



HOW TO KILL THE WORLD

A Timeline Of Earth's Sixth Mass Extinction

by William Thomas



WHO NEEDS A TIMELINE OF EARTH'S SIXTH MASS EXTINCTION?

We do.

Urgently.

Enraptured and enslaved by blinking, beeping, twittering gadgets; increasingly lobotomized by microwaves, toxic chemicals and manufactured “foods”, we are sleep-walking beyond the brink of an unimaginable abyss. As reams of expensive computer projections continue to lag behind daily events, attempting to inhabit no-longer habitable regions is already disrupting human and wild lives.

Hysteria? Hype? Exaggeration? Must be, because if you search “Sixth Mass Extinction” you will be stampeded by reputable scientists freaking out over what is going down. Scientists with hard-earned credentials are not professionally accustomed to writing “scary,” “frightening” and “terrifying”. But they’re using these words now. We need to listen up.

“JUST THE FACTS MA’AM”

Why a timeline? When breaking the stories of Gulf War Illness, 9/11, and the ongoing aerosol geoengineering program (which I first described as “chemtrails”), I found that arranging historically-corroborated facts in a simple date-driven listing accomplishes two good things:

- 1: Avoids the bias of a predetermined agenda the book then “proves”.
- 2: Confers the bonus of startling and insightful juxtapositions between seemingly unrelated events.

In this life on this planet, nothing is unrelated. *Everyone and everything* is interwoven. Ignoring the spreading and intersecting ripples of our daily choices means we can avoid looking at the ecological context of lives lost in electrosmog, noise and concrete. Onboard a planet, context is everything.



So is situational awareness. As a former pilot and bluewater sailor, my location, air/sea state, trending weather, approaching hazards, and airworthiness/seaworthiness of my craft held my complete attention for hours, days, even weeks at a stretch. Lives depended on it.

So go figure, Trekkies. Rushing through the silent, cold, irradiated vacuum of deep space, the thin-skinned ship we share with myriad other life forms is visibly shedding parts. Weather everywhere is becoming more frequently freakish. With no lifeboats to hand and the nearest inhabitable planet unknown out to 10,000 light years, you'd think everyone onboard would be obsessed by the rapidly deteriorating condition of their space colony.

Yet, the ongoing extinction of most life on Earth remains a non-story to a corporate media dedicated to serving up endless monsters and titillation, along with nonstop imprecations to assure our individual identity by keeping our interrupting devices turned on and our brains turned off as we rush to Buy Still More Stuff. Species-wise, this strategy is not working out too well.

Though intended as a source-book for activists (which ought to include all of us), this timeline does *not* attempt to deal with denialists. Implacable facts only drive true believers deeper into their beliefs. If you are looking for insight into the Really Big Question, “What The Hell Is Going On?” – welcome aboard. Almost every word in this timeline is a verbatim quote [sources provided]. I've worked hard editing hundreds of news stories into basic bullet points, *so please put this aside until you can spend some time with it*. The best way to read this litany of (mostly) unsettling events is to scroll through it quickly, glancing at the bolded headings to get a sense of converging trend lines. Then go back and read the sections that most interest, intrigue or freak you out.

The notion behind this much bad news is that it's always better to know the state of your ship.

Scrolling down...

FOUR BIG THINGS IMMEDIATELY BECOME CLEAR

1. The 3-4C additional Earth warming our fossil fuel use is locking in later in this Last Chance Century, an increasingly acidic and barren world ocean, global proliferation of brain-wiping and sterilizing wireless radiation, worldwide food contamination through GMOs and radionuclides, and the growing threat of massive methane releases in the thawing Arctic are *each* a civilization show-stopper. *All of these processes are cumulative in their effects, synergistic in their interactions... and accelerating.*
2. Hope is not a plan. Denial is not an appropriate response. The only possibility of species survival (including humans), is to keep fossil fuels in the ground and fossil fools away from the controls. *All-out global response demands full mobilization now.*
3. No such course change can be made while megacorporations and the banks that own them control governments through campaign bribes and job-loss threats. In Canada and the USA, rigged voting for media-manicured political puppets has become a bread-and-circuses distraction. The only possibility of dealing with this deepening planetary emergency is to *immediately revoke the corporate charters of every injurious corporation, end financial speculation, and transfer the printing of national currencies by private banks misleadingly labelled “Federal Reserve” back to civilian control.*
4. *“All Hands On Deck!” means everybody.* It means paying close attention to every choice we make, whether a frustrated retort to another zombie screenhead, more junk picked up at Wal-Mart, or that thing we just “threw away”. Onboard a spacecraft, where everything recirculates, there is no “away”. Everything tossed into a waterway, roadway, skyway or field will come back to whap some critters (maybe your own kids) upside the head. Guaranteed.

Solutions to this converging crisis require not to more tech with its built-in consequences, but more restraint. Now might be an excellent time to disempower faceless bankers and currency manipulators – and prepare for dislocations to precariously-maintained lifestyles – by stepping back from money-as-debt toward more local trade and food growing. And away from petroleum addiction into off-grid living and human-powered, electric and wind-driven transportation. We can either adopt lives of voluntary simplicity now. Or involuntary simplicity soon.

Our personal response also calls for supporting smaller conscious companies, while joining grassroots groups like 350.org and geoengineeringwatch.org with a broad enough network to disrupt and reverse ecocide by the military-industrial-entertainment nexus. And as I found during BC’s logging wars, depending on your courage and circumstances, choosing to be a protector rather than a predator might also mean engaging in the hallowed American tradition of civil disobedience in the legally justified cause of civil defence.

Only when we confront the lessons we’ve arranged for ourselves – or look in a child’s eyes – can we “get the lessons” and stop killing the world.

William Thomas
Hornby Island, Canada
January 8, 2015

HOW TO KILL THE WORLD

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1961

PROJECT STORM FURY SEEKS TO CONTROL HURRICANES

US scientists begin 23-year project aimed at weakening hurricanes with cloud-seeding techniques from aircraft. [[Wiki](#); Watch on [YouTube](#)]

1965

PRESIDENT JOHNSON URGED TO CONSIDER AEROSOL GEOENGINEERING

Report urges President Johnson to head off atmospheric warming using reflective aerosols did not even mention cutting emissions. [[Technology, Entertainment, Design conference New York City Sept/07](#)]

DECEMBER 10, 1976

US SIGNS TREATY PROHIBITING ENVIRONMENTAL MODIFICATION

Following the failure of its rain-seeding Operation Popeye to interdict the main infiltration trail from North Vietnam, the US signs the UN treaty “Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification” to prevent other countries from engaging in weather warfare. ENMOD prohibits “the use of techniques that would have widespread, long-lasting or severe effects through deliberate manipulation of natural processes and cause such phenomena as earthquakes, tidal waves and changes in climate and weather patterns.” [[Convention On The Prohibition Of Military Or Any Other Hostile Use Of Environmental Modification Techniques](#)]

The USA has similar laws already in place, including EPA AIR QUALITY MANAGEMENT RULE 402. NUISANCE: “A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.”

OCTOBER 7, 1979

US PHYSICIST PROPOSES AEROSOL GEOENGINEERING

In 1979, physicist Freeman Dyson proposes the deliberate, large-scale introduction of fine particles into the upper atmosphere to offset global warming. [Wall Street Journal Oct 17/97]



APRIL 26, 1986

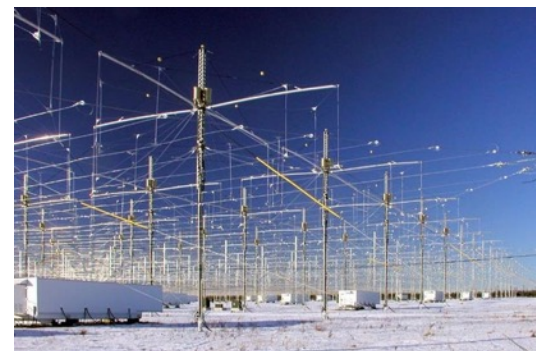
CHERNOBYL REACTOR MELTS DOWN

At 0123 an ill-judged systems test by undertrained technicians shuts down critical cooling water on Reactor 4 at the Chernobyl nuclear power plant and melts down the core. In the nearby town of Pripyat, Ukraine, people wake up to respiratory and distress nausea from radiation exposure. . [[Real Clear World Jan 26/13](#)]

AUGUST 11, 1987

BERNARD EASTLUND FILES HAARP PATENT

The first of three patents awarded to MIT physicist Bernard Eastlund describes his Method and Apparatus for Altering a Region of the Earth's Atmosphere, Ionosphere and/or Magnetosphere as focusing on weather modification. Commercial patent #4,686,605 claims that directed energy beams of more than one-billion watts can be used for “altering the upper atmosphere wind patterns using plumes of atmospheric particles as a lens or focusing device” to disturb weather thousands of miles away. [[HAARP Patent](#)]





JANUARY 29, 1991

GULF ECO WAR DISASTER

At the end of January 1991, an estimated 11 million barrels of oil from deliberate venting and coalition bombing are released to the Arabian Gulf from January 1991 to May 1991. This is more than twenty-times larger than the *Exxon Valdez* spill and twice as large as the previous world record.

More than 800 miles of Kuwait and Saudi Arabian beaches are oiled and tens of thousands of migratory birds passing north through the area are devastated by oil fallout. (US Marines are sent ashore to save hawksbill and green turtles laying eggs on at least one offshore island of the Persian Gulf.) [Author's experience as member of three-man Gulf Emergency Response Team related in my book, *Bringing The War Home*; [ICE Case Studies](#)]

The Kuwaiti oil fires are also started in January. At least 6 million barrels of oil are combusted into the atmosphere as thick petroleum smoke and “black rain” *every day for 10 months*, causing widespread pollution which oiled mountaintops in British Columbia and the Himalayas. After intervention by the GEERT persuaded the Kuwait Government to open the burning fields to more than the two teams from the US and Canada, the last oil fire was extinguished by November 1991 at a total cost of \$1.5 billion to Kuwait. [Author's experience as member of three-man Gulf Emergency Response Team and reporting for the *Toronto Sun* and *Globe & Mail*; [Oil Fires, Petroleum And Gulf war illness](#)]

MARCH 26, 1991

HUGHES AEROSPACE FILES WELSBACH SEEDING PATENT

A patent filed by Hughes aircraft company for the “Stratospheric Welsbach Seeding for Reduction of Global Warming” seeks to reflect incoming sunlight with “Welsbach” aluminum oxide and similar oxides of metals capable of converting heat trapped by greenhouse gases near the Earth's surface into far-infrared wavelengths, which then radiate into space.

Cautioning that the resulting white skies may be unpopular, the Hughes patent nevertheless suggests that these very tiny metal flakes could be “added to the fuel of jet airliners, so that the particles would be emitted from the jet engine exhaust while the airliner was at its cruising altitude.”

Aluminum oxide can withstand temperatures far higher than jet engine exhausts. While highly abrasive in larger sizes, a former Alcoa aluminum engineer tells this reporter that aluminum in the 10 to 100 micron sizes called for in the sunscreen patent would simply polish jet turbine blades without harming them. (A human hair is about 100 microns across).

The engineer adds that this “very fine, talcum-like” aluminum powder would appear as a “pure white plume” in the sky. [[Hughes Patent](#)]

1992

NAS GEOENGINEERING STUDY CALLS FOR AEROSOL GEOENGINEERING

The National Academy of Science \$80, 944-page report on the “Policy Implications of Greenhouse Warming” includes chapters on “mitigation” described geoengineering schemes championed by the late Edward Teller and others. The massive US Government study concluded: “Cloud stimulation by provision of cloud condensation nuclei appears to be a feasible and low-cost option capable of being used to mitigate any quantity of CO₂. Perhaps one of the surprises of this analysis is the relatively low costs at which some of the geoengineering options might be implemented.

JUNE 4, 1992

USA #1 IN CARBON EMISSIONS

The average American is responsible for adding 27-times as much carbon dioxide to the atmosphere as the average person in India. [Eye June 4/92]

1993

CANADA OZONE DEPLETION

| | |
|-----------------------------|--|
| 15% average ozone depletion | [Dr. Wayne Evans Trent U] |
| Toronto: 20%-30% depletion | [Dr. Wayne Evans Trent U] |
| Edmonton: 30% reduction | [Dr. Jim Kerr Env Canada] |
| 3,100 melanomas, 540 deaths | [Dr. Jason Rivers Canadian Dermatology Assoc.] |

1993 sees new damage to poplars: “sunscald” - curling of leaves that drop and decompose. White pine unsheathes needles each spring. Exposed new tissue is damaged after 1 hour exposure to bright sunlight. After two years of exposure, damaged trees are extremely susceptible to bark beetles. [Dr. Orie Loucks Miami U. of Ohio]

OCTOBER 1993

ANTARCTIC OCEAN PHYTOPLANKTON AND KRILL HIT BY INCREASED UVB

Vast colonies of plankton hover near the surface for photosynthesis. Solar radiation damage extends to 25 meters depth. In the Weddell Sea, some species of phytoplankton are adapting to the UVB threat by clumping together in an apparent effort to reduce surface exposure to UVB.

The adaptive mechanism may or may not save the species, but it could change the balance of the food web forever. No longer bite-size, these phytoplankton may prove unpalatable to the zooplankton and krill which feed on them. Scientists are surprised that there were no krill at all in the vicinity of the phytoplankton bloom. What is happening to the fish, whales, seals and penguins?[Sierra Club of Canada; Dr. Lou Hobson U. of Victoria]



OCTOBER 7, 1993

PLANKTON DECLINE ABOUT TO TRIGGER CARBON JUMP

Phytoplankton “air scrubbers” currently convert some 104 billion tons of atmospheric carbon annually into organic material. Ozone-induced loss of plankton could trigger a positive feedback in the global carbon cycle which would further accelerate the greenhouse effect. [Dr. Keith Hiedorn Oct 7/93]

WINTER '93-'94

NORTHERN FORESTS BECOME NET CARBON PRODUCERS

Northern forests have stopped removing increased amounts of CO₂ from the atmosphere. At 50N-60N, small changes in UV levels are significant for the boreal forest. This forest covers 12 million square kilometers and “fixes” some 9.6 gigatons of carbon. Now, increased frequency of forest fires are making boreal forests net carbon producers. [No Sweat News Winter 1993-94; Sierra Club of Canada]



1994

WORLDWIDE CO₂ EMISSIONS TOP 6 BILLION TONS

Fossil-fuel burning is adding about 6 billion tons of carbon to the atmosphere every year at a time when phytoplankton, forests and tundra are reducing their capacity to absorb CO₂. [Robin Round Sierra Club of Canada]

1995

BICYCLE AND SOLAR PANEL PRODUCTION SURGE

Bicycle production is exceeding 100 million new bikes annually, world sales of solar cells has jumped 32%, and wind energy – which currently produces carbon-free electricity for 24 million people worldwide – is also growing at 31% a year. [ENN, Earth Policy Institute Jan 10/05]

1996

US AIR FORCE REVEALS TECHNIQUES ON “OWNING THE WEATHER”

USAF research study, “Weather As A Force Multiplier: Owning The Weather in 2025” outlines how HAARP and aerial cloud-seeding from tankers would allow USAF “Weather Force Specialists” to fly “aerial obscuration” missions spraying chemicals to form “cirrus shields”. The study further notes that HAARP can be used “to stimulate,” heat and steer sections of the upper atmosphere.

[[Owning The Weather](#)]

JANUARY 30, 1998

EDWARD TELLER CALLS FOR AERIAL “SUNSCREEN”

As the first “Category 6” hurricane ever recorded packs sustained winds of 200 mph, Antarctica warms 10-times faster than the global rate, and flagship insurer Lloyds of London takes on water after losing almost \$11 billion in just four years, “Father of the H-Bomb” Edward Teller urges an International Seminar On Planetary Emergencies to spray a chemical “sunscreen” into the upper atmosphere.

Computer simulations conducted at Lawrence Livermore show that if enough reflective particles can be suspended in the atmosphere to deflect just 1% of incoming sunlight, an expected doubling CO2 emissions would result in no net warming over at least 85% of Earth's surface. This chemical cloud cover will also greatly reduce levels of potentially lethal ultraviolet rays.

But climate modeller Ken Caldeira worries that the massive aerial spraying of reflective particles will further cool the upper stratosphere by diverting incoming sunlight, creating CFC ice-clouds that “could destroy the ozone layer.”

The Lawrence Livermore National Laboratory scientist later tells *Columbus Alive*, “We originally did this study to show that this program shouldn't be done.”

