonne tax, to rise by 20% annually until it reaches $325 per tonne (the figure determined by the Stern Commission as the social cost of carbon). Revenues from carbon taxes must be directed towards renewable energy infrastructure as well as tax benefits for carbon footprint cuts.
- The multinational banking industry becomes actively and responsibly involved by aiding the economic revolution that will allow the renewable energy revolution.
- A massive injection of funding and public expenditure for global energy retrofit and conservation programs, global renewable energy infrastructure construction,

and global zero carbon transportation systems is paid for at no or minimal interest over the lifetimes of multiple future generations.

- A call goes out globally for a credit squeeze on all fossil fuel energy projects to severely constrain fossil fuel production and economic growth. Fossil fuel energy projects no longer receive direct or indirect subsidies and incentives.
- A call goes out globally to phase out fossil fuel combustion.

World Scientists' Warning to Humanity (1992)

Some 1,700 of the world's leading scientists, including the majority of Nobel laureates in the sciences, issued this appeal in November 1992. The World Scientists' Warning to Humanity was written and spearheaded by the late Henry Kendall, former chair of UCS's board of directors.

INTRODUCTION

Human beings and the natural world are on a collision course. Human activities inflict harsh and often irreversible damage on the environment and on critical resources. If not checked, many of our current practices put at serious risk the future that we wish for human society and the plant and animal kingdoms, and may so alter the living world that it will be unable to sustain life in the manner that we know. Fundamental changes are urgent if we are to avoid the collision our present course will bring about.

THE ENVIRONMENT

The environment is suffering critical stress:

The Atmosphere

Stratospheric ozone depletion threatens us with enhanced ultraviolet radiation at the earth's surface, which can be damaging or lethal to many life forms. Air pollution near ground level, and acid precipitation, are already causing widespread injury to humans, forests, and crops.

Water Resources

Heedless exploitation of depletable ground water supplies endangers food production and other essential human systems. Heavy demands on the world's surface waters have resulted in serious shortages in some 80 countries, containing 40 percent of the world's population. Pollution of rivers, lakes, and ground water further limits the supply.

Oceans

Destructive pressure on the oceans is severe, particularly in the coastal regions which produce most of the world's food fish. The total marine catch is now at or above the estimated maximum sustainable yield. Some fisheries have already shown signs of collapse. Rivers carrying heavy burdens of eroded soil into the seas also carry industrial, municipal, agricultural, and livestock waste -- some of it toxic.

Soil

Loss of soil productivity, which is causing extensive land abandonment, is a widespread by-product of current practices in agriculture and animal husbandry. Since 1945, 11 percent of the earth's vegetated surface has been degraded -- an area larger than India and China combined -- and per capita food production in many parts of the world is decreasing.

Forests

Tropical rain forests, as well as tropical and temperate dry forests, are being destroyed rapidly. At present rates, some critical forest types will be gone in a few years, and most of the tropical rain forest will be gone before the end of the next century. With them will go large numbers of plant and animal species.

Living Species

The irreversible loss of species, which by 2100 may reach one-third of all species now living, is especially serious. We are losing the potential they hold for providing medicinal and other benefits, and the contribution that genetic diversity of life forms gives to the robustness of the world's biological systems and to the astonishing beauty of the earth itself. Much of this damage is irreversible on a scale of centuries, or permanent. Other processes appear to pose additional threats. Increasing levels of gases in the atmosphere from human activities, including carbon dioxide released from fossil fuel burning and from deforestation, may alter climate on a global scale. Predictions of global warming are still uncertain -- with projected effects ranging from tolerable to very severe -- but the potential risks are very great.

Our massive tampering with the world's interdependent web of life -- coupled with the environmental damage inflicted by deforestation, species loss, and climate change -- could trigger widespread adverse effects, including unpredictable collapses of critical biological systems whose interactions and dynamics we only imperfectly understand.

Uncertainty over the extent of these effects cannot excuse complacency or delay in facing the threats.

POPULATION

The earth is finite. Its ability to absorb wastes and destructive effluent is finite. Its ability to provide food and energy is finite. Its ability to provide for growing numbers of people is finite. And we are fast approaching many of the earth's limits. Current economic practices which damage the environment, in both developed and underdeveloped nations, cannot be continued without the risk that vital global systems will be damaged beyond repair.

Pressures resulting from unrestrained population growth put demands on the natural world that can overwhelm any efforts to achieve a sustainable future. If we are to halt the destruction of our environment, we must accept limits to that growth. A World Bank estimate indicates that world population will not stabilize at less than 12.4 billion, while the United Nations concludes that the eventual total could reach 14 billion, a near tripling of today's 5.4 billion. But, even at this moment, one person in five lives in absolute poverty without enough to eat, and one in ten suffers serious malnutrition.

No more than one or a few decades remain before the chance to avert the threats we now confront will be lost and the prospects for humanity immeasurably diminished.

WARNING

We the undersigned, senior members of the world's scientific community, hereby warn all humanity of what lies ahead. A great change in our stewardship of the earth and the life on it is required, if vast human misery is to be avoided and our global home on this planet is not to be irretrievably mutilated.

WHAT WE MUST DO

Five inextricably linked areas must be addressed simultaneously:

We must bring environmentally damaging activities under control to restore and protect the integrity of the earth's systems we depend on.

We must, for example, move away from fossil fuels to more benign, inexhaustible energy sources to cut greenhouse gas emissions and the pollution of our air and water. Priority must be given to the development of energy sources matched to Third World needs -- small-scale and relatively easy to implement.

We must halt deforestation, injury to and loss of agricultural land, and the loss of terrestrial and marine plant and animal species.

We must manage resources crucial to human welfare more effectively.

We must give high priority to efficient use of energy, water, and other materials, including expansion of conservation and recycling.

We must stabilize population.

This will be possible only if all nations recognize that it requires improved social and economic conditions, and the adoption of effective, voluntary family planning.

We must reduce and eventually eliminate poverty.

We must ensure sexual equality, and guarantee women control over their own reproductive decisions.

DEVELOPED NATIONS MUST ACT NOW

The developed nations are the largest polluters in the world today. They must greatly reduce their overconsumption, if we are to reduce pressures on resources and the global environment. The developed nations have the obligation to provide aid and support to developing nations, because only the developed nations have the financial resources and the technical skills for these tasks.

Acting on this recognition is not altruism, but enlightened self-interest: whether industrialized or not, we all have but one lifeboat. No nation can escape from injury when global biological systems are damaged. No nation can escape from conflicts over increasingly scarce resources. In addition, environmental and economic instabilities will cause mass migrations with incalculable consequences for developed and undeveloped nations alike.

Developing nations must realize that environmental damage is one of the gravest threats they face, and that attempts to blunt it will be overwhelmed if their populations go unchecked. The greatest peril is to become trapped in spirals of environmental decline, poverty, and unrest, leading to social, economic, and environmental collapse.

Success in this global endeavor will require a great reduction in violence and war. Resources now devoted to the preparation and conduct of war -- amounting to over $1 trillion annually -- will be badly needed in the new tasks and should be diverted to the new challenges.

A new ethic is required -- a new attitude towards discharging our responsibility for caring for ourselves and for the earth. We must recognize the earth's limited capacity to provide for us. We must recognize its fragility. We must no longer allow it to be ravaged. This ethic must motivate a great movement, convincing reluctant leaders and reluctant governments and reluctant peoples themselves to effect the needed changes.

The scientists issuing this warning hope that our message will reach and affect people everywhere. We need the help of many.

- We require the help of the world community of scientists -- natural, social, economic, and political.
- We require the help of the world's business and industrial leaders.
- We require the help of the world's religious leaders.
- We require the help of the world's peoples.

We call on all to join us in this task.

The Animal Rights Movement Must Engage Global Warming

by Anthony Marr

At this stage of the Animal Rights movement, the subject of global warming is by and large considered irrelevant, and thus ignored. This has to change, immediately or sooner.... Why?

The obvious initial answer is that globally the animal industry generates more greenhouse gases (GHGs) than the transportation sector. A meat-eater riding a bicycle generates more GHGs than a vegan driving a Hummer. So, yes, veganism definitely is a solution.

But even if all 6 billion humans on Earth suddenly become vegans tomorrow, there is still a greater problem requiring an even greater solution – stopping GHG release from all sources altogether in record time, failing which a full-blown and unstoppable 6th mass extinction will descend upon the Earth.

The 6th mass extinction of species is not a theory. It is a fact. Its early stages are already unfolding all over the world as we speak. And it is anthropogenic, i.e., of human cause (see www.HOPE-CARE.org Global Warming section).

Every day, we are exterminating dozens of known species, and an unknown number of unknown species – directly by hunting and habitat destruction, and indirectly by global warming – and this extinction rate is escalating.

The magnificent Amazon rainforest seems destined to annihilation, becoming scrubland at best, a savannah if even drier, and a desert at worse, with 7-10 million species right there (see www.HOPE-CARE.org Global Warming section, Tropical Forests and Regions)

The IPCC report, which did not make a single mention of the very crucial term "methane clathrate", nor accounted for most carbon cycles and feedback loops, nonetheless predicted a maximum global temperature rise of 6oC/10oF in its "business-as-usual" "A1F1" worst case scenario, i.e. along the track we are currently following. If all relevant factors are entered into the equation, or more specifically their computer models, with all feedback loops accounted for, particularly the methane feedback loop, the worst case scenario would become a medium-case scenario at worst. The real worst case scenario would probably be banned from all government deliberations on policy and strategy, because to meet the challenge would not make its short term economic performance look too rosy. Such a convoluted journey towards societal insanity dooms not only animals by the millions, but species by the millions, each comprising millions of animals, totaling sentient lives by the trillions. This makes global warming very much of an animal rights issue.

The point to be made here is that the activities of our species are dooming millions of species of animals and plants to extinction. No crime perpetrated by us throughout our blood-soaked history, against humanity or against nature, can be more serious than this.

Since it is already happening, it is our responsibility to do all we can to minimize the carnage as soon as possible.

We have no right to destroy in a century what took millions of years to evolve. In other words, we have no right to categorically eradicate God's creation. And the animals, whose rights we champion, have every right to live, and live in harmony with an unpolluted environment.

If the Animal Rights movement does not rise in defense of these otherwise doomed species, including all mammals and birds, who will?

How?

I will not bore you with small talk about changing light bulbs and insulating houses. There will be no light bulbs to change and no houses to insulate within a century unless we shut down the most gargantuan monstrosity our species has ever created – the hideous and damned Alberta Tar Sands.

Within 3 years.

T"Impossible" is the usual immediate response. No doubt, this is more than a David-versus-Goliath contest, but one akin to mouse-versus-dinosaur. Be it as it may, take a look at the tar sands for yourself (see www.HOPE-CARE.org à global warming à fossil fuels à the tar sands), and tell me that the laws of nature allows it

One last point to stress, perhaps best till last where the Animal Rights Movement is concerned. Global Warming actually empowers the anti-animal-agriculture movement, because other than the industry's inherent cruelty, which has been the animal rights movement's sole lever, it is also a significant contributor to global warming. This adds a huge urgency to reducing meat consumption and phasing out the meat industry ASAP.

Meanwhile, just bear in mind, between the mouse and the dinosaur, which is still alive today?

How to Raise $120 Billion Per Year for Healing Our Planet Earth

by Anthony Marr

We need at least $120 billion a year in public funds, for starters, to save the Earth from mass extinction due to global warming. Without this global budget, we may as well kiss over 50% of Earth's species good bye, perhaps including our own.

The question is: Where will this money come from?

First of all, why $120 billion a year? The fact is that far more is needed, what with the range of alternative, renewable, non-combustion technologies that need to be researched, developed and massively built, in order to be capable of taking over the global energy load from fossil fuels technology. But $120 billion is the amount that seems potentially available.

I speak of the following with the utmost of seriousness.

What: 120 billion is 10% of $1.2 trillion. $1.2 trillion per year is the current global military expenditure. 10% of $1.2 trillion is $120 billion.

When: ASAP.

How: Essentially, each and every country will reduce its military budget by 10%, and donate the amount to a United Nations-administered Global Green Fund for environmental projects worldwide.

With the military of each nation declining by the same percentage, there is no relative gain or loss of power, and with 10% fewer weapons worldwide, the world will be 10% safer.

Back in the 1970s, I experimented with the idea by means of a test petition distributed internationally. Within weeks, I obtained thousands of signatures from all parts of the globe, and deemed the test a success. However, I did not proceed with the project because I deemed the world not ready for this move. The situation was not serious enough back then, and so neither were the people. Now the situation is very serious, and so seem people in general, at least more so than before.

The question is: How, specifically, do we liberate this fund for immediate use? "Immediately" means there is no time to lose. Can the internet be somehow employed to this end? Is a global petition the best way to go? What legal steps must we slog through to go from A to Z?

Here is the tough part. Of the $1.2 trillion of global military expenditure, the United States spends $623 billion, second place UK $65B, third place France $63B, Germany $52B, China $50B, Japan $43B, Russia $37B.... In other words, the United States alone spends over 50% of the global military expenditure, almost 10 times that of 2nd place UK, 13 times that of 5th place China, and 16 times that of 7th place Russia.

1	United States	623,000,000,000	2008
—	European Union Total	300,745,000,000	
2	United Kingdom	65,093,500,000	2007-2008
3	France	63,070,000,000	2008
4	Germany	52,400,000,000	2008
5	China	49,500,000,000	2007 est.
6	Japan	42,700,000,000	2006
7	Russia	36.800,000,000	2008
8	Italy	32,600,000,000	2008

9	Saudi Arabia	30,150,000,000	2008
10	South Korea	29,531,400,000	2008
11	Brazil	24,417,000,000	2008
12	India	24,330,000,000	2008
13	Australia	19,441,000,000	2008
14	Canada	16,900,000,000	2008
15	Spain	15,792,207,000	2007
16	Turkey	15,166,000,000	2008
17	Netherlands	11,790,000,000	2008 (est.)
18	Poland	9,650,000,000	2008
19	Israel	9,444,000,000	2007
20	Republic of China (Taiwan)	9,320,000,000	2007
21	Greece	7,648,561,000	2007 (est.)
22	Singapore	7,053,000,000	2008
23	Sweden	6,309,137,714	2007
24	Iran	6,300,000,000	2007
25	Mexico	6,070,000,000	2006
26	Norway	5,725,000,000	2007
27	Chile	5,193,000,000	2007
28	North Korea	5,000,000,000	2005
29	Pakistan	4,800,000,000	2006
30	Argentina	4,300,000,000	NA

If this plan is to proceed, the United States will have to reduce its military budget by the largest dollar amount: 10% x

$623 billion = $62 billion = the entire military budget of France = 1.3 times the entire military budget of China. The question is: The United States did not step up to the plate for the Kyoto Protocol; will it step up to the plate to reduce its military budget by $62 billion and donate the amount to the Global Green Fund?

In the first half of 2008, during the Republican candidates debate in California, Mitt Romney was heard to talk about the need for increasing the military budget. If global military hegemony is what he wants, he might indeed doom the US to eventually hold hegemony over a dead world.

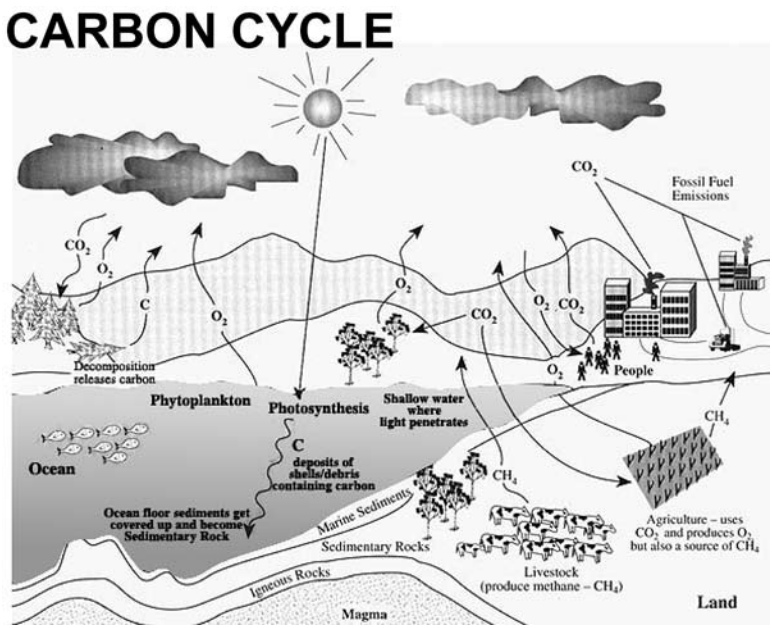
By the same token, would Britain be willing to reduce its military budget by $6.5 billion, China by $5 billion and Russia by $3.9 billion, and each donate its amount to the Global Green Fund?

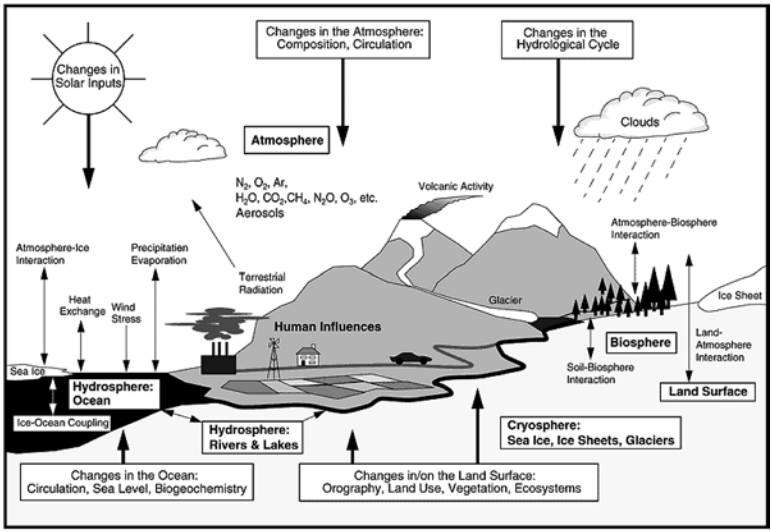
It is unmistakable that China as well as Russia have ambitions for super-power status. Given their relatively low budgets (relative to the US's) today, there is no doubt that they intend to increase their budgets as well. If un-curtailed, the world seems doomed to another cold war. An annual reduction of the military budgets of all nations will have a retarding effect on the potential onset of World War III.

The best way for a country to look at this is that they are investing their money in a global environmental enterprise, with no loss of national security and no relative weakening of military strength such that the level playing field is maintained.

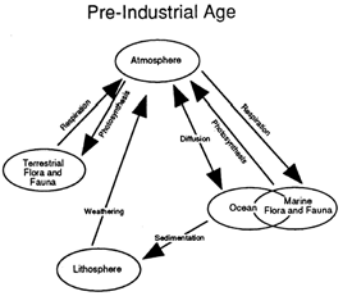
This promises to be a gigantic wheel to turn. But once turned, it may roll on forever.

Please go to the Care2 petition site, sign the petition, make a strong comment, and pass the petition far and wide. Google "secretary general global green fund."

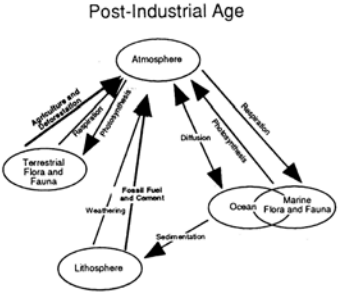

CARBON CYCLE
CO_2
Fossil Fuel Emissions
CO_2
O_2
C
O_2
O_2
O_2 CO_2
CO_2
Decomposition releases carbon
O_2
People
Phytoplankton
Photosynthesis
Shallow water where light penetrates
CH_4
C
deposits of shells/debris containing carbon
Ocean
CH_4
Marine Sediments
Ocean floor sediments get covered up and become Sedimentary Rock
Agriculture – uses CO_2 and produces O_2 but also a source of CH_4
Sedimentary Rocks
Igneous Rocks
Livestock (produce methane – CH_4)
Magma
Land


Changes in Solar Inputs
Changes in the Atmosphere: Composition, Circulation
Changes in the Hydrological Cycle
Atmosphere
Clouds
N_2, O_2, Ar, H_2O, CO_2, CH_4, N_2O, O_3, etc.
Aerosols
Volcanic Activity
Atmosphere-Biosphere Interaction
Atmosphere-Ice Interaction
Precipitation Evaporation
Terrestrial Radiation
Heat Exchange
Wind Stress
Glacier
Ice Sheet
Human Influences
Biosphere
Land-Atmosphere Interaction
Soil-Biosphere Interaction
Sea Ice
Hydrosphere: Ocean
Land Surface
Ice-Ocean Coupling
Hydrosphere: Rivers & Lakes
Cryosphere: Sea Ice, Ice Sheets, Glaciers
Changes in the Ocean: Circulation, Sea Level, Biogeochemistry
Changes in/on the Land Surface: Orography, Land Use, Vegetation, Ecosystems

Balanced Carbon cycle

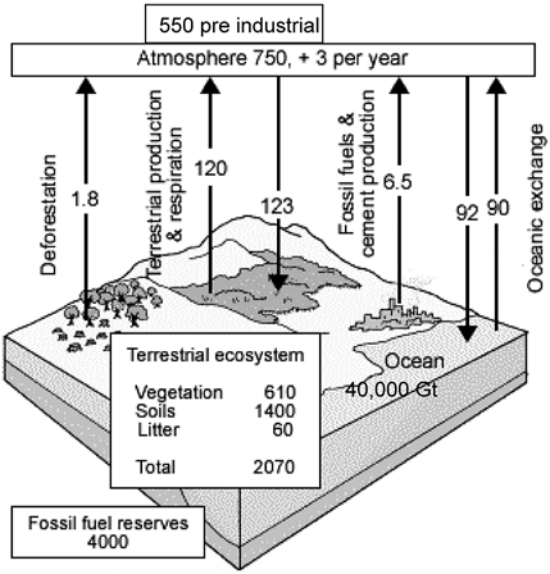


Perturbed carbon cycle
Out of balance

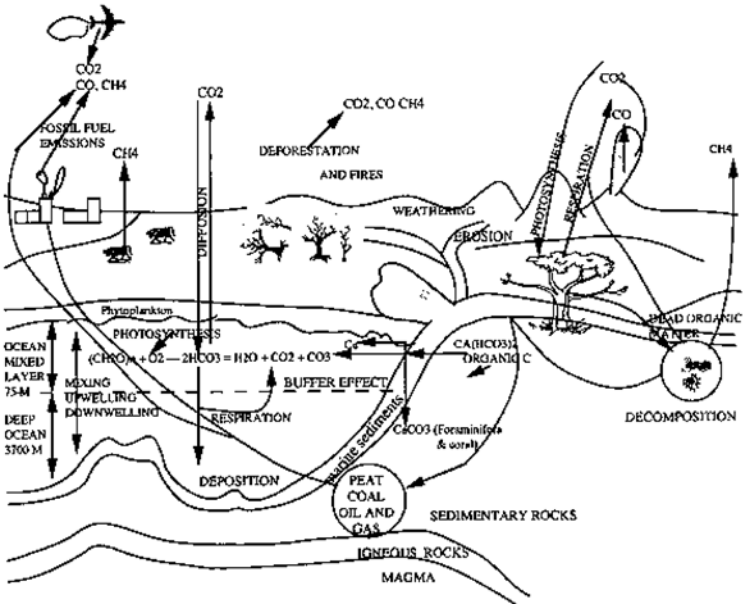


Permafrost (1 million sq.km.)
1000 Gt

Methane hydrate 10,000 Gt

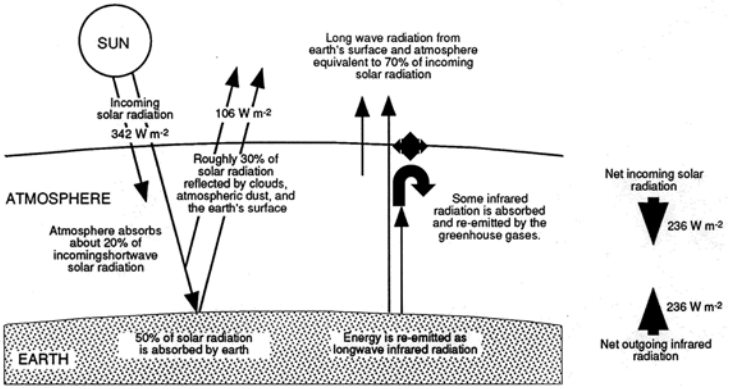


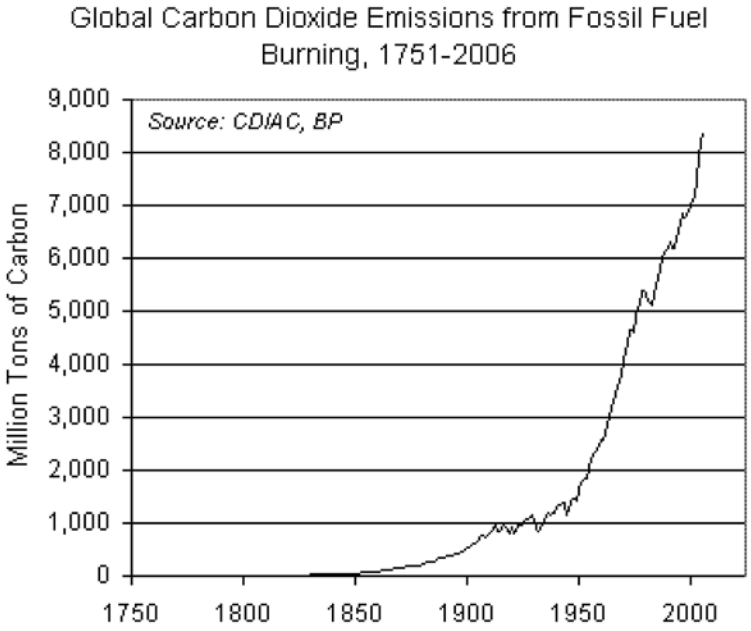
CARBON CYCLE

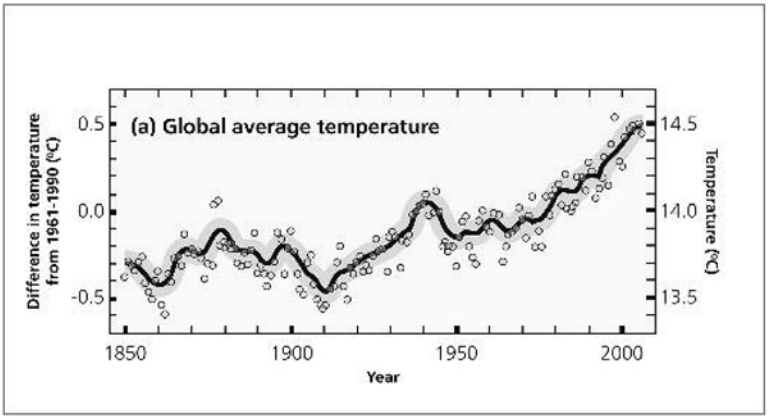


ENHANCED 'GREENHOUSE EFECT'

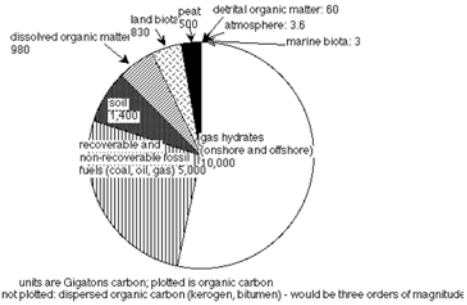
GHGs in fact absorb heat reflected from the Earth and then radiate heat back to Earth. This results in an increase in energy leading to extremes of heat weather and water cycle




Global Carbon Dioxide Emissions from Fossil Fuel Burning, 1751-2006
Source: CDIAC, BP
Million Tons of Carbon
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
1750
1800
1850
1900
1950
2000


(a) Global average temperature
Difference in temperature from 1961-1990 (°C)
0.5
0.0
-0.5
14.5
14.0
13.5
Temperature (°C)
1850
1900
1950
2000
Year

METHANE HYDRATES AND GLOBAL CARBON



"It is well documented that bottom-water temperatures in the ocean increase by approximately 5 degrees centigrade during periods of global warming,"

"Our study indicates that perhaps as much as 2,000 gigatons (a single gigaton is one billion tons) of methane gas might escape from the ocean into the atmosphere during such warming events."