“Why not?” asks reporter Bob Fittrakis. Because of negative health effects, Caldeira replies. [[willthomasonline](#); “Sunscreen For Planet Earth” Jan 30/98]

SEPTEMBER 31, 1998 UN AID CHIEF RESIGNS OVER IRAQ SANCTIONS

Genocide boosts extinction rates. The Senior UN official in charge of aid to Iraq resigns in protest over brutal sanctions, which he calls “a totally bankrupt concept” that punish the Iraqi people but not their government. Denis Halliday, the UN humanitarian co-ordinator in Iraq for 13 months, adds that sanctions were incompatible with the UN charter as well as the UN convention on human rights and the rights of the child. Halliday says, “Four thousand to five thousand children are dying unnecessarily every month due to the impact of sanctions because of the breakdown of water and sanitation, inadequate diet and the bad internal health situation.” [[Independent Oct 1/98](#)]



JANUARY 12, 1999 FIRST AEROSOL SPRAYING REPORT

In “Mystery Contrails May Be Modifying Weather”, I report for Environment News Service: U.S. Air Force KC-135 and KC-10 aerial tankers could be creating clouds to modify the weather. Tommy Farmer, a former engineering technician with Raytheon Missile Systems, became ill after collecting samples of what he calls "angel hair" sprayed by the mystery aircraft on six occasions since February, 1998. Lab tests reveal iron oxide in the samples. Strands of extremely fine polymers could be sprayed into the upper atmosphere to be heated by HAARP's inventor, Bernard Eastlund writes this reporter. “Recent work on polymeric additives for microwave absorption has been done... so the polymer fibres are available...The heat generation occurs by adding magnetic iron oxide powder to the polymer.” [[ENS Jan 12/99](#)]



MARCH 2, 1999

AEROSOLS VANISH AFTER TANKERS GROUNDED

One day after hundreds of KC-135s are grounded to fix problems in their tails, the following day, the chemtrail tracking center in Houston reports that daily spraying over the US has suddenly dropped from 24 to just two locations. When the big jets are returned to service the following week, aerosol sightings climbed right back to previous levels. [AP Mar 2/99]

MARCH 1999

ESPANOLA, ONTARIO RESIDENTS PROTEST AEROSOL EMISSIONS

Residents describe “frequent spraying” over Espanola, where spray sometimes falls as visible, flesh-stinging particles. Lab tests of the fallout show levels of aluminum 7-times over the “safe” threshold set by the Ontario government for drinking water.

At a raucous August 10 town meeting, environment officials pronounces the air “safe” - but do not release air sampling results after residents supply photos of USAF tankers spreading broad white plumes over the region. “Many in the community have reported respiratory problems and strange aches and pains,” the CBC reports. A residents notices “a lot of depressed people in Espanola” and, “a lot of people here in town are complaining of short term memory loss.” People cannot remember simple errands, or where they parked their cars. It's become, “a running joke.” More than 550 residents of this small Ontario community petition parliament to “ban all cloud-seeding activity by civil or military aircraft, foreign or domestic.” [[Earth Island Inst. Summer 2002; Consumer Health](#)]

WINTER 1999

ATMOSPHERIC STUDY SHOWS SKY PLUMES CANNOT BE CONTRAILS

Clifford Carnicom correlates atmospheric readings by NASA's Climate Diagnostics Center with 21 days of heavy aerosol gridding over Santa Fe, New Mexico. At altitudes where persistent white plumes criss-cross the usually cloudless New Mexico sky, Carnicom finds 30% humidity - or less than half the 70% moisture needed to form contrails. [*Chemtrails Confirmed*]

MARCH 12, 2000

RADIO REPORTER S.T. BRENDT INTERVIEWS ATC MANAGER, “DEEP SKY”

In remote rural Maine, radio reporter S.T. Brendt and her partner count 30 big jets in 45 minutes. Brendt calls the assistant WMWV news director, who takes the news staff outside. Together they count 370 lines in skies usually devoid of aerial activity.

Over three taped interviews, an Air Traffic Control Manager for the entire northeastern seaboard, whom we dub “Deep Sky” reveals that chemicals sprayed by specially designated USAF tankers degrade Air traffic Control radar returns. When asked whether the air force spray tankers cross into Canadian air space, he replies “yes.” When asked the purpose of these missions, the FAA official says he was told “weather modification” after a “higher civil authority” ordered him to divert incoming trans-Atlantic airliners around military formations flying over 37,000 feet. The explanation told to controllers across the nation is later defined as “climate modification”. [[Earth Island Journal Summer/02](#)]

MAY 24, 2000

ASTHMA RATES SKYROCKETING

Incidences of asthma have tripled in young women and doubled in young men since aerosol spraying began in earnest in the late 1990's. The number of children suffering from asthma has shown a massive rise in the past eight years: 23% of them suffer from the breathing disorder at some point in their lives- compared to 13% of children in 1992; 28% of children cough at night, compared to 16% in the previous study. It is becoming a major health problem, with its severity worsening. [BBC Mar 14/00]

MAY 28, 2000

GEOENGINEERING AEROSOLS COULD BRING "STRATO BUGS" TO EARTH

Weather balloons collect stratospheric samples swarming with live bacteria, fungi and viruses bigger than any previously known. An NCAR bulletin says that microscopic bacteria and algae aloft in the upper atmosphere apparently "play a key role in the processes that create clouds and trigger rainfall."

Inadvertently precipitating these living nuclei out of the sky with large quantities of free-falling chemical aerosols could cause drought. Professor Emeritus in the Department of Geology at the U. of Texas, Dr. Robert Folk figures that these ultra-tiny creatures are "possibly an order of magnitude more abundant" than normal bacteria that swarm everywhere. Under electronic magnification, Folk sees many diverse kinds of swarming nanobac feasting on an aluminum growth matrix. "Fungi just love metals," says another researcher.

SEPTEMBER 2000

RECORD ANTARCTIC OZONE HOLE

Since their discovery in 1985, Antarctic ozone holes have become increasingly larger. This new hole is the largest yet recorded, covering an area of 28.3 million square kilometres, a little bit bigger than North America. The hole extends as far north as the southern tip of South America, subjecting Ushuaia, Argentina and the city of Punta Arenas in Chile, with a population of over 100,000 people, to very high ultraviolet radiation levels.

DECEMBER 8, 2000

PLUMES NOT SPREAD BY AIRLINERS

At the Victoria International Airport in British Columbia, Canada, unsuspecting airport Environment Manager, Terry Stewart responds to a call from a local resident demanding to know why intense aerial activity left lingering X's, circles and grid-like plumes over the British Columbia capitol on December 6 and 7. His brief taped phone message reply ends the "airliner spreading contrails" argument:

"Mark, it's Terry Stewart, Victoria Airport Authority. Just calling you back from your comment. From what I gather, it's a military exercise; US and Canadian air force exercise that's goin' on. They wouldn't give me any specifics on it. Hope that helps your interest. Very odd. Thanks a lot. Bye-bye now." [[Unknown Country Mar 22/01](#)]



WINTER 2000 - 2001

HOUSTON CONTRAIL STUDY FINDS ANOMALIES

Using Flight Explorer software to identify the airliners and military aircraft passing Houston, Texas, Mark Steadham times their respective plumes.

Sample results:

12/02/00

11:00 am ~4-8 hrs. (military)

11:45 am ~2 minutes (commercial)

12/21/000

8:50 am 20 seconds (commercial)

09:00 am ~4-8 hrs. (military)

09:40 am ~4-8 hrs. (military)

10:10 am 20 seconds (commercial)

Confirmed contrail observations in study (46)

All confirmed contrails 15 seconds or less 72%

All confirmed contrails 30 seconds or less 80%

All confirmed contrails 2 minutes or less 96%

White plumes left by from Military Aircraft: ~4 hours to 8 hours

[[Steadham Study](#)]



LATE DECEMBER 2000

ATC FLIGHT CENTERS ACROSS UNITED STATES CONFIRM “CHEMTRAILS”

An increasingly worried “Deep Sky” begins calling his colleagues at FAA flight centers across the United States to ask them if they are seeing what he was seeing on his own radar scopes. They are. Controllers at Chicago's O'Hare, all three New York City area airports, LA's LAX, San Francisco, Jacksonville, Cleveland, San Diego, Dulles, Washington DC and the nation's biggest airport in Atlanta all report tracking unusual formations of particle-emitting Air Force tankers on their scopes.

Every controller is being told to divert commercial traffic below formations of tankers flying strange patterns. The controllers have never seen so much “clutter” or artificial “cloudiness” obscuring their radars. At least one concerned controller working in America's heartland visits a local hospital after heavy tanker activity to find the emergency room jammed with acute respiratory cases. [*Chemtrails Confirmed*]

MARCH 7, 2001

SMALL PARTICLES FORM BIG OVERCASTS

The National Center for Atmospheric Research in Boulder, Colorado is studying how tiny particles can clump into clouds. But in air not already swollen with moisture, especially in near-drought conditions, introducing too many particulates into the air to compete for a small amount of moisture can act like a sponge, resulting in decreased rainfall.

NOAA and NASA atmospheric studies confirm that the only way to form artificial clouds under conditions of low humidity and less than ideal temperatures is by dispensing additional particles from aircraft to act as moisture-attracting nuclei. The principle factors determining cirrus cloud development are temperature, relative humidity, and aerosol size. The last variable is of primary importance and may be supplied by high-flying aircraft. The smaller the size of each added nuclei, the faster the rate of cirrus cloud formation. [[Geoengineering Watch July 8/13](#)]

JULY 19, 2001

DYN-O-GEL TAKES OUT A THUNDERSTORM

Entering a thunderstorm off West Palm Beach, a B-57 Canberra jet bomber chartered for one million dollars releases 9,000 pounds of improved Dyn-O-Gel capable of 10-times stronger water absorption. Within seconds, the buildup vanishes as one side of the cloud collapses “like an avalanche”, according to a chase plane cameraman. ABC News reports gelatinous 'goo' again washing up on beaches in West Palm Beach, Florida. The substance was identified as Dyn-O-Gel.” [Sun-Sentinel July 20/01; ABC News July 19/01]



SEPTEMBER 11, 2001

GROUNDING AIRLINERS REVEAL SUN SHIELDING POWER

“During this three day period we had a sudden drop in Global Dimming contributed from airplanes. The temperature range jumped by over a degree Celsius,” atmospheric scientist Dr. David Travis worries. “If so much could happen in such a short time, removing just one form of pollution, then it suggests that the overall effect of Global Dimming on world temperatures could be huge.”

“We're gonna be in a situation where the cooling pollutant is dropping off while the warming pollutant is going up, CO2 will be going up and particles will be dropping off and that means we'll get an accelerated warming. We'll get a double whammy... we'll get reducing cooling and increased heating at the same time,” says leading climate modeller, Dr. Peter Cox. [[BBC Sept 17/14](#)]

OCTOBER 2, 2001

HR 2977 BILL SEEKS TO BAN “CHEMTRAILS”

Introduced into Congress by Ohio Representative Dennis Kucinich, Space Preservation Act HR2977 calls for the peaceful uses of space, and a ban on “exotic weapons”. Section 7 seeks specifically to prohibit “chemtrails”. Kucinich told *Columbus Alive* that despite official denials, as head of the Armed Services Oversight Committee he was well acquainted with chemtrail projects. Kucinich stated, “The truth is there's an entire program in the Department of Defense, ‘Vision 2020’ that calls for ‘dominance of space, land, sea and air’.” [[HR2977](#)]

DECEMBER 7, 2001

ARCTIC WILDFIRE SOOT DARKENING GREENLAND ICE SHEET

Smoke plumes from huge Arctic wildfires are darkening the surface of the ice, making it absorb more sunlight and hastening its melt. The Greenland Ice Sheet experiences record melt this year, and its warmest summer in 170 years. Reflectivity of the Greenland ice has dropped by 6% in the last decade. (A 1% decline is huge.) [[Live Science Dec 7/01](#)]

JANUARY 24, 2002

HR 3616 REPLACES HR 2977 - OMITTS "CHEMTRAILS"

Kucinich reveals how, under intense political pressure, all references to "chemtrails", HAARP and other weapons capable of planetary destruction are removed from HR2977. Replacement measure, HR 3616 no longer refers to "chemtrails". Asked why he would introduce a bill banning so-called "chemtrails" when the U.S. government routinely denies such things exist and the US Air Force has routinely called such sightings "a hoax", Kucinich replies, "The truth is there's an entire program in the Department of Defense, Vision for 2020 that's developing these weapons." [[Columbus Alive Jan 24/02](#)]

MARCH 5, 2002

METHANE BUBBLING UP FROM SIBERIAN SEABED

Large amounts methane are bubbling up from a long-frozen seabed north of Siberia. About 8 million tonnes of methane are seeping every 12 months from vast stores long trapped under permafrost below the seabed north of Russia. "Subsea permafrost is losing its ability to be an impermeable cap," says Dr. Natalia Shakhova, a scientist at the University of Fairbanks, Alaska. [[ABC \(Aust\); Reuters Mar 5/02](#)]

JUNE 16, 2002

EDMONTON ATC TRACKS US AEROSOL TANKERS ON RADAR AND VISUALLY

Puzzled by lab tests showing extremely high electrical conductivity in city soils stunting and killing plants, Edmonton landscaper Dave Dickie wonders if there is a connection with the persistent plumes he's seeing overhead. At Edmonton airport, Dickie and an excited group of 12 year-olds watch two KC-135 tankers tracked by radar flying at 34,000 and 36,000 feet to the south and the north of the city. Both USAF tankers had flown south out of Alaska, controllers say. The big jets began making patterns over Edmonton. Both Stratotankers are working alone in "commanded airspace" from which all other aircraft are excluded. And they are leaving "chemtrails".

"The signature is significant," comments a radar operator, pointing to a trail clearly visible on the scope that extends for miles behind the KC-135. A JAL flight on the same display leaves no contrail. Going outside, Dickie and several controllers easily located the KC-135 leaving a broad and lingering white plume signature. They also clearly see the JAL airliner at a similar flight level. It is leaving no contrail at all. [[Chemtrails Confirmed by William Thomas](#)]

2003

CARBON EMISSIONS REACH RECORD HIGH 6.8 BILLION TONS

In 2003, carbon emissions from the burning of fossil fuels climbs to a record high of 6.8 billion tons. Annual emissions have quadrupled since 1950. [[Earth Policy Inst. Jan 1/04](#)]

JANUARY 16, 2003

RUSSIAN DUMA SEEKS HAARP BAN

Duma deputy Yuri Solomatin describes how the Russian Federation State Duma spent nearly a year considering the global threat posed by HAARP. On the front page of *Pravda*, he warns, “The operators of such a weapon are able to program floods, tornados storms and even earthquakes in any region of the planet. It is also possible to paralyze civil and military electronic surveillance systems, and even to affect the psyche of entire nations.”

The Russian government further alleges that “the scientifically incomprehensible apathy of entire peoples in the post-Soviet territories can be connected to testing by the USA of such geophysical weapons at low power.” Referring to the 1970 convention signed by the USA prohibiting atmospheric modification, the Russian parliament is seeking a global ban on all HAARP tests. [[Pravda Jan 16/03](#)]

SUMMER 2003

52,000+ EUROPEANS DIE FROM SUMMER HEAT

While denialists continue to “debate” global heating, severely hot weather across Europe withers crops, dries up rivers, fuels fires and kills more than 52,000 people, making the heat wave one of the deadliest climate-related disasters in Western history.



Hospitals, undertakers and funeral homes were overwhelmed. In France, doctors’ warnings of a heat epidemic are quashed by the Health Ministry denial as the bodies pile up, requiring makeshift morgues.

During the peak heat, French fatalities top 2,000 a day. Italy sees 18,000 heat-related deaths.

In Portugal, where August temperatures exceeded 104F for many days, 2,099 persons die. In Belgium, where the mercury rises higher than record dating back to 1833, high temperatures bring 1,250 “untimely deaths” between June and August, while in picture-postcard Switzerland, 975 people die from heat in the warmest Swiss summer since 1540. By the end of the century, the world’s average temperature is projected to increase by 2.5–10.4F. As the mercury climbs and more frequent and more severe heat waves ensue, heat-related fatalities could double in less than 20 years. [[Earth Policy Inst. July 28/06](#)]

NOVEMBER 4, 2003

WRIGHT PAT AEROSOLS SCIENTISTS REVEAL AERSOL PROGRAM

Two Lawrence Livermore National Laboratory scientists working at Wright Patterson Air Force Base in Ohio tell *Columbus Alive* reporter Bob Fittrakis that they were involved in two aerial spraying experiments. One involves aluminum oxide sunscreens related to global warming. The other involves spraying barium for “over the horizon” military communications, 3-D mapping and radar. One scientist says that HAARP is used to guide low-pressure systems “picked up” over Canada, and guided south over the Midwestern United States. [[Columbus Alive Nov 4/03](#)]

DECEMBER 6, 2003

METHANE EMISSIONS 3x CO2

New Yorkers walk around in T-shirts, and cherry blossoms bloomed three months early in Washington DC, where mid-winter temperatures touch 70F. US Government geologist John Atcheson warns, "Once these methane releases really get cooking, it's likely to play out all the way." Worldwide observations have already found emissions of methane rising into the air at a rate three-times that of carbon dioxide. [Independent Dec 6/03; National Science Foundation Press Release Dec 17/03; [Prospect Mar 10/10](#); Independent Dec 6/03]

DECEMBER 18, 2003

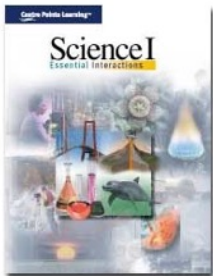
INEXPLICABLE "GLOBAL DIMMING" SHOCKS SCIENTISTS

Sunlight reaching the Earth's surface has declined more than 10% in the three decades, with levels of sunshine reaching parts Russia darkening almost 20% between 1960 and 1987. According to its discoverer and scientists who have confirmed his results, "Global Dimming" could be masking more drastic climate change, while stunting sunlight-starved crops. But scientists say known sources of ground level pollution cannot account for drastic sky dimming. [Guardian Dec 18/03]

DECEMBER 29, 2003

TINY AIRBORNE PARTICLES POSE GRAVE HEALTH THREAT

The US EPA warns that microscopic particle fallout 10 microns or smaller results in a 5% increased death rate within 24 hours. The Welsbach patent calls for spraying 10 million tons of sunlight-reflecting aluminum oxide 10 microns across. Airborne particulates this small are also thought to "initiate and/or exacerbate respiratory disorders, such as asthma and airway hyper-responsiveness and is epidemiologically associated with causing death in the elderly and those with pre-existing respiratory, or cardiopulmonary disease," the *LA Times* reports. "After they reach the heart, the particles are thought to cause a stress reaction in cells, producing inflammation that contributes to heart disease. The particles also may cause blood clots." [Idaho Observer May/04; Los Angeles Times Dec 29/03]



FEBRUARY 2004

GRADE SCHOOL TEXTBOOK TEACHES KIDS TO ACCEPT GEOENGINEERING

A is for Apple. B is for Boy. C is for Chemtrails. While checking out his children's science book, American father finds is dismayed to find seventh graders being taught about geoengineering the planet in the Centre Point Learning Science I textbook.

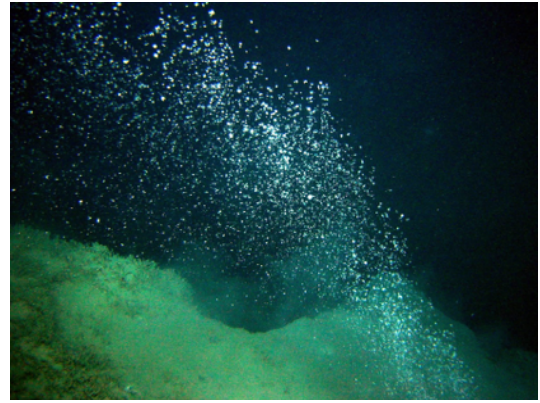
Under "Solutions for Global Warming" section 5.19 features a photo of a big multi-engine jet with a familiar orange/red paint scheme. The caption reads: "Figure 1- Jet engines running on richer fuel would add particles to the atmosphere to create a sunscreen." Helping habituate children to a life of lethal sunshine and "protective" spray planes, the logo on the plane says: "Particle Air".

"Could we deliberately add particles to the atmosphere?" asks the text. Where are the pictures, a parent wonders, "of people planting trees, or turning down thermostats, or bicycling, or any of the other ways not to add to the problem?" [[Parent's remarks](#); [Centre Point Learning textbook](#)]

SEPTEMBER 2004

WARMING WATERS RELEASING METHANE

Gavin Schmidt reports warm Atlantic waters decanting into the Beaufort Sea “are destabilizing shallow methane hydrates... releasing increasing quantities of methane directly into the atmosphere.” He also warned, “volcanoes also occur on the west end of the ESAS, so destabilization of shallow methane hydrates is probably also opening deep seated, vertical fractures which will allow mantle methane to rise up into the atmosphere.” [[NASA GISS Sept/04](#)]



SEPTEMBER 5, 2004

HURRICANES FRANCES AND IVAN “MODIFIED”

Just before Hurricane Frances hits Florida, its central eye suddenly expands from the usual 20 miles across to 70 nautical miles wide. “That is just unbelievably large,” exclaims a CNN affiliate out of Jacksonville. “And it's moving unbelievably slow. If it's going five, they say eight miles an hour, it could take 10 hours for the eye to go through. I mean that's crazy.”

It takes 13. On hurricane watch at Juno Beach just north of West Palm Beach, WFOR-TV's Dave Malkoff is drawn to something on the water. “Gel foam down here on the ocean,” Malkoff tells viewers. “Once the waves crash they instantly mix with foam - watch! That's the foam right there. And it instantly turns into like a foam that you would have in your bathtub, and it blows away like a solid. Instantly, this foam that's coming off the ocean mixes with the sand and is blowing down this way.”

Soon afterwards, a CBS-affiliate reports from Pompano Beach: “White foam all across the water. And it is not blowing away.”

TV commentators call it “strange” when this new hurricane abruptly turns away from making direct hits on Jamaica and the Caymans. As Ivan approaches the US Gulf Coast, a “dry air incursion” opens a wide boulevard into the eye-wall, causing it to collapse. As the eye reforms and the storm wobbles toward the east, Ivan's entire southwestern quadrant becomes jagged, misshapen and devoid of rain. The previous month, the US Air Force admitted that it had broken up a storm over the Atlantic using products made by a company called Dyn-O-Mat. [[Steering Katrina](#)]

DECEMBER 2004

METHANE NOT FACTORED INTO CLIMATE MODELS

The latest IPCC projections show an “upper range” temperature increase of about 11F by this century's end. But rapid warming from thawing methane has not been factored in. Scientists warn that just a few degrees more ocean warming might release 2,000 billion tons of methane gas into the atmosphere, triggering a sudden “destabilization event”. US Government geologist John Atcheson observes, “Humans appear to be capable of emitting carbon dioxide in quantities comparable to the volcanic activity that started these chain reactions... burning fossil fuels releases more than 150 times the amount of carbon dioxide emitted by volcanoes—the equivalent of nearly 17,000 additional volcanoes the size of Hawaii's Kilauea.” [Baltimore Sun Dec 16/04]

JANUARY 31, 2005

MONSANTO SPREADS HARDSHIP AND DEATHS ACROSS INDIA

Monsanto's practices have so far driven more than 166,000 Indian farmers to kill themselves, mostly by drinking pesticide. A farmer in India takes his own life every 30 minutes in the largest mass suicide in recorded human history. More than 8 million farmers in India have abandoned their lands after Monsanto bankrupted them with water- and pesticide-intensive GM cotton. A patent filed in Europe also gives Monsanto sole "rights" over the use of India's own indigenous Nap Hal wheat to make chapattis – staple food of more than one-billion people. Monsanto continues to use child labor in India, "primarily very young girls, exposing them to a lethal pesticide 13-14 hours a day, for pennies in pay. [Guardian Jan 31/05; The Hindu Jan 30/08; Open letter to Hillary Clinton from Wellesley College Alumna Linn Cohen-Cole Feb 19/08]

APRIL 26, 2005

HUMAN CARBON EMISSIONS CONTINUE INCREASE HIT 900 TONS-A-SECOND

[Washington Post Apr 26/05]

APRIL 27, 2005

OZONE THINNING RECORD

The protective ozone layer over the Arctic thins to the lowest levels since records began, alarming scientists who believed it had begun to heal. At high altitudes, 50% of the protective layer has been destroyed. What appears to have caused the further loss of ozone is the increasing number of stratospheric clouds in the winter, 15 miles above the earth. These clouds in the middle of the ozone layer facilitate chemical reactions that destroy ozone. This year, for three months from the end of November, there are more clouds for longer periods than ever previously recorded. In late March, when ozone depletion is at its worst, Arctic air masses drift over the UK and the rest of Europe as far south as northern Italy, giving significantly higher doses of ultraviolet radiation.

As increased greenhouse gases in the air trap more heat in the lower atmosphere, the stratosphere far above the earth is getting colder. "We thought things would start to get better because of the phasing out of CFCs and other chemicals because of the Montreal protocol, but this has not happened" John Pyle says. "The pollution levels have levelled off but changes in the atmosphere have made it easier for the chemical reactions to take place that allow pollutants to destroy ozone. With these changes likely to continue and get worse as global warming increases, then ozone will be further depleted even if the level of pollution is going down."

TV BRAINWASHES ZOMBIES

MARCH 14, 2005

L. Wolfe writes: The subconscious doesn't know the difference between fact or fiction and responds to all information passing through the conscious mind. Goofy commercials and television programs are training your thought processes [behind] the blank stare of a television zombie.



Eight hours a day, every day, through its programming, you are being programmed. At the Tavistock Institute for Human Relations, Hal Becker had spent more than 20 years of his life manipulating minds. “I know the secret of making the average American believe anything I want him to. Just let me control television,” Becker boasts. “Americans are wired into their television sets. Over the last 30 years, they have come to look at their television sets and the images on the screen as reality.”

After studying TV for 25 years, Tavistock’s Fred Emery observes, “Constant visual stimulus fixates the viewer and causes the habituation of response.” With the cortex hypnotized, the viewer is unable to reflect on what he is doing and what he is viewing.

Television watching shapes our perceptions. Children and adults become more infantile, more easily controllable. Becker adds, “Americans don't really think--they have opinions and feelings. Television creates the opinion and then validates it.”

Such an important matter as choosing a president becomes the same as choosing a box of laundry detergent: a set of possibilities, whose limits are determined, by the images on the screen. “I think that people have lost the ability to relate the images of their own lives without television intervening to tell them what it means. That is what we really mean when we say that we have a wired society,” Becker says. Best advice? Turn it off! [[Rense Mar 14/05](#)]

AUGUST 11, 2005

SIBERIAN TUNDRA THAWS INTO “LAKES”

A million square kilometres of thawing permafrost of western Siberia is turning into shallow lakes that could unleash billions of tonnes of methane into the atmosphere. Sergei Kirpotin, a botanist at Tomsk State University, says the entire western Siberian sub-Arctic has begun to melt “in the last three or four years.” Kristin describes an “ecological landslide that is probably irreversible and is undoubtedly connected to climatic warming.”



Western Siberia is warming faster than almost anywhere else on the planet: some 3°C in the last 40 years. Similar warming is also taking place on the North Slope fringing the Arctic Ocean in Alaska. Methane released by melting permafrost is accelerating climate change from Australia to the far North. [New Scientist Aug 11/05]



AUGUST 25, 2005

HURRICANE KATRINA DROWNS NEW ORLEANS

With winds up to 175 mph and a 20-foot storm surge, the largest and 3rd strongest hurricane striking the US kills 2,074 persons in Louisiana and Mississippi. More than 15 million people are effected by evacuations, rising gas prices and financial loss as water up to 20 feet deep drowned 80% of New Orleans, impacted about 90,000 square miles and caused \$81 billion in property damages.

HAARP's magnetometer chart shows big transmission spikes between August 24 and August 25 - right before Katrina made landfalls in Florida and Louisiana. [[Do Something Org;ABBAS Watchman](#)]

NOVEMBER 24, 2005

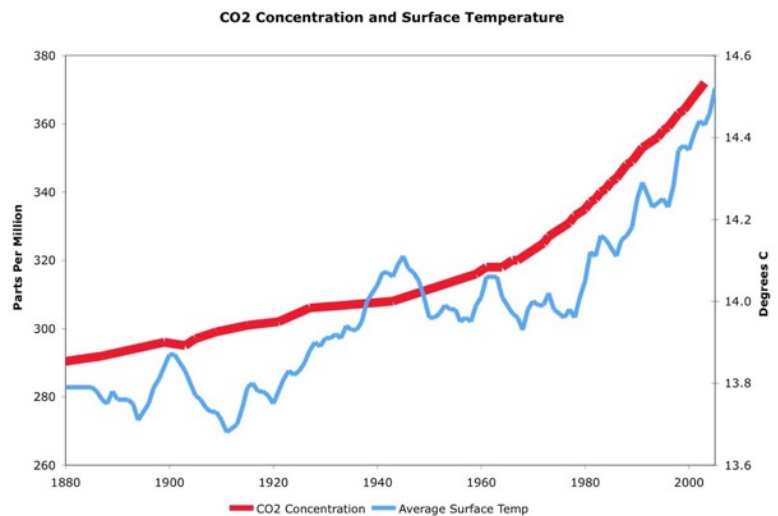
CO2 HIGHEST FOR 650,000 YEARS

Current levels of the greenhouse gases carbon dioxide and methane in the atmosphere are higher now than at any time in the last 650,000 years.

“We find that CO2 is about 30% higher than at any time, and methane 130% higher than at any time; and the rates of increase are absolutely exceptional: for CO2, 200- times faster than at any time in the last 650,000 years,” says project leader Thomas Stocker from the University of Bern, Switzerland.

“We found a very tight relationship between CO2 and temperature even before 420,000 years,” adds Prof, Stocker.

“The fact that the relationship holds across the transition between climatic regimes is a very strong indication of the important role of CO2 in climate regulation.” They calculate the present rate of rise at 2mm per year. [[BBC Nov 24/05](#)]



JUNE 19, 2006

DEPLETED URANIUM FALLOUT RETURNED TO SENDER

In three years of slaughter, thousands of pounds of DU were fired from US and British tanks and aircraft against Afghanistan and Iraq. The resulting fine radioactive “dust” scattered on winds that do not stop at national boundaries.

British scientists Chris Busby and Saorise Morgan find, “The highest levels of depleted uranium ever measured in the atmosphere in Britain, were transported on air currents from the Middle East and Central Asia; of special significance were those from the Tora Bora bombing in Afghanistan in 2001, and the ‘Shock & Awe’ bombing during Gulf War II in Iraq in 2003.” [[Uruknet June 19/06](#)]



JUNE 27, 2006

ASIA GOES SOLAR

Solar power does not require steep subsidies to be able to push aside environment-polluting fossil fuels, says proponents of large sun-powered projects in Laos and Bangladesh. In developed countries, solar-generated electricity is four times more expensive than so-called brown electricity made with coal and gas, and can only be made attractive to consumers when subsidized heavily, they told an energy conference. But in large parts of emerging

markets, solar power does not compete with mains electricity, because there is no grid.

In Bangladesh, where more than two out of three households cannot get electricity out of a socket, some 80,000 homes now own a basic solar panel that generates about 50 watts of power. The energy is stored in a small battery and can light up three bright, energy-saving lamps for four hours.

With a per capita income of \$440. Solar systems cost \$300, including a \$30 subsidy. Microcredits backed by the World Bank are citizens able to afford this huge upfront investment. Loan repayments of \$9 per month is close to the cost of kerosene consumption and is often shared with neighbours.

In Laos, for-profit company Sunlabob rents out basic solar modules for households and more advanced systems for village halls, schools and health posts where staff can now cool the vaccines and work through the dark. They also power water pumps.[Reuters June 27/06]

JULY 26, 2006

CARBON BOMB IGNITES

Warmer temperatures, causing earlier snow runoff and drier summer conditions see big wildfires explode across the US West, including fires rampaging east of Los Angeles. In Canada, fires are destroying nearly 6.5 million acres a year, compared with 2.5 million in the early 1970s.

Nadezda M. Tchebakova, a climatologist at Russia's Sukachev Institute of Forestry, says southern Siberia's average winter temperatures are up to 7.2F warmer than the pre-1960 norm. "This combination of elevated temperatures and decreased precipitation should provide conditions for greater fire occurrence," she says. More than 29 million acres – an area the size of Pennsylvania – has already burnt in Russia this year as global temperature continues to outpace forecasts.

Warming in high northern latitudes also generates more lightning, igniting more forest fires, which release methyl bromide – a top ozone-layer depleter. Boreal forests are crucially linked to the fate of the global environment, since the forests and their peat soils hold about one-third of Earth's stored carbon. "This is a carbon bomb," exclaims another scientist of the northern forest. "It's sitting there waiting to be ignited, and there is already ignition going on." [AP July 21/06]

DECEMBER 27, 2006

RUNAWAY FEEDBACK BEGINS

The process has begun to feed off itself, with rising atmospheric levels of carbon dioxide triggering releases of methane from peat bogs and soggy permafrost in Europe, Siberia and North America. “The world’s peatland stores of carbon are emptying at an alarming rate,” says Chris Freeman of the University of Wales. “It’s a vicious circle. The problem gets worse and worse, faster and faster.”