(University Of Wyoming (2004, January 13). Ocean Floor Reveals Clues To Global Warming. *ScienceDaily)*

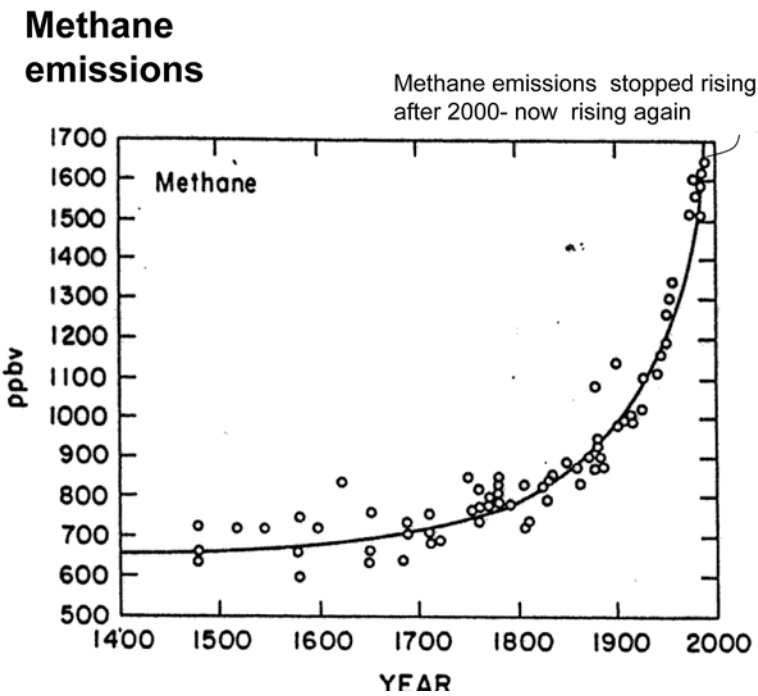
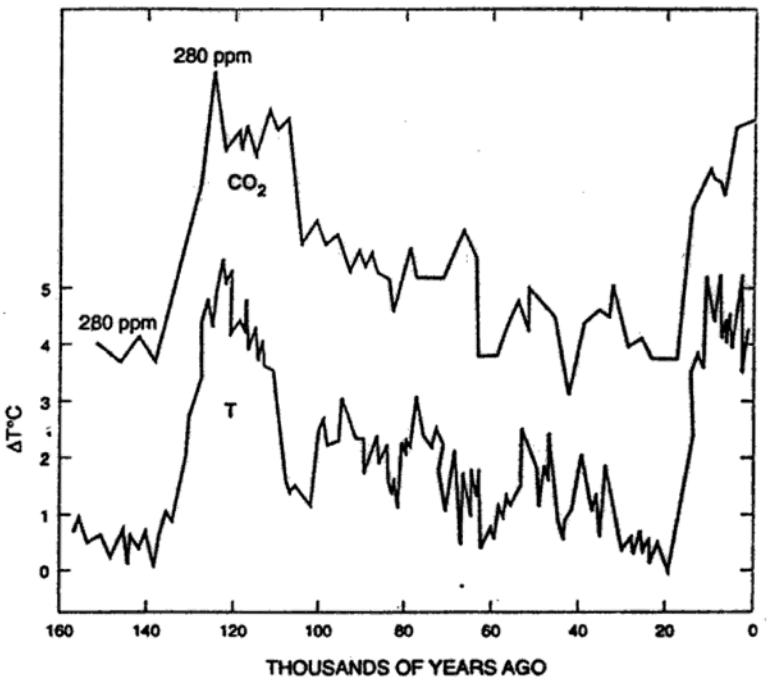


TABLE 1. Major Components of the Earth's Atmosphere

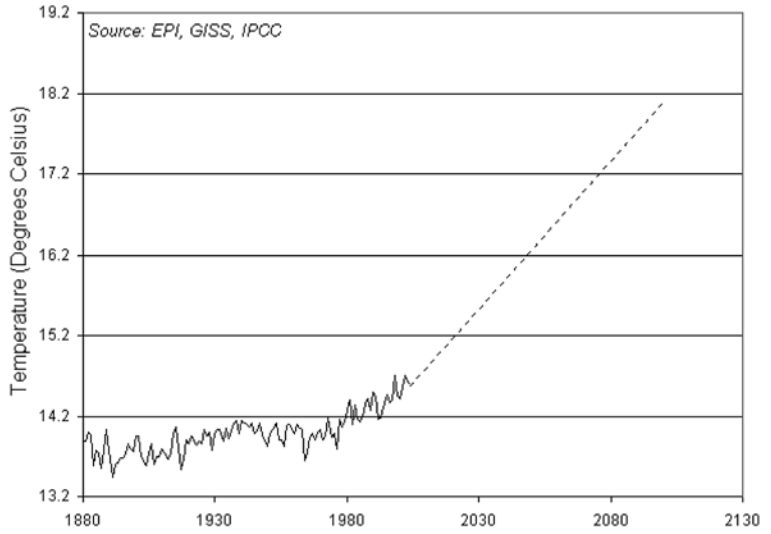
GAS	CONCENTRATION	
Nitrogen, N_2	78.1% by volume	
Oxygen, O_2	20.9% by volume	
Argon, A	0.9% by volume	
Water Vapor, H_2O	0-4%, variable	**Greenhouse Gas**
Methane, CH_4	1,750 ppb	"
Carbon Dioxide, CO_2	350 ppm	"
Nitrous oxide, N_2O	280 ppb	"
Carbon Monoxide, CO	150 ppb	"
Ozone, O_3	4-65 ppb	"

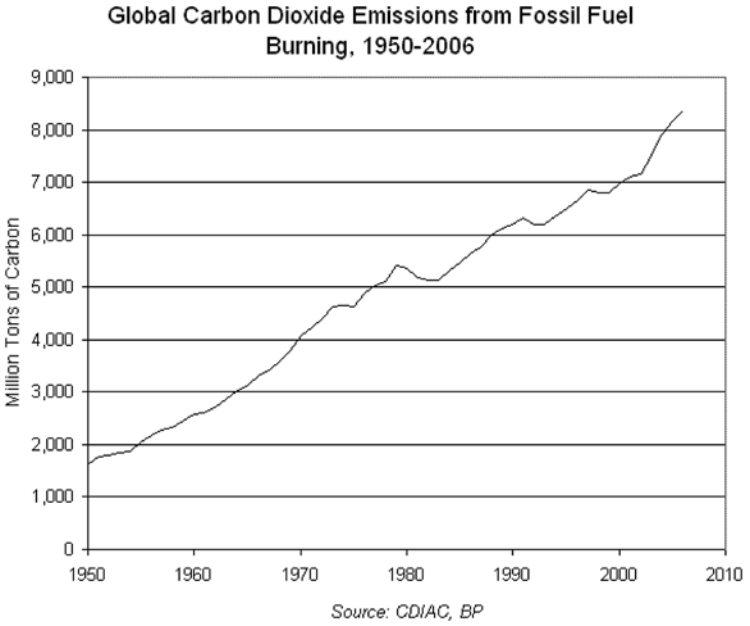
(ppm = parts per million, ppb = parts per billion)

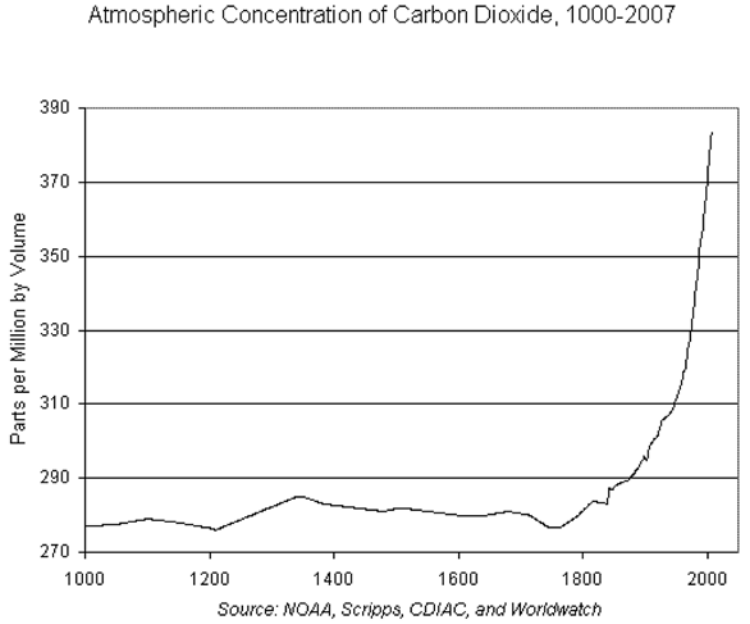
All GHGs are atmospheric trace gases – present in tiny amounts. Therefore small amounts of GHGs added is a large increase and will have large effects.

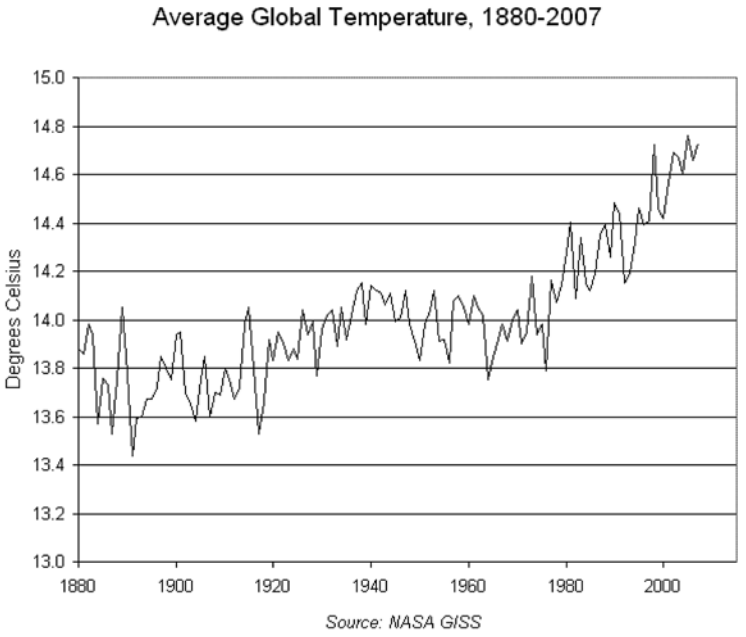


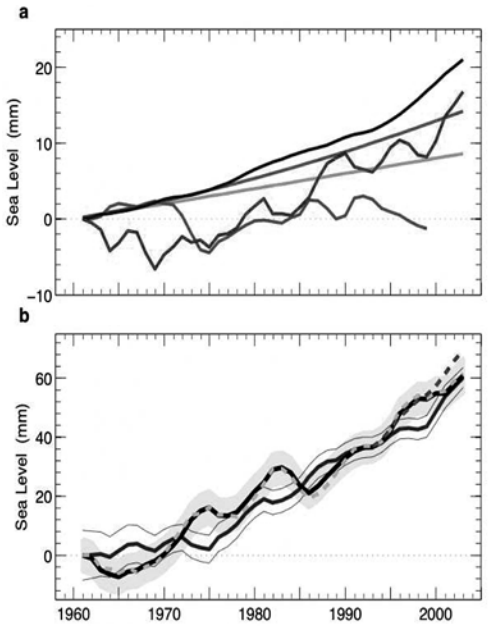
Average Global Temperature, 1880-2004,
with Projection to 2100




Global Carbon Dioxide Emissions from Fossil Fuel Burning, 1950-2006
Million Tons of Carbon
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
1950
1960
1970
1980
1990
2000
2010
Source: CDIAC, BP


Atmospheric Concentration of Carbon Dioxide, 1000-2007
Parts per Million by Volume
390
370
350
330
310
290
270
1000
1200
1400
1600
1800
2000
Source: NOAA, Scripps, CDIAC, and Worldwatch





Ocean temperature and sea level increases 1961 - 2003

50 percent larger than estimated in the 2007 IPCC Assessment.

(Lawrence Livermore 19 June 08)

Warming of the ocean

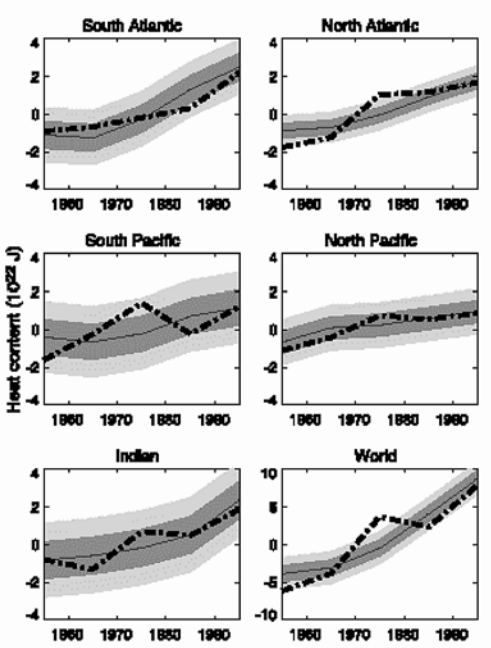
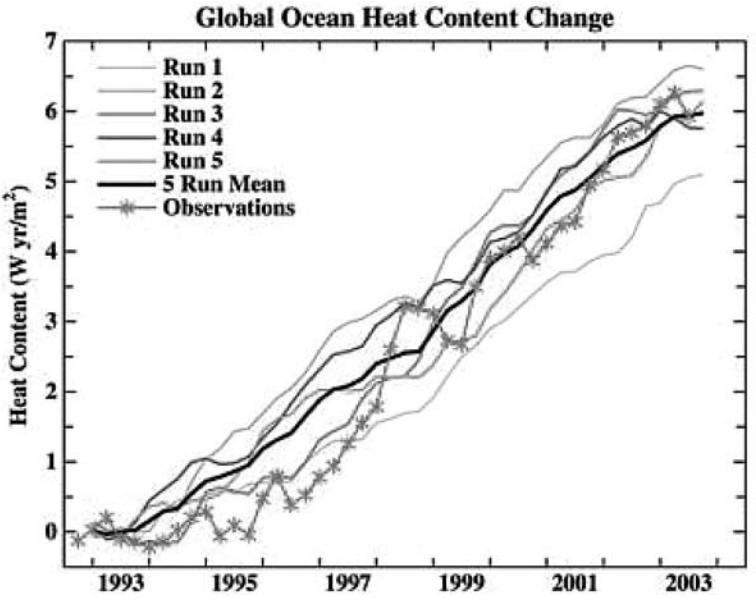
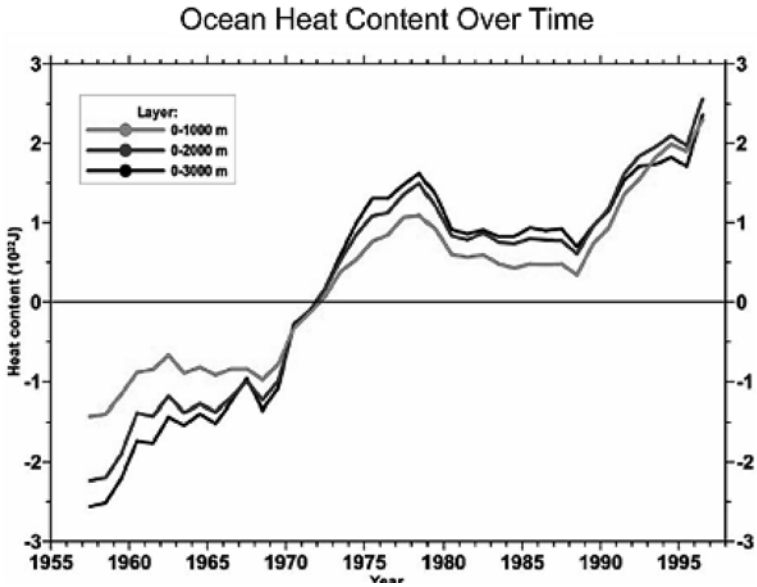
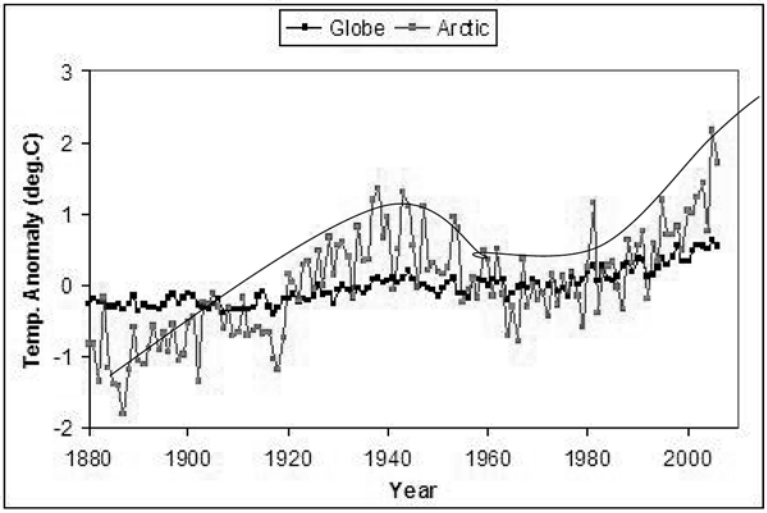


Fig. 1. Decadal values of anomalous heat content (10^{22} J) in various ocean basins. The heavy dashed line is from observations (*14*), and the solid line is the average from five realizations of the PCM (*16–19*) forced by observed and estimated anthropogenic forcing. Both curves show significant warming in all basins since the 1950s. The shaded bands denote one (heavy shading) and two (light shading) standard deviations about the model mean signal estimated from the standard deviation in the scatter of the five-member ensemble. The heat content is computed over the upper 3000 m of the water column. The space/time sampling was identical for both model and observations. Basin averages for the northern oceans are defined between 60°N and the equator. The southern ocean averages are between the equator and 77°S.



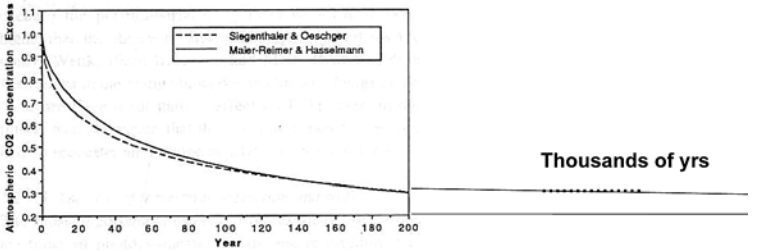

Ocean Heat Content Over Time
Layer:
0-1000 m
0-2000 m
0-3000 m
Heat content (10²²J)
3
2
1
0
-1
-2
-3
1955
1960
1965
1970
1975
1980
1985
1990
1995


Globe
Arctic
Temp. Anomaly (deg.C)
3
2
1
0
-1
-2
1880
1900
1920
1940
1960
1980
2000
Year

ARCTIC WARMING

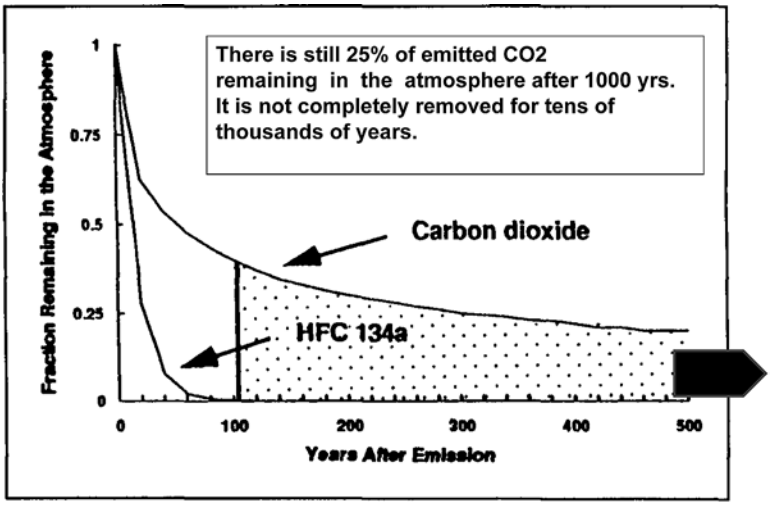
Residence time of CO2 in the atmosphere

CO2 is a long lasting GHG. Much of emitted CO2 is persistent and therefore CO2 emissions are cumulative over time.



25% of emitted CO2 remains in the atmosphere for 1000 yrs and about 7% released today will still be in the atmosphere in 100,000 years (Archer)

With more CO2 the life time is much longer.
Of 5000Gt of C (all fossil fuels) released 75% of the atmospheric emissions have an average lifetime of 1800 years (Weaver June 07)



MELT DOWN

Arctic Sea Ice Arctic Ocean September ice area declined by 7.8 percent per decade between 1953 and 2006. In 2007 there was a record low in summer sea ice extent, 23 percent below the previous 2005 record. Summers could be ice-free in the Arctic Ocean by 2030.

Greenland Ice Sheet Greenland Mean melt extent on the Greenland ice sheet in 2007 was the largest in the 29 years that records have been kept, 10 percent greater than the previous 2005 record. Mass lost from the ice sheet more than doubled between 1996 and 2005.

Permafrost Arctic permafrost has warmed by up to 2 degrees Celsius in recent decades. Methane emissions from thawing permafrost in Northern Siberia increased an estimated 58 percent between 1974 and 2000

Antarctic Ice Sheets The Antarctic ice sheets are losing mass at an average rate of 196 billion tons a year, mostly from the West Antarctic Ice Sheet. Mass lost from ice melting has not been offset by increased snowfall in the interior, as had been predicted by climate models.

Himalayas The Gangotri Glacier, which provides up to 70 percent of the water in the Ganges is retreating more than 35 meters per year, twice as fast as 20 years ago. It could disappear by 2030.

Industrial farming livestock GHGs

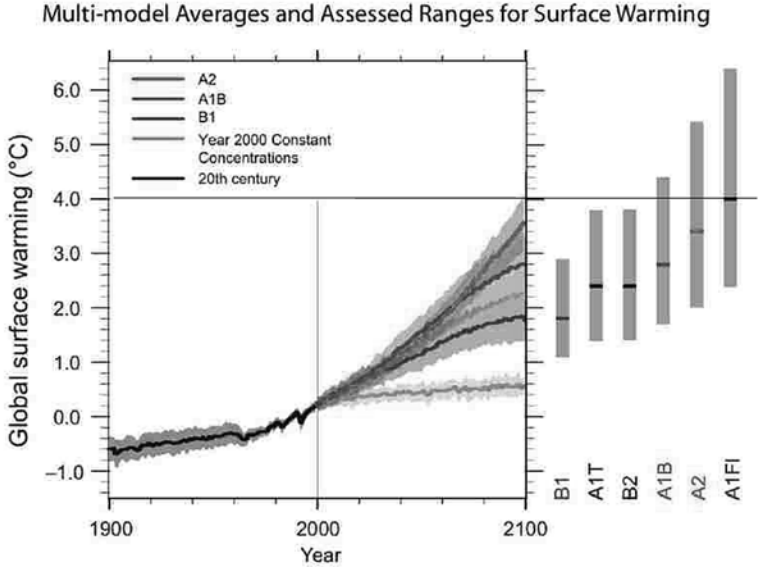
METHANE has an atmospheric lifetime of 12 years and a GWP of 62 X CO2 over 20 years, 23 over 100 years and 7 over 500 years.

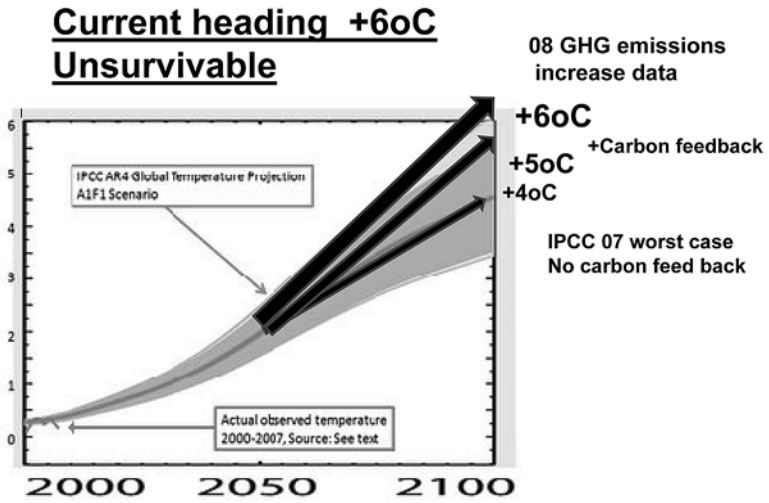
Methane after release has a GWP of @ 75 over its 12 life after which it's GWP is due to its conversion in the atmosphere to CO2.
It's global heating as CO2 is every bit as much as its heating as methane.

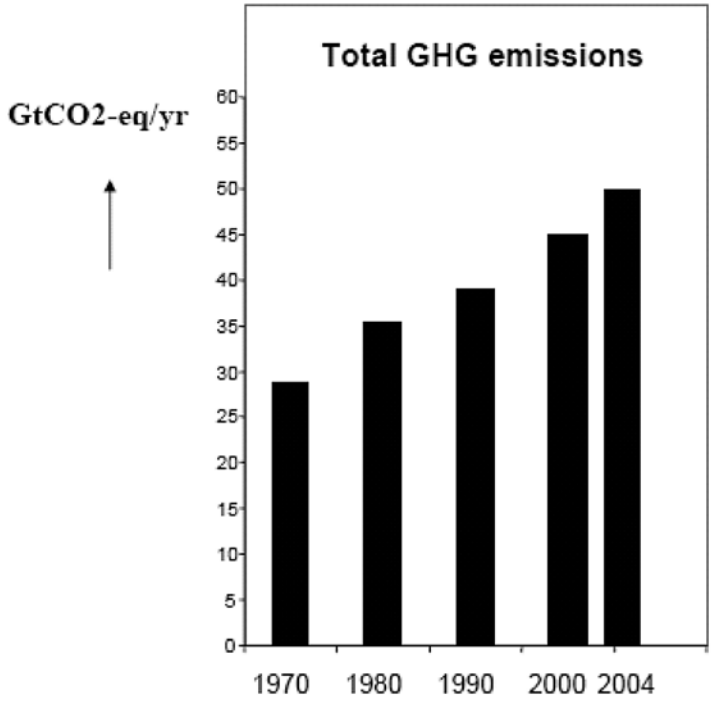
The decrease in GWP associated with longer times is associated with the fact that the methane is degraded to water and CO_2 by chemical reactions in the atmosphere.

NITROUS OXODE has an atmospheric lifetime of 120 years and a GWP of 296 over 100 years.

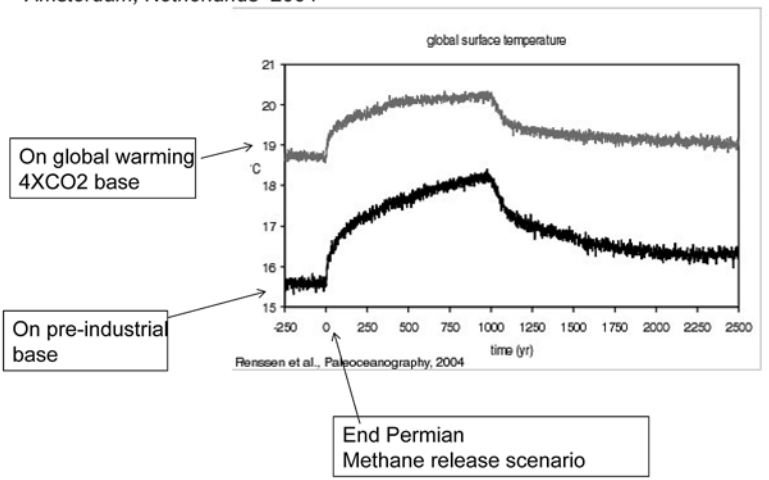
IPCC Worst case scenario +4oC range to +6.4oC (5% chance) N.B. No carbon feed backs included



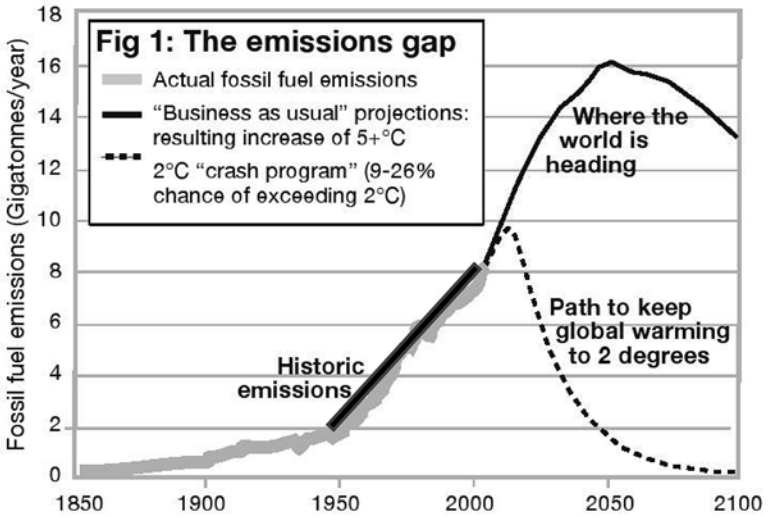

Current heading +6oC
Unsurvivable
08 GHG emissions
increase data
+6oC
+Carbon feedback
+5oC
+4oC
IPCC 07 worst case
No carbon feed back
IPCC AR4 Global Temperature Projection
A1F1 Scenario
Actual observed temperature
2000-2007, Source: See text
0
1
2
3
4
5
6
2000
2050
2100


Total GHG emissions
GtCO2-eq/yr
0
5
10
15
20
25
30
35
40
45
50
55
60
1970
1980
1990
2000
2004

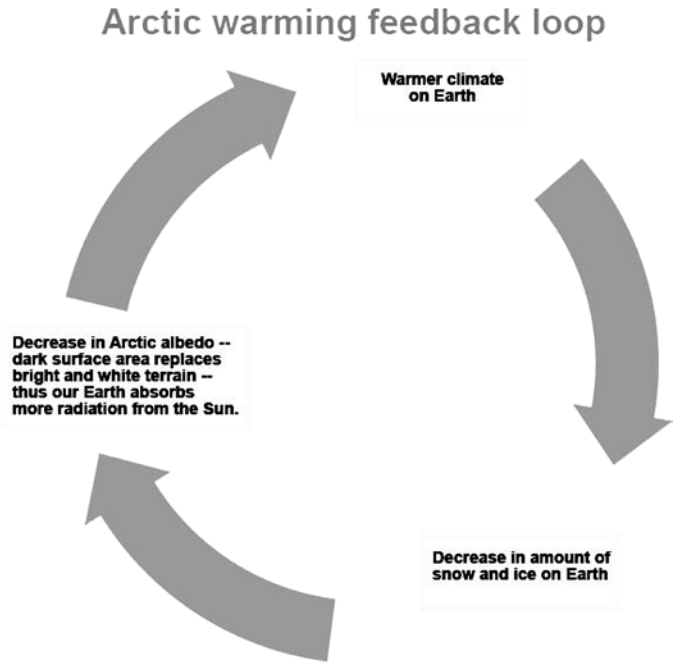
The climatic response to a massive methane release from gas hydrates: Numerical experiments with a coupled climate model, H.Renssen, K. Beets D. Kroon, *Faculty of Earth and Life Sciences, Vrije Universiteit Amsterdam, Netherlands* 2004



+5oC Total Collapse Civilization



Source: *Historic emissions/BAU path:* GCP Report No 5/2006 www.globalcarbonproject.org. BAU based on 2001 IPCC report scenario. 2°C *"crash program" path:* Athanasiou, T, S Kartha, P Baer, 2006. "Greenhouse Development Rights", EcoEquity/Christian Aid (www.ecoequity.org)

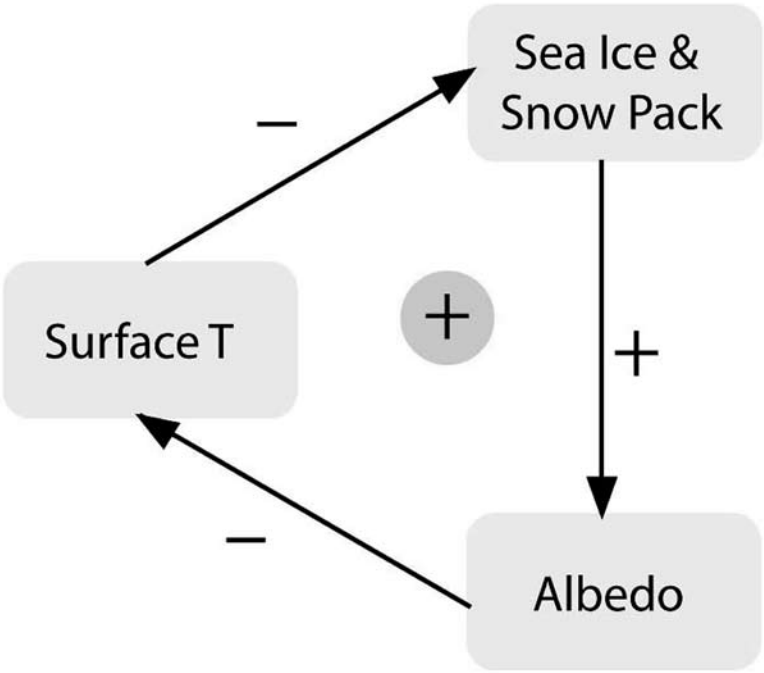


ARCTIC SEA ICE IS MELTING 3 X as fast as models predicted.
INCREASES WARMING OF PERMAFROST
3 X METHANE

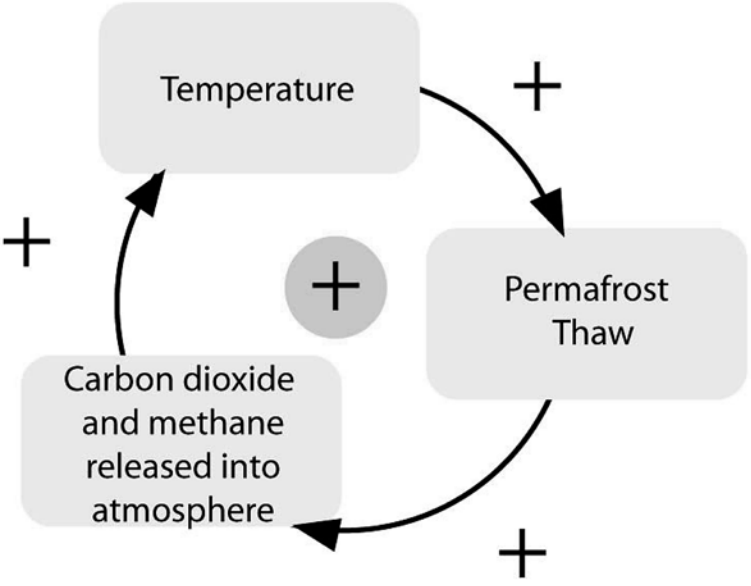
Accelerated Arctic land warming and permafrost degradation during rapid sea ice loss

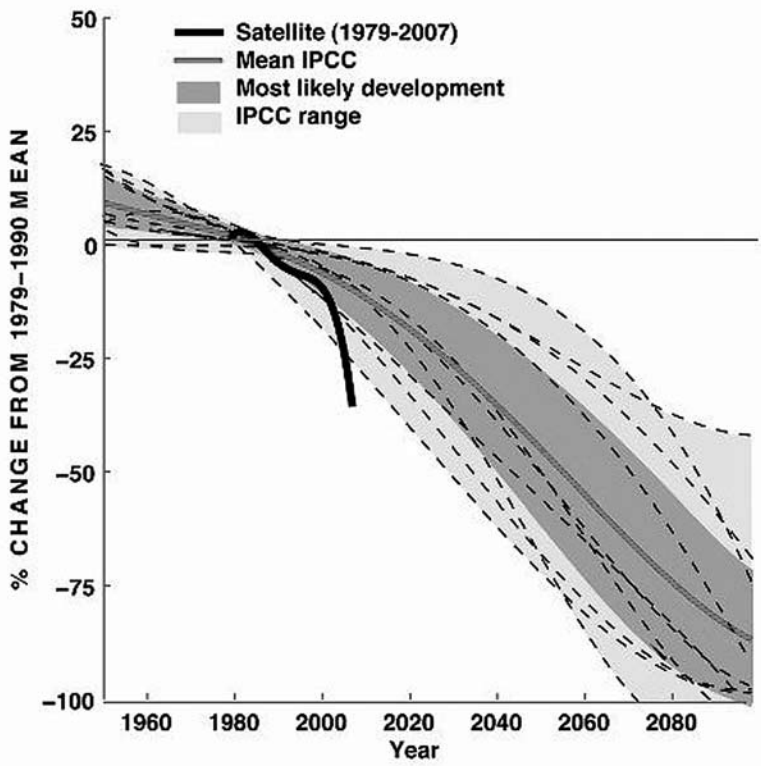
David M. Lawrence, et al
Climate and Global Dynamics Division, National Center for Atmospheric Research 7 Mar 2008

We find that rapid sea ice loss forces a strong acceleration of Arctic land warming in (3.5-fold increase, peaking in autumn) which may trigger rapid degradation of currently warm permafrost and precondition colder permafrost for subsequent degradation under continued warming. This sea ice loss – land warming relationship may be immediately relevant given the record low sea ice extent in 2007.