The world’s largest frozen peat bog stretches a million square kilometres across the permafrost of western Siberia. It’s melting. If we keep choosing cheap plane rides and driving to rainforest-depleting hamburger joints... “several hundred billion tons could be released,” says chief scientist Pep Canadell of Marine and Atmospheric Research in Canberra, Australia. [NewScientist.com Aug 11/05]

2007

METHANE WARMING KICKS INTO HIGH GEAR

Since 2007, atmospheric methane has been on the rise in a carbon feedback due to global warming. This feedback atmospheric increase is sustained and in the Arctic has reached a level of 1900 ppb. [Arctic Methane Emergency Group Dec/11]

FEBRUARY 8, 2007

CHINESE CITIES SQUABBLE OVER WEATHER MODIFICATION

Two Chinese cities in Henan province come close to open conflict when they both attempt to alter local weather patterns by cloud-seeding. The city downwind accuses the city upwind of stealing its weather. This hasn't deterred the Chinese government from promising the International Olympic Committee that China will use weather modification to guarantee sunny days for the 2008 Beijing Olympics. [[Foreign Policy In Focus Feb 8/07](#)]

MARCH 26, 2007

WARMING REMAKES WORLD CLIMATE ZONES

Global warming could re-make the world's climate zones by 2100, with some polar and mountain climates disappearing altogether and formerly unknown ones emerging in the tropics. This was surprising, since the tropics tend to have little variation in weather. Temperature changes of 3 or 4F in these regions might have more impact than a change of 5 to 8F in a region that is accustomed to regular changes. Species living in tropical areas may be less able to adapt. Mountain areas such as in Peruvian and Colombian Andes and regions such as Siberia and southern Australia face a risk of their current climates disappearing altogether, posing a risk to all species living in those areas [MSNBC Mar 26/07]

MARCH 28, 2007

WORLD'S BIGGEST SOLAR POWER PLANT OPENS IN PORTUGAL

The world's largest-producing solar power plant is inaugurated in Portugal. The 11-megawatt, \$78.5 million plant spreads across a 60-hectare hillside, 200 km southeast of Lisbon. Southern Portugal, one of the sunniest places in Europe, has up to 3,300 hours of sunlight a year. The new plant will produce enough power to supply 8,000 homes and will also prevent the emission of 30,000 tons of greenhouse gases a year when compared to fossil fuels. [[Kuwait Times Mar29/07](#)]

“This project is successful because Portugal's sunshine is plentiful, the solar power technology is proven, government policies are supportive, and we are investing,” says Kevin Walsh, managing director and leader of renewable energy at GE Energy Financial Services. The most productive solar plant in the world will produce 40% more energy than the second largest one, Gut Erlasse in Germany,.

Portugal is almost entirely dependent on imported energy, but is developing large wave and solar power projects and building wind farms to supply some 750,000 homes. It also is exploring new hydropower projects and plans to invest \$10.8 billion in renewable energy projects over the next five years. Prime Minister Jose Socrates said in January that his Socialist government wants 45% of Portugal's total power consumption to come from renewable sources by 2010. [AP Mar 29/07]

APRIL 6, 2007

HUMAN-INDUCED CLIMATE CHANGE HAPPENING NOW

“Human-induced climate change is happening now, and the impacts are being seen now,” says Cynthia Rosenzweig, a climate impacts specialist with NASA. But desire for tough action on emissions might not be shared in government departments of finance, transport, energy and industry. The arguments can be quite hard to win in rich northern countries, which have done most of the damage and believe they have the resources to cope with the calamity they have largely wrought.

“Mitigation is always the best form of adaptation. There is no way that you can effectively adapt to all the impacts of climate change; it's absolutely impossible,” says Anthony Nyong from the International Development Research Centre in Nairobi, lead author on African impacts. [BBC Apr 6/07]

MAY 3, 2007

NATURAL CARBON SINKS FAILING AS ATMOSPHERE WARMS

In the upper layer of ocean, the most studied region, plankton take up CO₂ the ocean absorbs from the atmosphere. But much of the carbon gets converted back to CO₂ in that layer and is quickly recycled back into the atmosphere. As little as 20% of carbon fallout makes it to the ocean's bottom for long-term storage. Natural systems become less-efficient “sinks” as they become saturated with CO₂. [Christian Science Monitor May 3/07]

MAY 12, 2007

CLIMATE CHANGE PASSES KEY TIPPING POINT, GOOSING TEMPERATURES

Climate change may have passed a key tipping point after it's learned that previously surges of carbon dioxide levels is due to more greenhouse gas escaping from trees, plants and soils as plants take up less carbon because of unusually dry and hot conditions. About half of human carbon emissions are re-absorbed into the environment, but increased temperatures reduce this effect. Bristol climate researcher Wolfgang Knorr, says, “We could be seeing the carbon cycle feedback kicking in, which is good news for scientists because it shows our models are correct. But it's bad news for everybody else.” [Sydney Morning Herald May 12/07]

JULY 30, 2007

US AIR FORCE EYES NANOMACHINES FOR WEATHER WARFARE

The US Air Force says it will launch swarms of “smart particles” into the sky called Microelectronic Mechanical Sensors and Global Environmental Mechanical Sensors.

Clouds of these extremely tiny nano-machines will be sent up inside hurricanes and other weather systems, reporting back streams of data in real time to enhance weather forecasting and manipulation. Interconnected, atmospherically buoyant and possessing self-directed navigation capability in three dimensions, MES and GEMS are expected to steer storm systems to specific targets, while increasing or decreasing their power and size. “It is potentially relatively inexpensive to do,” says Rutgers University scientist, J. Storrs Hall. “About the same price per pound as potatoes.”



Nanoparticles 80,000 times smaller than the width of a human hair travel to the brain after being inhaled. [Global Research Oct 21/07; Daily Texan July 30/07; *Weather as a Force Multiplier: Owning The Weather* 2025 Dec 11/96; PubMed Abstract]

AUGUST 7, 2007

EARTH REELS UNDER RECORD-BREAKING EXTREME WEATHER

The world experiences a series of record-breaking weather events, from flooding in Asia to heatwaves in Europe and snowfall in South Africa. Global land surface temperatures in January and April are the warmest since records began in 1880, at more than 1C higher than average for those months.

South Asia's worst monsoon flooding in recent memory affects 30 million people in India, Bangladesh and Nepal, destroying croplands, livestock and property and raising fears of a health crisis in the densely-populated region. Heavy rains also douse southern China, with nearly 14 million people affected by floods and landslides that killed 120 people.

England and Wales have their wettest May and June since records began in 1766, resulting in extensive flooding, more than \$6 billion in damage, and at least nine deaths. Germany whipsawed from its driest April since country-wide observations started in 1901 to its wettest May on record. Mozambique suffered its worst floods in six years in February, followed by a tropical cyclone the same month as the flooding Nile hits Sudan.

Uruguay has severe flooding, huge swells swamp some 68 islands in the Maldives, and the Arabian Sea had its first documented cyclone in June, touching Oman and Iran. Temperature records are broken in southeastern Europe, and in western and central Russia. In many European countries, April is the warmest ever recorded. Argentina and Chile saw unusually cold winter temperatures in July, while South Africa sees its first significant snowfall since 1981. [Reuters Aug 7/07]

SEPTEMBER 17, 2007

7 BILLION TONS CARBON EMISSIONS – SIBERIAN MELT LAKES SPREADING

Corporations and actual humans are now emitting about 7 billion tonnes of carbon each year. “Permafrost areas hold 500 billion tonnes of carbon,” says scientist Zimov. “If you don't stop emissions of greenhouse gases into the atmosphere.. the Kyoto Protocol will seem like childish prattle.”

Permafrost places that five or 10 years ago were empty tundra are now dotted with thawing ‘thermokarst’ lakes bubbling with methane.

Methane's "ticking time bomb" is detonating," says Zimov. "But in the end local problems of the north will inevitably turn into the problems of Russia's south, the Amazon region or Holland." A thousand billion tons of methane is hibernating just under the Arctic ice. [[Reuters Sept 17/07](#)]



SEPTEMBER 27, 2007
APPALACHIA SACRIFICED TO
BIG COAL COMPANIES

"It's a noisy, dusty place. They dynamite constantly," says Larry Gibson, 61. "It's the genocide of Appalachia, the destruction of a people who have lived in these mountains forever."

Mountaintop mining destroys forests, pollutes streams and floods communities. Local pilot Tom White has seen the transformation of the mountains in the 12 years he's been flying overhead. "It's changed dramatically," says White. "You look

at this stuff and you think, at least I do, that this just can't be right." [[Reuters Sept 27/07](#)]

JANUARY 8, 2008

KSLA NEWS REPORTS VERY HIGH BARIUM LEVELS

A KSLA news investigation finds that a substance that fell to Earth from a "chemtrail" contains high levels of Barium (6.8 ppm), or "more than six times the toxic level set by the EPA." The Louisiana Department of Environmental Quality confirmed that the high levels of Barium were "very unusual." Mark Ryan, Director of the Poison Control Center, says short-term exposure to barium "can lead to anything from stomach to chest pains and that long term exposure causes blood pressure problems." [[Jones Report Jan 8/08](#)]

FEBRUARY 2008

HUGE SOLAR PLANT OPENS IN USA

The 400-acre, 64-megawatt Nevada Solar One is the first built in the US in 17 years and the third largest in the world. The plant produces energy to power about 14,000 homes. [[New York Times June 27/0-8](#)]

MARCH 10, 2008

DRASTIC EMISSION CUTS URGED

Scientists from countries including the United States, Canada and Germany insist that the world must bring carbon emissions down to near zero to keep temperatures from rising further. Senior scientist Ken Caldeira, co-author of a paper published in the *Geophysical Research Letters*, says, "The answer implies a much more radical change to our energy system than people are thinking about."

Although many nations have been pledging steps to curb emissions for nearly a decade, the world's output of carbon from human activities totals about 10 billion tons a year and has been steadily rising. The Earth has already warmed by nearly 1.4F above pre-industrial levels.

A scientist named Schmittner says his modelling indicates that if global emissions continue on a “business as usual” path for the rest of this century, the Earth will warm by 7.2F by 2100. “This is tremendous,” Schmittner says. “I was struck by the fact that the warming continues much longer even after emissions have declined... Our actions right now will have consequences for many, many generations. Not just for a hundred years, but thousands of years.”

Last year's report of the U.N. Intergovernmental Panel on Climate Change said industrialized nations would have to cut emissions 80% to 95% by 2050 to limit CO₂ concentrations to a potentially catastrophic 450 ppm goal. The rest of the world will have to reduce emissions by 50% to 80%.

“People aren't reducing emissions at all, let alone debating whether 88% or 99% is sufficient,” points out Gavin Schmidt, of NASA's Goddard Institute for Space Studies. Leading climate scientist Ken Caldeira and geographer H. Damon Matthews say that “each unit of CO₂ emissions must be viewed as leading to quantifiable and essentially permanent climate change on centennial timescales.”

[[Washington Post Mar 10/08](#)]

APRIL 8, 2008

RENEWABLE ENERGY JOBS SOAR IN GERMANY

Renewable energy jobs in Germany shot up to 249,300 in 2007. As many as 400,000 people could be employed in the renewable energy industry in Germany by 2020. “The systematic expansion of renewable energy is not only good from the environmental and climate policy point of view but also for innovation, growth and employment in Germany,” says German environment minister Sigmar Gabriel.

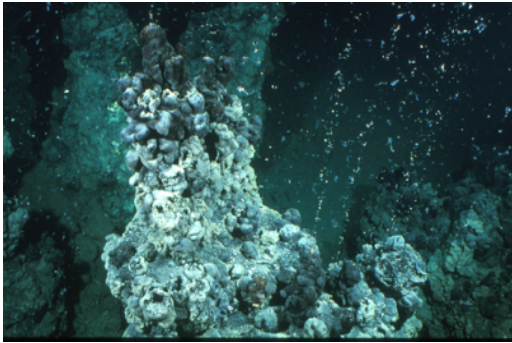
Biomass, which accounts for 39% of all renewable energy jobs in Germany, employed 96,100 people in 2007, up from 56,800 in 2004. Jobs in wind power, which accounts for 34% of green energy jobs in the country, grew to 84,300 in 2007 – up from 63,000 2004. Germany's wind power tech exports grew to \$8.9 billion in 2007.

At least 134,000 jobs in renewable energy created so far in Germany are thought to be a direct result of Germany's renewable energy law, which gave a big stimulus to investment. To train young people in the skills needed for the booming renewable energy sector, the government is also expanding a program to 5,100 training places have been announced under a joint government-industry initiative “Creating Environment Perspectives”. [*Umwelt Schafft Perspektiven*]. [[Truthout Apr 8/08](#)]

APRIL 17, 2008

ARCTIC CLATHRATES BEGIN THAWING

The frozen Arctic floor has started to thaw and release long-stored methane gas. The first stages of melting are underway off the coast of Siberia, where the Asian continental shelf stretches across an underwater area six-times the size of Germany, before falling off gently into the Arctic Ocean.



“This submarine hydrate was considered stable until now,” says the Russian biogeochemist Natalia Shakhova, member of the Pacific Institute of Geography at the Russian Academy of Sciences in Vladivostok. The permafrost has grown porous, says Shakhova, and already the shelf sea has become “a source of methane passing into the atmosphere.”

If this Siberian permafrost-seal thaws completely, “The result would be catastrophic global warming,” say Russian scientists. In mid-2008, the Arctic seawater is already proving to be “highly oversaturated with solute methane,” reports Shakhova. In the air over the sea, greenhouse-gas content is being measured in some places at five-times pre-industrial values.

Permafrost in the flat shelf is perilously close to thawing. Three to 12 kilometers from the coast, the temperature of sea sediment is -1 to -1.5C, just below freezing.

“If the Arctic Sea ice continues to recede and the shelf becomes ice-free for extended periods, then the water in these flat areas will get much warmer,” says Paul Overduin, a geophysicist at the Alfred Wegener Institute for Polar and Marine Research. “We cannot rule out sudden methane emissions. They could happen at any time,” warns Natalia Shakhova. [Der Spiegel Apr 17/08]

APRIL 24, 2008

AEROSOLS TO COUNTER GLOBAL WARMING COULD DAMAGE OZONE LAYER

Injecting sunlight-blocking particles into the stratosphere to offset global warming would erode Earth's protective ozone layer, warns Simone Tilmes at the National Center for Atmospheric Research (NCAR). Injections of small particles could reduce the ozone layer by 100 to 230 Dobson Units. The average thickness of the ozone layer in the Northern Hemisphere is 300 to 450 Dobson Units. [Science Express Apr 24/08]

APRIL 28, 2008

NBC NEWS AIRS “CHEMTRAILS OVER CALIFORNIA” [[YouTube Apr 28/08](#)]

JULY 20, 2008

WORSE THAN WE THOUGHT - EARTH WARMING FAR FASTER THAN EXPECTED

The World Ocean is indeed warming far faster than expected. In particular, the Southern Ocean shows much greater warming than was previously anticipated. [Reuters July 20/08]



JULY 30, 2008

SOLAR TAX CREDITS DEFEATED IN CONGRESS AGAIN

The Senate votes for the eighth time this past year to block investment tax credits for installing solar energy and the production tax credits for building wind turbines and other energy-efficiency systems. Both the wind and solar industries depend on these credits to scale their businesses and become competitive with coal, oil and natural gas - which receive substantial government incentives.

Despite his campaign commercial showing spinning wind turbines, Senator McCain does not show up for the crucial vote. Barack Obama bails, too.

The Solana solar power plant in McCain's home state is the biggest proposed concentrating solar energy project ever. The local utility is ready to buy its power. But because of the Senate's refusal to extend solar tax credits, "we cannot get our bank financing," says a senior adviser for the project. "Without the credits, the numbers don't work." Some 2,000 construction jobs are on hold.

Suntech America is a major Chinese-owned solar panel maker that wants to build a new factory in America. But his boss told him, "Don't set up any more meetings with governors. It makes absolutely no sense to do this if we don't have stability in the incentive programs." [[New York Times; Truthout Aug 13/08](#)]

FEBRUARY 5, 2009

BUTTERFLIES INSPIRE MORE EFFICIENT SOLAR POWER

The discovery that butterfly wings have scales that act as tiny solar collectors leads scientists in China and Japan to design a more efficient solar cell that could be used for powering homes, businesses, and other applications.

[[Science Daily Feb 5/09](#)]



FEBRUARY 22, 2009

THAWING DOWN TO 5 METERS

"We are seeing thawing down to 5 meters," says geophysicist Vladimir Romanovsky of the University of Alaska. "A third to a half of permafrost is already within a degree to a degree and a half [Celsius] of thawing. We are at a tipping point for positive feedback," he warns, referring to a process in which warming spurs emissions, which in turn generate more heat, in an uncontrollable cycle. The upper 10 feet of permafrost stores 1.9 trillion tons of carbon, more than double the amount in the atmosphere today. [[LA Times Feb 22/09](#)]

APRIL 3, 2009

GERMANY TO BECOME FIRST MAJOR RENEWABLE ENERGY ECONOMY

Germany's Reichstag in Berlin is set to become the first parliamentary building in the world to be powered 100% by renewable energy. Soon the entire country will follow suit. Germany is accelerating its efforts to become the world's first industrial power to use 100% renewable energy – and given current momentum, it could reach that green goal by 2050.

“The technical capacity is available for the country to switch over to green energy, so it is a question of political will and the right regulatory framework. The costs are acceptable and they need to be seen against the huge costs that will result if Germany fails to take action to cut its carbon emissions,” observed David Wortmann, Director of Renewable Energy and Resources, Germany Trade and Invest.

Both the will and the framework are in place. A new Roadmap published by the German Federal Ministry for the Environment sketches out the route the world's biggest exporter plans to take to switch over completely to renewable energy, and add 800,000 to 900,000 new clean tech jobs by 2030 as it does so. The roadmap lays out an integrated approach, involving measures for greater energy efficiency as well as a steady expansion of all types of renewable energy and a stronger focus on research and development into the next generation of green technologies. [[Renewable Energy World Apr 3/09](#)]

APRIL 18, 2009

WHITE HOUSE CALLS FOR AEROSOL GEOENGINEERING

Even expectant reporters are taken aback when White House science adviser John Holdren uses his first interview to announce, “Global warming is so dire, the Obama administration is discussing radical technologies to cool Earth's air.”

Holdren says the Obama administration is considering “last resort” technologies to chill the global greenhouse village. Referring to “radical” technologies such as spreading a sunlight-reflecting artificial cloud cover, Holdren told the nation, “It's got to be looked at. We don't have the luxury of taking any approach off the table.”

Instead of the deep, urgent reductions in carbon emissions urged by frightened scientists, drowning polar bears, still homeless Katrina survivors, and drought-stricken farmers everywhere, the White House decision to embrace climate geoengineering “represents the ultimate moral bankruptcy of institutions and a failure of democracy,” charges Dr. Andrew Glikson. [[Truthout Apr 18/09](#)]

JULY 4, 2009

DISCOVERY CHANNEL AIRS “CHEMICAL CONTRAILS”

The Discovery Channel's “Best Evidence” program brings “chemical contrails” into living rooms across North America. “What is in those fuel emissions, and what causes them to linger for hours and link up with one another like a ghostly blanket that seems to affect the weather and perhaps our health?” the producers ask William Thomas and other activists and scientists. “Are lingering jet trails seen by millions of people “potentially toxic 'chemical trails' emitted intentionally as part of secret geo-engineering experiments or weather-weaponization tests?” The "Chemical Contrails" episode is also shown in Paris. [Part 1](#) [Part 2](#) [Part 3](#)

JULY 30, 2009

KING COAL STILL BREAKING HEARTS AND BODIES IN APPALACHIA

Robert F. Kennedy Jr points out: Mining syndicates are detonating 2,500 tons of explosives each day - the equivalent of a Hiroshima bomb weekly – to blow up Appalachia's mountains and extract sub-surface coal seams. They have demolished 500 mountains, encompassing about a million acres, buried hundreds of valley streams under tons of rubble, poisoned and uprooted countless communities, and caused widespread contamination to the region's air and water.

On this continent, only Appalachia's rich woodlands survived the Pleistocene ice ages that turned the rest of North America into treeless tundra. King Coal is now obliterating the hemisphere's oldest, most biologically dense and diverse forests. Highly mechanized processes allow giant machines to flatten in months mountains older than the Himalayas, while the coal industry provides only 2% of the jobs in Central Appalachia and imposes a net cost to Kentucky of more than \$100 million per year.

[[Washington Post July 3/09](#)]

AUGUST 12, 2009

FERTILITY PLUMMETS IN WAKE OF WIRELESS

Wireless transmitter towers crowd the rooftops of Delhi. The Federation of Obstetric and Gynaecological Societies of India finds as many as 1 in 4 of that city's married couples are infertile: they haven't conceived after trying for two years or more. "Ten years ago, not more than 10% couples were diagnosed with infertility. Today, at least 50% patients who come to gynaecologists for consultation are suffering from infertility-related problems," says V K Poddar, FOGSI's chairman of reproductive endocrinology.

Baidyanath Chakraborty, one of the most respected names in the country today in treating infertility, notes, "In at least 40% cases, it is the husband/male partner who is infertile," adds Sajal Dutta, president of the Bengal chapter of FOGSI, "The fact that a large number of men are unable to impregnate women is because of poor quality sperm or low sperm count." [[India Times Aug 13/09](#)]

Dr. Manzoor Alam, an expert in the health care field warns the people of the ill-effects of mobile towers in their neighbourhood saying if not checked, it could produce massive health problems in the future. [[Patna Daily Aug 12/09](#)]

Infertility is on the rise in Canada, where up to 16% of heterosexual couples are experiencing infertility – a near doubling since the previous time infertility was measured in the nation in 1992. In 1984, the figure was 5.4%. [[Canada.com](#)]

Worldwide male sperm counts are falling by 2% a year. Problems with sperm dying off or not moving properly are common in men who use mobiles extensively. Many laptops are now equipped with Wi-Fi which sends out pulses every second as it maintains contact with the nearest access point. Young men with these devices on their laps are submitting their testicles to strong EMFs at close range, oblivious to the damage they may be doing to their chances of future fatherhood. [[Daily Mail Nov 30/10](#)]



Argentine doctors confirm that exposure from proximity to laptops connected to Wi-Fi causes a reduction in sperm motility associated with DNA damage to these cells, with a reduced reproductive capacity in males. "There was a significant increase in sperm that showed evidence of damage in their DNA molecules. Sperm DNA fragmentation has been shown to decrease the chance of natural conception," Dr. Conrado Avendano reports. Since EMF can penetrate tissues, this radiation also impacts female gametes. [[Tandem News Oct 24/10](#)]

Researchers from the University of Szeged, Hungary report that men who carry their cell phone on standby throughout the day have about a third less sperm than those who do not. Of the remaining sperm, high numbers are found to be swimming abnormally, reducing the chances of fertilization. [BBC June 27/04]



Exposure to mobile phone radiation for 60 minutes/day for the total period of three months also significantly decreases the serum testosterone level. [National Institutes of Health USA; Saudi Medical Journal Aug 31/10]

Meanwhile, the FDA has approved permanent wireless birth control. A tiny insert, about the size of a grain of rice, is placed in each fallopian tube. A battery-powered instrument then delivers low-level radiofrequency energy to each tube. The permanent procedure cannot be reversed. [[CBS News](#)]

DECEMBER 18, 2009

CANADA TAGGED “FOSSIL OF THE YEAR”

Once again, a coalition of environmental groups at the Copenhagen Climate Change Conference gives its “Fossil of the Year” award to Canada. The citation calls Canada “the absolute worst country at the talks.” [Fully one-third of Canadian voters voted for tar sands and anti-Kyoto accords advocate, Prime Minister Harper.] Canada has been under pressure to cut greenhouse gas emissions by just 20% from 2006 levels by 2020. But Canada’s corporate government has not ruled out giving special breaks to tracings companies regarding their increasing greenhouse gas emissions. [CBC Dec 18/09]

2010

CARBON EMISSIONS HIT ALL-TIME HIGH OF 9.7 BILLION TONS

After a short dip in 2009 due to the global financial crisis, emissions from fossil fuels rebounds in 2010, hitting an all-time high of 9.7 billion tons of carbon in 2012. [[Earth Policy Inst. July 23/13](#)]

ARCTIC OCEAN BECOMES SIGNIFICANT METHANE EMITTER

Satellite data shows the Eastern Arctic Ocean a significant methane emitter after 2009. [Arctic Methane Emergency Group Dec/11]

JANUARY 15, 2010

ARCTIC METHANE EMISSIONS UP 1/3 IN FIVE YEARS

Methane emissions from the Arctic have risen by almost one-third in just five years. Paul Palmer, a scientist at Edinburgh University who worked on the new study, says, "It shows that even a relatively small amount of warming can cause a large increase in the amount of methane emissions." The increase represents about 1 million extra tonnes of methane each year. [Guardian Jan 15/10]

MARCH 4, 2010

RUSSIANS FIND MANY METHANE HOTSPOTS

A Russian expedition to the Arctic finds Methane levels elevated overall and the seascape dotted with more than 100 hotspots. Says Shakhova, “If it further destabilizes, the methane emissions would be significantly larger.” [[Eco Buddhism](#); National Science Foundation Mar 4/10]



MAY 19, 2010

BP's UNDERSEA OIL GUSHER 19-TIMES BIGGER THAN ORIGINALLY THOUGHT

Four million gallons, a day of crude oil may be spewing from the leaking wellhead, 19-times the previous estimate, an engineering professor told Congress after viewing deep-sea video from the site. The figure of 210,000 gallons a day that BP and the federal government have been using for weeks is based on observations of the surface slick made by satellites and aircraft. The well is 5,000 feet below the surface. Coast Guard advisers are “considering” putting sensors

near the leak to give an unwanted better understanding of the amount of oil entering the water.

[McClatchy Newspapers May 19/10]

JUNE 7, 2010

COREXIT DISPERSANTS WREAK HAVOC IN GULF

The sulphur and sulphuric acid-based dispersant makes the oil spewing into the gulf sink, where it is impossible to clean up – and where it depletes oxygen levels under the water, killing plankton and everything above plankton in the food chain. “Corexit is toxic, petroleum is toxic, and its depleting the oxygen levels,” says environmental engineer Joe Taylor. Taylor says BP should be letting the oil rise to the surface, then skimming and collecting as much as possible. The dispersant should be used on what’s left. [floridaoilspilllaw.com]

Over 1 million gallons of the chemical have been pumped in Gulf waters, killing dolphins and other animals. One ingredient damages red blood cells and kidneys. “The reason they are using it is to reduce the obvious visual effect,” says Jerald Ault, a professor at the University of Miami. [McClatchy Newspapers June 7/10]

JUNE 8, 2010

HUGE UNDERSEA METHANE RELEASE IN GULF BLOWOUT

The oily undersea zone, three miles wide and 600 feet thick at its core, contains levels of methane gas 10,000 times greater than the norm. “I’ve never seen concentrations of methane this high” in the Gulf of Mexico, says marine sciences professor Samantha Joye. “The entire water column has dispersed oil,” says Joye, whose sail was funded by the National Science Foundation and the National Oceanic and Atmospheric Administration. [LA Times June 8/10]

“This is the most vigorous methane eruption in modern human history,” says John Kessler, a Texas A&M oceanographer. Small microbes feeding on the oil are consuming large amounts of oxygen. When oxygen levels drop low enough, organic life and the breakdown of oil grinds to a halt. A 15-mile-long plume drifting from the leak site contains methane concentrations up to 10,000 times higher than normal and oxygen levels depleted by 40% or more. Some parts of the plume had oxygen concentrations just shy of the level that tips ocean waters into uninhabitable “dead zones”.

[[Alexander Higgins June 22/10](http://AlexanderHiggins.com)]

JUNE 15, 2010

75% OF OVERSEERS OF OIL ERUPTION EFFECTS HAVE TIES TO BP

Scientists accuse BP of trying to control the research by selecting the research topics and the members of an advisory committee that would select the institutions to oversee the money and research [floridaoilspilllaw.com June 15/10]

JUNE 20, 2010

BP BLOWOUT NOW LARGEST ENVIRONMENTAL DISASTER IN US HISTORY

Naomi Klein writes: The Deepwater Horizon disaster is not just an industrial accident – it is a violent wound inflicted on the Earth. Alaskan fisheries have yet to fully recover from the 1989 *Exxon Valdez* spill and some species of fish never returned. As much as a Valdez-worth of oil may be entering the Gulf coastal waters every four days.

“Everything is dying,” a woman says at a town hall meeting. This Gulf coast crisis is about many things – corruption, deregulation, the addiction to fossil fuels. But underneath it all, it's about our culture's excruciatingly dangerous claim to have such complete understanding and command over nature that we can radically manipulate and re-engineer it with minimal risk to the natural systems that sustain us. Over three years, top oil and gas companies spent “\$39 billion to explore for new oil and gas. Yet, the average investment in research and development for safety, accident prevention and spill response was a paltry \$20 million a year.”

In the initial exploration plan that BP submitted to the federal government for the ill-fated Deepwater Horizon well, the phrase “little risk” appears five times. Just three weeks before the it blew up, the president announced he would open up previously protected parts of the country to offshore drilling. The practice was not as risky as he had thought, he explains. "Oil rigs today generally don't cause spills. They are technologically very advanced." [Guardian; Nation June 20/10]



JULY 19, 2010

SPAIN LEADING RENEWABLE ENERGY RACE

Spain has overtaken the US as global solar leader. They currently have wind farms capable of generating more than 40% of Spain's total wind energy and plan for the entire country to be running of 100% renewable energy by 2050.

With over 300 sunny days, Spain is setting out to triple its output in the next decade and exceed the EU target of 20%

renewable energy by 2020. Prime Minister Jose Luis Rodriguez Zapatero announced that Spain would meet 23% of its energy demands and generate 40% electricity without emitting CO2. In 2009, one wind farm produce met over 50% of the country's total energy demand. With more than 400 wind farms and 12,000 turbines, Spain is the third largest producer of wind energy, closer behind China and the US. Spain is geared to boost renewable energy production by 67%. [[Care2 July 19/10](#); [Guardian July 13/10](#)]

JULY 23, 2010

CANCER RATE IN FALLUJAH FROM DU EXPOSURE WORSE THAN HIROSHIMA

Tom Eley writes: The people of Fallujah are experiencing higher rates of cancer, leukemia, infant mortality, and sexual mutations than those recorded among survivors in Hiroshima and Nagasaki in the years after those Japanese cities were incinerated by US atomic bomb strikes in 1945.”

In Fallujah the rate of leukemia is 38-times higher, the childhood cancer rate is 12-times higher, and breast cancer is 10-times more common than in populations in Egypt, Jordan, and Kuwait. The infant mortality rate in Fallujah is eight-times higher than in neighbouring Kuwait. Iraqi and British doctors are demanding a UN inquiry, noting, “Young women in Fallujah in Iraq are terrified of having children because of the increasing number of babies born grotesquely deformed, with no heads, two heads, a single eye in their foreheads, scaly bodies or missing limbs. In addition, young children in Fallujah are now experiencing hideous cancers and leukemias.”

Preparing to deliver a major escalation of violence in Afghanistan, CENCTOM General James “Mad Dog” Mattis - who played a key planning role in the US assault on Fallujah in 2004 - told a public gathering, “It’s fun to shoot some people... You know, it’s a hell of a hoot.” [[WSWS July 23/10](#)]

JULY 31, 2010

HEAT WAVE KILLS PEOPLE, CROPS AND HOPES IN SOUTH CHINA

Hot peppers, grapes and other crops withered by almost 70%, threaten food shortages and the incomes of thousands of farmers. [[US China Daily July 31, 10](#)]

AUGUST 4, 2010

RUSSIA UNDER SMOKE CLOUD FROM MASSIVE FOREST FIRES

The unprecedented heat wave affecting western Russia is one of the deadliest heat waves in world history. The resulting fires send smoke over 1,860 miles. (Comparable distance: San Francisco to Chicago.)

More than 15 major US cities set records for the hottest June – August temperatures. In Pakistan, records melt as the mercury hit 128.3°F at the town of Mohenjo-Daro on May 26 - the hottest reliably measured temperature ever recorded on the continent of Asia.



Kuwait records its hottest temperature ever at 52.6°C (126.7°F). Jeddah, the second largest city in Saudi Arabia hits a record 125.6°F on June 22, accompanied by a super-sandstorm that trips eight power plants offline. Russia, Finland, Cyprus, Qatar, Belarus, Ukraine, Chad, Sudan and Niger also set heat records. [[Weather Underground Sept 22/10](#)]

SEPTEMBER 16, 2010

MONSANTO ROUNDUP LINKED TO BIRTH DEFECTS

Glyphosate, the active ingredient in the world's best-selling weedkiller Roundup, causes malformations in frog and chicken embryos at doses far lower than those used in agricultural spraying – and well below maximum residue levels in products presently approved in the European Union. Problems started in 2002, two years after large scale introduction of RR soybeans in Argentina. “Lab findings are compatible with malformations observed in humans exposed to glyphosate during pregnancy,” says Prof. Andrés Carrasco, director of the Laboratory of Molecular Embryology at the University of Buenos Aires Medical School at Carrasco. [[Organic Consumer Sept 16/10](#)]

OCTOBER 20, 2010

CO2 CATASTROPHIC TRENDS TO 2100

The A1B scenario has atmospheric concentrations of CO2 around 520 ppm in 2050 and 700 in 2100. We're currently on the A1F1 pathway, which would take us to 1000 ppm by century's end. The start of permafrost thaw typically occurred 25 or more years after warming started and 20% of the total thawing occurred after warming stopped in 2100. [[Think Progress Oct 20/10](#)]

NOVEMBER 10, 2010

WHALES SUNBURNT BY RISING UV

Whales off the Mexican coast are showing signs of severe sunburn from rapidly rising levels of UV radiation. [[AP Nov 10/10](#)]



NOVEMBER 21, 2010

SIBERIAN LAKES SEETHING WITH METHANE RELEASES

Katey Walter Anthony, of the University of Alaska Fairbanks, has been measuring methane seeps in Arctic lakes for 10 years. She is stunned to see how much methane is leaking from sediment at the bottom of one of the first lakes she visited. “On some days it looked like the lake was boiling,” she says. Lakes doubling in size as warm water eats into thawing banks. The ground around remote Chersky, an isolated town on the bank of the Kolyma River at the mouth of the East Siberia Sea 4,000 miles east of Moscow, has warmed about 2C (3.6F) in the last five years - to about 23F today. The northern Siberian soil, called *yedoma*, covers 700,000 square miles and is particularly unstable. [AP Nov 21/10]

NOVEMBER 29, 2010

METHANE LEAKAGE UNDERESTIMATED

Looking at the latest research indicating methane has about 30% greater climate impact than the IPCC stated, Dr. Robert Howarth, says, “I believe they are severely underestimating the methane leakage.” [[The Energy Collective](#)]

2010-2011

GREENLAND WARMING TEMPS 2010-2011 UP 6-9C

In parts of northern Canada, Greenland and the surrounding ocean during the 2010-2011 northern winter, temperatures are more than 6C warmer than the baseline temperature average for the period of 1951-1980. And 7 to 9C above average over the Chukchi Sea.