CARBON FEED BACK PERMAFROST



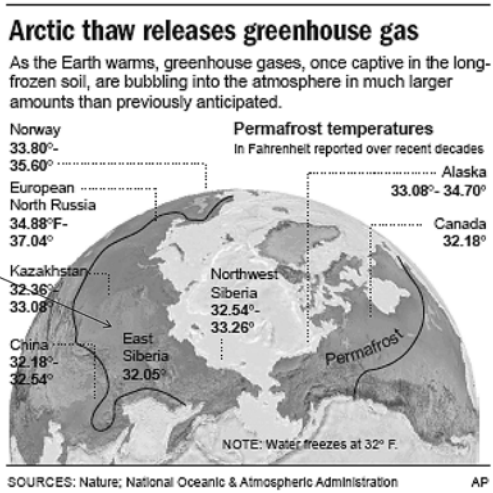


Arctic sea ice loss compared to IPCC models

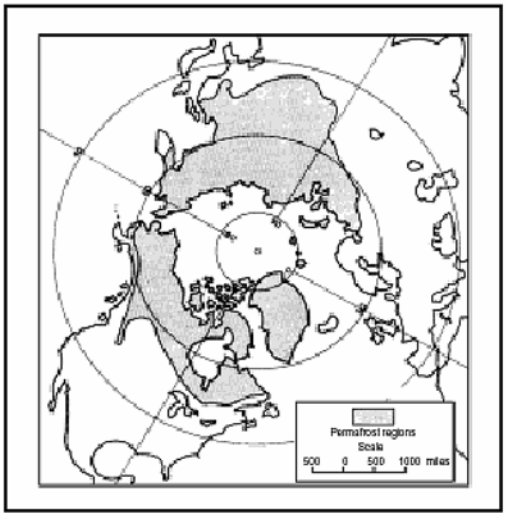
Arctic ice extent loss to September 2007 compared to IPCC modelled changes using the SRES A2 CO2 scenario (IPCC high CO2 scenario). September loss data from satellite observations. Data smoothed with a 4th order polynomial to smooth out the year-to-year variability. Chart courtesy Dr Asgeir Sorteberg, Bjeknes Centre for Climate Research and University Center at Svalbard, Norway.
Date: 23 September 2007 www.carbonequity.info/images/seaice07.jpg

ARCTIC CARBON FEEDBACK has been RECORDED at SEVERAL SITES

Permfarost Methane emissions increased 5 X E Siberia
(K. Walter Univ Alaska)

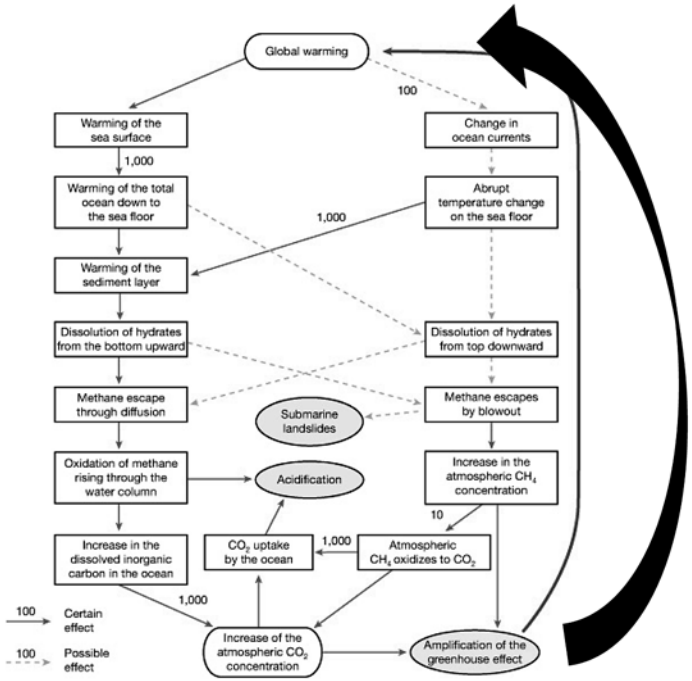


PERMAFOST DISTRIBUTION



Almost all the near surface permafrost will have melted by 2100 releasing it's frozen CO2 & Methane as it does.

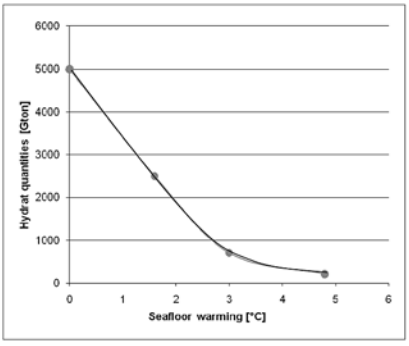
HUGE CARBON FEEDBACK FROM DESTABALIZATION OF METHANE HYDRATES BY GLOBAL WARMING



Seafloor Warming: Facts

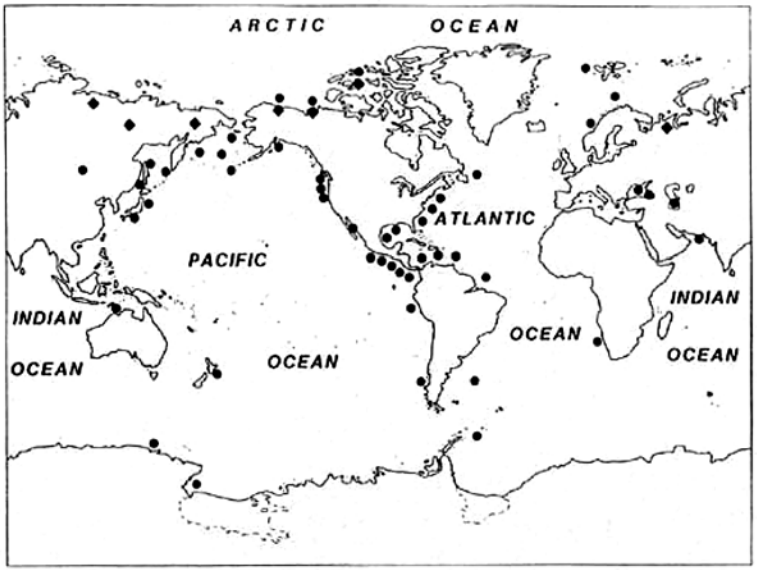
In 10,000 years, the atmosphere-ocean system will still show measurable amounts of the carbon dioxide released through the burning of fossil fuels during the 21st Century.

The global warming will thus last into the distant future affecting the sea floor. Scientists assume that this will have severe effects on the ecosystems located there.

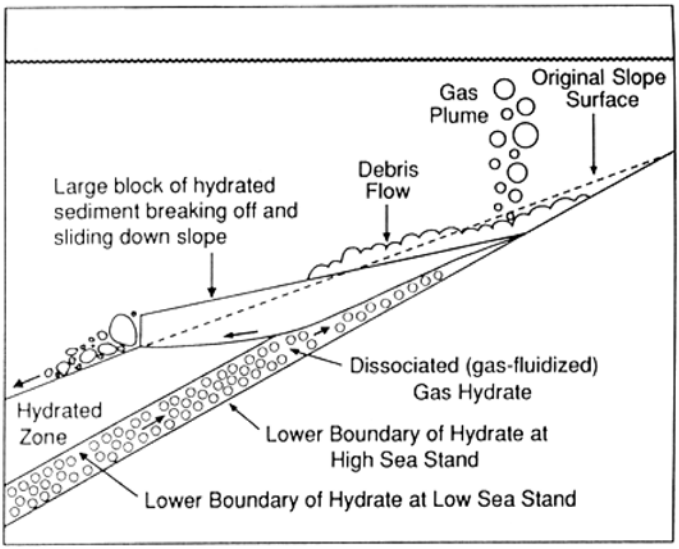


Research models produced by Kiel University demonstrate that approximately 85 percent of the gargantuan methane deposits will become unstable if the temperature of the seafloor increases by 3°C.

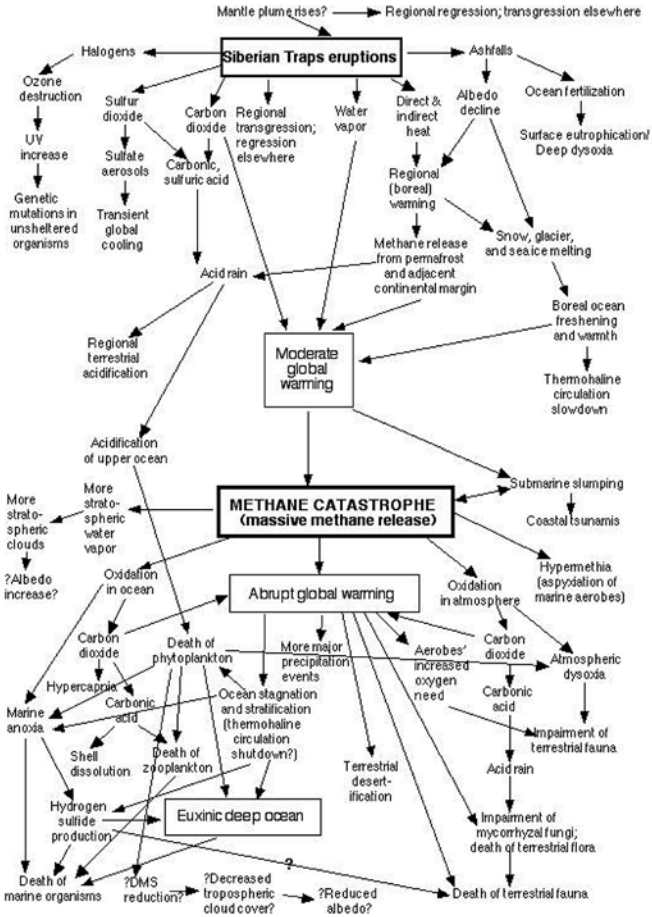
KNOWN METHANE HYDRATES



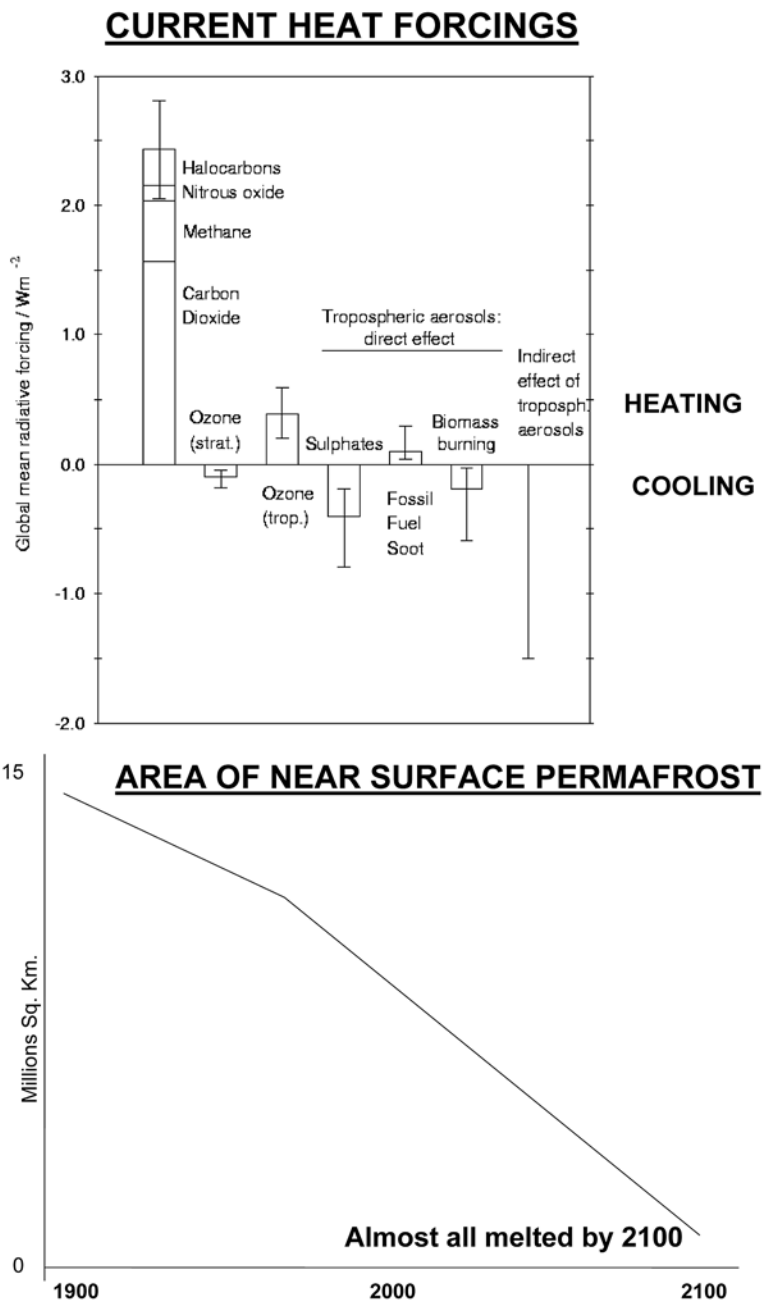
METHANE HYDRATE IS PREDICTED TO DESTABLIZE WITH GLOBAL WARMING

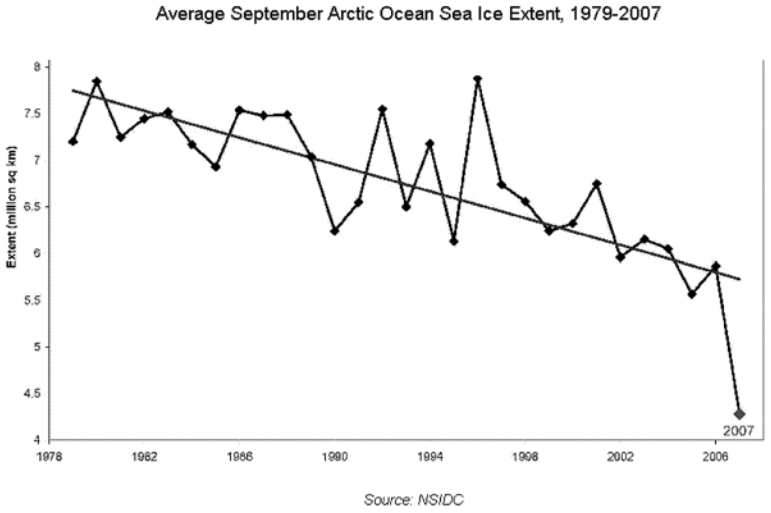


END PERMIAN METHANE CATASTROPHE (Continental Margin Methane Release)

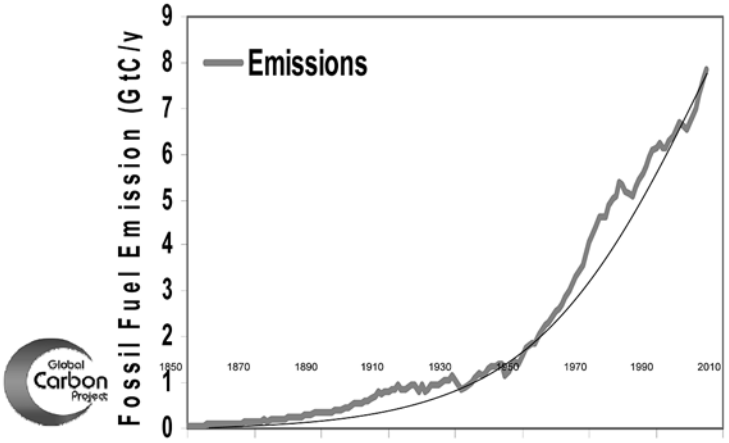


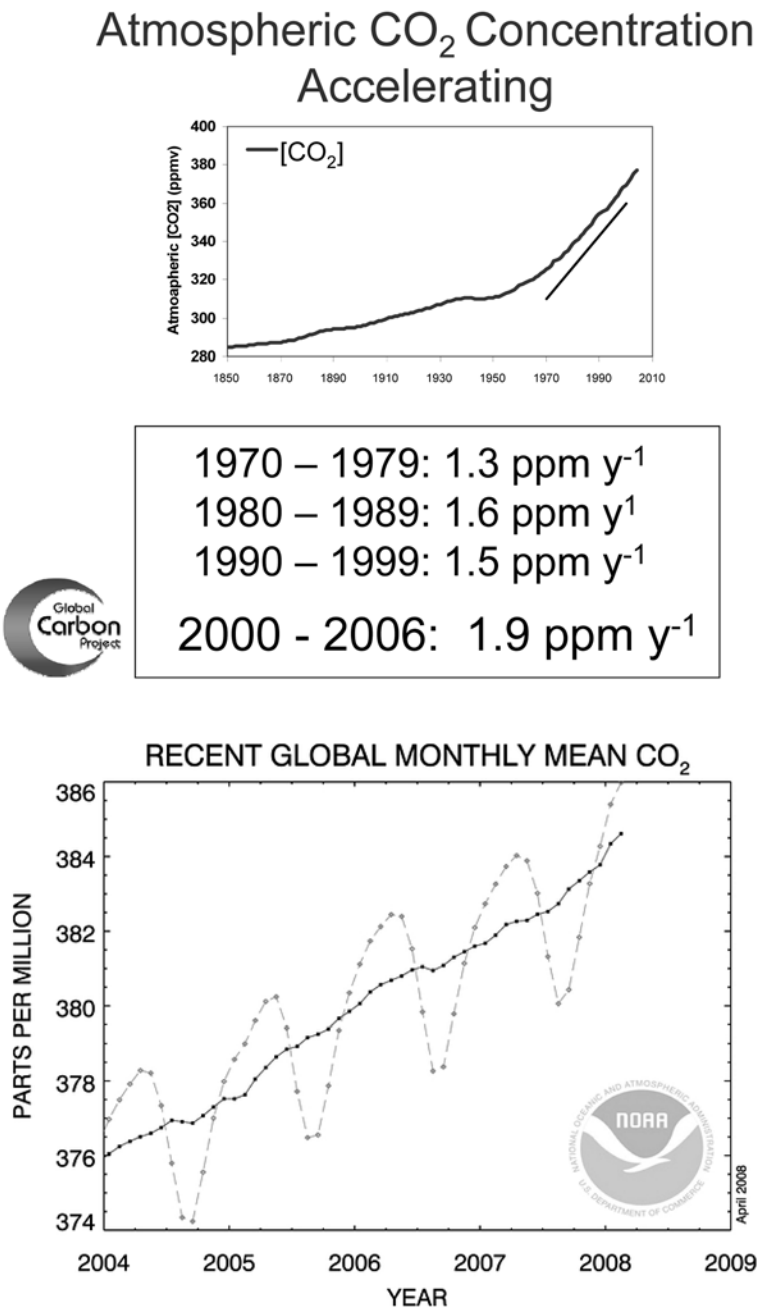
Dan Dorritie www.killerinourmidst.com


CURRENT HEAT FORCINGS
Global mean radiative forcing / Wm -2
3.0
2.0
1.0
0.0
-1.0
-2.0
Halocarbons
Nitrous oxide
Methane
Carbon
Dioxide
Tropospheric aerosols:
direct effect
Indirect
effect of
troposph
aerosols
Ozone
(strat.)
Ozone
(trop.)
Sulphates
Biomass
burning
Fossil
Fuel
Soot
HEATING
COOLING
AREA OF NEAR SURFACE PERMAFROST
Millions Sq. Km.
15
0
Almost all melted by 2100
1900
2000
2100



- Accelerating emissions




Atmospheric CO_2 Concentration Accelerating
$[CO_2]$
Atmoapheric [CO2] (ppmv)
400
380
360
340
320
300
280
1850
1870
1890
1910
1930
1950
1970
1990
2010
1970 – 1979: 1.3 ppm y^{-1}
1980 – 1989: 1.6 ppm y^{1}
1990 – 1999: 1.5 ppm y^{-1}
2000 - 2006: 1.9 ppm y^{-1}
Global Carbon Project
RECENT GLOBAL MONTHLY MEAN CO_2
PARTS PER MILLION
386
384
382
380
378
376
374
2004
2005
2006
2007
2008
2009
YEAR
NOAA
April 2008

Heal Our Planet Earth launches Global Emergency Operation

by Anthony Marr

One of the most repeated phrases in the titles of newspaper articles as of about 2004 is "FASTER THAN SCIENTISTS EXPECTED." This refers to global warming in general, and specifically about the Arctic, Greenland and Antarctic ice melt, the thawing of the methane-laden sub-Arctic permafrost, the deforestation and desertification of the Amazon and other tropical rainforests, the rise in oceanic temperature and acidity, the ever-increasing emissions of greenhouse gases, ozone depletion, mass extinction of species….

Of greatest concern and deserving its own paragraph is the potential runaway global heating due to positive-feedback methane release. Since the methane-laden permafrost is already melting, this dreadful scenario has already begun to unfold. Unless it is stopped now while things might still be at least partly within our control, this global over-heating could spiral uncontrollably into global baking, referring to a possible global temperature rise of over 12°C/20°F – way past the 6°C/10°F threshold of exponential mass extinction. What does a 12°C/20°F global temperature rise mean? It would be safe to say a 99% extinction. After all is said and done, life on Earth could end up falling back to square one, literally, since the 1% possible survival refers perhaps to the bacteria living near submarine volcanic vents where life could have begun 3 billion years ago.

In view of this potential and indeed already unfolding calamity, HOPE has launched its new Global Emergency Operation which comprises four projects:

1. The Global Green Fund
2. The Time-Capsule-of-HOPE-2060
3. The Shut-Down-the-Alberta-Tar-Sands Campaign
4. The Compassion for Animals Road Expedition #6 (CARE-6)

1. The Global Green Fund

HOPE has set up a million-signature online petition at www.ThePetitionSite.com (April 17, 2008) titled "*To the UN Secretary General for establishing a $120-billion/yr* ***Global Green Fund*** *from 10% of the $1.2 trillion global military budget, for saving life on Earth from global overheating.*"

This Global Green Fund will mainly finance environmental projects that are not commercially feasible, and therefore would not be touched by for-profit enterprises, such as developing a global carbon capture and sequestration (or storage) (CCS) system for reducing the carbon content in the atmosphere and ocean, or establishing a gene bank for those species expected to go extinct in short order, such as the polar bear, most African life, major Amazonian species, and all corals and cetaceans, among almost everything else.

Before moving on to point 2, please first take a minute to sign the global green fund petition and leave a comment. Google "secretary general global green fund".

Then please distribute the petition link far and wide. We need the whole world to work together on this one.

2. The Time-Capsule-of-HOPE-2060

In 100 years, even 50 years, the world will be a very different place than the one we inhabit today, in most if not all respects, worse – much, much worse. o say the least, but still gut wrenchingly, if nothing is done today to address the issue, the beauty of our planet will have been much diminished. The elephants, the tigers, the bears, the rhinos, the dolphins, the whales, the eagles… will have joined the ranks of the dinosaurs, because they will have been hunted and/or poached out, and/or their habitats will have been destroyed by direct deforestation and/or indirectly by global warming. One way or another, these tragedies are mostly, if not all, of human cause – of those humans who are alive today.

Today is the critical time of humanity. What we do today, both good and evil, will have huge consequences in the decades and centuries to come. Of all humans alive today, there are heroes and villains. Sea Shepherd disrupting the villainous Japanese whaling in the Antarctic is a heroic deed, whereas the American government striking a deal with Brazil to cut down the Amazon rainforest for soy plantations to provide cattle with feed, and to provide Americans with both soy-derived ethanol and soy-fed beef, is very evil indeed.

Next to a time machine, a time capsule is the best way to directly communicate with our future generations. We want them to know the TRUTH, the truth of the good and evil of our generation.

And let contemporary criminals-against-nature-and-humanity beware, their names could be spat upon in future history if they don't change their ways today.

All activists and organizations are invited to contribute material to the time capsule(s), and to nominate their own heroes and villains for posterity.

3. The Shut-Down-the-Alberta-Tar-Sands Campaign

The Canadians developing the Alberta Tar Sands, with full knowledge of its grave environmental consequences and progenocidal impact on future generations, is probably the single most evil deed in the world today. If it is developed according to plan (almost tripling the production from 1.3 million barrels a day to 3.5 million barrels over the next decade), it will without a doubt seal our fate inextricably to the dreaded methane-based runaway global heating, which will spiral into global baking. This will mean the end not only of civilization, but of life itself.

Canadian politicians using the tar sands to make a fat and fast buck, or for the "quality of life of Albertans" as Alberta Premier Ed Stelmach so provincially put it, can be justly dubbed the Criminals-Against-Nature-and-Humanity-of-the-21st-Century, and will be so described on a brass plaque in the Time-Capsule-of-HOPE-2060.

HOPE is committed to shutting down the Alberta tar sands within 3 years, *by whatever non-violent means necessary*. It is a matter of survival for millions of species, including our own. These means may include environmental assessments, class lawsuits, and external international economic pressure against Canada, among others.

4. The Compassion for Animals Road Expedition #6 (CARE-6)

Since 2003, HOPE founder Anthony Marr has conducted five Compassion for Animals Road Expeditions (CARE-1 through CARE-5), spanning 25-42 states/provinces in 3-7 months each. On July 1, 2008, he will take the above three projects on the road, by launching his CARE-6, which will cover 6 Canadian provinces and 22 American states.

Anthony Marr's 2008 Tour Itinerary

PROVINCE OR STATE	2008
Alberta	Jul 1-6
MT	Jul 7-10
SD/ND	Jul 11-12
MN	Jul 13-16
WI	Jul 17-21
IL	Jul 22-25
IN	Jul 26-29
MI	Jul 30 to Aug 2
OH	Aug 3-8
WV	Aug 9-12
VA	Aug 13-19
Animal Rights National Conference (DC)	Aug 14-18
MD/DC/PA/DE/NJ/NY/CT/RI/ MA/NH/VT/ME	Aug 20 to October 15
Quebec	Oct 16-18
Ontario	Oct 19-25
Manitoba	Oct 26-27
Saskatchewan	Oct 28-29
Alberta	Oct 31-Nov 3
British Columbia (home base)	Nov 4 onward

When Anthony arrives in a province or state, he will be engaged in one or more of the following activities:

- give a powerful audio/visual presentation on **Saving Wildlife from Mass Extinction Due to Global Warming**, sponsored and arranged by a local group (presentations on other animal rights issues or double bill presentations are also possible)
- do a joint media event with one or more local groups to launch the **Time-Capsule-of-HOPE-2060** of that province or state, and to bring the **Global Green Fund** concept to public attention
- assist local groups with their own campaigns and bring their local issues to national attention
- meet with local groups on participating in the **Global Emergency Operation**, which indeed cannot succeed without worldwide participation

And he will need:

- local accommodation (usually at activists' homes; if not, *inexpensive* motels) and local guidance
- delicious and nutritious vegan food
- donations to cover at least fuel cost to reach the next destination (as with the other CARE-tours, Anthony will leave home with a personal credit card in his pocket, one tank of gas in his car, and that's it)
- just basically a warm welcome

2009

The HOPE-GEO team will execute Compassion for Animals Road Expedition #7 (CARE-7 - see www.HOPE-CARE.org), which will cover the US west, southwest, midwest, south and southeast.

2010

The HOPE-GEO team will execute Heal Our Planet Earth World Tour #1 (HOPE-GEO-1), which will include upwards of 20 countries on 6 continents.

Wherever you live in the world, if you wish to contribute material to the Time Capsule, or if you wish to join the war against the Alberta tar sands, even if you just want to treat Anthony Marr to a cup of coffee (or a delicious vegan dinner!), or if you know someone in one of these states or countries who might be interested, and of course if you wish to host an Anthony Marr event, please contact:

Anthony Marr, founder, president and campaigner
Heal Our Planet Earth (HOPE)
Global Emergency Operation (GEO)
Anthony-Marr@HOPE-CARE.org
604-222-1169

and/or

Janelle Kowal and Nan Sea Love, project directors
Heal Our Planet Earth (HOPE)
Global Emergency Operation (GEO)
Heal_Our_Planet_Earth@yahoo.com

You can learn more about Anthony Marr at:
www.HOPE-CARE.org
www.MySpace.com/AnthonyMarr
www.ARConference.org

Scapegoated Seals Save Cod

by Anthony Marr

Once, while driving from Toronto to Ottawa – a four hour trip at 100 km/h – I picked up a hitchhiker shortly after leaving Toronto, who, after a few kilometers, unabashedly announced that he was a Newfoundland sealer. Straddled with Canadian civility, I did not jettison him, but asked him instead whether he would consider walking from Toronto to Ottawa with me.

"What for?"

"The two cities are 248 miles or 390 km apart. If you line up all the seals you guys kill every year in a single file, the line of some 350,000 seals, at a bit more than one meter per seal, would stretch from the CN Tower in Toronto all the way to the Parliament Building in Ottawa. I think, out of respect for these sentient beings, the least you can do is to walk a Funeral March for the Hunted, from the first one you kill to the last."

"A funeral march for seals? That's ludicrous. They don't even have souls, for Christ's sake."

"Speaking of souls, I might suggest that you take the Funeral March as a penance. It would be good for your karma, too. Some cultures would believe that you will reincarnate as a seal next life, one destined to be skinned alive, if you don't do something about it now."

"Yeah, right, I'm quaking in my boots already," he sneered.

"Personally, though I do find reincarnation a fascinating concept, I don't believe this interpretation of it either. I just can't look at an innocent baby seal and think that it used to be an evil human baby-seal killer, reborn to be skinned alive by other baby-seal killers, to atone for that ex-baby-seal-killer's crimes.

It would be adding-insult-to-injury of the worst kind. But I do think that walking the 390 km on the Funeral March for the Hunted would be good for your soul, if you have one."

"Sorry to say this to you, pal, but your 390 km is way off base. Most of the seals we kill are just babies as young as two weeks old. They don't measure up to a meter in length. Your line of seals would be well short of 390 km; 300 km max. So there."

"I rest my case," I said, without bothering to argue that adult harp seals average 1.8 meters long, which would counter-balance the baby seals' shortfall, or point out that the sealers and even the Canadian Fisheries Minister have been dismissing the word "baby". Instead, I asked, "How can you justify this kind of carnage? Don't you have feelings?"

"Sure I have feelings. But it's no skin off my back." The sneer broadened into a lopsided grin. No seal could ever produce an evil expression as this, that's for sure.

"Do they have feelings?"

"Who? The seals? I don't know. And, frankly, I don't care."

"Can't you feel their pain?"

"Not a bit. I hear them scream. I see them writhe. But I feel just fine. In fact, the more seals I kill, the better I feel."

"Don't you also feel just a bit cowardly to torture and kill a pup whose mother cannot defend, who can't defend himself, and who cannot fight back?"

"Better a living coward than a dead hero, is what I say."

"Have you no pride?"

"How much is pride a kilo, eh? How much per kilo do you sell courage for? Come to think of it, pride and courage are very expensive to buy. So, you can keep'm. As for me, I have seal skins and seal penises to sell, at a hundred bucks a pop, or should I say, a pup, haha."

I was beginning to see red. I took a moment to cool down. "I believe that deep down you do feel some pain, however much you succeed in concealing it from yourself. Really, tell me. Why do you do it? You don't make all that much of money out of it. You're primarily a cod fisherman."

His eyes lit up above the grin. "Aha! I kill seals because they eat fish, cod in particular. The more seals, the fewer cod, the fewer seals, the more cod. Plain and simple. There are some 5 million seals out there. They eat up a hell of a lot of cod. So, I don't get enough."

"I think you got too much. It is called overfishing. And you're scapegoating the seals for your own blunder driven by greed," I could have sounded a little less hostile, but I'm not a seal; I'm human.

"We follow the law. If the law says it is okay, it is okay. The law says it is okay."

"Only 3% of a seal's diet comprises cod," I pointed out.

"3% of the total amount of fish eaten by 5 million seals is still a lot of cod."

I pressed on, "In other words, 97% of the seal's diet consists of other fish species that prey on cod. Without the seals controlling the population of the predatory fish species, the amount of cod eaten would be many times greater."

"I've heard that before. It's just a theory, and a vague one at that. There is no proof."

"I don't know about you, but we on the west coast have proof," I asserted.

"What proof? Your harbour seals there eat salmon. I'm sure the same law of nature applies. More seals, fewer salmon; fewer seals, more salmon."

"That's just it. It's just the opposite. On the west coast, it is more seals, more salmon, fewer seals fewer salmon," I sought to

humbly inform him.

"That's ridiculous. Where's your proof?"

"Before I provide the proof, could you tell me what fish species the harbour seal preys on?"

"Salmon, of course, and some others, maybe herring, smelt, hake, mackerel, something like that."

"There are about 20 major fish species on which the harbour seals feed. In descending order of volume consumed, they are rock fish, Pacific sand lance, Pacific herring, Pacific staghorn sculpin, smelt, Pacific tomcod, lamprey, flounder, shad, flatfish, Pacific hake, Shiner surf perch, gunnel, prickleback, juvenile salmonids, Northern anchovy, adult salmonids, Peamouth chub and Pacific Macheral, as well as cephalopods like squid."

"So?"

"Where are the salmonids on this list?"

"I thought you were going to give me some kind of proof," he said evasively, but in doing so, jumped from the pan into the fire.

"Do you know that there used to be a commercial seal hunt on the west coast too, combined with a bounty hunt?" I asked him.

"Can't say that I do."

"Well, it happened in the late 30's through into the 60s. By the late 60s, the seal population had become so decimated that the hunt was banned in 1969. The ban stays in force today. The seal population has recovered."

"Bad news."

"Good news. According to your formula of more seals, fewer salmon, fewer seals, more salmon, the salmon population in the 30s, 40s, 50s and 60s should be high and that in the 70s, 80s and 90s should be low. Correct?"

"Damn right."

"Well, just the opposite is true."

"More seals, more salmon; fewer seals, fewer salmon?"

"Correct."

"I don't believe it."

"Believe it."

"What do you have to back this up? "

"Could you open the Road Atlas to British Columbia?"

He did, reluctantly. "This better be good."

"Pick a river. Any river."

"Why?"

"Just do it."

"Alright. The Kitimat River."

"Do you know about escapement?"

"Sure. It is the number of adult salmon that make it all the way up to their spawning ground to spawn in a salmon run. What about it?"

"Now, let's see. For the Kitimat river, the 1950s escapement of Chum salmon averaged 16,700; 70s, 26,400; 90s, no mistake, 129,000. For Chinook salmon, 1950s, 4,100; 80s, 9,900; 90s, 16,700."

"You're making things up as you go."

"No. Just photographic memory. Try another river."

"I don't particularly want to play this silly game."

"It is no game. Why don't you write down these numbers, and check them in a government library in Ottawa when we get there?"

"A waste of time."

"So, you are afraid to find out?"

"Not at all, `cause I know you must be wrong. So, lie some more. Here. The Babine River. What numbers are you gonna

make up?"

"1950s, Babine River escapement of even-year Pink salmon average 11,800; 60s, 41,000; 70s, 106,000; 80s, 202,000; 90s, 214,700."

"The Kishwan River."

"1950s, escapement of Chum salmon 4,000; 60s, 1,150; 70s, 7,350; 80s, 13,200; 90s, 21,000."

"The Pinkut River."

"Escapement of Sockeye salmon in the 50s, 27,200; the 60s, 40,500; the 70s, 73,900; the 80s, 241,000; and the 90s, 260,900."

"Enough of this crap! Even if these are true, they are west coast harbour seal and salmon, not the east coast harp seal and cod."

"And the natural law is different in the west than in the east?"

"If your figures are correct, it damn well is."

"So, are you going to do a funeral march for the seals you slaughter or not?"

"Why should I? They eat my cod."

Note: The above numbers were exacted from BC government and academic documents.

Debunking the Debunkers

by Anthony Marr

On January 30th 2008, the US Fish and Wildlife Service released the report below. Having dealt with them on hunting issues for years, I've concluded that the US Fish and Wildlife Service (F&W) is scientifically not trustworthy. They could be right or could be wrong, but everything they say has to be vetted rigorously. High political or corporate pressure bends or breaks science all the time. In this case, the pressure comes from the hunting lobby. One of the motivations of F&W is to perpetuate and legitimize polar bear hunting. The "Threatened" status allows it; the "Endangered" status forbids it.

The vast majority of the scientists in the world today accept global warming and its human cause as fact. The following scientists and agencies, however grandiose their names and titles, are among the tiny minority that F&W have raked together in support of their polar bear hunting policy as demanded by the hunting lobby.

My rebuttals to each and every one of them are below in bold:

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The United States Fish and Wildlife Service, Polar Bears, Threatened Species, Endangered Species Act

U.S. Senate Report Debunks Polar Bear Extinction Fears
By EPW Blog, Wednesday, January 30, 2008

The United States Fish and Wildlife Service is considering listing the polar bear a threatened species under the Endangered Species Act. This report details the scientists debunking polar

bear endangerment fears and features a sampling of the latest peer-reviewed science detailing the natural causes of recent Arctic ice changes.

The U.S. Fish & Wildlife Service estimates that the polar bear population is currently at 20,000 to 25,000 bears, up from as low as 5,000-10,000 bears in the 1950s and 1960s. A 2002 U.S. Geological Survey of wildlife in the Arctic Refuge Coastal Plain noted that the polar bear populations "may now be near historic highs." The alarm about the future of polar bear decline is based on speculative computer model predictions many decades in the future. And the methodology of these computer models is being challenged by many scientists and forecasting experts.

Scientists Debunk Fears of Global Warming Related Polar Bear Endangerment:

According to Canadian biologist, Dr. Mitchell Taylor, the director of wildlife research with the Nunavut government in the Arctic: "Of the 13 populations of polar bears in Canada, 11 are stable or increasing in number. They are not going extinct, or even appear to be affected at present," Taylor said. "It is just silly to predict the demise of polar bears in 25 years based on media-assisted hysteria."

Evolutionary Biologist and Paleozoologist, Dr. Susan Crockford of University of Victoria in Canada, has published a number of papers in peer-reviewed academic journals. "Polar bears, for example, survived several episodes of much warmer climate over the last 10,000 years than exists today," Crockford wrote. "There is no evidence to suggest that the polar bear or its food supply is in danger of disappearing entirely with increased Arctic warming, regardless of the dire fairy-tale scenarios predicted by computer models."

AM: The prediction of polar bear extinction is based on the predicted meltdown of the Arctic polar icecap. Over the last 10,000 years, there has never been such a rapid and extreme meltdown. Canada was almost entirely covered by thick ice during the ice age 100,000 to 10,000 years ago, and over the last 10,000 years, the ice shrank to what it was in the 19th century. Since then, the icecap has shrunken further, and the southern limits of the icecap have never been as far north as they are today.

Due to global warming, the Arctic winter has shortened and the Arctic summer has lengthened. Young polar bears have been found to have starved to death during the lengthened summer – when seal hunting was almost impossible – after their body fat reserves were exhausted.

There is ample evidence of the polar ice retreat, especially illustrated by the massive breakup of sea ice at Newfoundland in the context of the Canadian seal, which also precipitated massive drowning of baby harp seals. The southern limits of the sea ice have been retreating due north by the dozens or even hundreds of kilometers per year, year after year in the last few years. A wave of warmth would not impact the polar bears and harp seals unless it stays long enough and is powerful enough to cause an icecap meltdown. No icecap meltdown, no extinction.

Award-winning quaternary geologist, Dr. Olafur Ingolfsson, a professor from the University of Iceland, has conducted extensive expeditions and field research in both the Arctic and Antarctic. "We have this specimen that confirms the polar bear was a morphologically distinct species at least 100,000 years ago, and this basically means that the polar bear has already survived one interglacial period," Ingolfsson said. "This is telling us that despite the on-going warming in the Arctic today, maybe we don't have to be quite so worried about the polar bear."

AM: Once again, during the last 100,000 years, interglacial or not, there has never been any polar icecap meltdown,

and therefore, never the slightest threat to polar bear and harp seal survival.

Internationally known forecasting pioneer, Dr. Scott Armstrong of the Wharton School at the Ivy League University of Pennsylvania, and his colleague, forecasting expert Dr. Kesten Green of Monash University in Australia, co-authored a January 27, 2008 paper with Harvard astrophysicist, Dr. Willie Soon, which found that polar bear extinction predictions violate "scientific forecasting procedures." Excerpt: The study analyzed the methodology behind key polar bear population prediction and found that one of the two key reports in support of listing the bears had "extrapolated nearly 100 years into the future on the basis of only five year's data - and data for these years were of doubtful validity."

AM: Not just 5 years; 50 more like. Regardless, if we are given a 5-number series as follows: 2, 4, 16, 256, 65536, we have enough information to calculate what the 100th number in the series will be.

According to biologist Dr. Matthew Cronin, a research professor at the School of Natural Resources and Agricultural Sciences at the University of Alaska Fairbanks: "We don't know what the future ice conditions will be, as there is apparently considerable uncertainty in the sea ice models regarding the timing and extent of sea ice loss. Also, polar bear populations are generally healthy and have increased worldwide over the last few decades."

AM: Again, the key phrase is "over the last decades." There was no polar icecap meltdown over the last few decades. A temporary population rise means nothing. Many population crashes are preceded by temporary population booms. In fact, sometimes it is the temporary population boom that causes the crash, which of course is not the cause in the case of the polar bear and harp seal. A large population means nothing if the habitat is about to be wiped out.

Naturalist Nigel Marven is a trained zoologist, botanist, and a UK wildlife documentary maker who spent three months studying and filming polar bears in Canada's arctic in 2007. "I think climate change is happening, but as far as the polar bear disappearing is concerned, I have never been more convinced that this is just scaremongering. People are deliberately seeking out skinny bears and filming them to show they are dying out. That's not right," Marven said.

AM: How many "skinny bears" there are today, we don't know. But how many skinny bears were there 50 years ago? Probably none.

An article about Marven "Polar Bear on the Brink? Don't You Believe It" contains the following passage: "According to Polar Bears International, the most prominent and widely respected campaign organisation, the West Hudson Bay bear population has fallen by 22% since 1987 and its prospects are bleak.

"'If we lose the sea ice, we're going to lose the bears,' says Dr Andrew, who serves on the group's scientific advisory council, arguing that they will not be able to adapt quickly enough to become vegetarians if and when the ice melts, leaving them with no hunting grounds.

"His world-renowned colleague, Dr Ian Sterling, who has studied the bears since the mid-1970s, says that the ice now breaks up about three weeks earlier and so the bears have a shorter time in which to store up fat. 'There's a direct relationship between the date of the ice breakup and survival. The health, or condition, of the bears has declined over the past 30 years.'"

Biologist Josef Reichholf, who heads the Vertebrates Department at the National Zoological Collection in Munich, said: "In warmer regions it takes far less effort to ensure survival. How did the polar bear survive the last warm period? … Look at the polar bear's close relative, the brown bear. It is found across a broad geographic region, ranging from Europe across the Near East and North Asia, to Canada and the United States. Whether

bears survive will depend on human beings, not the climate."

AM: The origin of the polar bear is recent, certainly as recent as 250,000 years, and probably at late as 100,000 years. During the last 1 million years, the Earth underwent a series of 5 ice ages, the last spanning 100,000 years to 10,000 years ago. There were warmer interglacial periods, but all in all, the last 1 million years was a cool period in geological history. The polar bear probably lived through the last two ice ages at most, and have never experienced a complete polar ice cap meltdown.

The article titled "Evolution of the Polar Bear" (http://www.geol.umd.edu/~candela/pbevol.html) explains: "Somewhere during the mid-Pleistocene period (roughly 100,000 to 250,000 years ago), a number of brown (same as grizzly) bears (Ursos arctos) probably became isolated by glaciers. Many probably perished on the ice; however, they apparently did not all disappear. Some survived due to the fact that "organisms vary" (Steve Gould's terminology and logic is used here), that is, every litter of grizzly's [sic] has a variation in coat thickness, coat color etc. which imparted a slight evolutionary advantage to some individuals of each litter. These successful individuals underwent an apparent rapid (rapid, probably because of the small population, and extreme selection pressure) series of evolutionary changes in order to survive (note they were not necessarily "better" in any absolute sense, or on any absolute "bear" scale of perfection - they were simply more in keeping with their new environment than their siblings). Today, polar bears are adapted to their harsh northern environment.

"Hecht (in Chaline, 1983) describes polar bear evolution: the first 'polar bear,' Ursus maritimus tyrannus, was essentially a brown bear subspecies, with brown bear dimensions and brown bear teeth. Over the next 20,000 years, body size reduced and the skull elongated. As late as 10,000 years ago, polar bears still had a high frequency of brown-bear-type molars. Only recently

have they developed polar-bear-type teeth."

Polar bear expert Dennis Compayre, formerly of the conservation group Polar Bears International, has studied the bears for almost 30 years in their natural habitat and is working on a new UK documentary about the bears. "I tell you there are as many bears here now as there were when I was a kid," Compayre said. "Churchill [in Northern Canada] is full of these scientists going on about vanishing bears and thinner bears. They come here preaching doom, but I question whether some of them really have the bears' best interests at heart."

AM: As before, the key word here is "now," not 50 years from now.

Botanist Dr. David Bellamy, a famed UK environmental campaigner, former lecturer at Durham University, and host of a popular UK TV series on wildlife asked: "Why scare the families of the world with tales that polar bears are heading for extinction when there is good evidence that there are now twice as many of these iconic animals, most doing well in the Arctic than there were 20 years ago?"

AM: Again, the key word here is "now," not 50 years from now.

Scientists and Recent Studies Cast Doubt on Man-Made Melting of Arctic:

A NASA study published in the peer-reviewed journal Geophysical Research Letters on October 4, 2007 found "unusual winds" in the Arctic blew "older thicker" ice to warmer southern waters. Despite the media's hyping of global warming, Ignatius Rigor, a co-author of the NASA study, explained, "While the total [Arctic] area of ice cover in recent winters has remained about the same, during the past two years an increased amount of older, thicker perennial sea ice was swept by winds out of the Arctic Ocean into the Greenland Sea. What grew in its place in

the winters between 2005 and 2007 was a thin veneer of first-year sea ice, which simply has less mass to survive the summer melt." […] "Unusual atmospheric conditions set up wind patterns that compressed the sea ice, loaded it into the Transpolar Drift Stream and then sped its flow out of the Arctic," said Son Nghiem of NASA's Jet Propulsion Laboratory and leader of the study.

AM: Whatever their argument, they cannot refute the fact that the Canadian seal hunters off the coast of Newfoundland of at least the last two years have experienced extensive sea ice retreat, requiring the sealers to move the sealing centre 700 kilometers due north from St. Johns to Cartright. Even in the pre-warming years, the sea ice off Newfoundland was new ice every year. Incidentally, it is worth mentioning that we have 250,000 baby harp seals as silent witnesses, those that died in the Gulf of St. Lawrence and part of the Front due to the break up of sea ice. The opposition may argue that this is anecdotal evidence, but the centuries-old seal hunt has never experienced any such phenomenon.

A November 2007 peer-reviewed study in the journal Nature found natural cause for rapid Arctic warming. Excerpt: [The study] identifies a natural, cyclical flow of atmospheric energy around the Arctic Circle. A team of researchers, led by Rune Graversen of Stockholm University, conclude this energy flow may be responsible for the majority of recent Arctic warming. The study specifically rules out global warming or albedo changes from snow and ice loss as the cause, due to the "vertical structure" of the warming ... the observed warming has been much too weak near the ground, and too high in the stratosphere and upper troposphere. This study follows hot on the heels of research by NASA, which identified "unusual winds" for rapid Arctic ice retreat. The wind patterns, set up by atmospheric conditions from the Arctic Oscillation, began rapidly pushing ice into the Transpolar Drift Stream, a current which quickly sped the ice into warmer waters. A second NASA team, using data

from the GRACE (Gravity Recovery and Climate Experiment) satellite, recently concluded that changes in the Arctic Oscillation were, "mostly decadal in nature," rather than driven by global warming.

AM: There may well be a natural cause as well, which in fact adds to the gravity of the situation, since the human cause is real and was not refuted in the article.

A January 2008 study in the peer-reviewed journal Science found North Atlantic warming tied to natural variability. Excerpt: A Duke University-led analysis of available records shows that while the North Atlantic Ocean's surface waters warmed in the 50 years between 1950 and 2000, the change was not uniform. In fact, the sub-polar regions cooled at the same time that subtropical and tropical waters warmed. This striking pattern can be explained largely by the influence of a natural and cyclical wind circulation pattern called the North Atlantic Oscillation (NAO), wrote authors of a study published Thursday, January 3 in Science Express, the online edition of the journal Science. Winds that power the NAO are driven by atmospheric pressure differences between areas around Iceland and the Azores. "The winds have a tremendous impact on the underlying ocean," said Susan Lozier, a professor of physical oceanography at Duke's Nicholas School of the Environment and Earth Sciences who is the study's first author. [...] "It is premature to conclusively attribute these regional patterns of heat gain to greenhouse warming," they wrote.

AM: Again, the case quoted is anecdotal. There is general agreement in the scientific community that the planet as a whole is warming up, and that the temperatures at higher latitudes generally rise more than those at the lower latitudes (i.e., warming more nearer the poles than near the equator). If we pour some hot water into a glass of ice water and stir it slightly (to simulate ocean currents), and measure the temperature at one particular place inside the cup on a second by

second basis, the temperature rise will not be uniform, and at certain seconds it might even decrease temporarily. But all in all, the average temperature of the water in the glass has risen.

A November 2007 peer-reviewed study conducted by a team of NASA and university experts found cyclical changes in ocean currents impacting the Arctic. Excerpt: "Our study confirms many changes seen in upper Arctic Ocean circulation in the 1990s were mostly decadal in nature, rather than trends caused by global warming," said James Morison of the University of Washington's Polar Science Center Applied Physics Laboratory in Seattle, according to a November 13, 2007 NASA release. Morison led the team of scientists using data from an Earth-observing satellite and from deep-sea pressure gauges to monitor Arctic Ocean circulation from 2002 to 2006. Excerpt: A team of NASA and university scientists has detected an ongoing reversal in Arctic Ocean circulation triggered by atmospheric circulation changes that vary on decade-long time scales. The results suggest not all the large changes seen in Arctic climate in recent years are a result of long-term trends associated with global warming. […] The team of scientists found a 10-millibar decrease in water pressure at the bottom of the ocean at the North Pole between 2002 and 2006, equal to removing the weight of four inches of water from the ocean. The distribution and size of the decrease suggest that Arctic Ocean circulation changed from the counterclockwise pattern it exhibited in the 1990s to the clockwise pattern that was dominant prior to 1990. Reporting in Geophysical Research Letters, the authors attribute the reversal to a weakened Arctic Oscillation, a major atmospheric circulation pattern in the northern hemisphere. The weakening reduced the salinity of the upper ocean near the North Pole, decreasing its weight and changing its circulation. […] "While some 1990s climate trends, such as declines in Arctic sea ice extent, have continued, these results suggest at least for the 'wet' part of the Arctic – the Arctic Ocean – circulation reverted to conditions like those

prevalent before the 1990s," Morison added.

AM: The study monitored the Arctic Ocean from 2002 to 2006, i.e., for 4 years; even one cycle lasts 10 years. "…[N]ot all the large changes seen in Arctic climate in recent years are a result of long-term trends associated with global warming" means that at least some of the large changes seen in Arctic climate in recent years are a result of long-term trends associated with global warming. the melting of sea ice and especially land ice which drains into the sea would lower the salinity of the water and would indeed cause "decrease in water pressure at the bottom of the ocean at the North Pole between 2002 and 2006."

NASA Study Blames Natural High Pressure Leading to More Sunny Days for Arctic Ice Reduction. Excerpt: But experts say it was the peculiar weather Mother Nature offered up last summer - whatever caused it - that is largely to blame for the recent unusual events. There was a high-pressure system that sat over the Arctic for much of the summer. It shooed away clouds, leaving the sun alone to beat down. That created higher ocean temperatures, which in turn accelerated the melt. Son Nghiem, who led that NASA study on sea ice released this week, also pointed to unusual winds, which compressed sea ice, pushing it into the Transpolar Drift Stream and into warmer water where melting happened more quickly.

AM: The "high-pressure system that sat over the Arctic for much of the summer" and the extra solar heat leading to "higher ocean temperatures" are both consistent with the prediction of global warming, and that the Arctic would warm up more drastically than the tropics.

Global warming is largely due to human causes.

A July 2007 analysis of peer-reviewed literature thoroughly debunks fears of Greenland and the Arctic melting and predic-

tions of a frightening sea level rise. Excerpt: "Research in 2006 found that Greenland has been warming since the 1880s, but since 1955, temperature averages at Greenland stations have been colder than the period between 1881-1955. A 2006 study found Greenland has cooled since the 1930s and 1940s, with 1941 being the warmest year on record. Another 2006 study concluded Greenland was as warm or warmer in the 1930s and 40s and the rate of warming from 1920-1930 was about 50% higher than the warming from 1995-2005. One 2005 study found Greenland gaining ice in the interior higher elevations and thinning ice at the lower elevations. In addition, the often media promoted fears of Greenland's ice completely melting and a subsequent catastrophic sea level rise are directly at odds with the latest scientific studies." [See July 30, 2007 Report - Latest Scientific Studies Refute Fears of Greenland Melt]

AM: Maps depicting global warming show that the entire world is warming up by various degrees, more at higher than lower latitudes. An exception is the northern Atlantic directly south of Greenland, which in all of the northern hemisphere is singularly slow warming. The exception proves the rule.

In September 2007, it was announced that a soon to be released survey finds Polar Bear population rising in warmer part of the Arctic. Excerpt: Fears that two-thirds of the world's polar bears will die off in the next 50 years are overblown, says [Arctic biologist] Mitchell Taylor, the Government of Nunavut's director of wildlife research. "I think it's naïve and presumptuous," Taylor said. […] The Government of Nunavut is conducting a study of the [southern less-ice region of the] Davis Strait bear population. Results of the study won't be released until 2008, but Taylor says it appears there are some 3,000 bears in an area - a big jump from the current estimate of about 850 bears. "That's not theory. That's not based on a model. That's observation of reality," he says. And despite the fact that some of the most dramatic changes to sea ice are seen in seasonal ice areas such as

Davis Strait, seven or eight of the bears measured and weighed for the study this summer are among the biggest on record, Taylor said. "Davis Strait is crawling with polar bears. It's not safe to camp there. They're fat. The mothers have cubs. The cubs are in good shape," Taylor said, according to a September 14, 2007 article.

AM: The article titled "Environment News - Warming Causes Record Arctic Ice Melt - US Report" reports: "The Arctic ice shelf has melted for the fourth straight year to its smallest area in a century, driven by rising temperatures that appear linked to a buildup of greenhouse gases, US scientists said on Wednesday.

"Scientists at NASA and the National Snow and Ice Data Center, which have monitored the ice via satellites since 1978, say the total Arctic ice in 2005 will cover the smallest area since they started measuring. It is the least amount of Arctic ice in at least a century, according to both the satellite data and shipping data going back many more years, according to a report from the groups.

"As of Sept. 21, the Arctic sea ice area had dropped to 2.05 million square miles (5.31 million square km), the report said. From 1978 to 2000, the sea ice area averaged 2.70 million square miles (7 million square km), the report said. It noted the melting trend had shrunk Inuit hunting grounds and endangered polar bears, seals and other wildlife.

"The report warns that if melting rates continue, the summertime Arctic may be completely ice-free before the end of the century, echoing last year's findings from the Arctic Council, an eight-nation report by 250 experts."

Between 1978 and 2000 is a period of 22 years. The decrease from 2.70 million sq. mi. to 2.05 million sq. mi. is 24%. Further, the percentage decrease per unit time with less ice and higher temperatures will be higher. There is little doubt that in 100 years, the entire polar icecap will have disappeared. Without ice, there is

no doubt that the polar bear and harp seal will go extinct.

An August 2007 peer-reviewed study finds global warming over last century linked to natural causes: Published in Geophysical Research Letters: Excerpt: "Tsonis et al. investigate the collective behavior of known climate cycles such as the Pacific Decadal Oscillation, the North Atlantic Oscillation, the El Niño/Southern Oscillation, and the North Pacific Oscillation. By studying the last 100 years of these cycles' patterns, they find that the systems synchronized several times. Further, in cases where the synchronous state was followed by an increase in the coupling strength among the cycles, the synchronous state was destroyed. Then a new climate state emerged, associated with global temperature changes and El Niño/Southern Oscillation variability. The authors show that this mechanism explains all global temperature tendency changes and El Niño variability in the 20th century." Authors: Anastasios A. Tsonis, Kyle Swanson, and Sergey Kravtsov: Atmospheric Sciences Group, Department of Mathematical Sciences, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin, U.S.A. See August 2, 2007 Science Daily – "Synchronized Chaos: Mechanisms For Major Climate Shifts"

AM: Again, natural cause does not rule out human cause. The most likely scenario is that it is a combination of the two.

According to a 2005 peer-reviewed study in Geophysical Research Letters by astrophysicist Dr. Willie Soon, solar irradiance appears to be the key to Arctic temperatures. The study found Arctic temperatures follow the pattern of increasing or decreasing energy received from the sun. Excerpt: Solar forcing explains well over 75% of the variance for the decadally-smoothed Arctic annual-mean or spring SATs (surface air temperatures). [...] In contrast, a CO2-dominated forcing of Arctic SATs is inconsistent with both the large multidecadal warming and cooling signals and the similar amplitude of warming trends between cold

(winter) and relatively warmer (spring and autumn) seasons found in the Arctic-wide SAT records.

AM: There has been a global temperature rise in the order of about 1°C since the 1880s. The temperature/time graph has nature-caused decadal fluctuations, but it rises as a whole, and does so more steeply in recent decades.

Meteorologist Craig James Debunks Myths about Northwest Passage. Excerpt: The headline in this press release from the European Space Agency reads "Satellites witness lowest Arctic ice coverage in History." In history! That sounds like a long time. However, when you read the article you find "history" only goes back to 28 years, to 1979. That is when satellites began monitoring Arctic Sea ice. The article also says "the Northwest Passage - a long-sought short cut between Europe and Asia that has been historically impassable." I guess these people flunked history class. It has been open several times in history without ice breakers. The first known successful navigation by ship was in 1905. This is all very similar to the story on the NBC Nightly News Friday, 14 September 2007 where the story on water levels in Lake Superior never mentioned that the lowest recorded water level on the lake occurred in March and April 1926, when the lake was about 5 inches lower than it is now. Instead, NBC interviewed several people who could never remember seeing it this low and blamed most of the problem on global warming. Never mind that the area has seen below normal precipitation for several years and for most of this year has been classified as being in an extreme to exceptional drought.

AM: The attack on "in history" is grasping at straws. Before the satellite study, the determination was done by other reliable means, such as navigational resources. About the drought, who is to say it is not caused by global warming?

History of Northwest Passage - Navigated in 1905 and multiple times in 1940s (Note: 80% of man-made CO2 came after 1940) Excerpt: 2. ROALD AMUNDSEN: First Navigation by

Ship 1905: In mid August, Amundsen sailed from Gjøahaven (today: Gjoa Haven, Nunavut) in the vessel Gjøa […] On August 26 they encountered a ship bearing down on them from the west, and with that they were through the passage. From Amundsen's diary: The North West Passage was done. My boyhood dream - at that moment it was accomplished. A strange feeling welled up in my throat; I was somewhat over-strained and worn - it was weakness in me - but I felt tears in my eyes. 'Vessel in sight' ... Vessel in sight. 3. ST. ROCH: First West-East Crossing 1940-1942: The St. Roch was given the task of demonstrating Canadian sovereignty in the Arctic. It was ordered to sail from Vancouver to Halifax by way of the Northwest Passage. The St. Roch left Vancouver in June 1940 and on October 11, 1942, it docked at Halifax - the first ship to travel from the Pacific to the Atlantic via the Northwest Passage. The journey had taken almost 28 months. 4. ST. ROCH: Northern Deep-Water Route (East-West) 1944: The St. Roch was the first ship to travel the Northwest Passage through the northern, deep-water route and the first to sail the Passage in both directions.