[[Climate Code Red Apr 10/12](#)]

JANUARY 23, 2011

RETHINKING “SAFE WARMING”

With Arctic sea-ice in a "death spiral", Greenland melting at an unprecedented rate, a seemingly extraordinary number of extreme climate events in the last year from the Russian fires to the Pakistan floods, and 18 countries setting new temperature records, have we already gone too far for a safe climate?

The period of human settlement over the past 10,000 years is known as the Holocene. Today's temperature is slightly above the warmest part of the Holocene. Around this temperature level, polar ice sheets start substantially melting. Heat-reflecting white sea-ice is replaced by heat-absorbing dark ocean water, producing an “albedo flip”, which substantially increases the melt season, with immediate local temperature and sea level effects.

“Even small global warming above the level of the Holocene begins to generate a disproportionate warming on the Antarctic and Greenland ice sheets,” Hansen and Sato say. Amplifying feedbacks make ice sheet disintegration highly non-linear. The early Pliocene, when sea level was about 25 metre higher than today, was only about 1C warmer than present-day temperature. Hansen and Sato conclude: “Goals of limiting human-made warming to 2C and CO₂ to 450 ppm are prescriptions for disaster. Augmentation of peak Holocene temperature by even 1C would be sufficient to trigger powerful amplifying polar feedbacks, making ice sheet disintegration and large sea level rise inevitable.”

The notion that 2C is a “safe” target is out the window. If past is prologue, even 1 degree looks like an unacceptably high risk. [[Climate Code Red Jan 23/11](#)]



MARCH 11, 2011

THREE FUKUSHIMA REACTORS MELT DOWN

On April 8, TEPCO’s Fukushima nuclear power plant loses cooling to three active reactors after a powerful quake and accompanying tsunami knocked out much the region. Long cited for maintenance violations, the plant crumbles under the double blows. All three reactors melt down, releasing significant amounts of deadly radionuclides.



The 9.0 magnitude earthquake and tsunami unleashed a tsunami with 30 foot waves. The fourth largest earthquake on record and the largest to hit Japan kills 15,884 people and did some \$300 billion in damage. [CNN July 11/14]

“It went up with a bang,” a Japan press briefing was told after an Atomic Energy Agency team measured levels of radiation 20 to 40 miles from the wrecked facility high enough to prompt evacuations at European standards.[Sunday Mirror Mar 20/11]

Iodine131 is currently being released to the prevailing winds at 73% of the daily levels experienced after that 1986 catastrophe. Strobing at trillions of times-per-second like a miniature x-ray machine run amok, relentless radioactive emissions from each ingested or inhaled isotope can severely damage living tissue and DNA. [Kyodo Apr 12/11]

Caesium137 emissions from Fukushima are now pegged at “the same order of magnitude” as Chernobyl. And caesium is still being found in soil in Germany, Austria and France 25 years after the Chernobyl nuclear disaster. [Daily Mail Apr 11/11]

Japanese officials admit that as much as 630,000 terabecquerels of radioactive material have been lofted into the air from ruined reactors 1 and 3. Each terabecquerel signifies one-trillion small nuclear disintegrations per second taking place within any body that ingests any part of a radioactive stew consisting of barium140, cobalt60, caesium134, caesium136, caesium137, iodine132, iodine133, tellurium129, tellurium132 and strontium90. The vagaries of wind-borne radioactivity ensure that some of the most dangerous places are far from the reactor. Eating some vegetables and cheese in Europe now qualifies as “risky behaviour”. [Forbes.com Apr 10/11; rt.com Apr 9/11, Apr 11/11; e.nikkei.com Apr 12/11; Sunday Mirror Mar 20/11]



MARCH 30, 2011

IAEA CONFIRMS VERY HIGH LEVELS OF CONTAMINATION FAR FROM REACTORS

The concentration per area of long-lived Cesium 137 is extremely high as far as 40 kilometers from Fukushima and would trigger compulsory evacuation under IAEA guidelines. The IAEA reports up to 3.7 megabecquerels per square meter. The deposition level that triggered compulsory relocation in the aftermath of the Chernobyl accident was 1.48 MBq/sq. m. [allthingsnuclear.org Mar 30/11]

APRIL 4, 2011

**FUKUSHIMA CONTAMINATES
PACIFIC OCEAN**

Some 1,850 gallons of seawater are being poured onto Fukushima's hot plutonium and uranium piles – and running off into the ocean every hour, 24/7. “The fact that radioactive water is being deliberately dumped into the sea is very regrettable and one we are very sorry about,” says Chief Cabinet Secretary Yukio Edano. [Bloomberg Apr 4/11]



APRIL 10, 2011

FUKUSHIMA RADIOACTIVITY DETECTED IN CANADA AND USA

Radioactive rainwater is collected in downtown Vancouver, Canada. Philadelphia becomes the 14th U.S. city to detect radioactive fallout in its drinking water. [SFU Press Release Mar 28/11; Forbes.com Apr 10/11]

APRIL 15, 2011

AEROSOL GEOENGINEERING WON'T WORK

Even halving the amount of sunlight reaching the north may not be enough to reduce rapid warming. With warming penetrating hydrate sediments, reducing surface temperature may not be able to reverse such a process quickly enough to avoid massive methane releases. The window of opportunity for Solar Radiation Management may already have closed in 2011. [Geo-Engineering Blogspot Apr 15/11]

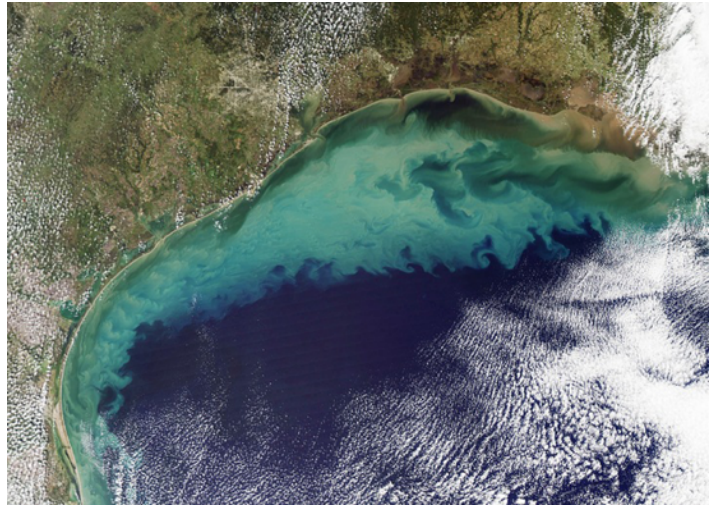
APRIL 27, 2011

MONSANTO GMOS HURTS PLANTS, ANIMALS, HUMANS, EARTH

Commercialized in 1974, glyphosate is the most widely used herbicide in the world. A letter to the US Secretary of Agriculture by Dr. Don Huber warns that a micro-organism appearing in high concentrations in genetically modified Roundup Ready corn and soybeans “appears to significantly impact the health of plants, animals and probably human beings.”

“What glyphosate does is, essentially, give a plant AIDS,” Huber says, by making plants unable to mount a defence against soil pathogens or properly uptake many nutrients. Affected crops and beneficial soil microorganisms dies, leaving industrial farm soils totally dependent on petroleum-based nitrogen fertilizers, which runoff to form ocean “dead zones” and evaporate into the air to speed global heating.

The “miracle” herbicide also increases the severity of diseases on normal crop plants, and fosters resistance in the weeds it's intended to kill – requiring ever more applications of Round-Up.



“We are experiencing a large number of problems in production agriculture in the U.S. that appear to be intensified and sometimes directly related to genetically engineered (GMO) crops, and/or the products they were engineered to tolerate — especially those related to glyphosate (the active chemical in Roundup® herbicide and generic versions of this herbicide,” Huber writes in a follow-up letter.

“We have witnessed a deterioration in the plant health of corn, soybean, wheat and other crops recently with unexplained epidemics of sudden death syndrome of soybean. At the same time, there has been an increasing frequency of previously unexplained animal (cattle, pig, horse, poultry) infertility and [miscarriages]. These situations are threatening the economic viability of both crop and animal producers.”

Monsanto-GMO corn sprayed with glyphosate becomes susceptible to Goss' wilt, which was a “major contributor” to an estimated one billion bushels of corn lost in the US in 2010, “in spite of generally good harvest conditions,” writes Huber. [[Altnet Apr 27/11](#)]

MAY 4, 2011

OCEAN NO LONGER BREAKING DOWN AS MUCH METHANE

US Government scientists report that the marine environment is no longer able to break down some methane, as indicated by spikes in methane concentration at all eight major Arctic Ocean plumes. Oxygen, nutrients, and trace metals required by methane-eating microbes are dwindling year-by-year as more methane enters the water. [[Berkeley News Center May 4/11](#)]

JUNE 4, 2011

HALF PERMAFROST GONE BY 2050

An NCAR-led study finds half the land-based permafrost will vanish by mid-century on our current emissions trajectory. Thawing permafrost feedback will turn Arctic from carbon sink to source in the 2020s, releasing 100 billion tons of carbon by 2100.

Climate model do not yet incorporate the amplifying feedback from methane released by a defrosting tundra, adding more than one billion tons of carbon a year to the atmosphere by the mid-2030s. Says NSIDC scientist Kevin Schaefer, “That is a lot of carbon.” [[Think Progress June 4/11](#)]

JUNE 12, 2011

OUTPACING PETM TRIGGERED BY METHANE

Carbon is pouring into Earth's atmosphere 10-times faster today than during a dramatic event 56 million years ago that raised Earth's temperature by at least 9F. The Paleocene-Eocene Thermal Maximum (PETM), could have been a pre-historic dress rehearsal for a future climate change event that could be even more abrupt and much more damaging.

Life is as sensitive to the rates of change as to the absolute amount of change. UN scientists now say that unless CO2 emissions are curtailed, average global temperatures could climb 9F by 2100, compressing a PETM-type spike onto a scale of hundreds, rather than thousands of years. If the PETM was a climate change "squeeze," while the asteroid that wiped out the dinosaurs 10 million years earlier was a "punch," we are "probably closer to the punch than the squeeze," says Prof. Kump.

Carbon emissions during the 20,000-year warming period did not exceed 1.7 billion metric tonnes per year. Recent fossil fuel emissions of carbon average over 8 billion tonnes, with 2010 showing the highest output on record. "It is the rapid rate at which we are dumping carbon that is so dangerous, as well as the large volumes involved," says Cambridge U. and PETM prof Bryan Lovell. It took up to 200,000 years for the planet to return to something resembling normalcy.

All indications are that the PETM was triggered by the release of methane trapped below the ocean floor in frozen gas hydrates. "Given that we are pumping carbon dioxide (CO2) into the atmosphere at a rate nearly 10-times that of the PETM means that the climate system is having to adjust to a much more intense disturbance," says Prof. Kump. [Independent June 12/11]



JUNE 16, 2011

NOSEBLEED, DIARRHEA, LACK OF ENERGY IN CHILDREN IN FUKUSHIMA

Many children in Koriyama City in Fukushima Prefecture, 50 kilometers from Fukushima I Nuclear Power Plant, are suffering inexplicable nosebleed, diarrhea, and lack of energy since the triple meltdowns. A mother of two says her 6-year-old daughter had nosebleed everyday for three weeks in April. Her 2-year-old son suffers nosebleeds, too.

Schools in Koriyama provide local milk loaded with concentrate radioactive materials. The mother says she lets her daughter drink milk with other children so she won't be shunned for not drinking milk with them. Another mom with a 6-year-old son doesn't understand why in Iitate-mura, "They just let the villagers get exposed to high radiation for a month."

Her family just built a new house, and she was not sure how they could survive economically if they moved. If they move, when would they be able to come back? What about cost of moving, or the psychological effect on her child? She just couldn't decide what to do. [[Tokyo Shinbun June 16/11](#)]





JULY 5, 2011

1 IN 20 FUKUSHIMA CHILDREN WILL DEVELOP THYROID CANCER

At least 1 in 20 Fukushima children will develop thyroid cancer. Residents are shovelling radioactive topsoil from their lawns and dumping it into forests, parks and streams in an attempt to protect themselves from high levels of radiation.

The Fukushima Prefecture government survey found levels up to an equivalent of a 50 millisieverts per year of thyroid radiation exposure for 1 year olds. The US annual radiation exposure limit is 4 millisieverts per year in drinking water for adults. Since the thyroid is known to accumulate radioactive iodine it is one the most sensitive organs in the body in regard to the risk of cancer due to radiation exposure.

Almost 4 months into the disaster, three reactors are still melting down. The radiation already released is comparable to Chernobyl. Cesium is still being detected in Tokyo drinking water and Fukushima residents are urinating radiation.

TEPCO is refusing to build a concrete barrier beneath the reactor to stop molten fuel from spreading through the water table and into the surrounding environment because it costs too much. Even with nuclear radiation being detected at levels 4-times higher than Chernobyl evacuation limits in areas far

beyond the Fukushima evacuation zone, the government still refuses to evacuate those areas.



Taxpayers are being forced pay to clean up TEPCO's mess financially, while sacrificing their health, safety and eventually their lives. Mussolini called governments serving corporations fascism. [[Alexander Higgins July 5/11](#)]

MAY 28, 2011

COAL OPPOSITION STIFFENS WORLDWIDE

In the United States and Europe, the triple hits of recession, cheap alternatives, and aggressive anti-coal campaigning has helped halt the expansion of coal burning. Since 2004, plans to build more than 150 coal plants in the U.S. have been abandoned. But in the fertile farming areas that support large rural populations in much of Asia, the coal boom spells civil conflict as fields are seized, villages are ordered to pack up and leave, and communities resist. In India or Bangladesh, marches and demonstrations of more than 10,000 people are common.

While local people face displacement and the destruction of their livelihoods, electricity is often exported to urban centres. Communities are calling for a more sustainable model of energy development that prioritizes access to energy services for all, environmental sustainability, and human health. Their efforts to halt coal-plant construction have placed them front and centre in the struggle over energy and development in the 21st century in places like: Malaysia, Bangladesh, India, Burma, Thailand, Australia and Colombia. [[Grist May 28/11](#)]

SEPTEMBER 28, 2011

AEROSOL GEOENGINEERING “PIE IN THE SKY” - OR PIE IN THE FACE?

Professor David Karoly, of the University of Melbourne’s School of Earth Sciences, says another ‘pie in the sky’ solution is to shoot sulphur particles in the atmosphere to shield the earth from the sun. He says that would destroy the ozone layer. [[Wake Up The Lies Sept. 28/11](#)]

OCTOBER 2011

ARCTIC SHELF METHANE RELEASES UP SHARPLY

Once again, maximal methane concentrations are found over the East Siberian Arctic Shelf. As the Arctic warms several times faster than the rest of Earth, at least 50 million metric tons of methane is being released every year from the largest continental shelf in the world. [[Arctic Methane Emergency Group Dec/11](#)]

OCTOBER 2011

GERMANY TO SHUTTER ALL REACTORS BY 2022

German Chancellor Angela Merkel commits to shutting down all 17 of Germany’s nuclear reactors by 2022. Eight will be permanently switched off by the end of this year. The country plans to compensate by reducing electricity consumption by 10% and doubling the share of renewable energy sources to 35% by 2020. Europe’s overall renewable energy capacity rose 30% in 2010. [[Natural Awakenings Oct/11](#)]

OCTOBER 2, 2011

FIRST MASSIVE ARCTIC OZONE HOLE

Scientists say the destruction this spring “far exceeded” any previously observed loss in the Arctic. The hole covered two million square kilometres - about twice the size of Ontario - and allowed high levels of harmful ultraviolet radiation to hit large swaths of northern Canada, Europe and Russia. The discovery of the “unprecedented” hole comes as the Canadian government is moving to cut its key ozone monitoring network.