AM: The St. Roch has been on display in the Vancouver Maritime Museum for decades. I have looked at it and touched it, and walked on its deck, and have read its history. An occasionally open passage appears to be an integral characteristic of the ice cap. The Northwest Passage now in question does not refer to an occasionally open passage, but a permanent, wide-open and ice-free Arctic OCEAN.

In a 2005 study published in the Journal of Climate, Brian Hartmann and Gerd Wendler linked the 1976 Pacific climate shift to a very significant one-time shift upward in Alaskan temperatures.

AM: Just one piece in a complex meteorological jigsaw puzzle.

According to a 2003 study by Arctic scientist Igor Polyakov, the warmest period in the Arctic during the 20th Century was

the late 1930s through early 1940s. Excerpt: Our results suggest that the decadal AO (Arctic Oscillation) and multidecadal LFO (low-frequency oscillation) drive large amplitude natural variability in the Arctic making detection of possible long-term trends induced by greenhouse gas warming most difficult.

AM: Optimists say "difficult but possible"; pessimists say "possible but difficult."

(All comments in bold above were by Anthony Marr.)

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Peter Carter, a sponsor of Anthony Marr's "Saving Wildlife from Mass Extinction Due to Global Warming" campaign, had this to say about the F&W article:

"The stats are correct. But the listing is because the polar bear's only habitat is disappearing very rapidly (and covered under the US Endangered Species Act). That is incontestable by current real measurements.

"The models are only wrong in that they underestimated the rate of Arctic melting by a factor of 3.

"This is usual government policy: Wait until the species is on the way out for sure, then try to save a remnant of the former species. That way, habitat does not have to be protected from oil and gas exploration and extraction.

"This is why the species extinction rate will increase from 100-300 times the natural rate now (American Academy for the Advancement of Science) to 1000 times the natural rate with added destruction of habitat under global climate change, by 2100 (Edward O. Wilson).

"Our economic, business and government leaders want to convert the planet for only domesticated money-making species – and wiping out the 'wild' that is in the way is an intrinsic part

of that policy.

"They are converting the entire planet to one big money-making factory farm – land and sea.

"The precedent was set in the first days of the United States. Exterminating the vast buffalo herds was for sure intentional, making way for privately owned domestic cattle ranching land.

"This is insane and evil.

"If our civilization doesn't respond to the imminent loss of charismatic species the future is done for, because the entire ecology of the Earth will unravel."

Americans and Canadians Rank Near Last in Global Warming Awareness

– Nielson Survey

by Anthony Marr

Seeing as Al Gore is American and CNN is in America, we might rightly think that Americans, and by inference, Canadians, are the world leaders in global warming awareness. I'm not talking about leaders like US president George W. Bush who insisted that the "only superpower on Earth" should not play a leading role in combating global warming, or like Alberta premier Ed Stelmach who is intent on developing the tar sands until the biosphere of planet Earth is cooked. I'm talking about the general population who watch the news in high definition and living color and read the New York Times or Washington Post or Toronto Star or Vancouver Sun. Surely, we must be the most aware people in the world.

Wrong. In October 2006, the AC Nielson Company, with 42,000 employees in 100 countries, surveyed 25,408 internet users in 46 countries on all continents except the Antarctic, and came out with the findings below, in which Canadians came in near last and Americans came in dead last amongst the Asian and Western nations, but ahead of the Islamic nations. (Accompanying graphs can be seen at the online version of this chapter at www.HOPE-CARE.org.)

Frankly, I'm puzzled by this. Could it be corporate funded skepticism that derailed us? Anthropocentrism? Religious dogma? The don't-worry-be-happy syndrome? I even argued with

myself by saying, well, the internet is used far more per capita in the US and Canada than in, say, China or Zimbabwe. A Deliverance-like hillbilly might be online posting in hunting sites and here comes the survey, and he hates Al Gore anyway, whereas a peasant in Sinkiang, China, would likely not be online at all for him to type, in Chinese of course, "Global what?" But even so, how could ANYone in the US or Canada have NEVER heard of global warming? It is just too hard to believe.

Well, believe it.

To the question "Have you heard or read anything about the issue of global warming?", a whopping 12% of Americans (the highest in the world) answered a firm "NO" and another 4% answered a wavering "Don't Know" (tantamount to "Global what?"), meaning of course "NO," adding up to 16%, translating to 300 million x 16% = 4.8 million Americans never having once heard of global warming. I didn't know there were that many hillbillies.

And if a person knows nothing about global warming, he or she would know even less about its potentially devastating effects for life on Earth including the total desertification of the Amazon within decades, which currently holds upwards of 5 million species.

Of course, if there is no awareness, there is even less action.

This confirms for me the need for new and ever broader awareness-raising programs including my campaign "Safeguarding Earth's Biodiversity from Mass Extinction Due to Global Warming."

The Defining Truth – The Numbers on IPCC's Projections

by Peter D. Carter, MD

Governments are presently negotiating the replacement for the Kyoto Protocol under the 1992 United Nations Framework Convention on Climate Change. The Convention requires OECD nations to "control" their greenhouse gas emissions so as to "avoid dangerous interference with the climate system." All governments and all environmental NGOs are relying completely on the IPCC assessment for their positions on greenhouse gas (GHG) emission reductions. Here's the question: Does the IPCC assessment tell us what is safe for the survival of species? It does not. Nor does it say what is safe for the survival of humanity.

While there can be no question we are way beyond any common sense definition of "dangerous," the Intergovernmental Panel on Climate Change (IPCC) position is that the Panel has not decided yet what is "dangerous."

(Susan Solomon, Co-chair, IPCC Working Group 1 – Science, Paris press conference February 2007 and subsequent IPCC answers to the press)

This is hard to believe, but it's true. There is no mention of what is dangerous in the entire IPCC 2007 Fourth Assessment.

Hello! We are changing the climate, messing up the seasons, depleting the ozone layer (still), acidifying the oceans, and wiping out species faster than a giant asteroid direct hit on the

planet would. How come the top scientists in the world don't see this as dangerous?!

Building a bridge, an airplane, a house ... the scientists behind the job inform us of what is safe and what it is dangerous. But not for the planet! What is dangerous to the survival of other animal species is also dangerous for us. The rate of increase is every bit as dangerous as the extent of global heating and climate change. This applies to both the ability of other animals to adapt or migrate and the ability of humans to adapt their agriculture to a variable climate. This rate of increase in greenhouse gases and temperature is unprecedented, giving successful adaptation by other species or by us little chance. The coral reefs are doomed with a temperature increase of +2°C and the Amazon with an increase of 3°C. In other words, most life on the planet is doomed to extinction with a global temperature increase of 3°C. This is also the temperature at which human agriculture fails.

The avoidance of what is dangerous by the IPCC is critical because the world's governments are negotiating on the basis of the IPCC 2007 Fourth Assessment and more specifically on the Summaries for Policy Makers.

There's not even a *mention* of "dangerous" by the top scientists in the world. No need for panic, so keep mining that coal and pumping that oil. And keep making meaningless promises about greenhouse gas targets.

While it is generally agreed by the climate change experts that a 2°C heating is too much, that is what the governments are aiming for – they say it's a target. Which is criminally insane.

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What guidance does the IPCC give on avoiding +2°C? Well, none.

The IPCC does not include a GHG reduction number for getting under +2°C. The best IPCC scenario is to end up 2.0°

to 2.4°C hotter. And for that, the Panel's numbers indicate we have at the most 8 years to turn things around (to have reversed greenhouse gas emissions from rising to falling).

So quite simply we have no 8 years. There is no time left.

If we carry on as we are with business as usual (like we are), how hot could it get?

The IPCC doesn't tell us. The governments are negotiating based on an assessment that ignores risk and throws precaution to the wind.

While the IPCC is supposed to advise governments on the most relevant science, it does not. The IPCC does not give a temperature increase based on the current population and economic growth.

Instead the Panel gives a range of temperature increases from IPCC-invented scenarios that the Panel says are plausible.

The Panel's "best estimate for the high IPCC scenario (A1FI) is **4.0°C** (*likely* range is 2.4°C to 6.4°C)."

The above is the basis of current international negotiations, but it's wrong. It's hopelessly wrong on risk and wrong on the most likely temperature increase.

Here is the risk we are taking with all life on Earth – right now. Here is how the numbers add up at this time.

1. Increased acceleration of global GHG emissions

The closest IPCC scenario to the real world up to the year 2000 was A1F1, which is status quo population and economic growth. Since 2000, however, global GHG emissions have accelerated above and beyond the IPCC worst case scenario.

The projected temperature increase range to 2100 on this real world global GHG emissions trajectory has been projected to be an additional **1.0°C** (Commonwealth International Research Laboratory, Australia – CSIRO). That makes **+5.0°C** by 2100.

2 Terrestrial carbon feedbacks (excluding permafrost)

The IPCC assessment omitted carbon feedback models, though the IPCC technical report said these feedbacks will happen and they will add more than another 1°C by 2100. (The highest model for carbon feedback by Peter Cox using the Hadley carbon cycle model gave an extra **1.5°C** by 2100.)

That makes **+6.5°C** by 2100.

3 Ground level ozone increase carbon feedback

Global heating causes ground level ozone pollution (a product of fossil fuel combustion in the first place) to increase further. Ozone is itself a GHG. It is not only very bad for human health, it is also toxic to green plants. The result is that green plants cannot absorb as much carbon by photosynthesis – and the terrestrial carbon sink is thereby reduced. This may more than double the global warming effect of the increasing ground level ozone by 2100. The estimate for the carbon feedback is largely thought by researchers to be another 1° to 1.5°C (mean **1.25°C**).

That makes **+7.8°C**.

4. Ocean carbon sink failure

More than one paper has found that the ocean carbon sink has started to fail. The ocean carbon sink is by far the largest buffer we have to global heating. The researchers say that if failure continues, it will add another **+1.5°C** by 2100.

That makes **+9.3°C**.

5. Permafrost carbon feedback

There are no modeled estimations due to great uncertainty on how fast this vast store of carbon will be released by global heating. Most guesstimates are around at least another **0.5°C** by 2100.

But clearly this could be many times more based on the amount of carbon involved.

That makes **+9.8°C**.

6. Methane hydrates

This is by far the largest carbon feedback. Alhough not mentioned in the IPCC Summaries for Policy Makers, the IPCC does make some scant reference in the technical reports to the massive amount of carbon in methane hydrates. The only model is Hadley's, giving at the very least another **1.5°C** by 2100.

That makes **+11.3°C**. With a range of up to +13.5°C.

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Is it valid to add all these numbers up? For sure it's a lot better than missing them all out.

And it is valid because they are all distinct sources of heating. And valid because the IPCC acknowledges each and every one will happen before 2100. In fact, it is more than likely that synergies will result, making the real total increase in heating far more than the simple sum of them all.

Any risk of going up to +13.5°C, or indeed of going up to IPCC's +6.4°C is a zero tolerance risk. It's unthinkable because a 6 degree increase is a threat to the survival of most animal species, including our own.

The question arises, why hasn't IPCC given a global average temperature increase for the current real world scenario? The data are readily available and the economic growth number is certain. And why hasn't IPCC done a projection from the current rate of increase of global GHG emissions? That also is certain.

The only answer is that the governments that control the work of the IPCC do not want to be told the risks. Instead of risk avoidance policy by governments, we have a policy of avoiding risk avoidance policy.

Why is no one challenging the use of the incomplete IPCC assessment in setting policy on cutting GHG emissions?

Denial.

There is supposed to be an important reason for all this number crunching and that's to determine how long we have to wake up, get sane and get off fossil fuels. We know we have to avoid going over +2°C at the very least. Once at +2°C, global GHG emissions are further boosted by carbon feedbacks and failure of carbon sinks, making a +3°C increase inevitable.

Just taking the real world GHG emissions (ignoring carbon feedbacks), we hit +2°C by 2040. With carbon feedbacks kicking in, we hit +2°C before 2040.

The G8 nations have said they will not cut GHG emissions by more than 50% by 2050. The IPCC assessment provides an excuse for doing no more.

The painful but unavoidable conclusion is that another few decades of economic growth is being valued by our culture over all the future of all the life on all the Earth. All of our governments and all of our institutions are protecting the growth of the world economy – while killing all of life – and working hard to deny it.

There is nothing new about this. It's been happening for decades and we all know it.

It's the illogical and insane conclusion of a culture that doesn't value the natural world but only what can be manufactured and sold for money from the natural world.

It is the sum of all evils.

Open Letter to BC Premier and Environment Minister on the Tar Sands, Pipeline and Tankers

Former American president Harry Truman had a sign on his desk saying, "THE BUCK STOPS HERE.", referring to the passing of responsibility and blame. It is a statement of leadership.

The American and Canadian people say to their elected leaders, "Put your money where your mouth is." This is a requirement of trustworthiness and accountability.

All peoples of the world elect their leaders for their courage and wisdom, not cowardice and ignorance.

We the people of British Columbia expect our elected leaders to be responsible, trustworthy, accountable, wise and courageous in discharging their duties to British Columbia and British Columbians. We expect the Environment Minister to take full responsibility of the environment, and the Premier to take full responsibility of the Environment Ministry.

To give one specific example, an oil spill in British Columbian waters is not only the responsibility of the BC Environment Minister, but more so that of the BC Premier, and ultimately that of the Canadian Prime Minister, regardless of who is in office or which party is in power.

The BC Environment Minister, and the BC Premier and the Canadian Prime Minister should all be aware that given tanker traffic in British Columbia waters, the probability of an Exxon-Valdez-level oil spill would be once every 16 years. "Just a probability"? Bear this in mind: the sinking of the ferry Queen of the

North 135 kilometers south of Prince Rupert in March 2006 had a much lower probability than a tanker oil spill, yet the ferry did sink. And since the Exxon Valdez accident happened 19 years ago, the next one is 3 years overdue.

But there is no oil tanker traffic in BC waters, you say? True, for now. As we speak, however, a pipeline is being planned to be built across northern British Columbian to drain the crude oil from the Alberta tar sands into tankers to be docked at Kitimat, BC, destined for the United States and China.

If this pipeline is to be built, there will be precarious oil tanker traffic in BC waters. Conversely, if British Columbians allow lumbering oil tankers that require kilometers just to slow down to prowl the treacherous waters of the unforgiving BC coast, the pipeline will be built, which will damage huge swaths of pristine wilderness. And both tanker and pipeline will support the environmentally disastrous Alberta tar sands, about which the Premier of BC himself, a pioneering champion in North America of the carbon-tax, has expressed disapproval. Which begs the question: Is this trustworthiness?

And: Why?

Is it money? Canada paying BC to support Alberta ? Alberta itself paying BC for support? BC somehow extracting a fee for the service? BC, the gateway to the Pacific – dollars? If so, take a look at the down side of money.

To name a front-line example. While the ecological effects of the Exxon Valdez 11-million-gallon spill is still felt today, back in 1989, the cleanup cost to Exxon alone was upwards of $3.5 billion, equivalent to $25 billion in 2008. Although it was Exxon who paid the bill, the size of the bill reflects the enormity of the environmental and health damage. The death toll in term of wildlife along the affected 470-mile Alaskan coast was staggering; but the full impact we'll never know. The Exxon spill has precipitated health problems on wildlife and humans alike. In terms of impact on humans and cultures, the impact is inestimable.

The University of Florida reports:

"Refusal to Accept Responsibility

In addition to its slow response and insufficient communication, the company's attempts to remedy its damaged reputation fell short of their intended goals. Initially, Exxon blamed state and federal officials for the delays in containing the spill. When asked how Exxon intended to pay the massive cleanup costs, one Exxon executive responded by saying it would raise gas prices to pay for the incident. These attempts to evade responsibility and defer blame angered consumers. Ten days after the spill, Exxon spent $1.8 million to take out full-page ad in 166 papers. In the ad, the company apologized for the spill but still refused to accept responsibility. Many saw this approach as insincere and inadequate.

"The End Result

Exxon paid the price for its actions in several different ways. The cleanup effort cost the company $2.5 billion alone, and Exxon was forced to pay out $1.1 billion in various settlements. A 1994 federal jury also fined Exxon an additional $5 billion for its "recklessness," which Exxon later appealed. In addition to the upfront costs of the disaster, Exxon's image was permanently tarnished. Angered customers cut up their Exxon credit cards and mailed them to Rawl, while others boycotted Exxon products. According to a study by Porter/Novelli several years after the accident, 54 percent of the people surveyed said they were still less likely to buy Exxon products."

Double-hulling the tankers will prevent spills? Wikipedia reports:

> *"Opposing viewpoints have argued that the double hull is actually more dangerous than a single hull. Most of the collisions that the double hull prevents are so minor that they would typically spill little to no oil on a single hull tanker... In addition, there is a much larger potential for explosive accidents happening due to the increased element of oil mixing with air during a high-energy grounding, as was the case with the Aegean Sea oil spill.*
>
> *"Possibly the most disturbing fact about the double hull is that it does not protect against major, high-energy collisions or groundings which is what causes the majority of oil pollution… the damage to the Exxon Valdez penetrated sections of the hull (the slops oil tanks) which were protected by a partial double hull. The double hull required by the new regulations would not have prevented extensive loss of oil from the Exxon Valdez, though it might have somewhat limited the losses."*

While on Exxon, the Financial Post reported (May 29, 2008) that Rex Tillerson, chairman and chief executive, argued that the science of climate change was far from settled and that his company viewed it as its *"corporate social responsibility"* to continue to supply the world with fossil fuels. He said that since global warming is *"not fully understood"*, we should keep on debating about it, while developing the tar sands at all speed, *"rather than acceptance that it is occurring, with the potential consequence that governments will implement policies that put world economies at risk."* This is in spite of the fact that Exxon Mobil is the only oil company which is a member of the United Nations Intergovernmental Panel on Climate Change. Metaphorically, Tillerson is an officer of the Titanic sailing through thick fog, saying, "Icebergs may still be a hoax. Full speed ahead!"

A side note is that when Neva Rockefeller Goodwin, the great-granddaughter of John D. Rockefeller who founded Exxon's predecessor 125 years ago, proposed that Exxon Mobil

prepare a report on the impact of climate change on emerging countries, and embrace greener energy, it was rejected by 90% of Exxon shareholders, a stark illustration of "bad capitalism" in action (vs "good capitalism" as in green investing). They are the societal root of all evil. Some even say that Capitalism itself is the root of all evil. One thing is for certain. If Capitalism is indeed the root of all evils, I'm sure it can buy itself out of it.

One last note on tankers is that as their size grows ever larger, so will the magnitude of the disaster when it happens.

Yes, "when", not "if", which begs another question: Has the BC Ministry of Finance taken this inevitable future expense into account? No. To be paid by whom? Our children's children, who will already be suffering the consequences of global warming we are right now precipitating upon them. Is this what accountability means?

We often miss the obvious while looking for the unusual. It never ceases to amaze me how financially responsible we have trained ourselves to be on a personal level, where one day late in credit card payment will brand us unreliable, when our highest echelon leaders show such gross irresponsibility on a global level and multi-generational scale. Our elected leaders may have 20/20 hindsight, but definitely very shallow insight, and near-zero foresight.

Now, if we step farther back and look at the greater picture, the hazards of the BC government's self-conflicting policy and involvement with the Alberta tar sands have such wider global impact that makes the Exxon Valdez spill look like mere spilled milk.

We don't even need to look to our future generations yet to see this suffering, for it has already begun. Where the Alberta tar sands are concerned, the native people are the biggest losers. The Chippewyan people living near the Alberta tar sands are suffering sky-high cancer rates, and at that of exotic forms of cancer associated with ingesting deformed fish in the Athabasca

watershed. A Chippewyan saying: "When you see a duck land, do not expect it to take off again." The tar sands consume as much water as the whole city of Calgary , and where does the waste water go? The Athabasca watershed.

And what does the waste water contain? The PAHs (Polycyclic Aromatic Hydrocarbons) and other organic compounds, along with a range of heavy metals, all in all a cocktail of carcinogens.

The Alberta government and oil companies boast of benefiting the Chippewyan by building for them infrastructures not there before, including modern hospitals equipped with state-of-the-art *cancer-treatment* technology. What is wrong with this picture?

Speaking of technology, the way by which oil is extracted from the tar sands is ridiculous, absurd, wasteful and polluting in the extreme. It burns one unit of natural gas to produce two units of crude, which will require even more energy to be transported to distant refineries through pipelines and tanker transport, where even more fuel is burned to refine the crude into gasoline, which eventually is all burnt. What is wrong with *this* picture?

And where does the natural gas come from? Russia , via an already built natural gas pipeline through northern BC. So, Canada buys natural gas from Russia, to extract crude oil from the tar sands in Alberta, which will then be shipped by pipeline and tanker to the US and China, where the crude is refine it into gasoline, some of which being shipped back to Canada for Canadian consumption. What is wrong with *this* picture?

These incongruent and almost nonsensical pictures, though huge, are tiny compared to the biggest picture in climate change and global warming – how much carbon is currently locked up in the tar sands, to be eventually all released into the atmosphere when burned as gasoline in the US and China? Quantitatively, according to Wikipedia, "*Oil sands may represent as much as two-*

thirds of the world's total petroleum resource, with at least 1.7 trillion barrels (270×10^9 m^3) in the Canadian Athabasca tar sands and perhaps 235 billion barrels (37×10^9 m^3) of extra heavy crude in the Venezuelan Orinoco tar sands. Between them, the Canadian and Venezuelan deposits contain about 3.6 trillion barrels (570×10^9 m^3) of oil in place, compared to 1.75 trillion barrels (280×10^9 m^3) of conventional oil worldwide, most of it in Saudi Arabia and other Middle-Eastern countries." If all the carbon in the tar sands go up in smoke, we can kiss our children's future goodbye.

And how much of the carbon in the tar sands do the oil companies and the Alberta government intend to release into the atmosphere? All of it, of course.

Oil will become more and more expensive as the years, months, even just weeks, roll by, so how can these agents of greed resist it?

And what will this mean? Runaway global heating, civilization collapse, global chaos, widespread famine, mass extinction. Is this wise?

Now, back to British Columbia , British Columbians and the BC government. If we permit the pipeline to be built, and allow tankers into BC waters, not only will we be endangering the ecology of British Columbia, but the global environment, and our children's survival, and life on Earth, and the life of Earth itself.

One small request to the Premier and Environment Minister of British Columbia . It is not something colossal and global, nor are we asking you to vigorously oppose the Alberta tar sands. All we are asking of you is this:

Please guarantee to me and all British Columbians that there will be no chance, not just a slim chance, but *zero chance*, of any major oil spill in British Columbian waters.

That's it.

Please do not say that there is no way for a 100% guarantee

on anything. There is a very simple way. No oil tanker traffic in BC waters, period.

Mr./Ms. Environment Minister, if you cannot make this promise, what good are you to us nature-loving British Columbians as the person we trust to protect our environment? Mr./Ms. Premier, if you cannot make this simple yet all important promise, what good are you as our leader?

As I said, we are not asking you to vigorously oppose the Alberta tar sands, only to end British Columbia's support of it, and association with it. Even this little bit will take courage, but, as I said, we elected you on grounds of courage and wisdom, not cowardice and, in this case, to put it neutrally, inconsistency.

Without tanker traffic, there is no reason for the pipeline to be built, and British Columbia's complicity in the Albertan tar sands atrocity will be cleared, and the global conscience of British Columbians will be at peace.

Then and only then will you go down in history as the responsible, trustworthy, accountable, wise and courageous leaders that we British Columbians and our future generations require and deserve.

Sincerely,

Anthony Marr, founder and president
Heal Our Planet Earth (HOPE)
Global Emergency Operation (GEO)
www.HOPE-CARE.org

Open Letter to the Premier and Environment Minister of Alberta, Canada

This will not be a respectful letter, because you deserve no respect. Positive-reinforcement has no place in this matter, because there is nothing positive to reinforce.

I will just tell you straight what we, citizens of our planet Earth, think about you, and inform you about what we intend to do for your future victims – our children's children and all life on Earth.

We see it as our sacred duty to our future generations to first keep them from harm, and failing this, to at least let them know the truth – of what, who, when, how and why - while they roast in an atmospheric oven, and see no beauty in any direction wherever they live, even in the middle of the Amazon basin which may have become desert, the only way to escape which being death, involuntary or otherwise.

You, sirs, are committing the gravest crime against nature and humanity ever, graver than even the Holocaust, by far. Instead of 6 million humans murdered by the Nazis, your current atrocity will cause human losses by the billions, plus millions of *species*. All their blood is on your hands.

There are only two possible reasons why you are doing what you're doing with the tar sands and the native people living nearby. First, you are scientifically illiterate and simply cannot grasp the gravity and urgency of the climate change situation, and the catastrophic future consequences of your atrocious actions at the tar sands. Second, you are fully aware of them, and yet are blinded by greed and the desire to go down smelling like a rose

in the future history of Alberta . Of the two, the first of course is more generous, and God save the world, but the second is likely more truthful, and God save your soul.

I won't deny you your moment of glory, which might last as long as a decade or two, but, wrong, if fragrant immortality is what you have in mind. In the long run, and, trust me, it won't take that long, you will begin smelling like the Criminal Against Nature and Humanity of All Time that you truly are - to the rest of the world, which Alberta will sooner or later be obligated to join. The EVIDENCE against you will then have sufficiently surfaced – all over the world – to have you damned for all time, and no one can come to your rescue.

Of course you will try to manipulate your political machine and control your media to stave off the condemnation for as long as you can, and you will try to write history with words, not results. But you can only do it for so long. For the truth will set itself free.

This is how it will happen. Over the next three years, Heal Our Planet Earth will launch into the future a collection of several hundred time capsules from all nations of the world, each titled a Time-Capsule-of-HOPE-2060, with its own serial number. The time capsules will contain locally relevant material, but all will contain one item in common – a brass plaque with a bright side and a dark side. On the bright side will be engraved the names and titles of the locally nominated heroes; on the dark side, of villains. And every plaque in every time capsule will contain something in common – *your* names, and your titles, and the title we have bestowed upon you:

For the Alberta premier:
CANADIAN CRIMINAL AGAINST NATURE AND HUMANITY OF ALL TIME #2
And for the Alberta Environment Minister:
CANADIAN CRIMINAL AGAINST NATURE AND HUMANITY OF ALL TIME #4

Our regrets, Mr. Premier, for not giving you the number one spot I know you crave. Unfortunately, and indeed reluctantly, we have awarded the honour to someone else. "Reluctantly" because we actually despise him less than we do you.

Oh, and, by the way, at the launching media conferences from city to city, the plaques will be shown to TV before being sealed into their respective time capsules.

The locations and coordinates of these time capsules will not be made known to the general public. They will be known only to a privileged few, myself *not* included. There are instructions as to how they will be launched, and how they will be opened at the destination date. The media, if they still exist then, will definitely be involved. The media may no longer exist in 2060 because what you are doing today may doom civilization to disintegration and collapse, when the first to go would be high technology. Perhaps you could then wish for these as another temporary refuge for your reputation, though I would not recommend it.

We are not vindictive, and would say the same words and do the same things no matter who and what party are in power. So don't take this personally. And we believe in giving someone a second chance. Here is our condition:

If you shut down the tar sands once and for all within three years, we shall erase your names from the plaque, or give you a better title if you wish. If not, we will throw away the key. This is not a threat, and the ball is in your court.

We will be monitoring every politician's word you say and every political move you make over the next three years, to begin with, and promise to be fair, a leniency that you certainly have not earned.

Just one last question for you both before we close this door: How do you sleep at night?

Sincerely,

Anthony Marr, founder and president
Heal Our Planet Earth (HOPE)
Global Emergency Operation (GEO)
www.HOPE-CARE.org

Petition to UN Secretary General for Global Green Fund – Arguably the Most Important Petition in History – MUST SIGN!

Dear Secretary General Ban Ki-Moon,

On April 9, 2008, the Global Conference on Oceans, Coasts and Islands was featured in a newspaper article titled "Oceans warming 4 times faster than predicted", which concluded with: "More money must be spent on protecting international waters," and we would add, "the atmosphere, the Arctic and Antarctic, the Amazon rainforest, the Boreal forest, African wildlife, biodiversity, in fact, the entire biosphere itself".

World experts have determined that a **Global Green Fund** for healing our planet Earth of $120 billion per annum is the bare bone minimum.

Almost shockingly, in this hour of critical planetary need, such a Global Green Fund DOES NOT EXIST. In contrast, the Global Military Expenditure towers $1.2 trillion per annum, and to what good end? A mere 10% of it would make the $120 billion Global Green Fund.

As a nature-revering, peace-loving and deeply concerned planetary citizen, in view of the current global environmental crisis in climate change, habitat destruction and species extermination, I am writing to participate with other planetary citizens

worldwide in presenting the following proposal:

As overseen by the United Nations, all member nations shall contribute ten percent (10%) of their military budgets, totaling $120 billion per annum approximately, to a U.N.-administered Global Green Fund dedicated to solving the environmental problems of the planet Earth.

Nations may contribute by means of environmental work performed by their military forces (e.g. by using the army for anti-poaching and habitat protection, and the navy for enforcing international laws on the high seas) in lieu of financial contributions.

By this method, there will be no relative loss of military strength for any nation, the world will be 10% safer, and Planet Earth will be 100% greener, and our children's future will be infinitely brighter.

Where the United Nations is concerned, it will finally have a real budget with the real means to heal our planet Earth.

Thank you for your attention.

Signed:

Anthony Marr, founder and president
Heal Our Planet Earth (HOPE)
Global Emergency Operation (GEO)
www.HOPE-CARE.org
To sign the Global Green Fund petition, google "Secretary General Global Green Fund".

Thus Speak The Citizens of Earth

Raminothna

Homeland Security is good. Home Planet Security is infinitely better.

Janelle Kowal, Michigan

Sir, I support the concept of creating a Global Green Fund whole-heartedly, and urge all UN members to do the same, and this is why: as outlined in Mr. Marr's proposal, life on planet Earth is in jeopardy of extinction; life meaning all species, including our own. It is vital that the very organization designed to govern and protect the security and livelihood of the world's people must embrace this simple plan of action in order to preserve a world with lives to protect. This organization and movement affects all living beings and species on earth, and is relevant and vital to the survival and protection of humans, animals and nature to coexist and thrive as it was divinely designed to, free from the degradation that has been caused solely by our actions, whether subconsciously or directly. We face unspeakable catastrophes which will threaten the health and existence of ourselves, our children and an unfathomable number of species of animals will become extinct. Unlike mass extinctions and catastrophic, "natural" disasters of the past, the current crisis facing the planet is not only a direct result of our own actions and those of human generations past, but it is also one that we not only can correct, but it is our conscientious duty to do so. The citizens of the world and the countries that you secure call upon you to accept that the time to act is now and that the responsibility to act lies within all of us. With no contributions made to a Global Green Fund now, it is inevitable that in time, no nations will remain for the UN to protect, and life on planet earth will be gone. Please

recognize that this is truly the greatest threat in existence to the people of the world, as well as the most inconceivable outcome knowing that it can be prevented only with your cooperation. Thank you.

Rebecca Monaghan, Oregon

I strongly believe in the Global Green Fund. It's the only plan out there that could actually change the world for the better for our future generations. We are given a chance here to save the Earth from dying. If we wait much longer, it may be too late and we might as well start planning our funerals now. When will be the right time to step up and do something if not now? When? How long are you willing to wait? Do you want to see the population of species rapidly declining and heading for extinction? That includes humans.... which include YOU! Why isn't saving the planet as big as a priority if not higher than national security? If there is no planet left then all the time and energy that went into keeping our country safe is valuable time wasted that should have been spent organizing the Global Green Fund. You can be a wealthy man and all the money won't be able to buy you a new home if everything is dying around you. It's time to be an active part in this movement to save the Earth. Everyone needs to do their share. Sign the petition, speak out to your friends, educate those who aren't aware of what's happening to our home planet. DO SOMETHING PLEASE!

Victor Chatipwa Phiri, Zambia

The UN must dedicate more funding to the global warning situation to reduce its negative impact. And let me say that I am very happy that the UN has put Africa at the centre of global warming by recognizing that poor farmers in Africa need assistance and technical know how. I would also urge the UN to network with a lot of grassroots organizations in the fight against global warming.

Tia Pinela, California

Mr. Secretary General: This is a sensible and practical start to solving the environmental crisis we have created by our greedy exploitation of the planet. I wholeheartedly support diverting at least 10% of my nation's military budget to restoring and protecting the environment, and would welcome even 50% of the budget being used to develop safe, renewable energy and environmental restoration and protection programs. Our current administration is famous for not listening to the will of its citizens, but we are also citizens of a larger community - citizens of Planet Earth. As you are the closest we have to a leader of the planet, I implore you to create this fund and bring pressure to bear on all the countries to contribute generously to it. Thank you!

Glenn King, Canada

I am in full support of this fund.

Tierra Cinamon, New York

My son is 17 and I have his friends signing this petition. So should everyone else.

James Robertson, Arkansas

The global implications are already being felt; PLEASE lets do everything possible to address this situation now.

Paul Sullivan, Florida

The world is not ours but our children's children's.

Maureen Sheridan, Jamaica

I hope this petition attracts a million signatures - 100,000 represents only a very small percentage of the people who want change.

Belinda Geiger, Ohio

Funding is long overdue to battle the destructive ways of mankind ("kind"?!) via protection of animals, habitat and the planet. Save us from ourselves through the creation of the Global Green Fund. I implore you on behalf of my daughter and all future generations; may they be.

Connee Robertson, Arkansas

Please understand: The citizens of the Earth ask the heads of all of the governments of the world to join together to save all of life on our planet. We are looking at the end of most of life on the planet, staring it right in the face! Please heed this request. WE'VE BEEN WARNED!

Carolyn Nikkal, Massachusetts

If we do not reduce atmospheric CO2 rapidly, we won't have to worry about the economy, terrorists or military might. We will be dead and these things will be meaningless. Are we as a species so stupid, short-sighted and greedy not to make all the sacrifices that it takes to save our planet? If so, we deserve to die. Too bad we will take the rest of creation with us.

Marsha Waterbury, California

ONE WORLD. ALL LIVING BEINGS. ONE LIVING PLANET. SAVE IT NOW.

Tanya Metzner, Florida

Do it for the children

Dotti Wikle, Virginia

Save our Earth for future generations.

Eloise Holland, Canada

Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has. - Margaret Mead

Karen Hawley, Canada

I feel this initiative is positive and productive. Please consider its implementation seriously.

Randy Behre, Louisiana

I believe we are way past the time to think and debate about this. We must start taking action.

Marina Juric, Austria

Please save our beautiful world! And all the life on it! Do you want your children to burn? Stop global warming!!

Carolina De la Rosa, Mexico

Have a heart. Help our Mother Earth!

Koi Neah, Canada

Our actions and prejudices have great impact on the world around us. We must take responsibility personally, locally, nationally and globally.

Katie Furnell, United Kingdom

This huge problem has to be recognized worldwide and resolved. Its our selfish greed for money and commercial/material growth that has escalated this. Its time for action.

Marisa Herrera, Canada

In a "civilized" society people should have an understanding that all living creatures deserve to be free from oppression, intolerance, exploitation and cruelty. It's time we evolve to a civilized and compassionate way of thought and action and protect nature and all her creatures. What Iceland, Norway and Japan do, the latter in the guise of "scientific" research is one of the most despicable acts of human greed. The bloody massacre of thousand of dolphins and whales reflects the evil, greed and tyranny of the imperialistic human ego. Shame on Japan, Norway and Iceland! Unless we change for the better, the human race dooms itself to be Earth's cancer.

James Wilcox, Virginia

We MUST stop fouling our nest.

Melissa Rudolph, Illinois

I agree with this petition with all my heart. We as a society of people across the world need to put in more effort to save our planet and ourselves.

Catherine Chiarello, Pennsylvania

Global Warming is real, and it is happening now. There are so many ways we can do to repair the damages we've done. Please hear us out!

Bina Robinson, New York

We have already delayed too long to deter global warming and must to everything we can to stave it off for the sake of all the earth's creatures, including ourselves.

Alex Buckley, United Kingdom

I fully support this petition and I feel that you should be able to see how a mere 10% reduction in military spending to support the world that we live in is a tiny price to pay for any forward thinking country who actually wants its citizens' and politicians' children and grandchildren to have a world to live in.

Anonymous, Florida

Life is still sacred.

Daniel Phalp, Australia

Once this planet is raped there is nothing left. Its not a political issue. Its common sense. Enough is enough. We all know what needs to be done so why isn't anything happening?

Dana Lawrence, Rhode Island

Get with the program! Dana Lawrence, Rhode Island

Get with the program!

Anonymous, Florida

Save Mother Earth for she has been supporting you for countless centuries.

Veronique Pires, Canada

It would definitely be a step forward.

Howard Davies, United Kingdom

I would like my children to have somewhere to live securely and safely, with enough to eat. Let's make this happen!

James Turner, United Kingdom

This earth needs a lot more than that! BUT it would be a positive step forward. A MUST!!!

Colleen Klaum, Pennsylvania

It is our duty to protect mother earth from global warming, something needs to be done to save our planet and the animals that thrive on it. Plus for generations to come.

Amanda Daniell, Canada

What a brilliant idea, Anthony! Why aren't you in Politics? If we had more citizens involved in the political arena who cared more about the people and Earth they are intended to care for, and less about warfare and gaining political favour, we may actually have hope on this planet. Thank you, Anthony. I hope that the UN and Political Governments around the world will think this is as brilliant as the people who live on our earth do; those who want to live out their remaining lives with oxygen to breath, waters to inspire and an Earth to call home. Rather than spend Trillions of dollars killing each other, let us please do what we can to cherish our home.

Vicki Regan, Illinois

What is the point of all this "progress" and money making if we are going to die because of it...?

Yvonne Bartsch, Illinois

We have one planet and once its gone, our children are finished and wiped out. SO STOP KILLING OUR PLANET!!!!!!!!

Terri Collins, Maine

We need to take care of our planet if we want it to take care of us and generations to come

Shaunak Pandit, Canada

Global warming will ultimately affect all of us, no matter where we live. Please join and lend your voice to this cause.

Lawren Freebody, California

Please take a stand on this important issue and do the right thing. There are growing numbers of people who are there to work and support these efforts if you make the choices that allow this healing to take place. Let your legacy be one you can be proud of. Thank you!!

Janice Bernath, New Jersey

We all MUST start to conserve wisely and to care for the other creatures on this planet. There is no such thing as "sustainable growth" we've heard over the years in the media. And spending billions for destruction, not only through this so-called war in Iraq, is downright stupid. We need new, clean sources of energy, much less packaging and waste, and the wherewithal to use that new technology that's at our fingertips now. Without OUR mother, MOTHER EARTH, WE'RE history!

Anonymous, United Kingdom

How come we can spend Billions on arms and nuclear reactors but aren't spending it on saving the planet?

Dianne Radmore, Canada

The time is NOW.

Anne Muller, New York

What a wonderful world it could be. We urge you to initiate and grow the Global Green Fund for the sake of life on Earth.

Erika Siegel, South Carolina

Please start doing something. There needs to be more awareness and activity from the government, on both the local and national level. Mandatory recycling, no more plastic bags, minimal packaging methods, water restrictions - it's not that hard to establish.

Joshua Kahn, Canada

Stop wasting time and money. Our behaviour is not sustainable and we will be extremely sorry when the consequences of our actions are flown in our faces. Future generations do not deserve to bear the burden of our ignorance!

Patrick Stone, Arizona

All the money we make won't matter at all when we're dying.

Julie Daniluk, Canada

I think that we only have a few years to turn this reality around. Please act fast to make this change happen.

Diana Hardacker, Canada

Our future depends on slowing global warming. I am very sad to see the devastation in Myanmar this weekend. It is a sign of our changing climate, with more to come. For the sake of ourselves and future generations please put funding towards this global crisis.

Deanne Rapacioli, Canada

What is the point of living when we have destroyed the earth? We must invest now for the future or we will have no future.

Nan Sea Love, California

As a very committed activist and long time environmentalist, with over 5570 friends on my non-profit's myspace site, I am continually amazed that so little is being done to save our planet. I observe businesses getting richer with greenwashing, but shocking little but lip service from those who can really make a difference! Yet I see and speak to real people everyday, who are really concerned, young people who are worried about their future and that of the planet. When will governments get serious instead of just giving lip service to saving our planet? Please act to change this!

Barry Faires, Canada

120 billion dollars would be, at very least, a beginning. We are all (and I mean all living beings) in this together. Unfortunately, only humankind can do something about the predicament that the Earth now

must deal with. It is no longer a question of saving the members of some developing nation. It is now a matter of saving everyone (again I mean all beings).

Angela Llamas, Florida

This issue is no longer a myth. It's about time we took action, Don't let our children suffer the consequences.

Amber Maloney, Arkansas

Global warming is a major issue, not a minor one. We need to take action ASAP if we wish to reverse this.

Liz Toledo, Florida

I wish for my children to have a better tomorrow.

Anelyse Weiler, Canada

Thank you for recognizing the crucial need to protect the Earth, our only home.

Allison Herbert, California

Please sign to save our world!!!

Diane Kastel, Illinois

We ask you to please use your influence to facilitate the creation of this Global Green Fund, for saving life on Earth from mass extinction due to global warming and habitat destruction

R. Raja, Wisconsin

I feel very passionately about this issue and urge you to support a Fund for saving our precious ecosystems.

Victoria Pitcock, Arizona

We must do something to effect a solution ASAP, for the future of our children and grandchildren.

Ellen Mcgill, Brazil

Urgent action is needed!!

Rosita Medeira, Brazil

This is a great idea, please take it as seriously as possible to save our future.

Inge Bolin, Canada

Glaciers are melting at an alarming rate. During the dry season millions of people and animals along the Andes Mountains depend on their glaciers for the water they use. In as little as 5 years water scarcity will be severe. Along the Himalayas 3 billion people and all its animals depend on the water from its glaciers which will be scarce or gone within a few decades or less. We must prepare immediately or we'll face a disaster as never seen before.

Denz Prhd, United Kingdom

It is not good to think only of the here and now. Have a heart for your children's children.

Danielle Moore, Belgium

Help to save the planet for us, our kids ,the future generations . All life is precious, and needs to be respected and protected.

William West, Australia

The heritage of this consumerist generation leaves desertification and pollution of the planet for our children. Exploitation and greed is boundless. Who will draw a line in the sand and say enough is enough?

Naomi Arnaud, Australia

Will you support a dead planet?

Bobby Dunkle, Ohio

It terrifies me that my kids will be paying for OUR sins committed against Mother Earth.

Joseph Thibeault, Massachusetts

Please, the Oceans are dying. Too many links are in collapse. The web of life is disintegrating. Many marine species already challenged by man's unwise commercial exploitation, much of which impossible

without layers of Government subsidies, are now facing the challenge of climate change. Large sums will be required to retire the most destructive aspect of the fisheries, otherwise the oceans' biodiversity will collapse completely and all fisheries will be lost. History will either say we were the generation that ended the destruction, or the generation that destroyed so many wonders. Hopefully, wisdom will prevail.

Richard Griffiths, New Zealand

Please try a lot harder. What a great idea this is.

Chaz Brand, Michigan

LETS STOP GLOBAL WARMING! WE CAN DO THIS!!!!!!!!!!!!

Julie Johnston, Canada

Sir, I know how much you care about the Children and the Future. Here is a wonderful way to ensure a healthy and habitable planet for all the children of all species for all time!

Laura Slitt, New Hampshire

What words are there to beg the question, what are humans doing to Mother Earth, and her many species who reside here? The heaviness of what industrialism and unbridled, seemingly amoral, capitalism is doing, goes against anything and everything we learned was good, right and proper, as a child. For the species claiming some "intelligence" over other life forms, so much so we are meddling and re-creating life, our ethics and behavior lag tragically in the dust of technology. We have designed our own demise. Forgive us again, we still have NO CLUE!

Laura Warren, Texas

The earth is something worth fighting for. Nothing else matters without it.

Pat Newson, Canada

This is an issue that concerns me deeply - for the sake of my children & my grandchildren, for the sake of the planet & all her inhabitants - please, please let us not be the generation that destroys our very home. Let us put this small amount of money toward solutions.

Please agree to contribute to the Global Green Fund.

Douglas Wilson, Australia

Polar bears are drowning due to ice melts, frogs, the indicator species for the health of the planet are disappearing, Australia has the highest rate of extinctions in the world and still governments ignore the threats to Nature. Cattle are emitters of carbon and still people eat beef. We chop down our forests and too many human beings clearing land to grow crops decimating beloved species such as elephants left with no where to go. Isn't it time that you addressed these issues please?

Di and Phil Cornelius, Australia

The era of ethics and compassion is overdue and the human race is at a turning point. We must act now or our grand children will condemn us for their legacy. That is of course if the planet supports them, to be around, to do so. Human society has the capacity to make a difference in the way the environment is used to underpin development, health and well-being of all, living on the planet. Our trust is in people like yourself to provide the leadership to achieve the outcomes needed for preservation of our planet.

Kerry Bailey, Australia

The time to act was years ago - the time to pay the penalties is fast approaching, the time to change the course of history is now. Do not be remembered as the ones who did nothing. Care now, redeem the race of man, make the world a place that can be better - for all - now and into the future!

Anita Euschen, Croatia

I think the environment should be put in the category of our national security. Defense of our resources is just as important as defense abroad. Otherwise what is there to defend? ~Robert Redford, Yosemite National Park dedication, 1985

Jackie Rares, Australia

We are running out of time to make things better for this planet. Humans must make up for all the destruction they have caused.

Katheen Chapman, Australia

This is the most urgent matter facing the world today. Please establish a Global Green Fund.

Alistair Cornell, Australia

The war that will kill us all is the one we wage against the planet and no one is a winner. It is essential that the environmental integrity of the planet be preserved, otherwise there will be nothing left to even cry over - let alone fight over.

Andrew Baker, Canada

The planet run by those who have chosen to let their egos eclipse their souls is doomed.

Heather Adelson , Canada

We cannot afford NOT to do this.

Charles Mattoon, Washington

We must deal with this issue, and we must hold those accountable who continue to block progress on this issue. This is a great test of humanity, and failing is not an option.

Penny Gummo, New York

This is the most important thing you can do to slow global warming, please do so before its too late.

Jackie Ryan, Washington

This petition is a win-win situation, a godsend. Please realize our planet's future is now in your hands.

Sarah McReynolds, Canada

God gave us this wonderful place to grow up and live on. He has done so much to make ours lives easier and now it's our turn to do something for him. If you don't do something fast our world will end. We need to do something. Even little things help. If we could get every single person in the whole world to do something for the environment for just one day, imagine what a difference it would make.

Loretta Thompson, California

Dear Mr. Ban Ki-Moon, Please think hard on this most serious issue as you have the greatest decision to make which could change the fate of our planet Earth. If you do nothing then you may go down in history as being the one person who could have made the difference to help save our world but chose to ignore the signs of impending disaster and annihilation. What do you want for you and your family? A world that will be dead maybe in our lifetime or a world full of life for your grandchildren to enjoy? I know what decision I would make and it would be an easy one for me because it would make sense and I believe in logic. Please do what is right for everyone on this Earth. You can be known for this great accomplishment and also that you really care enough to help save our world.

Robert Ernst, Washington

I am 69 and when I look back to my childhood time and compare the state of our current environment with that of the time when I was still a teenager, I can see the enormous destruction of our environment that has taken place in that relative short period of time. Escalating CO2 levels over the next 20 or 30 years is nothing short of insanity. If we don't start NOW to reduce carbon emissions through development of alternative (non combustion) forms of energies as well as restoring the carbon sinks through massive re-forestation, our children and especially our grandchildren will not survive. Politics and corporate interests have to be brushed aside if we want to have any chance to avert the worst of the changes that, even if we can deal with them, will come.

Irena Lawrenson, Canada

This is the point of no return. Ensure that the UN's legacy is one of saving this planet and humanity.

Kayla Cooper, Missouri

I pray that we examine our priorities and our values to see what really is important in this life we are so blessed to have!

Jerrold Terdiman , New Jersey

The world was created by almighty G-D and placed in our care.

We do not own it. We may not abuse it. We have been provided with detailed instructions regarding this care. We violate these rules at our great peril.

Shana Duncan, Florida

Please take action now to save our planet and preserve the millions of species that live on it. Please start the Global Green Fund so we can remove the pollution we've dumped into the air and stop global warming. You will go down in history books as a hero. The world needs heroes now!

Kelli Marshall , Michigan

Secretary General of the United Nations, Please create a Global Green Fund and see to it that it is touched ONLY for its intended purpose. Our future generations will remember and thank you for it.

John Bell, Maine

Please facilitate our acting responsibly before our children are faced with an inexorably worsening state of affairs.

Cecilie Davidson, Canada

The future will thank you a thousand fold for having the courage to press for this solution now.

Janine Bandcroft, Canada

War is soooooo patriarchal, boring and unimaginative!

Peter Carter, Canada

The most important project ever. Thank you Sir for all your work on this issue.

Anonymous, Idaho

We need to start taking care of our earth, instead of focusing all of our military funds on projects that will have no resolution.

Evelyn Vincent, North Carolina

There's been talk about a very high percentage of species becoming extinct by 2050. What makes us think "we" will not be one of those

species? There are two things happening at the same time, if you're not aware of them you will no doubt want to. They are called "Global Warming" and the other is "Global Dimming." Educating everyone on these two combined I think will provide everybody with a much better picture of what's going on and just how much of a pickle we've gotten ourselves into. We need to get on the ball really fast here and stop being concerned about how much money corporations are making. This is our Earth, our lives and our children at stake here. We have abused this Earth to such an extent that we probably don't even deserve to live here. It's so easy to do the right thing, and so difficult to undo messes and mistakes.

Marie Fortin, Canada

Time has come for an international fund to mitigate global warming. The Global Green Fund is much needed. Please create it!

Kristal Parks, M.A., Colorado

Thank you for your efforts for global peace and justice. And thank you for taking seriously the impact of global warming on all life.

Pley Nicole, France

Monsieur, qu'es ce que quelques millions pour éviter des catastrophes dues au réchauffement de la planète. La vie vaut bien cela!

Bruce Glover, Hong Kong

Dear Mr. Ban Ki-Moon: Regarding using military efforts towards solutions in the ongoing battle against environmental problems as an economical and proactive measure. I implore you to put every effort and means available to you to push for this kind of sensible and economical world effort towards a solution to this very complex environmental issue. There are no easy solutions but this approach appears economical and very effective in many ways. It could even develop better relations between military regimes with a common goal. You will be remembered in history for acting rather than ignoring. I wish you all the success in your endeavors.

Arne Ketola , Canada

The only way this is going to be worthwhile is if the majority of

funds are put into alternative energy, eliminating emissions, and carbon sequestration. Lobby the Auto industry to accept electric cars, (the hydrogen fuel cell is a bust. It's only a sham, and a delay tactic). A Global Green Fund has to be selective. Somehow its activities should be voted upon. Fix things in order of priority. Fix Global Warming first, Secure Green areas, habitat and the forests second, but don't waste time on protectionist laws that don't dent the real problems. Think big people. Don't cheat by thinking small.

Kathy Acker, Pennsylvania

Dear Mr. Ban Ki-Moon, The Global Green Fund can change and virtually save the world. But it takes creative and revolutionary thinkers to put it into effect. Please do all you can to establish this Global Green Fund for our planet.

Nicole Jeannotte, Canada

Now is the time to act and make the present and future health of our globe our top priority. Without it, we have and are nothing. If our planet dies, we die. The need for an economy no longer exists because we no longer exist. Maybe I am overly simplistic, but it seems so blatantly obvious how critical this cause is and should be recognized as the most pressing issue on a global scale. Please consider my plea and the plea of others in the hopes that if we come together not as nations or countries, but as the human race, we can make miracles happen.

Anonymous, Canada

It is imperative that the UN takes on a Global role to head up saving Earth.

Ruth Goring, Illinois

This has to do with survival. Please heed the call.

Angela Bischoff, Canada

Peace now, if we want it.

Brandy Boswell, Pennsylvania

In 50 years I want this planet to be a more beautiful place. I want my children, grandchildren, and future generations to live in a world where respect for the environment is revered and upheld!

Elizabeth Flood, Canada

Please help save our planet.

Tove Reece, Canada

It is time to take concrete action against environmental destruction. Let's have countries and politicians put their money where their mouth is.

Ann Best, Pennsylvania

Please help us shift our focus to healing rather than destroying the Earth.

Teresa Buss-Carden, Australia

Dear Secretary General Ban Ki-Moon, Please consider this petition seriously. There are many ways to help our ailing planet Earth, but one which is the most powerful, and can potentially bring the most immediate results, is educating people to change their diet. Below are few extracts from Heather Steel's article: "Being Green, Eating Green: Are you what you eat?" "....Eating a plant-based diet keeps the Earth green. Each vegetarian saves one acre of trees a year simply by his or her food consumption choices. It is these trees which keep the planet alive by absorbing carbon dioxide and releasing oxygen. In addition, they provide a habitat for millions of species, many of whom are rapidly going extinct as their natural homes get eaten up by human greed. ...the average vegan uses about 1/6 of an acre of land to satisfy his or her food requirements for a year; the average vegetarian who consumes dairy products and eggs requires about three times that, and the average meat-eater requires about 20 times that much land. An analogy sometimes used to illustrate the relative effects of incremental dietary changes on the environment says that eating meat is like driving a huge SUV, eating a vegetarian diet is like driving a compact car, and eating a vegan diet is like riding a bicycle or walking. Check out: www.ciwf.org "Global Benefits of Eating Less Meat". Only a small portion of the $120 billion Global Green Fund will be needed to educate the public, however this can bring dramatic positive steps to halt degradation of our planet. The rest of this fund should be used to implement practical steps to reverse damage already done.

Carmen Gentry, Virginia

Last night, I listened to Apollo astronaut Edgar Mitchell speak at the local conference here in Washington, DC. He has seen the Earth from the dark and lifeless surface of the Moon. He called our planet a "blue jewel" and a "pearl" in a thick sea of black mystery. Please listen to those who have seen our planet from a different perspective; please learn from them! Our planet is indeed a jewel, a unique interconnected system brimming with life and...potential! It is our duty to respect it and protect it! Ignorance and greed will bring consequences of unimaginable proportions!

Valerie Byrd , Ohio

Let's give up the global guns and go for a little global green! Please, act on this, UN!

Melanie McCain , Nebraska

We have a RESPONSIBILITY to preserve the Earth and all of its species for future generations.

Melissa Dawson Chapman, Michigan

We HAVE to do something about Global Warming... it is NOT going to just go away... we owe it to everything on this planet!

Trisha Roberts, Australia

A meat eater riding a bike leaves a bigger carbon footprint than a vegan driving a Hummer. While governments allow corporate greed to go unchecked and to function without ethics, and while capitalism continues to spread the message - consume consume consume - there will be little hope for humans, non-humans and the environment. For most large corporations, sentient beings and the planet are just products, and when we are almost destroyed, they will move to another planet. We must go vegan for peace, for ourselves, for all sentient beings and the environment and we must consume less and ethically.

Michelle Zein, Canada

Protect the planet, humans have made it sick. You cannot sit back and wait for it to be damaged beyond repair. Do you not see how urgent this issue is and what is already happening???

Tyler Markson, Canada

It is called respect. Respecting the planet and others and yourself as well. This is your home. Stop the ignorance and selfishness.

Janelle Joston , Canada

Time to do something right for the planet. You wouldn't treat your house like this. Well guess what? The planet is your home.

Darlene Williams, Iowa

HUMANS LISTEN UP! EVERYTHING is connected. By destroying the Earth and animals, you ARE destroying yourselves.

Ian Robichaud , California

Its all connected. Global warming is the apex of the problems facing the world and we must face it to reduce it.

Curtis Coutts, Canada

We can be the turning point or the point of no return, the choice is ours to make. Stop throwing trillions to support war.

Vinod Bodhankar, India

The money spent on arms belongs to the people of our beloved planet. They have a say in how it ought to be spent. We want it to be spent to heal our planet and the suffering of the people who know not how to heal themselves.

Sarah Chesterman, Canada

The destruction of our ONLY HOME by humans, who claim to be its most intelligent inhabitants, MUST be offset by positive action - NOW, before it's too late. The biggest polluters - who use our planet as a dumping ground to satisfy their greed - must be forced to change. Requisite funding redirected from military (destructive) budgets is obviously fair; even fairer would be 50%. Funds are just the start: they must then be distributed wisely (and quickly) to guarantee the most beneficial actions & results. Global warming is an irrefutable fact that can no longer be ignored: for in the end, ABOVE ALL, the global perspective is the only one which matters.

Neil Gregory, Canada

It is with eternal HOPE that I sign this 11th-hour petition. The planet is very sick and those with the cure are not administering it. Instead the evil clowns, the sinister puppet masters, otherwise known as the corporations, and their puppet governments, cling tightly to the vial of precious serum. They claim not to have it, they hide it, they would rather die than offer it willingly since... it may affect profits. I thank Anthony Marr and his dedicated associates for reminding us all that sometimes David can fell Goliath. Let's HOPE that he's as good a shot as I think he is. Don't forget to take personal responsibility and do what you can. Human over-population must be addressed.

Michael Hampson, Canada

Please act for the planet rather than serve our dysfunctional economy.

Patricia Horta, Brazil

Protecting our nations and boundaries is very important, but if we do not protect our planet, environment, flora and fauna, soon there will be no boundaries to protect as our world will die.

William Doheny , New York

We only have one Earth. We NEED to take care of it before it's too late. Please start a Global Green Fund & help save our planet. Thank you.

Jack Nugent, Illinois

It's my sincerest hope that our world leaders understand how important it is to not only stop, but work to reverse the effects of our environmental devastation. This is our top priority. 10% support from every member nation provides an equal playing field from which the best and the brightest of our generation can come together to solve the greatest problem of the 21st century. The $120 Billion Global Green Fund would lay the foundation for solving this crisis. Properly funding the initiatives with UN support and direction will provide the hope that our children and future generations need.

Jerry DeJongh, California

"The Earth we abuse and the living things we kill will, in the end,

take their revenge; for in exploiting their presence we are diminishing our future." Marya Mannes, More in Anger, 1958. That kinda sums it up, doesn't it? We must act now or generations will suffer because of our ignorance.

Kathy Chadwell, Indiana

I've seen and read many plans to help save the planet. But this idea of Anthony's is by far the most ingenious plan I've read, and it will work, I'm sure of it.

Stefanie White, Arizona

Please look into this. This will be considered a major improvement in helping sustain our planet.

Sean Michael , Ohio

We only have one home. When it is gone, we are gone. We need to protect it.

Janet Howard, California

It is very simple. We need the Earth and the Earth needs us. Let's do something about it to take care of our futures.

Tina Halloran, Pennsylvania

This can be done! Heal our Earth please!!

Karen Juarez , Arizona

I love nature, I love trees and fresh air. Please help keep our planet beautiful. The impact that we have on Earth will impact us.

Roxy Pettifar, Canada

What a fantastic idea! If all of the countries joined together in this truly worthwhile cause that would benefit EVERYONE, what a miracle that would be. It would be the first time that the entire world chose to join forces putting the betterment of mankind, and the preservation of the Earth and all its species, at the top of their priority list. What a concept!!

Andrew Garner , United Kingdom

Every action has a reaction. We've got one planet, one chance.

Jeffrey Simones, Rhode Island

Please read and understand that the Earth is all we have. Especially if you wish our children to have a beautiful and safe home in the future, the time to act is now!

Lisa Feldman, Michigan

At this rate our Mother Earth as we know it will be gone. I have seen so many changes already since my childhood. What will my Grand children and Great grandchildren have to look forward to? Our wildlife is suffering in huge doses, our weather is changing this will cause even more loss to our wildlife. How will we survive as humans? When this all comes crashing down on us will their even be any humans left? WE NEED TO TAKE ACTION AND HEAL OUR PLANET NOW! My Grand children and Great Grand children... all have the right to live in peace and harmony with the MOTHER EARTH! It's time we give back and fix what we have broken, instead of pretending it's not happening or going to happen. Anthony Marr has very logical and practical suggestions, with countless people behind him supporting him. The time to listen is now!

Elizabeth Trainer, United Kingdom

We have to put an end to this. As I have said so any times, everything on this planet breathes "Life" in some way and form. We are the only ones to DESTROY it. And we are supposed to be the "Intelligent" species? Let's hope our Children of the Future have a FUTURE!!

Michelle Andria, Arizona

We should all be concerned about global warming, as it is impacting us all, including future generations. I, as a taxpayer, hate to see so much of my money going towards military budgets. Afterall, if we cease to exist because of environmental factors, what is the point of military strength? We can well afford the small percentage of military budgets that is needed to heal our planet. Please support this well thought out solution to the world's environmental issues.

Daniel Trujillo, Nevada

I cannot believe there even has to be a petition for this. As stated above, we spend $1.3 trillion dollars on war machines without question, but we have to petition for a measly $120 billion?!?!

Dominique Landis , California

We cannot ignore the fact that we need immediate action to save this planet now! This is not a drill, experts have made clear we do not have option of waiting to start the Global Green Fund. Please, it is dramatically imperative to act immediately to avert mass extinction.

Sheila Calcagno, United Kingdom

Please support this VITAL initiative.

Beverly Whelan, Ohio

I fear what the future holds for my grandchildren. They, at the ages of 4 and 6, show more concern for the planet than our political leaders. I cannot imagine a greater goal for the United Nations than to protect our planet from further destruction at the hands of humans. I don't even know if there is any hope to reverse all the damage we have already done. We destroy everything in our path and live as though we exist only to consume the Earth. I implore everyone to recognize how serious this issue is and to take steps in our own lives in a positive direction. The Global Green Fund is such a step and I urge you to take this important action promptly.

Carolyn Thomas, Delaware

For thirty years, experts have been saying that we need to start doing something. Isn't it time to stop saying and start doing?

Anonymous, United Kingdom

This is an important step to make in the development of humanity. Everyone needs to realize that money and cost should be irrelevant when it comes to protecting the earth and creating equality for all humans and animals.

Sinikka Crosland, Canada

Today's wise decision can secure a sustainable future for our

planet and its inhabitants. Any other decision will ensure that there will be no future.

Wanda Manning, Tennessee

Please pay very close attention to this petition. If we don't start caring for our resources, they won't be here long. It's time to put back what we've destroyed!!!

Alice Bruckenstein, New York

Establishing a Global Green Fund is vitally important to saving our planet. Actions that will have a real impact are necessary to preserve life on Earth. Well-intentioned symbolic gestures that have no significant effect are no longer meaningful in the crisis we are facing. We must have the courage to face this situation head-on and focus our efforts to create an effective plan of action. Please create this Fund - our very survival is at stake!