UV levels were as much as 60% higher than normal under the hole last spring. The ozone layer recovered in late April and May when winds mixed the atmosphere, but the effects of the hole lingered for months. Scientists warn, “more acute Arctic ozone destruction could exacerbate biological risks from increased ultraviolet radiation exposure, especially if the vortex shifted over densely populated mid-latitudes, as it did in April 2011.” [National Post Oct 2/11]

OCTOBER 6, 2011

GERMANY MAY BUY GREEK SUNSHINE

Greece hopes large-scale solar plants modelled on the new Gemasolar solar power plant in Fuentes de Andalucía, Spain could help it export energy to northern Europe. Plans are to develop about 20,000 hectares of solar power parks for exporting renewable energy to Germany, while creating 60,000 jobs during record unemployment.

“Greece could become the showcase of solar development in Europe’s ‘sun belt’ and that development could become the main driver of Greece’s green economic growth,” enthuses Costas Karayiannis, chief executive of Greece’s only solar energy investment fund, Axeon Navitas. “Germany is the global leader in solar energy and it has a lot less sun than Greece. It makes a lot of sense for it to invest in this type of project here.” [Guardian Oct 6/011]



DECEMBER 19, 2011

14,000 DEAD IN USA FROM FUKUSHIMA FALLOUT

An estimated 14,000 excess deaths in the United States – mostly infants under age one – are linked to the radioactive fallout from the wrecked Fukushima nuclear reactors, according to the first peer-reviewed study published in the *International Journal of Health Services*. The estimate of 14,000 excess U.S. deaths in the 14 weeks after the Fukushima meltdowns is comparable to the 16,500 excess deaths in the 17 weeks after the Chernobyl meltdown in 1986.

Six days after the disastrous meltdowns, plumes of radioactivity arrived over North American shores. Tests by the EPA found levels of radiation in air, water, and milk hundreds of times above normal across the USA.

Internist and toxicologist Janette Sherman, MD, says, “Based on our continuing research, the actual death count here may be as high as 18,000, with influenza and pneumonia, which were up five-fold in the period in question as a cause of death. Deaths are seen across all ages, but we continue to find that infants are hardest hit because their tissues are rapidly multiplying, they have undeveloped immune systems, and the doses of radioisotopes are proportionally greater than for adults.” [[PR News Wire Dec 19/11](#)]

DECEMBER 13, 2011

VAST METHANE PLUMES SEEN IN ARCTIC OCEAN AS SEA ICE RETREATS

The scale and volume of the methane release astonishes Igor Semiletov, head of the Russian research team who has been surveying the seabed of the East Siberian Arctic Shelf off northern Russia for nearly 20 years.

“Earlier we found torch-like structures like this but they were only tens of metres in diameter. This is the first time that we've found continuous, powerful and impressive seeping structures more than 1,000 metres in diameter. It's amazing,” Dr Semiletov says. “I was most impressed by the sheer scale and the high density of the plumes. Over a relatively small area we found more than 100, but over a wider area there should be thousands of them.”

In late summer 2011, the Russian research vessel *Academician Lavrentiev* conducted an extensive survey off the East Siberian coast. “In a very small area, less than 10,000 square miles, we have counted more than 100 fountains, or torch-like structures, bubbling through the water column and injected directly into the atmosphere from the seabed,” he added. [Independent Dec 13/11]



DECEMBER 21, 2011 CHINESE PROTEST COAL

Tens of thousands of residents in China's southern Guangdong province occupy a highway to demonstrate against the development of a new coal plant near Shantou city. The residents say existing oppose another coal plant in an area already fouled by smog making people sick. After two people were reportedly killed in clashes with police, officials have abandoned plans to build the new coal plant.

Since 1980, coal consumption in China has grown 500%, and now represents three quarters of consumption in Asia. That has coincided with a five-fold increase of lung cancer since 1970, now the leading cause of death in China. An increase in smoking is also a huge contributor. [[Think Progress Dec 21/11](#)]

DECEMBER 24, 2011 WIRELESS BRAIN TUMOUR PANDEMIC

Medical models now predict a 2,400% increase in brain tumours within 15 years. After investigating peer-reviewed studies showing blood-brain barrier failure after two-minutes on a cell phone, deleterious impacts on sperm, double strand DNA breaks, stress gene activation from toxic exposure, and increased risk of acoustic tumours and brain cancer, co-researcher L. Lloyd Morgan concludes: “What this analysis shows is that, unless mobile phone usage behaviour patterns change significantly, we can reasonably expect a pandemic of brain tumours, for which we are ill-prepared.” [Neurology & Neurophysiology Dec 24/11]

OCTOBER 22, 2011 100,000 EXCESS DEATHS IN NORTH AMERICA IN 2011 FROM FUKUSHIMA

CDC mortality data show that total USA excess deaths for the period from the Fukushima event March 11, 2011 to September 3, 2011 was 34,129 excess deaths. The peak excess death rate period was April 23-May 21, 2011. May 7, 2011 was a peak excess death day with a 34% increase. [[US Regions with Significant Increases in Mortality Since 3/13/11](#) (CDC) [[Seattle Exopolitics Examiner Oct 22/11](#)]



2012

32 BILLION TONS CO2 EMISSIONS

In 2012, over 32 gigatons of CO₂ were emitted into the atmosphere and the net human greenhouse gas emission was equivalent to more than 45 gigatons of CO₂. At the current rate of emissions and emissions growth, we are now on track to hit between 500 and 600 parts per million of CO₂ by the middle of this century. And this range of CO₂ is enough or nearly enough to melt all the world's ice, setting us on a path toward a place not seen in at least 40 million years. A path toward long-term temperatures in the range of 6C hotter than the 1880s. Average temperatures in Siberia, Alaska and western Canada are now 3 to 4C warmer than 50 years ago. [[Climate Code Red Apr 10/12](#)]

FEBRUARY 21, 2012

LARGE AREAS OF OCEAN STARVED OF OXYGEN

“The water is getting warmer, and warm water holds substantially less oxygen than cold water... Off southern California over the past 22 years we've lost about 30% of the oxygen at depths of around 200 to 300 metres,” says Professor Lisa Levin of the Scripps Institution of Oceanography in La Jolla, California.

Deep-water temperature gauges off Spitsbergen in the Arctic and in the Southern Ocean near the Antarctic have recorded temperature increases of between 0.03°C and 0.5°C, and as much as 1°C, which is highly significant for a stable environment that does not change at all from one century to the next, she says.

“Those are significant numbers. The warming is more intense at the sea surface but is reaching the deep water,” Professor Levin states. [Independent Feb 21/12]

Large releases of methane from hydrates in underwater sediments cause oxygen depletion, resulting in much of the methane entering the atmosphere. [[Methane-Hydrates Blog Mar/12](#)]

APRIL 7, 2012

GAS LEAKS IMPACT CLIMATE

A North Sea Elgin field gas well is leaking about 200,000 cubic meters of natural gas per day, approximate the annual global warming impact of 35,000 Americans, writes award-winning BP spill reporter Elizabeth Grossman. The gas is mostly methane. Over the first 20 years of its release into the atmosphere, methane turns up warming more than 105-times greater than CO2 .

Rampant natural gas production is the largest single source of U.S. anthropogenic methane emissions. Over the next 20 years it will be responsible for almost half the warming impact of U.S. carbon emissions.

“For the BP spill, industry greatly under-estimated the leakage rate from the start. Are we sure this is not the case again here?” asks Cornell University Professor of Ecology and Environmental Biology, Robert Howarth. There is no worldwide tally of offshore oil and gas leaks. As Total struggles to stop this big leak, US Secretary of the Interior Ken Salazar announced plans to speed the processing of permits of oil and gas permits on and offshore. [InsideClimate News Apr 7/12]

APRIL 8, 2012

SHALE SHOCKED

The US Geological Survey links a sharp jump in earthquakes in the US heartland to oil and natural gas fracking. Tremblers awaken after high-pressure fluid is injected into the Earth. The USGS notes "a remarkable increase" in magnitude 3.0 and greater earthquake in the mid-US. More than 50 earthquakes in Oklahoma occurred within a 24 hour period after hydraulic fracturing operations; 134 earthquakes between Alabama and Montana are a 600% increase over 20th century levels. The surge corresponds to a nationwide surge in shale drilling since 2006. [Think Progress Apr 8/12]

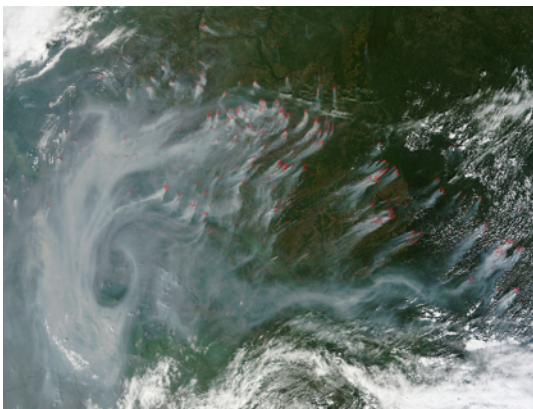
APRIL 21, 2012

DEEPWATER DRILLING IN GULF BACK “WITH A VENGEANCE”

“We are seeing deep-water drilling coming back with a vengeance in the Gulf,” says Dr. RV Ahilan, a technical adviser for the oil and gas industry. “The price is too big to ignore. People are quite keen and are booking rigs for long drilling campaigns in deeper drilling waters.”

“Chevron's pace of drilling in the deep-water Gulf of Mexico is ahead of our pre-moratorium pace,” boasts Steve Thurston, the company's vice president of deep-water exploration. Before the BP blowout,

Chevron had three drill ships working in the deep-water Gulf. Four working drill ships will be joined by a fifth at the end of April. [[Common Dreams Apr 21/12](#)]



JULY 10, 2012

RUSSIA BURNS

Smoke from more than 1,826 forest fires in Siberia sends significant amounts of smoke across the Pacific Ocean to British Columbia, The 195,800 hectares that burn in the Russian Far East is greater than the land that burnt in Siberia in the epic fires of 2010. [[Earth Observatory July 9/12](#)]

AUGUST 2, 2012

AUSSIE FOLKS AND FISH FRY

Sunburnt coral trout in Australia's Great Barrier Reef have cancerous lesions on their scales. They resemble Australians who live on land — 2 in 3 people who live down under will be diagnosed with skin cancer before the age of 70, the highest rate in the world. Australia is under the Earth's biggest hole in the ozone layer. [[LA Times Aug 2/12](#)]

SEPTEMBER 28, 2012

CLIMATE CHAOS KICKING IN

Paul Beckwith writes: Sometimes a little push can lead to something totally unexpected! This is called “nonlinearity” and nonlinearities are inherent in most systems like our atmosphere. Abrupt and unexpected change happens at a tipping point. Nonlinearity is kicking in! We only have to look at the rapidly vanishing arctic icecap. [Paul Beckwith Blog Sept 28/12]

OCTOBER 11, 2012

DEMENTIA PANDEMIC

How many cell phone “users” do you know whose memory for errands, appointments and directions is zip? “Memory loss is one of the first indications of dementia and is a common side effect of wireless phone use,” concluded Dr. Henry Lai in a paper presented at the Mobile Phones and Health Symposium, in Vienna, Austria in October 1999.



French researchers have found that the abnormal proteins found in Alzheimer’s cases always deposit in the hippocampus first. Chinese researchers corroborate chronic exposure to cell phone radiation reducing hippocampus function. [Proceedings of the Second Kuopio Alzheimer Symposium, Finland, Jan/01; Dept. of Neurobiology, Zhejiang University School of Medicine Feb 5/06]

Pointing to stress proteins released in response to electromagnetic radiation, Dr. Theodore Litovitz, a biophysicist and professor emeritus of physics, adds, “Heavy daily cell-phone usage could lead to great incidence of disorders such as Alzheimer’s and cancer.” [Reuters Apr 23/08; wirelessconsumers.org Dec 3/01; BioInitiative Report 2012]



“The scope of the looming medical-care disaster is beyond comparison with anything that has been faced during the entire history of humanity,” asserts Dr. Barry Greenberg, director of strategy for the Toronto Dementia Research Alliance. “The medical-care system is going to be bankrupt by 2050 if we don't figure out a way to delay or treat Alzheimer's disease.” By 2050, dementia could be wiping two billion brains, causing an unprecedented health care crisis that could cost \$1 trillion a year in the US alone. [Altnet Oct 11/12]

DECEMBER 4, 2012

SCIENTISTS CALL FOR WAR ON CLIMATE CHANGE

Dr. Pep Canadell of CSIRO confirms, “Emissions trends over the past ten years are tracking consistently with the most carbon-intensive pathway, leading to 4–6C warming over pre-industrial times by 2100.” The World Bank says that 4C of warming will end the world we know.

With a total of 9.0 – 10 billion tonnes of carbon emitted annually to the atmosphere, the highest in human history and 54% higher than in 1990, Dr Daniel Pauly of the U. of British Columbia says it’s time to prepare for a climate change ‘war’. “We are not dealing with it (climate change) in terms of the danger that this represents,” he asserts. “When there is a war, the industry is put on a war footing... Really the question of cost doesn't come up... Global warming does threaten all of Western civilization... but we are dealing with pennies.”

“We are losing control of our ability to get a handle on the global warming problem,” observes Prof. Andrew Weaver of the U. of Victoria, Canada. On 12 November 2007, UN Secretary General Ban Ki-moon declared: “This is an emergency and for emergency situations we need emergency action.”
[[Al Jazeera Dec 20/12](#); [China Daily Nov 12/07](#)]

Climate change author and reporter George Monbiot writes that climate change commitments are incompatible with short-term corporate growth. The world is burning and few have the courage to conceive of better futures. The problem is now so big, and the scale and urgency of the solutions required so great, that it is impossible to talk about them within the current public policy frame. The business and political spheres have horizons too narrow and too limited in time to be able to deal with the challenges and complexities of global warming, Monbiot reports.

There is no solution within the politics-as-usual frame; and there is no developed frame outside of it. What needs to be done cannot be achieved in today’s neo-conservative capitalist economy, because a rapid transition will require a great deal of planning, coordination and allocation of labour and skills, investment, and materials and resources, that can’t just be left to markets and pricing.

There is a choice between two dystopias: some very significant social and economic disruptions now while we make the transition quickly, or a state of permanent and escalating disruption as the planet’s climate heads into territory where most people and most species will not survive: our task now is to chart the “least-worst” outcome. The population will need to actively understand and participate in some personally-disruptive measures, but they will do so because they have learned that the transition plans are both fair and necessary, and the other choice is unspeakable.

Humankind’s greatest crisis coincides with the rise of an ideology that makes it impossible to address. Preventing climate breakdown – the four, five or six degrees of warming now predicted for this century by green extremists like, er, the World Bank, the International Energy Agency and Price Waterhouse Coopers – means confronting the oil, gas and coal industry. It means forcing that industry to abandon the four-fifths or more of fossil fuel reserves that we cannot afford to burn. It means cancelling the prospecting and development of new reserves – what’s the point if we can’t use current stocks? – and reversing the expansion of any infrastructure (such as airports) that cannot be run without them.

[[Guardian Dec 4/12](#)]



DECEMBER 6, 2012

IRAQI DEATH TOLL PASSES 3 MILLION

Approximately 3.3 million Iraqis, including 750,000 children, were “exterminated” by economic sanctions and/or illegal wars conducted by the U.S. and Great Britain between 1990 and 2012, eminent international legal authority Professor Francis Boyle tells the Kuala Lumpur War Crimes Tribunal.

The slaughter fits the classic definition of Genocide Convention Article II of, “Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part,” says Francis Boyle. The professor of international law at the U. of Illinois filed a 1991 class-action complaint with the UN against President George H.W. Bush.

In a previous address to The International Conference on War-affected Children in Kuala Lumpur, Malaysia, Boyle tallied the death toll on Iraq by U.S.-U.K. aggression:

- * The slaughter of 200,000 Iraqis by President Bush in his illegal 1991 Gulf War I.
- * The deaths of another 1.4 million Iraqis as a result of the illegal 2003 “war”.
- * The deaths of 1.7 million Iraqis “as a direct result” of the genocidal sanctions.

The “grossly hypocritical” UN refused to terminate the sanctions, Boyle points out, even though its own Food and Agricultural Organization’s Report estimated that by 1995 the sanctions had killed 560,000 Iraqi children during the previous five years. On May 12, 1996, in response to a question by CBS-TV’s Leslie Stahl if the price of a half-million dead children was worth it, then-U.S. Secretary of State Madeline Albright replied for the USD Government, “We think the price is worth it.” [[Global Research Dec 6/12](#)]

DECEMBER 22/12

CHERNOBYL: ONE-MILLION-AND-A-HALF DEAD

The toll is more than 1 million people dead worldwide after 15 years, an exhaustive independent Russian scientific study has found . “But for 25 years, maybe to close one and a half million, adds Prof. Alexey Yablokov, PhD, Centre for Russian Environmental Policy, N. K. Koltzoff Institute of Developmental Biology, Russian Academy of Sciences. [[ENENews Dec 22/12](#)]

2013

RECORD ATMOSPHERIC METHANE LEVELS

Average global methane levels are currently around 1830 parts per billion at Mauna Loa - some 1130 parts per billion higher than the pre-industrial average. This increase represents an additional global warming forcing equal to at least 28% of the added CO2 forcing provided by humans.