Laura Harvey, Canada

Please, for the sake of the next generation and the survival of the planet, pay attention to this matter.

Megan Osgood, Maine

At this point, global warming needs to be our TOP PRIORITY!

Sam Hirsch , California

Please, we need to do something now or your children and their children will not even have a tomorrow. If you care about your own children/grandchildren then please do something now before it is truly too late.

Maria Cristina Almeida, Portugal

Earth is in dire need for this. But beware of those countries that will try to elude a REAL contribution to the Global Green Fund by apparent duplication of military forces. They will be wanting to go on with business as usual, not contributing at all to the Green Fund. We must ALL contribute because we ALL live here and need a healed Earth. Please Mr. Secretary General, HELP OUR EARTH!
April Foulks, Tennessee

If we don't do something NOW, there may not be a tomorrow for our children or grandchildren.

Kyrie McNeill, New Jersey

There is no price tag on our planet. Do what we NEED to do to fix our own mistakes!

Jane Gallagher, Canada

Establishing a Global Green Fund would be a great way to ensure the planet's needs for environmental protection.

Maureen E. Roth, Brazil

I have lived in Brazil for 35 years and have traveled extensively during these years. It breaks my heart to see the devastation of the Atlantic Rain Forest, the most diverse forest on the planet reduced to nothing. I can see the Amazon Rain Forest going the same way. Please for the sake of future generations consider this proposal. It may be our last chance!

Melissa Capler , Michigan

Our planet is our only home and we need to do everything we can to ensure that it is safe and taken care of. If we continue to take it for granted, we will destroy our world and future generations will suffer. Species are dying at a rapid rate and we need to keep them here so the ecosystem can be nourished. Please support this funding so we can have a healthy planet Earth.

Chaz Brand, Michigan

Let's not leave our kids with our problems! Let's do the tight thing and put an end to global warming!!!! Not more beating around the Bush (haha).

Jan Fredericks, New Jersey

It's our responsibility to take care of all creation (including animals). As our leaders and representative, please do the right thing.

Aleksandar saso Kotnik, Slovenia

Politicians - do you have children? Planning to have some? Well do something - not for you, for them!! TALK-ACTION!

Maggie Morgan, Canada

A full scale crisis is upon us, with enormous ice sheets collapsing in Antarctica, two thirds of the polar bear population headed for extinction by 2050, illnesses to afflict more people, heat waves, wildfires, hurricanes to intensify. our planet cannot afford to wait any longer, we must act now if we are to avert a catastrophe. If we DO NOT face the daunting challenge of Global Warming and face it NOW millions of species will die from droughts, starvation, flooding and disease. I am in strong support of the proposed Global Green Fund, I believe it would be a step in the right direction in helping bring about a solution to Global Warming and its effects.

Karen Orr , Canada

A fund for the planet - it's a good start, there's so much work to be done.

Tracey-Ann Church, United Kingdom

I hope that priorities will be put in order and this fund created, as nothing else matters and everything else is irrelevant if we have a dying planet that we continue to destroy. As an inhabitant of this planet I would like a future and so would my children. All those in power may have the attitude of not caring because it is not going to affect them personally and immediately, but we the people - and there are a lot of us! - would like to see positive changes to clean up our environment and repair the damage that we are responsible for. It is everyone's duty to help ensure a future for ALL of Earths inhabitants.

Adele Tyrala , United Kingdom

I am in full support of the proposal for a Global Green Fund and urge you to endorse it. When I was a little girl I was writing poems about 'Being Green' and 'Saving the World' but back then I never knew the real meaning of it and that the threat to Earth and all inhabitants would come to be so CRITICAL! Not enough people care, so I am glad I was born in this era, so be one of those who do, but I wouldn't dream of bring children into this world until I know that there is a future for them. Caring citizens around the globe, literally have the 'weight of the world on their shoulders' while the governments are acting like they have 'all the time in the world!' This shouldn't be happen-

ing - climate change should be your number one priority! You have the 'whole world in your hands' - use your powers and DO SOMETHING!

Sheila Gredzinski , Pennsylvania

Not much has changed from my younger years, we protested the war, and fought for our rights. A popular song in my days cautioned us to leave some blue above us, some green on the ground. Have we forgotten what we held dear? What are we leaving for our children? Nothing but a mess, and I can't help but cry when I think of my grandchildren inheriting this earth. Dead skies, water and land, not much life, not many animals left for them to enjoy, mankind kills off as many species as possible. You don't have to believe in the scriptures to see the truth of one that says "man will lead man to his own ruin". If we stop now, our children and theirs may be able to heal the wounds we have inflicted on this earth.

Elodie Ladlow, United Kingdom

We must rethink our priorities for future generations.

Bruce Reynolds, Switzerland

This is the most sensible movement towards sanity I have ever come across. Please listen to our voices.

Deanna Runne, California

Just a little bit is all that is needed to try to save our Earth for future generations. I know it can be done so let's focus on the problem at hand. Mother nature - if we take care of her, she will return the favor, I promise!

Valerie Knox , Washington

We must protect priceless habitat for the animals that depend on it - they who truly know how to live harmoniously with nature. Environmentalism starts with a cruelty-free world! True stewards of the earth, animals, need to be able to call this planet home in 20, 40, 100+ years, for if they do not survive how are we to be able to? They are indicators of the Earth's health and the earth's health determines their survival. If they go, we go.

Peter Bagshaw, United Kingdom

I believe this to be the most urgent, pressing problem on the planet. Far, far bigger than terrorism and the credit crunch! Apart from politicians and industry needing to take a lead we could all do one simple thing to help in a massive way - go VEGAN.

Jim Phillips, California

This is an interesting proposal. This is something that should be tried and carried out expeditiously.

Pat Mellini , Ohio

Please honor this request for our future and the future of your children and grandchildren!

Prad Basu, Canada

As Quark (of Star Trek fame) expressed astonishment: "You nuked your own planet???!!!"

Doris Lin, New Jersey

This is an urgent, top-priority issue! Thank you!

Mariana Jakobsen, Washington

The Global Green Fund would be the first REAL step in healing our home - the Earth. I want my 4 year old son to know the beauty and diversity that I have witnessed. I want his children to be able breathe clean air, to observe indigenous species in their natural habitat and to know that the government cares enough about the human race, animals and the environment to preserve it for generation to come. Please act now!

Paula Lasersohn , South Africa

The world has changed so much in 100 years. In another 100 years there may not be an habitable world because of our destructiveness. Please fix it now while we still can!

Jeanie Delgado , California

I absolutely support this plan. It is necessary for our planet to survive!

Kim Kerr, Canada

For the sake of mankind and our planet I urge you to create the Global Green Fund.

Taina Ketola, Canada

Please earmark the majority of the funds for resolving the global warming issue through the development of alternative energy infrastructures and carbon sequestration. This is the most important issue facing our world today. Without the planet Earth we, our children and grandchildren have nothing at all.

Kelli Curtis, Canada

The human species is just as much a part of nature as plants and wildlife are. Actions toward a GREENER earth is a MUST and should start NOW, not tomorrow. This planet is heating up far faster than is should be and if we don't start living greener then plants and wildlife won't be the only species on the extinction list. The human species will quickly be added to that list as well. All of these natural disasters that have been worsening over the last few years are Nature's way of warning us that we as human beings MUST start living in harmony with Earth or Earth WILL eventually kill off the human species.

Lane Ferrante, Ohio

The government is not usually too concerned with spending huge amounts of money even on things that citizens desperately need. The issue of global warming and what we do now is our future.....or not. This money is to be put toward life, the life of our planet and of our species. I am quite sure that every person in the world would perceive this money as being well spent

Anthony Damiano , Florida

I currently reside in one of the few true tropical paradises left in my country. I know this because I have seen much of the United States firsthand. So many changes have come to pass in my short 34 years in this world, and my paradise is threatened. The waters aren't as clear blue as they were when I was 13. The rain doesn't fall as much as it should. The climate has changed and wildlife has dwindled. There are

many more people. Such is the way of our species. We move in, take over and leave waste behind. We take what we want without regard to the consequences. Now, we have placed ourselves in dire straights. It truly is do or die time for the human race. You see, for those of us who realize the truth (I am speaking in general terms and placing myself in a category of people classified as animal rights and environmental activists), I am not as afraid for the world as I am for my own species. I know that this planet can heal itself. It is a living, breathing organism unto itself and one day (actually those days are here and ours are numbered) it will shake itself clean of us. It has no other alternative then to do so as we have become an illness upon it. This in itself have left me baffled as to just how we went astray so badly. We are capable of creating so much beauty, yet we destroy beauty a million fold. I have hope that this can change. Many of us do. That is why we are here now fighting for the sake of our silent brothers and sisters who share this planet with us. Fear alone keeps them silent. Fear of facing themselves and the truth in what is happening all around us. The world is sick, and we are the disease. The wonderful thing about humanity, though - we can also become the cure. If we are capable of destroying a world, then we are capable of repairing one. But we must act NOW. I adore all wildlife. The vast intelligence, grace and beauty of whales and dolphins have fascinated me since childhood. I would sooner take a harpoon then watch it pierce one of the most amazing creatures on Earth. I would take a clubbing rather then watch a seal be beaten. Men who are capable of such atrocities are just part of the symptoms of the same disease I have been speaking of. What this comes down to is that we need to change what we are doing. This must happen globally and it has to start today in order to save tomorrow for our children and our children's children.

Anthony Marr, founder
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World Food Crisis — A Dangerous Opportunity?

by Anthony Marr

The Chinese define "crisis" as "dangerous opportunity"; so obviously, it works for the Chinese. But it does not work for the shrews, as the following example attests. Would it work for the species self-named Homo sapiens – "Man the Wise" – to which the Chinese belong, which is supposed to be a little more shrewd than the shrews?

A shrew is among the smallest of mammalian predators, and ounce-for-ounce one of the most ferocious, requiring several times its own body weight in meat per day to survive that day. Other than air and water and rest and sex (and drugs and rock-and-roll for at least one species), which are basic universal needs, the primary target of pursuit of a shrew's existence is food. Put three shrews into a terrarium with two days' worth of food and what will you find at the end of the third day? Some dried blood, some shrew feces, and the front half of a shrew.

You see, after two days, the food would be exhausted. On the third day, two of the shrews killed the third and ate it, followed by one of the remaining two killing the other and eating it, followed by the remaining shrew eating itself tail first, until it dies. This means, among other things, that starving animals turn to cannibalism, and that an animal would rather be eaten alive than be starved to death.

This applies to humans as much as to the shrews. Air-crash survivors and those trapped in the wilderness have by individual actions turned to cannibalism to survive, and the tribes of Easter Island made cannibalism a social institution after they had cut

down their last tree.

It would take immense pressure to make a vegetarian eat meat, and even more so to turn even meat-eaters into cannibals. But a global famine can certainly and easily do that.

World food shortage is something that even the die-hard global-warming-deniers have to acknowledge and explain, and there is no way that they can explain the current world food shortage without addressing global climate change as one of the causes.

As for the generally anthropocentric public, they may shrug their shoulders to mass extinction of other species half a world away, but most cannot ignore the starvation of humans in even the farthest corners of the world. And for those who still don't care, they will care soon enough when the price of a loaf of bread in their neighborhood store doubles, as does the price of gasoline in a neighborhood gas station.

World food shortage has been predicted for years. In 2005, the Guardian published an article titled "One in six countries facing food shortage" due to "severe droughts that could become semi-permanent under climate change." Already in 2005, droughts had devastated crops across Africa, Central America and south-east Asia, and this became part of an "emerging pattern."

The two most worrisome regions were sub-Saharan Africa and the Amazon basin. The emerging pattern is that not just one African nation, but all sub-Saharan African nations, without a single exception, will suffer declines in rainfall of at least 50%, some as much as 75%.

"The worst affected countries include Ethiopia, Zimbabwe, Malawi, Eritrea and Zambia, a group of countries where at least 15 million people will go hungry without aid. The situation in Niger, Djibouti and Sudan is reported to be deteriorating rapidly. Many countries have had their worst harvests in more than 10

years and are experiencing their third or fourth severe drought in a few years," said the United Nations in the Guardian article. While northern Africa might enjoy some moistening and greening, central and especially southern Africa will see the formation and spreading of deserts – "across huge tracts of Botswana, Angola, Zimbabwe and western Zambia."

Before 2005, the Amazon rainforest had been predicted to be hit by a long-term drying trend, whereas the Arctic and sub-Arctic were predicted to lose sea ice at an accelerated rate. Since then, all three predictions –African, Amazon and Arctic – have come true, all exceeding the worst-case scenarios by substantial margins. Where anything related to global warming is concerned, "faster than scientists expected" has become a hot media phrase.

Severe droughts have also badly affected crops in Cuba, Cambodia, Australia, Afghanistan, Vietnam, Morocco, Guatemala, Honduras, Nicaragua, Peru, Ecuador and Lesotho. In Europe, one of the worst droughts on record has hit Spain and Portugal and halved some crop yields.

All in all, at least 34 countries were experiencing droughts and food shortages, and up to 30 million people could need assistance because of the droughts and other natural disasters as observed in 2005.

Despite the above warning given two and a half years prior, the UN issued a statement in December 2007 that in an "unforeseen and unprecedented" shift, the world food supply was dwindling rapidly and food prices were soaring to historic levels. The UN food price index had risen by more than 40% in 2007, compared with 9% the year before, "a rate that was already unacceptable." New figures showed that the total cost of foodstuffs imported by the neediest countries rose 25 percent in 2006, from $77 million to $107 million, meaning malnutrition if not starvation for the poorest of the poor.

At the same time, reserves of cereals were "severely depleted." World wheat stores declined 11 percent in 2007, to the lowest level since 1980. That corresponds to 12 weeks of the world's total consumption – much less than the average of 18 weeks consumption in storage during the period 2000-2005. There were only 8 weeks of corn left, down from 11 weeks in the earlier period. Prices of wheat and oilseeds were at record highs. Wheat prices had risen by $130 per ton, or 52%, since a year earlier. US wheat futures broke $10 a bushel for the first time Monday, "the agricultural equivalent of $100 a barrel oil."

That there is a world food crisis is beyond a shadow of a doubt. The UN identified a confluence of recent supply and demand factors as the cause of the situation, and predicted that those factors were "here to stay."

On the supply side, these include:

- *the droughts induced by global warming in agriculturally crucial regions, where crop yields were significantly decreased. Global warming will result in shorter growing seasons and smaller crop yields across most of the developing world, affecting the lives of billions of people. Wheat production in India could drop by 50% within 40 years, putting as many as 200 million people at risk. Growing seasons in many parts of Africa will decrease by 20%, with some of the world's poorest farming communities in east and central Africa, including Rwanda, Burundi, Ethiopia and Eritrea, among the worst affected.*
- *the near-exponential increase in the global human population. We are adding 73 million mouths a year. The global population will grow from 6.5 billion to 9.5 billion before peaking near mid-century.*
- *the rising percentage of meat-eaters in newly affluent developing countries. In 1985, China's average per capita consumption of meat was 20 kilograms per year; by 2007, it had risen to 50 kilograms. This not only diverts vast quan-*

tities of soy to become cattle feed, it also sustains industries (meat production) from which methane is emitted in vast quantities, adding hugely to the global warming feedback loop. Finally, expanding soy and sugar-cane plantations also reduce the total size of the Amazon rainforest, thus reducing its carbon-sinking capacity, while driving thousand of species to extinction.

- *diverting major portions of "food crop" for cattle-feed and for ethanol production. As the world's oil prices skyrocket, so do ethanol prices, and so does the price of the "food" crop from which the ethanol is derived, regardless of whether the crop is used for food, feed or fuel. The UN FAO (Food and Agricultural Organization) reported that there has been "an unprecedented hike in world prices of, not just a selected few, but nearly all, major food and feed commodities."*
- *food exporting countries capping their exports in favor of stockpiling the commodity internally. Food-supplying countries, from Ukraine to China to Argentina, have been limiting or reducing exports in an attempt to protect domestic consumers, leading to angry protests from farmers, and making food sometimes downright unavailable to those importing countries that need it. The import ratios for grains of the most import-dependent countries are: Eritrea (88%), Sierra Leone (85%), Niger (81%), Liberia (75%), Botswana (72%), Haiti (67%), and Bangladesh (65%). In these places, if they don't get what they need when they need it, people die. Roughly 100 million people are tipping over the survival line.*
- *high oil prices have doubled shipping costs since 2006, putting enormous stress on poor nations that need to import food as well as the humanitarian agencies that provide it. The global food bill rose by 57% in 2007. Soaring freight rates make it worse. The cost of food "on the table" has jumped by 74% in poor countries that rely on imports. These are places*

> *where 50% to 60% of the people's income goes to food. If they can't afford to pay, they starve, even if there is food on the shelf.*

The World Food Program considers the present food crisis "the perfect storm" of global hunger, where the poor are being "priced out of the food market," and one that will rage on for decades.

A state of famine anywhere in the world is hard evidence that global demand has exceeded global supply, or at least there is a blockage in the global food-delivery system for some reason. It means that we are at or have exceeded the limits of our allowance. The safety margins, such as food reserves, have shrunken dangerously. Any local calamity, such as a crop failure in a high production area (e.g., Australia or the Ukraine) due to climate change or insect infestation or crop disease, can trigger a major and resounding global disaster. The Commonwealth Scientific and Industrial Research Organisation in Canberra stated that this was a "very risky situation."

Recent scientific papers concluded that farmers could adjust to 1°C (1.8°F) to 3°C (5.4°F) of warming by switching to more resilient species, changing planting times, or storing water for irrigation. But for any global temperature increase of more than 3 degrees Celsius, "all bets are off," said Columbia University's Earth Institute. "There is a strong potential for negative surprises."

As of the end of 2007, the previously listed 34 countries that were considered by the UN FAO to be headed for "drought and food shortages" was increased to "almost 40 countries," including 20 African countries as well as Iraq, Afghanistan, Nepal and Pakistan, that "are facing critical food shortages as world food prices soar to record levels."

The world's food supplies are rapidly dwindling, and the FAO's global food price index reached its highest level in 2007,

rising by more than four times fasters (40%) compared with its rise in 2006 (9%).

In its monthly analysis of global food prices, the FAO reported an unprecedented rise in world prices of nearly all food and feed commodities. Rarely has the world felt such "a widespread and commonly shared concern about food price inflation." In Australia, prices for bread and eggs have increased by 17% since 2005, vegetables by 33%, dairy products by 11%, fruit by 43%, and honey by 100%.

Meanwhile, food riots caused by shortages and rising prices occurred in Mexico, Morocco, Uzbekistan, Yemen and Senegal.

Came February 2008 and the world's stockpile of wheat had shrunk even further. From the previous 12-week-grace, the world is now only ten weeks away from running out of wheat should major global crop failures occur. And we haven't even talked about rice yet.

The price of rice doubled within the first three months of 2008. Rice is not used for ethanol production. It is a physical problem of dwindling supply. Rice cultivation is water-intensive, and many farmers in drying and desiccated areas are switching to more drought resistant crops. Australia is a big factor. Six long years of drought has reduced the Australian rice production by 98%, partly due to the abandonment of rice by Australian farmers as a viable food crop.

Shrinking stockpiles have led the world's largest exporters to restrict exports severely, spurring panicked hoarding in Hong Kong and the Philippines, and setting off violent protests in countries including Cameroon, Egypt, Ethiopia, Haiti, Indonesia, Ivory Coast, Mauritania, the Philippines, Thailand, Uzbekistan, Yemen, and even Italy.

It took something so severe to finally lead the National Farmers' Federation in Australia to say, "Climate change is potentially the biggest risk to Australian agriculture," while

American farmers, highly subject to denier-persuasion, are still debating whether global warming is real, tantamount to smokers still debating the health effects of smoking.

The agricultural crisis has now become also a matter of politics, morals and ethics. It takes 232 kilograms of corn to fill a 50-litre car tank with ethanol. That is enough to feed a child for a year. Isn't it a crime against humanity to take food out of the mouths of hungry children to feed some gas-guzzling SUVs with ethanol? Isn't it a crime against nature to wipe out thousands of square miles of Amazon rainforest and thousands of endemic species, just so that we can pump ethanol into the V8 engines of muscle cars? Isn't it downright stupid for the Canadian government to push for a new high of 10% ethanol in Canadian gasoline by 2010?

America – the world's food superpower – will divert 18% of its grain output for ethanol in 2008, chiefly to break dependency on oil imports. It has a 45% biofuel target for corn by 2015. Argentina, Canada, and Eastern Europe are falling over themselves to join the ethanol race. The European Union has targeted a 5.75% biofuel share by 2010, though that might change. Is alcohol not only an intoxicant for Americans and Canadians, but also an intoxicant for America and Canada?

And meanwhile, there are more and more violent food riots in more and more places. The UN predicted "massacres" unless the biofuel policy is halted. New bloody riots have erupted now in Egypt, Cameroon, Haiti and Burkina Faso. Haiti's government fell in the weekend following rice and bean riots, when five died.

Is there any more land for more crops? Other than making more efficient use of the already used land in Russia, Ukraine, and Kazakhstan, Brazil has the world's biggest "reserves" of "potential arable land" with 483 million hectares (it currently cultivates 67 million hectares), and Colombia has 62 million hectares – both potentially offering biannual harvests. We all

know what this means.

"The idea that you cut down rainforest to actually grow biofuels seems profoundly stupid," said Professor John Beddington, Britain 's chief scientific adviser. In early 2007, Jean Ziegler, the UN's Special Rapporteur on the Right to Food, denounced biofuels as "a crime against humanity" and called for a five-year moratorium on their production. The impact of biofuels on world food production will be reviewed at a UN conference on food security in late 2008.

Food export controls have now been imposed by Russia, China, India, Vietnam, Argentina, and Serbia. The world is disturbingly close to a chain reaction that could shatter its assumptions about food security. The Philippines last month had to enlist its embassies to hunt for grain supplies after China withheld shipments. Washington stepped in, pledging "absolutely" to cover Philippine grain needs. A new Cold War is taking shape, around energy and food.

The United States can afford to appear generous now, but not for long. Sooner or later, and judging by recent global trends much sooner than later, the food crisis will hit even the rich nations, as they are now being hit by high oil prices. But knowing the politicians here, they won't pay this the slightest attention until people begin dying of malnutrition and starvation in the streets of Washington, DC.

And meanwhile, many in the corridors of power will continue to mumble and scowl, "Global warming is just a hoax."

Let Big Oil exhale its last poisonous breath. Let their political puppets do the last scene of their macabre dance of planetary rape. Let's move forward and leave them behind in our wake. So, you may now ask, "you've shown us the crisis. Where is the opportunity?" The best I can say for myself is that some people thrive on stress, and I am thriving. If I'm less optimistic, I'd just say that the Rolling Stones have long foreseen such a predicament, when they sang, "You can't always get what you want."

Parable of the Sudden Pond

by Anthony Marr

Once there was a pond, a stone's throw across. Its water was clear, and its fish and invertebrates lived in a well-balanced aquatic paradise.

A few stones'-throws away was another pond, one covered thick with a prolific reddish scum that could double itself in weight and size every day. The scum had long since choked the life out of that pond, where no fish could live.

One day, a careless angler, who had had no luck at the second pond, cast his lure into the first pond. Clinging to the lure was a strand of the red algae. He caught a basketful of fish, then casually departed, leaving the strand of algae in the pond.

One year later, he returned, and found that about one-eighth of the pond had become infested with the algae. He had learned that the presence of the algae meant the impending demise of the fish. But except for the unthreatening reddish patches floating here and there, the pond looked beautiful and healthy as before.

He smiled, thinking of his wedding in four days' time at the very bank of this picturesque pond. He promised himself he would come back with a rubber raft and a net to scoop as much of the algae from the pond as possible – after the wedding.

When he arrived four days later, resplendent in his tuxedo, he was shocked to see that the pond had become covered from bank to bank with the algae, and dead fish were floating bloated in the ruddy scum. It was then he realized, too late, that the eighth doubled itself into the quarter on the first day, the quarter doubled itself into a half on the second day, and the half doubled itself into the whole on the third day.

A few years later, he brought his son and daughter back to the pond, which he had since cleaned up and reseeded with fish, and told them, "The climate of our world is changing. Just because this valley still looks okay does not mean that the whole planet is okay. Drastic changes could hit us like a freight train, just when you least expect it."

Chinese Earthquake Could Be Caused by Global Warming

by Anthony Marr

The 12 May 2008 Richter 7.9 earthquake in the Sichuan province of China might have been caused by glacier-melting caused in turn by global warming. The result is so common it even has a name: "glacial earthquake." The Sichuan earthquake could be one of these glacial earthquakes, and if so, certainly not the first one, nor the last.

Relevant to Sichuan are the Himalayas. Himalayan glaciers have shrunk due to three factors:

- Higher temperature thaws the glaciers. According to the International Center for Integrated Mountain Development (ICIMOD), "The average temperature in the Himalayas in the northern part of Nepal rose about 2 degrees between 1970 and 1994; in the rest of Nepal, more than 3 degrees."
- Global warming changes snow into rain that melts the glaciers and forms glacial lakes.
- The amount of snowfall has decreased.

The Nepalese Himalayas alone contain more than 3,000 glaciers, each kilometers long and hundreds of meters wide, weighing billions of tons. There are approximately 70 extra-large glaciers in the Himalayas, covering about 166 square kilometers or 17% of the mountain area.

With glacier meltdown comes weight redistribution on a mammoth scale. The melting of these glaciers has been accelerating.

- Thickness-wise, in the period of 2000-2004, a thinning of about 10 meters occurred below 4000 meters altitude, and 2 meters of thinning occurred above 5000 meters.
- Length-wise, the Chhukung Glacier, for example, retreated at about 5 meters per year in the late 1970s, which increased to about 20 meters per year in and after the 1990s.
- Weight-wise, the shrinking of the AX010 Glacier, which accelerated from 2.7 meters per year in the 1980s to 12.5 meters in and after the 1990s, resulted in the loss of more than 1 million tons of ice in 20 years through 1999.

The Himalayas and the surrounding mountain ranges are not the most geologically stable region to begin with. The northward incursion of the Indian subcontinent into SE Asia continues and the Himalayas continue being built and elevated, as does the folding of the surrounding ranges, including those in the Sichuan province of China where the earthquake occurred. The redistribution of weight by the glacier-melting will cause seismic events in areas where ill-settled sub-plates hang on to each other by their fingernails, as it were, slipping violently against each other at the slightest disturbance.

If the above is true, then we can expect more devastating earthquakes to come. Likewise, it can be predicted that the massive melting of the Greenland and Antarctic land-ice will generate earthquakes in and around these regions.

An aside about the Himalayan glaciers is that they are the water source of upwards of 2 billion people in southeast Asia. If the glacier-melt continues until all the glaciers have melted off, what will they use for water?

Time-Capsule-of-HOPE-2060

We Want Our Children to Know the TRUTH!

by Anthony Marr

An invitation to submit items for inclusion

Next to a time machine, a time capsule is our best way to communicate directly with our future generations, if any.

We want to contact our children's children, if any, at a time when they are alive, and let them know THE TRUTH about what is happening today, which will have led to their predictably dire predicament. We want to let them know how we who truly love them are fighting on their behalf and struggling to leave them a beautiful, compassionate and healthy planet, and how the politicians of many governments, the CEOs of many corporations, and the unconscionable investors of many walks of life, are knowingly and intentionally sacrificing their own children's future to their present personal sociopathic greed.

That our future generations' predicament will be dire is without question, be it fifty years from now or five hundred years from now. The question is: How dire?

Originally, we were considering Time Capsule 2100, but we decided to move the date forward by 40 years, since by century's end there may not be too many humans left to open it, and those very few who might open it may not be literate enough to understand what they will find within.

Why possibly illiterate? There is a saying: "*World War III will be fought with chemical, biological and nuclear weapons, and World War IV will be fought with sticks and stones*." In the climate change context, we are talking about something potentially even more devastating than an all-out nuclear war, and more inevitable. Regardless of whether it is a nuclear holocaust or runaway global heating, the result will be the same – sticks and stones, in a background of droughts, famine, insect infestation, disease, and ever increasing heat.

Therefore, instead of Time Capsule 2100, we have made it Time Capsule 2060. A child born today will be 52 in 2060. Such a person will be able to read our messages conveyed in the time capsule.

There will be more than one time capsule. For 2008, HOPE plans one time capsule per Canadian province and US state. Starting July 1, HOPE founder Anthony Marr (www.HOPE-CARE.org, www.myspace.com/AnthonyMarr) will take the campaign on the road for 4 months, covering 6 provinces and 22 states.

The first time capsule will be for Alberta, Canada. Alberta is the perfect place to start for the tour. It is the site of the most hideous Mother-Earth-raping operation in the world – the infamous and incredibly polluting Alberta Tar Sands (see www.HOPE-CARE.org, Global Warming section, Fossil Fuels subsection). If the tar sands were developed as planned, i.e., to nearly triple the production from 1.3 million barrels a day to 3.5 million barrels a day over the next decade or more, plus burning enough natural gas in the extraction process to heat 3.8 million homes today and 10 million homes by 2020, it could add billions of tons of carbon into the atmosphere within years, which will accelerate global warming steeply, thus boosting the methane feedback loop towards ever intensifying runaway global heating.

The tar sands must be closed down within three years. It is non-negotiable; it is a matter of survival. The gigabucks currently being poured into the tar sands should be directed towards research and development for clean and renewable energies – solar, wind, geothermal, wave and tidal. Alberta Premier Ed Stelmach, on the other hand, not only advocates but actively promotes and oversees mining the tar sands at maximum speed, aiming for a tripling by 2012, all for the "quality of life of Albertans." That would be the final nail in the global warming coffin, and Stelmach knows it. This would doom millions of children as well as species in the future, and he knows it too. His charging ahead with the tar sands is an act of mass murder of human progeny as well as Earth's biodiversity. His is the crime of "progenocide," as HOPE officer Taina Ketola puts it, as well as "biocide." On this score alone, he more than deserves the title of the Criminal of the Century. Our future generations, if any, have the right to know about Ed Stelmach.

This time capsule will contain, among other items, a brass plague engraved with exactly that: "Ed Stelmach – Criminal against Nature and Humanity of All Time #2." His non-entity of an "environment" minister will also receive a dishonorable mention, as will the Big Oil CEOs directly involved in the Tar Sands. Other items will include selected materials from HOPE as well as other organizations, as well as a collection of quotations from various key activists of the movement, especially from the activists of Alberta. They will tell the story of the tar sands, and they shall be honored as the front-line fighters.

In early July, HOPE will hold a media conference in Edmonton, Alberta. The time capsule and its contents will be displayed on a long table for TV documentation. The brass plaque will be given special attention. The media conference will conclude with the sealing of the time capsule.

On camera we will offer Premier Stelmach a chance to redeem himself. If he shuts down the tar sands within 3 years, we

will exhume the time capsule and destroy the plaque. If not, we will throw away the key. How his name will go down in history will be entirely up to him.

The time capsules of different provinces and states will be similar to the Alberta time capsule in general, but different in specifics in terms of the politicians and CEOs to be dishonored, or honored as the case may be, as well as different materials submitted by the groups and activists of that province or state. HOPE will defer to the local groups and activists to name their own heroes and villains, and have their names engraved on that state's or province's own brass plaque.

The time capsules will be buried together at a secret location, or separately at a number of secret locations. The GPS coordinate(s) will be known to no more than three unidentified persons at any given time. The capsules will be unearthed and opened to the world on New Year's Eve, 2059 AD.

The invitation

Any activist or group of any state or province is welcome to submit material for consideration for inclusion in the time capsule, as long as the material has an ecological and/or animal rights theme, which means, for example, that anti-hunting and anti-factory-farming material can be included.

A time capsule has to be strong, airtight, waterproof, insulated and undegradable. The ideal container is a family-sized plastic cooler (note: COOLer). So, please keep the size in mind when choosing contents.

Since the people who will be opening the capsule may have lost high tech capability, the capsule should include both high tech (e.g., DVD with player with solar panel) and low tech (printed material and engravings). For printed material, please make sure that the paper used is pH-neutral for longevity.

There will be a collection of quotations from activists, on DVD and on paper, so statements and letters are invited for inclusion. Letters should address our children's children directly and should be succinct.

Electronic copies of the quotations will be submitted to media at the time of the media conferences. They will also be kept in HOPE's central computer archive for present publication and for subsequent additions.

Any activist or animal rights/global warming group interested in submitting items and/or quotations for inclusion in a time capsule, please contact:

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The Human Spirit – Making the Impossible Possible

by Taina Ketola

There has been no progress in the world without doing "the impossible." Every truly positive change or invention in history, every life reform that we now take for granted was, before its inception, deemed to be impossible.

The average person, the mass consciousness, forgets or fails to realize that this is true and takes these hard-won changes for granted. And so we take for granted the legal right to freedom of the individual even though for thousands of years human slavery was considered the perfectly natural way of the world, and civilized law upheld the control of an individual's human "property." We forget that less than a hundred years ago women in most civilized countries still were denied the right to vote.

Before the Wright brothers flew, the small numbers of individuals working to master the art of flight were considered fools. Simon Newcomb, professor of mathematics and astronomy at Johns Hopkins University and vice president of the National Academy of Sciences, said just 18 months before their successful flight, "Flight by machines heavier than air is unpractical and insignificant, if not utterly impossible."

Naysayers abound, making fools of themselves in the eyes of history. Hence, just as there are people today calling climate change a hoax or believing that changing the energy infrastructure will be damaging to our lifestyles, there were individuals in the past who felt that giving women the right to vote would be a calamity for society.

"Hereafter this outbreak will stand in history as an instance of national sickness, or moral decadence, of social disorder."

– Journalist Eliza Lynn Linton on the push for women's suffrage, 1892

"Woman's participation in political life…would involve the domestic calamity of a deserted home and the loss of the womanly qualities for which refined men adore women and marry them…. Doctors tell us too that thousands of children would be harmed or killed before birth by the injurious effect of untimely political excitement on their mothers."

– Henry T. Finck, The Independent, 1901

Meanwhile Susan B. Anthony pushed forward in the face of all opposition saying, "Failure is impossible."

And now, as climate change feedbacks make their presence known and begin to increase exponentially while governments and corporations continue their denial assisted by the fact that things really don't look *that* bad in absolutely everyone's backyard, we say again along with our predecessors who have brought humanity forward, "Failure is impossible."

Despite denial we say that failure is impossible. And the first impossible step in the achievement of the impossible – as the Amazon burns, and the ocean acidifies, belching forth methane, and melting glaciers trigger earthquakes in the surrounding landscape – is to step forward as a global species and courageously acknowledge the truth of the situation in which we find ourselves. Most environmental organizations and the Intergovernmental Panel on Climate Change are choosing to or are being pressured to downplay the facts (or are innocently relying on information sources that are choosing to do so). One rationale behind this decision is to avoid alarming the public.

Let me ask you a question. If you were a Jew in the early days of Nazi Germany, would you have preferred not to "be alarmed" or would you have wanted to know the facts so that you could safeguard your life and the lives and future of your children? Those Jewish people who had the foresight to leave the country while they still could ensured the survival of themselves and their children.

There is often a tendency to downplay the reality of global warming because it is seen as a sure-fire recipe for inaction. It's believed that if people become convinced that we are doomed, they will be inclined to lapse into a state of paralysis and do nothing. Of course this is sometimes the case. But recognizing the realities of the situation and the challenges we face is not by itself a recipe for despair. Instead, when the full facts of the situation – the problem *and* its solutions – are fully understood, despair can turn into inspiration as we discover that we have now entered a time in which we have all been given the opportunity to be heroes.

Along with the tendency to downplay the seriousness of the situation, the media in general have not yet made people aware of the solutions at hand, which, if implemented now, will mitigate the problem to a large extent. Once these are fully understood, paralysis and inertia will inevitably turn into a call for action.

Several decades ago it was determined that available alternative energy technologies would only be enough to meet a small fraction of our needs. It is not yet widely known that these technologies have advanced to the point where we are capable of meeting several times the current energy needs of North America by wind power alone and several times the current need by solar power alone. Few people are aware that if a relatively small segment of the Sahara Desert were set aside for the generation of concentrated solar power (a simpler method than the more commonly known solar technologies), enough power would be generated to meet the needs of the entire world.

Implementing these technologies on a massive scale represents a large economic opportunity without the long term costs of environmental degradation, which as time has passed must now be acknowledged to be catastrophic even in an economic sense.

Only two things stop us from implementing the change in infrastructure that will make this possible – cost and inertia. The Heal Our Planet Earth (HOPE) Foundation suggests creating a UN administered Green Fund into which all countries contribute 10% of their annual military budget. This would keep all nations on par in terms of one another as well as liberating $120 billion to make the necessary changes that will pull our planet back from the brink of disaster.

I recently mentioned the UN Green Fund concept to a man who was skeptical at first due to the inertia and self interest of the majority of world leaders. But when I mentioned the ability of world governments to mobilize in the face of a true perceived threat, as for example, the fight against Nazi Germany in the Second World War, he brightened at the memory of how rapidly national resources were mobilized towards the war effort.

The truth is that the Third World War will be the war to save the planet and ourselves along with it. Partly because we are in greater contact with the events of life all across the globe and partly because of the current environmental crisis, the human race is now poised to understand our essential unity like never before. The next natural step for us to take is one of positive global responsibility. We are ready now to join together to overcome the largest threat the human race has ever experienced. Once we have learned to do this, the benefits to society and to all the species we share the planet with will be enormous and will go beyond simply meeting the current challenge.

Many individuals, if given the choice to lead a greener life, to drive cars that don't pollute or contribute to greenhouse gases, would jump at the opportunity to do so. The current infrastructure and corporate interests keep this from becoming a reality.

Many members of the general public are not as stupid as they may seem; they believe that public policy would change if the government did not bow so easily to oil companies and corporate interests invested in keeping things just as they are, thank you very much.

Corporate interests – many of which are corrupted by shortsighted economic and environmental policies – have a great deal of power to control government policy and decision making processes. The politicians tend to fear them and see them also as an important source of support for their own positions and political goals. But when politicians fear the people and the media attention that powerful public opinion generates more than they fear the corporations – well, wouldn't you know it, public policy changes overnight. When the masses cease to slumber, political complacency comes to an end and leaders must scramble to adjust or lose their support completely (and in some political climates the outcome can be much worse).

And so we have to do the impossible. We have to attack the inertia of governments worldwide (peacefully, of course) and put them in fear of the people and the people's opinions.

The Industrial Revolution led eventually to an end to child labor in the western world (as it should continue to do in the rest of the world). Technology is not to blame for climate degradation – shortsighted forms of technology are. The French and American Revolutions began the end of monarchical rule over most of the world and launched the beginning of the new political philosophy of democracy.

The political transformation will be the more difficult of the two "impossible" steps now confronting us. Once circumstances have forced the human species to learn to truly work together and govern ourselves from higher principles because we have realized that they are our only means of survival, our next and by then easier challenge will be technological. This is because at that point in time we will have reached the stage where simply

ending the production of greenhouse gasses is not enough. In addition to this step, our natural human tendency to invent new technologies will have to be utilized in order to engineer a shift back towards a normal climactic balance. Things have gone too far now for nature to be able to correct things by herself but if we can engineer "flight by machines heavier than air" we can certainly master the challenge of this riddle given proper intent and investment. Carbon sequestration technologies are being developed, representing a good start in this direction even now. On the other hand, we cannot depend on science alone to save the day while we continue going down the wrong path of being a carbon fueled society.

And so the human race comes of age. Like the teenager who has just crashed his parents' car, we have a lot of rethinking to do in order to grow up into our adult selves as a species.

We stand now on the verge of a new level of political expression – a rule by the people, for the people on a global scale. We the people have a choice now. We have a choice between two scenarios. In one scenario, we allow corrupt governments and corporate powers to control the final decades of human civilization and the age of the mammals. In the other, through uniting to save our world we enter an era of deeper human brotherhood and caring and compassion for our fellow species than we have ever known before.

The world must now cooperate as one if it is to survive and thrive as one. We won't so much have to "fight the powers" as to simply overrule them.

Which of the two scenarios will be the final result? I am betting on the second one. Why? Because human beings have always done the impossible. Simply put, it is the only way that anything – even the smallest of things – has ever been accomplished. We will do it because it needs to be done. And in the final analysis, despite our at times disappointing or even horrific failings, we will do it because that is who we are.

Thoughts on Mother's Day 2008

by Anthony Marr

I'm within two months of my departure on my 6th Compassion for Animals Road Expedition (CARE-6), which will cover 6 Canadian provinces and 24 U.S. states in 4 months as of June 30, 2008. I'm beginning to feel anxious, not particularly because of the 30,000 km of highway ahead, nor the arduous schedule to maintain, nor the enemies I'll surely be making at the Alberta tar sands, but that I'll have to again leave my mother behind.

My mother was born in 1919, so she's 89. She's very feeble. She used to be 5'3", now she's barely 4'6", and hunchbacked, and so fragile that I'm sure one small fall and she'd disintegrate like a delicate Chinese porcelain vase. She has no life-threatening disease, but is on 6 or 7 different drugs administered at the Lakeview Care Centre where she is being cared for by a competent and compassionate staff. Just last week, I asked the nurse, "Just out of curiosity, what would happen if the drugs are suddenly withdrawn?" She said, "Her body would probably stop functioning." And her memory is dimming. She could still tell me about her childhood in great detail, but just last month, she called me asking me why I hadn't seen her for so long, on the same day I had taken her out to lunch.

Up to now I've taken five of these long tours, the longest one covering 42 states in 7 months, with Brenda Davis and her son Cory Davis back in 2003-2004. Every time when I drove away from Vancouver, the thought would cross my mind that I might have seen my mother for the last time in my life. Yet, every time, she was always there to welcome me back. And again, I'm beginning to wonder about the same ting. I hate the feeling, but am haunted by it.

When I go on the road, I try to call her once every day or two, from city to city. And I send her some of the photos I've taken along the way, and pictures from the Animal Rights Conference. When I come back to Vancouver and visit her at Lakeview, I would see the pictures displayed proudly all over her room.

The staff at the care centre loves her, because she is easy going and always smiling at them and thanking them profusely, and would share some of the goodies my brother Matthew would bring her upon his visits. But she has her moods, and has the propensity to need to worry about something or in fear of something just to be sane. And I'm the person she chooses to unload her woes on to. This is one of the toughest things I have to deal with. As an activist I've spend my life getting rid of my own fears, until some have called me "fearless", but then she unloads her fears on to me, and I'm obligated to bear them. I hate this feeling too, especially if I have to do something I consider totally unnecessary just so that I could restore her serenity, but again, am haunted by it. I'm not sure that she realizes what effect this has on me, and from my point of view at lease, sometimes she seems profoundly selfish.

On the other hand, she could be very considerate of my feelings, especially on the conscious level (versus the subconscious "selfishness"). Back in 1999, for example, when I went to India for the third time to help save the Bengal tiger from extinction, my sister had a terrible traffic accident which resulted in severe brain injury. This happened within the first week of my 10-week stay at the Kanha and Bandhavgarh tiger reserves (see my book Omni-Science and the Human Destiny – www.HOPE-CARE.org). When I called my mother during my resupply trips to town, she never said a word about it. Afterwards, I asked her why and she said, "I didn't want to burden you with something you couldn't do anything about."

Although I know she would love to keep me by her side all the time, she never once tried to deter me from going on tour,

nor even to just guilt-trip me. She always says that she would pray for my safety and success. But the way she asks me how long I would be away for, and the way she looks at me when she says it, breaks my heart every time.

On June 30, I'll be driving from Vancouver, British Columbia, to Fort McMurray, Alberta, the town where the tar sands workers live. The last thing I'll do in Vancouver will be to say goodbye to my mother. I look forward to the amazingly scenic drive, but I dread the departure because of this good bye. And the inevitable question: "Will I see my mother again?"

She was born the only child of my maternal grand parents in a small town in the Guang Dong province of China, but had over a dozen cousins. They all lived in the same extended family complex walled with dragon-back tiles. They had an inland aquaculture business, a river-barge transportation system, and my maternal great grand father was the founder and president of a local bank. They were supposed to be the top-wealth family in town. My mom was also considered very beautiful, and was therefore the target of many an amorou$ young man's attention.

Deep-Tsui (Butterfly Green) was free spirited and loved to laugh, and well loved by all, men and women and old and young alike, and the apple of her grandparents' and parents' eyes. So, when the Japanese invaded China in 1937, when she was 18, and she was uprooted, her world crashed into chaos and danger. Village after village was raided, leveled, and villagers raped, tortured and slaughtered. The Great Nanking Massacre continued for days, the Yangtze River running red with the blood of 100,000 civilians. One of the first things the invaders wanted were "comfort women" (sex slaves). My mother almost became one, and if she did become one, I wouldn't be here to write about it.

In 1945, the Japanese were defeated, and life returned to normal for the next several years, until 1949 came around, when the Communists swept China. My father was an official in the

old government, so we packed up and escaped by moonlight down the Pearl River to Hong Kong as refugees. Since my family's wealth was tied up in real estate, and since we couldn't take it with us, the prince (me) became a pauper overnight.

Due to the torrents of refugees pouring from China into the postage-stamped sized British colony, accommodation as at a premium. Our family of ten (my parents, my two siblings, my four aunts and uncles, my paternal grandmother and me) had to be cramped into 3-bedroom apartment on decrepit Temple Street.

Jobs too were at a premium, and, with his university education, but without any knowledge of English – the official language – all my father could find was a sales and bookkeeper's position in a textile factory. He was paid peanuts, and had only two-days off per year: Chinese New Year's Day, and Christmas Day – the bloodsucking proprietor being a Christian. As for the other 363 days, he worked easily 12 hours a day. I hardly got to see him, except early in the morning when he was on his way to work and I was on my way to school. I was usually already asleep by the time he finally arrived home from work.

Even working as he did, he still couldn't bring in enough to keep us fed and educated, so my mother also went to work at the factory, as a sewing machine operator, though she would not work in the evening due to her children being home. I've heard my parents talk, more like fantasize, about starting a textile factory of their own, but they had always stayed with that small piece of security at the sweat shop. It was first and foremost for their three children. They have sacrificed their own career ambitions for their children's education and future.

The proof of their sacrifice is definite. As soon as my youngest sibling had gone on to university, my parents quit their jobs without delay, and started their own factory, which was absolutely not a sweat shop. A side twist. As soon as my parents began to get their one factory up to speed, the bloodsucker contacted all

his clients and asked them to boycott my parents' products. And a bit of karma. His business eventually went into bankruptcy.

When my parents were finally ready to retire, they sold their factory and immigrated to Vancouver to join me and my brother. In 1999, my father was 86, and he said he might not live to see the new millennium. He did see it, but for only 7 months. My mother used to say that she dreaded my father dying more than herself dying, which was a great weight on my shoulders at that time, but she survived his passing in surprising good spirit, and showed an independence surpassing my expectations. Unfortunately, but inevitably, her own condition has since declined. Today, she can hardly walk without assistance, and can't walk 100' without stopping. I see her about twice a week usually taking her out to lunch or dinner, and for both her and me, it was a chore. But we always enjoyed the dinner with a smile.

But now, I'm within two months of yet another long departure. Would it be our final farewell this time? I'll say that goodbye when I come to it. Meanwhile, I have another mother to serve - Mother Earth, who will survive me, I hope.

She has given birth to our species Homo sapiens, and nurtured us through the toughest of times, but not only have we milked her dry, we are desecrating her with every move we make, and choking the life out of her with our own extravagance, and destroying her future with our myopia, and robbing her beauty with our greed.

When I was saying goodbye to my mother while departing on CARE-5 last year, she asked me, "Why you?" I asked her back, "To be your son? Or to serve Mother Earth?" And she said, "I'll pray for your safety and your success." She will say the same to me on June 30 this year, fully knowing that she may not see me again.

Through my work I've met many mothers whose love for their children could not be less. On this Mother's Day, I express my admiration for all the wonderful mothers I've had the privi-

lege to know – Amy Burns (WI), Barbara Metzler (NJ), Betty Burns (WI), Brenda Davis (BC), Carol Barnett (NY), Cheryl Baker (PA), Coby Siegenthaler (CA), Doris Lin (NJ), Janice Pennington (MB), Jennifer Grill (MD), Jerry Taylor (MT), Lane Ferrante (OH), Laura Hendricks (NC), Linda Hone (NM), Mia Narcissa (OR), Rosie Hoenig (CO) Sharon Christman (VA), Sinikka Crosland (BC), Taina Ketola (BC), Tracy Zuber (BC) and several others who may want to be honored anonymously.

Truth be told, were I a woman, I would probably choose to not have a child, and I share deep concerns about human overpopulation with many colleagues, but these are exceptional women who bring forth exceptional children who will be the best future leaders of humanity.

As an animal rights activist, can I bypass the mother seal whose pup is clubbed before her eyes, and the mother deer whose fawn is caught in a trap, and the mother whale whose baby has just been harpooned?

Finally, back to our common Mother Earth, whose is now being ravaged by the Six Planetary Diseases (see www.HOPE-CARE.org), all of human origin I might add, I ask all to do this one thing, if you haven't yet. Please sign the following petition urging the U.N. Secretary General to orchestrate the creation and administration of a $120 billion/year Global Green Fund by a corresponding reduction of 10% of the $1.2 trillion world military expenditure, add a strong comment worth a thousand signatures and pass it on far and wide

Google "secretary general global green fund".

Now I have to get ready to take my mother out to dinner. Happy Mother's Day!

Return of Raminothna - Stairway to the Heavens

I woke up from a mystical dream,
which I was moved to record in poetic form:

One who dwells in the bottom of a well
will say that the sky is small.
Another may even insist to tell
that there is no sky at all
but a hole in The World's ceiling overhead
through which the light from Heaven is shed.

Of a great dried well was indeed what I dreamed
on whose bottom I was born and raised it seemed.
So dried this world of a well had become
Two hundred ponds were all that remained in sum,
each claimed and owned by one walled estate
who regarded its neighbors with jealousy and hate.

The wall of the well was high as the sky,
surrounding the World Village an unbroken cliff,
to try scaling which many have died falling,
and some by leaping, all understood why
who have sought an escape, no 'but', nor 'if',
as they heard again their freedom's calling.

For though of mansions our well-world was full,
and magnificent they could all be deemed,
yet the barbed-wire spoke of peace unachieved,
and feuds amongst families raged bloody and cruel.
To their gods they prayed, of palaces they dreamed,
but few for what vision had yet to be conceived.

Our world, sadly, was not brimming with wealth.
Fuel and building materials were in short supply.
Sooner or later we would surely kill
for the last wheelbarrow of coal, by force or stealth.
Afterwards, they say, "I'll suffer their orphans' cry."
Meanwhile, there's no doubt if they won't or will.

Still the root cause of this predicament persisted –
to out-luxuriate the Smiths and Jones bar none.
A few spoke of consequences but none had resisted
this tradition passed on from father to son.
To honour this cause entire generations had insisted,
a purpose upheld, if not fulfilled, by everyone.

It was certainly not fulfilled, if still upheld, by me.
Examine my purchasing record, and you'd agree.
My estate was still in grandeur, but grandeur in decline.
About the only thing new was in this garden of mine –
a giant question mark, paved in stone. But then,
what eyes could see it except those in Heaven?

Besides, what eyes in this world would even care?
It came as no surprise, therefore,
when Raminothna descended into this world-at-war,
the landing was made here and not over there.
She told me about the boundless universe beyond
this miserable little world of which I was not fond.

And I was told of the myriad living things
inhabiting those wondrous realms above,
and of the spiritual freedom that knowledge brings,
and universal truth, and peace, and love.
Like a caged tiger I began to pace
within my confining, confounding space.

Finally, I confronted Raminothna, saying,
"What are you here for?" And her reply:
"To bring you deliverance. To set you free."
But her discarded wings I could plainly see.
In ill-concealed skepticism I continued to pry:
"And how do you plan to accomplish that? By staying?"

"By persuading you to build a stairway, my love,
one leading to the domains above."
"What with? Do you realize what that would demand?
And that supplies are stockpiled, but none by me?"
"I see building materials right at hand,"
said Raminothna, "and supplies aplenty."

Following her illuminating eyes I was shocked to see
they're fixed on this mansion of mine. I replied in dismay,
"I would gladly take my house apart, stone by stone,
and transform it into a stairway to Heaven, on my own,
if I knew that the last stone would set me free.
But plainly, it wouldn't take me a hundredth of the way."

"Then let it be the foundation of your stairway to Heaven."
"After that, what then? I have nothing else, not even a dime."
"I see more than enough, considering all your brethren."
Following Raminothna's eyes again, I saw this time
they were sweeping the mansions all around, stone and gem.
"I see. And how do you propose to persuade them?"

Thereupon, Raminothna's penetrating gaze
moved to fix itself upon my face.
So shocked was I the dream ejected me
but then, in the dawn light I see
in the mirror misted in the morning chill
that her gaze is fixed upon mine eyes still.

I: Raminothna, are you there?

R: No matter where I happen to be, I'm always in the back of your mind.

I: We need to talk.

R: I'm always at your service.

I: If I read the dream right, you want me to rally all nations of the world together to haul Homo sapiens out of the pit it has dug for itself?

R: And for all life on Earth.

I: It could be on a deeper subconscious level, but when I was writing the poem, I had the vision of our species emerging into space.

R: A beautiful vision.

I: But is it practical? Don't we have to devote our resources to solving the problems on Earth first?

R: It is not a matter of practicality. It is a matter of spirituality.

I: What? Space exploration is a spiritual matter?

R: Isn't it?

I: Well, thinking about it does lift my spirit, if that counts.

R: It counts, astronomically, universally, cosmically. And it shows you a model for solving the problems on Earth.

I: What model?

R: Tell me. What happened in the beginning of your space age?

I: A fierce space race, more like, between the United States and the then Soviet Union.

R: Then what happened to this space race, the United States and the Soviet Union?

I: Eventually, the competition became cooperation, and the

US and the USSR, and eventually Russia, joined forces to build and operate the space station.

R: And abstractly?

I: Transcendent Integration.

R: Looks like you have internalized the Omniscientific Cosmology.

I: I live it.

R: I'm deeply gratified.

I: I can see that Transcendent Integration will be needed even more for a manned expedition to Mars, if only because it would be too expensive for any single nation to bear.

R: If you don't become extinct first, there will be a planetary space agency comprising all nations. But as for now, as you pointed out earlier, there is another far more urgent challenge, one even more expensive than the manned Mars mission, which then of course requires international cooperation on an unprecedented scale.

I: You are talking about healing our planet Earth. Yes, the bill is unaffordable, that is, to any single nation, even the United States. Thus, the Global Green Fund my organization Heal Our Planet Earth is driving for.

R: A good start.

I: Isn't that enough?

R: Not by a long shot.

I: Where else can we get more money?

R: More money would be nice, but not exclusively money.

I: What else than money?

R: What is your species' self-given name?

I: Homo sapiens.

R: What does it mean?

I: Man, the Wise.

R: Live up to your name.

I: So we are unwise, are we?

R: A sign of unwiseness is to describe oneself as wise.

I: Even if one is truly wise?

R: That is for others to judge. But even if others judge you wise, it is for them to say it, not you.

I: So, should we rename ourselves?

R: A little too late now. So, you have only one option in this regard.

I: To make good our claim.

R: Easier said than done, but, yes, you must, not just as a matter of ethics, but as a matter of survival.

I: I could rename our species a Homo Humilitus. How's that?

R: Calling yourself humble is not very humble, either. Verbalized humility is often false modesty.

I: I suppose at this point, we should concentrate on survival first, renaming later.

R: If only because if you don't survive, the name is moot.

I: So, in what major areas are we being unwise?

R: The list would be shorter if you asked the opposite.

I: In what major areas are we being wise?

R: Name one.

I: Researching and developing non-combustion energy, namely solar, wind, geothermal, wave and tidal.

R: Name another.

I: Scientific research into global warming.

R: One more.

I:

R: Name one for "unwise", then.

I: First thing that comes to mind: developing the Alberta tar sands.

R: What should be done about it?

I: Shut it down and leave the tar sands in the ground.

R: What of supply to meet demand?

I: The demand should fall to meet supply.

R: What if the demand continues rising?

I: Which, given the rising giants like China and India, it unfortunately will. Then, we should develop the non-combustion technologies to meet the demand.

R: Are you doing this?

I: Nowhere near even 10% enough.

R: Why not?

I: Big Oil has a life of its own, and it is powerful.

R: What is your view of the fossil fuels?

I: They should be phased out ASAP, and the bio-fuels too. Any form of combustion technology should be phased out, except…

R: Except?

I: Well, in order to construct a whole new energy system, worldwide, we need the old energy system with which to build it. In other words, we need to burn oil to build non-combustion technology to the point of being able to replace the combustion technology, economically speaking. For example, we need to burn fuel to manufacture and transport large volumes of solar panels and wind turbines.

R: How do you prioritize combustion-technology use?

I: Other than to run the essential services for the time being,

I would say, as stated before, that the top priority of combustion-energy use is to build the new non-combustion energy technology to the point of being able to replace the combustion technology. To use the fossil fuels and biofuels for pleasure, luxury and amusement, such as muscle cars (10 miles per gallon), cruise ships (10-feet per gallon), and the entire Christmas materialism craze, should not be a priority at all, but should be retired. If all burnable fuels are exhausted by pleasure use, with no alternative system emerges to take over, all economic, transportation and technological systems will collapse due to energy exhaustion, and the technological civilization as we know it will disintegrate, and regress back to perhaps the Iron Age, at best. Energy wars will ensure that the world will descend into chaos. Even if more fossil fuels could be burned, what kind of parents are we if we don't leave some for our children?

R: Is this the worst case scenario?

I: What could be even worse?

R: You mentioned "all burnable fuels". What do you mean by it?

I: I mean all the fuels that we can burn without driving global warming into runaway global heating.

R: What is the top priority within the alternative technology spectrum?

I: I would nominate Carbon Capture and Sequestration (CCS) technology and its global deployment. This alone will require the burning of hundreds of billions of dollars' worth of fossil fuels to achieve. If we do not ensure that we have this amount of fossil fuels for this purpose, we will not have this technology when we need it (which basically is now), and permafrost methane release and its feedback loops will drive global warming into runaway global heating. Almost all life on Earth will be extinguished, including probably our own. Game over.

R: So, there you have it – your even-worse worst-case scenario.

I: Runaway global heating. You're right. Instead of the collapse of civilization, it could be the collapse of the biosphere itself.

R: Back to the tar sands, you said you should shut down the mines. That is a negative though correct step. Do you have anything positive to say about it?

I: Yes. It has attracted an enormous pool of investment funds in one place, which could be reinvested en mass into clean energy without a moment's pause.

R: Give me one example.

I: The city of Rizhou in China, with a population of 5 million, has developed solar energy to the point where it provides over 95% of its electricity needs. It is said that if the solar potential of Algeria were realized, it could produce enough clean electricity to power Europe in its entirety. Likewise and case in point for Alberta for providing North America with clean electricity – as opposed to dirty oil and electricity derived from oil, biofuel or coal.

R: So, are you optimistic?

I: Shall I say: I have more confidence in human ingenuity than human wisdom, but we need human wisdom for the proper use of human ingenuity.

R: Sounds like a "Catch-22" to me.

I: Unfortunately, yes.

R: You have other Catch-22s, if interested.

I: Such as?

R: As you pointed out, you need high technology to solve the global warming problem, but global warming may cause civilization's collapse, in which the first thing to go would be high technology.

I: Yes. So, is there an out?

R: There is.

I: And?

R: Do you have high tech now?

I: Yes, we do.

R: Has your civilization collapsed yet?

I: Not yet.

R: Then, what are you waiting for?

I: You said that there were other Catch-22s, plural. What else?

R: You have a saying: To _____ is human. What is the missing word?

I: To err is human. Or it is human to err.

R: Very honest of you.

I: Thank you. Our way into the future is often by trial and error.

R: As often as your way in the past.

I: We didn't have enough destructive power to commit fatal errors in the past. But we do now. Our next error could be our last - an act of suicide. So then, if we are prone to errors, and the next error could be fatal, isn't our species doomed? I see how this could be another Catch-22.

R: By trial and error, is there a chance of success?

I: Maybe 50/50.

R: What your species is currently doing now, your "business-as-usual" scenario, if extended into the future to its inevitable conclusion, would it be a success or failure?

I: A failure.

R: To what extent?

I: Total. 100%

R: And your conclusion?

I: There is no chance for us unless we act, and change, and strive to realize the 50% chance of success.

R: That is your ONLY chance.

I: Raminothna, the dream last night, were you really there?

R: I walk with you in your dreams, and dwell within you in your wakefulness.

I: Have I got it right, that you want me to raise Homo sapiens from the pit?

R: If no one else will.

I: That sounds like a heavy thing to raise.

R: What does your philosopher Friedrich Nietzsche say about heavy things?

I: He said something along the lines of the weight-bearing spirit wanting to take on "the heaviest thing", to "rejoice in its strength".

R: What is the heaviest thing?

I: Nietzsche came up with a whole range of abstract metaphors.

R: What is the heaviest thing that you can take on - physically?

I: Without a machine, maybe 150 pounds.

R: Not quite. But you will know before this day is out.

I: A hint?

R: Sure. The heaviest thing is the physical object which, once you have taken its full weight in the palm of you hands, your feet will rise six feet off the ground, bearing no weight at all.

I: Impossible.

R: Therefore - miraculous.

In the cool of the evening, I did my daily exercise – a martial arts form, push-ups, chin-ups, handstand… During the handstand, Raminothna said, "There you have it. Now you have taken the full weight of the heaviest thing in the palm of your hands, and your feet have indeed risen six feet off the ground bearing no weight at all. Amen."

I: The Earth.

R: The very heaviest thing.

I: Raminothna?

R: Yes?

I: I wish I had your power, then I could bear this weight indefatigably for the rest of my life.

R: Yes, my love, but then, you will have to bear the weight of a million worlds.

Epilogue

Since you have read to this point, unless you're a spy from Big Oil, you're probably in agreement with the general thrust of this book. The general thrust is actually a hard charge for the finish. Yes, finish. Even five years ago, I still thought it would be a century from now. But now, it's NOW, or never.

The opposition, driven by money and greed, will not slow down, much less cease and desist. Can we, driven by love and compassion, do any less?

I earnestly invite you to join in this final battle for our children's future, for all life on Earth and the life of Mother Earth herself. Our bridge has been burnt. It is do or die. Please contact me at:

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See you on the battlefield!

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