MARCH 3, 2013

METHANE BURPS OFF CALIFORNIA COAST

Coastal residents near Santa Monica awaken to a foul odour caused by a large release of methane in the ocean. “We usually have this happen about twice a season,” says Justin Walker after a hazardous-materials team takes readings off the coast and finds methane in the water. [[LA Times March 3/13](#)]

MARCH 15, 2013

BURNING OF BOREAL FORESTS EXCEEDS BOREAL FIRES OF PAST 10,000 YEARS

The apparently anomalous Medieval boreal burning has been surpassed by the regional fire regime of recent decades, which is characterized by exceptionally high fire frequency and biomass burning. This extreme combination suggests a transition to a unique regime of unprecedented fire activity..

[[Proceedings National Academy of Sciences Mar 15/13](#)]

APRIL 2, 2013

FUKUSHIMA MELTDOWN CORRELATES WITH HYPOTHYROIDISM IN US INFANTS

Children born in Alaska, California, Hawaii, Oregon, and Washington between one week and 16 weeks after the meltdowns began in March 2011 were 28% more likely to suffer from congenital hypothyroidism than were kids born in those states during the same period one year earlier. Iodine-131 gathers in our thyroid glands that release hormones that control how animals grow. In human babies, including those not yet born, radiation can stunt the development of body and brain. [[Grist Apr 1/13](#)]

MAY 10, 2013

MULTITASKING DESTROYING CONCENTRATION WHEN WE NEED IT MOST

Nonstop multitasking is diminishing our ability to concentrate, manage our emotions, even think creatively, reports Clifford Nass, Communications prof. at Stanford and author of *The Man Who Lied to His Laptop*. Studies consistently show that people who chronically tweet, Facebook and answer emails while attempting other cognitive tasks, basically suck. Nass went on to say that people who multitask constantly can't filter out irrelevancy. They can't manage a working memory. They're chronically distracted. So they're pretty much mental wrecks. Yet they actually think they're more productive. They're suckers for irrelevancy. They just can't keep on task. By any of the behavioural measures of addiction, these people are absolutely, positively addicted.

Problem is, people love screens. Instead of focusing their attention, people with attention deficit spread their attention over an inappropriately large span of stimuli. Switching between tasks can cause a 40% loss in productivity. It can also cause you to introduce errors into whatever you're working on. "Inattentive blindness" occurs when cell-phone talkers are looking at their surroundings but none of it is actually registering in their brains. You may think you're a master multitasker, but that probably means you're actually among the worst. [[NPR May 10/13](#)]



MAY 19, 2013

TAR SANDS GAME OVER FOR CLIMATE, WARNS LEADING SCIENTIST

Major international oil companies are buying off governments, according to the world's most prominent climate scientist, NASA's James Hansen. "Oil from tar sands makes sense only for a small number of people who are making a lot of money from that product," Hansen says. "It doesn't make sense for the rest of the people on the planet. We are getting close to the dangerous level of carbon in the atmosphere and if we add on to that unconventional fossil fuels, which have a tremendous amount of carbon, then the climate problem becomes unsolvable."

Hansen meets ministers in the UK government, who secretly support Canada's tar sands. Canada's natural resources minister, Joe Oliver also visits London to campaign against EU proposals to tax oil from Alberta's tar sands as grotesquely polluting.

Canada's tar sands are the third biggest oil reserve in the world. Separating the oil from the rock causes three to four times more carbon emissions per barrel than conventional oil. Hansen argues it will be "game over" for a liveable climate if tar sands were fully burned. "To leave our children with a manageable situation, we need to leave the unconventional fuel in the ground," he prescribes.

Hansen has started a science programme at Columbia University to support suits filed against the US federal government and several state governments. "We maintain that the atmosphere and climate are held in trust by the present generations for the future generations and we do not have the right to destroy that asset," Hansen explains. [[Guardian May 19/13](#)]

MAY 27, 2013

**DEPLETED URANIUM DISASTER
CONTINUES TO UNFOLD IN IRAQ**

Dr. Jawad Al-Ali, an internationally respected cancer specialist at the Sadr Teaching Hospital in Basra, tells John Pilger, “Before the Gulf War, we had two or three cancer patients a month. Now we have 30 to 35 dying every month. Our studies indicate that 40 to 48 percent of the population in this area will get cancer... That’s almost half the population.



“Most of my own family have it and we have no history of the disease. It is like Chernobyl here; the genetic effects are new to us; the mushrooms grow huge; even the grapes in my garden have mutated and can’t be eaten.”

Dr. Ginan Ghalib Hassen, a pediatrician, keeps a photo album of the children she was trying to save. “Before the war, we saw only one case of this unusual tumour in two years,” she says. “Now we have many cases, mostly with no family history. I have studied what happened in Hiroshima. The sudden increase of such congenital malformations is the same.”

A US military physicist assigned to clean up the Gulf War battlefield across the border in Kuwait says, “Each round fired by an A-10 Warthog attack aircraft carried over 4,500 grams of solid uranium. Well over 300 tons of DU was used. It was a form of nuclear warfare.”

British oncologist Karol Sikora, chief of the World Health Organization cancer program in the 1990s, wrote in the British Medical Journal: “Requested radiotherapy equipment, chemotherapy drugs and analgesics are consistently blocked by United States and British” sanctions.

Hans von Sponeck, former Assistant Secretary General of the UN and senior UN humanitarian official in Iraq, adds, “The US government sought to prevent WHO from surveying areas in southern Iraq where depleted uranium had been used and caused serious health and environmental dangers.”

A “delayed” WHO report reveals that birth defects have risen to a “crisis” right across Iraqi society. Fourteen years after sounding the alarm, “phenomenal” multiple cancers are hitting entire families.

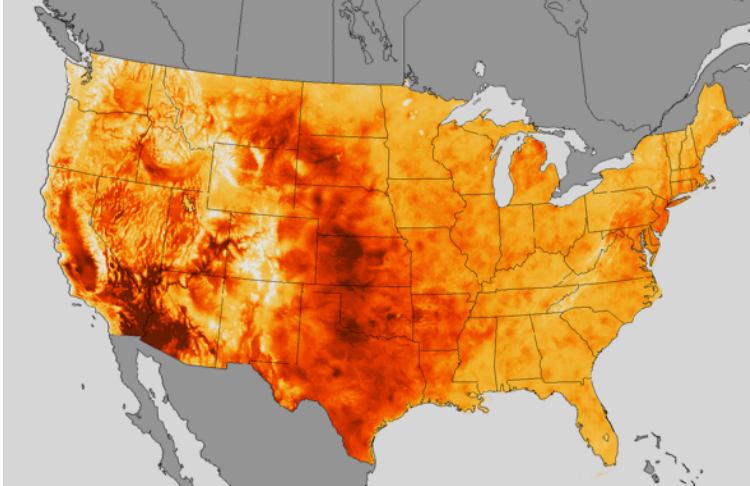
This is a crime of epic proportions, writes Von Sponeck, referring to the Iraqi Ministry of Social Affairs’ estimate of 4.5 million children who have lost both parents. “This means a horrific 14% of Iraq’s population are orphans.” About one million families are headed by women, mostly widows.

For British Prime Minister Tony Blair, writes Gareth Peirce, Britain’s greatest human rights lawyer, in her book *Dispatches from the Dark Side*, “human beings presumed to hold [Islamist] views, were to be disabled by any means possible, and permanently...in Blair’s language a ‘virus’ to be ‘eliminated’.” [[John Pilger May 27/13](#)]

JUNE 10, 2013

CARVING PERMAFROST

Charles Miller reports on the NASA CARVE mission, with which he is involved: “Permafrost soils are warming even faster than Arctic air temperatures — as much as 2.7 to 4.5F.” [[NASA June 10/13](#)]



JULY 14, 2013

EXTREME US SUMMER

Extreme schizoid US summer features floods and heavy rains in the east; drought and devastating fires in the west - and weird backward-moving storm systems caused by an extraordinarily weak Jet Stream. Rapidly melting sea ice and summer time snow cover reduce strong north-south temperature differentials that drive the Jet.

So weather tends to persist much longer over regions, and can even reverse west to east flow. [[Robert Scribbler July 14/13](#)]

JULY 19, 2013

FORMER MOBIL VP WARNS OF FRACKING, METHANE AND CLIMATE CHANGE

“The rock above the target zone in fracked wells is not necessarily impervious,” warns Louis Allstadt. “There are already cases where the methane gas has made it up into the aquifers and atmosphere... We don't know is just how much gas is going to come up over time.”

The former Mobil Oil executive vice president ran the company's exploration and production operations in the western hemisphere before retiring in 2000. When the draft New York Dept. of Environmental Conservation guidelines for the gas industry “was eventually put out for comment, the section about methane migration had been expunged.”

“20, 30, 100 years down the road we don't know how much methane is going to be making its way up. And if you do hundreds of thousands of wells, there's a good chance you're going to have a lot of methane coming up, exacerbating global warming. What you [also] don't know when you plug that well, how much is going to find its way to the surface without going up the well bore. And there are lots of good indications that plugging the well doesn't really work long-term. There's still some pressure down there,” Allstadt went on.

“We have wasted a lot of time that should have gone into seriously looking into and developing alternative energies. And we need to stop wasting that time and get going on it. The industry talks about, well, this is a bridge fuel [that] will carry us until alternatives [are developed] but nobody is building them. It's not a bridge unless you build the foundations for a bridge on the other side, and nobody's building it.” Obama “is not addressing the impact that methane has on global warming.” [[Truthout July 19/13](#)]

JULY 25, 2013

SUDDEN ARCTIC CYCLONE OVER BEAUFORT SEA

This intense Arctic storm drops to 977 millibars. But it is expected to be brief and is likely to not have the same impacts seen during the Great Arctic Cyclone of 2012. That storm approached the Arctic as an already well-developed system. Packing winds in excess of 60 miles per hour, it had the opportunity to rile a large section of open water and then fling waves against the ice pack. The Great Arctic Cyclone lasted for about two weeks while this most recent Sudden Arctic Cyclone is likely to last for only about four to five days.

JULY 28, 2013

MONSANTO SEEKS TO CONTROL WORLD'S FOOD SUPPLY

Pete Dolack writes: Already infamous for toxic chemicals such as polychlorinated biphenyls (PCBs), Agent Orange and dioxin, Monsanto's march toward control of the world's food supply is focused on proprietary seeds and genetically modified organisms. Genetically modified seeds patented by Monsanto, the world's largest seed company, accounted for more than 90% of soybeans and 80% of the corn grown on more than 151.4 million acres in the USA in 2009. More than 282 million acres of crops worldwide were genetically modified into crops the human body does not recognize as food as far back as 1996.

“A seed company can't stay in business without offering seeds with Roundup Ready in it, so if they want to stay in that business, essentially they have to do what Monsanto tells them to do, ” says a lawyer working for DuPont, the next largest seed competitor.

“Roundup Ready” soybeans, corn, sugar beets and other crops) that are genetically engineered to be resistant to Monsanto's Roundup herbicide. As more pesticides are sprayed, weeds and insects become more resistant, inducing farmers to spray still more and thereby introduce more highly toxic poisons into the soil and drinking water.

Monsanto's “Frankenseeds” account for 23% of world's seed sales. Standard contracts forbid farmers from saving seeds, requiring them to buy new genetically engineered seeds from the company every year and the herbicide to which the seed has been engineered to be resistant. Monsanto aggressively litigates against farmers to enforce this provision. The company has even sued neighbouring farmers whose fields unwillingly became contaminated with Monsanto's seeds. [[Counterpunch July 26-28/13](#)]

JULY 29, 2013

AN EXTRAORDINARY SUMMER

This summer has seen a great number of extraordinary events resulting from human caused climate change. These include massive heat dome high pressure systems setting off record droughts, fires and heat waves, Arctic temperatures rocketing into the 80s and 90s, Europe and Canada suffering some of their worst flooding events in history and a crazy US weather system moving backwards against the prevailing weather pattern for more than 3,000 miles.

Add to these record events a substantial melting of ice in the Arctic's most central regions, and you end up with rather strong proofs that our greenhouse gas emissions have permanently altered the world's weather.

From late May to early July 2013, a persistent Arctic cyclone fractured ice near the North Pole, then consistently widened and melted the gap it created. The melting... appears to have turned the sea ice near the North Pole into swiss cheese. [Robert Scribbler July 29/13]

JULY 30, 2013

JET STREAMING HOT AIR FROM SOUTH INTO FAR NORTH

A large, high amplitude bulge riding from south to north is carrying air from the southeastern US all the way north to Baffin Bay and southwestern Greenland. This sudden Jet Stream switch brings back a weather pattern that causes major melt conditions. Temperatures along the Greenland coast range from the upper 30s to the lower 60s – quite warm for this time of year. [Robert Scribbler July 30/13]

Greenland experiences its hottest temperature ever recorded – 78.6F. Greenland melt as a high amplitude wave in the Jet Stream surged over Greenland, pulling warm air up from the is quickening as this southerly flow sets up conditions for a *foehn* – a warm, dry airflow that occurs in the slopes of Greenland’s western mountains. This associated warm flow amplifies heat over a broad region of Greenland, creating 2013’s largest melt spike. [[Robert Scribbler Aug 2/13](#)]

JULY 31, 2013

ARCTIC ALGAE BLOOMS

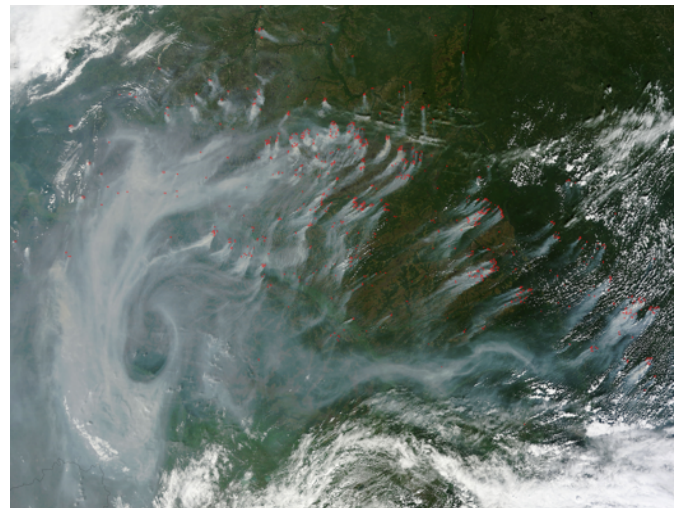
The region where the highest heat anomaly measures have appeared also shows a very large green algae bloom, visible in a freakish neon off-set to the typically dark Arctic waters. Higher ocean heat content and added nutrients increasingly fuel these kinds of blooms which can lead to fish kills and ocean anoxia in the regions affected. Ocean algae blooms also suffocate methane-munching microbes. This particular bloom is very large, stretching about 700 miles in length and 200 miles in width along a region near the northern coast of Scandinavia. [[Robert Scribbler July 31/13](#)]

AUGUST 1, 2013

MORE HEATWAVES AND MASSIVE TUNDRA FIRES

The continents circling the warming Arctic Ocean – a band from about 55 °North to about 75 °North – has increasingly erupted into heatwaves and massive wildfires.

Huge fires blanket both Canada and Russia, with a recent very large outbreak spreading over Siberia. Numerous wildfires roar through Arctic tundra and boreal forests alike over a sprawling swath of northern Russia.



These blazes rapidly multiply to nearly 200 fires, covering most of Arctic Russia in a pallor of thick, soupy, smoke. The smog cloud blanketing Siberia stretches nearly 3,000 miles in length and 1,500 miles in width, covering an immense slice of the Arctic and adjacent regions.

The fires coincide with a large methane pulse that sent local readings to nearly 2,000 ppb, almost 200 ppb above the global average.

Fairbanks reports its 14th straight day above 70F temperatures. This Arctic location has also seen 80+F weather for 29 days so far this summer and 85+ degree weather for 12. We continue to see a rising heat temperature anomaly over a vast region of the Arctic Ocean. [[Robert Scribbler July 21/13](#)]

AUGUST 4, 2013

DARKER, LESS REFLECTIVE ARCTIC ICE MELTING FASTER

An analysis of observed changes in the mean albedo of the Arctic sea-ice zone using a data set consisting of 28 years of homogenized satellite data. Along with the albedo reduction resulting from the well-known loss of late-summer sea-ice cover, we show that the mean albedo of the remaining Arctic sea-ice zone is decreasing. [[Nature Climate Change Aug 4/13](#); [New Scientist Aug 5/13](#)]

AUGUST 5, 2013

BAKED EVERYWHERE

As the Arctic baked under numerous heatwaves in which temperatures shattered the 90F mark... as the US experienced some of its worst southwestern heat ever recorded... as the UK experienced record summer heat and wildfires... as Spain sweltered as temperatures soared above 104F. [[Robert Scribbler on Aug 5/13](#)]



AUGUST 5, 2013

HEAT DOME FORMS OVER CHINA

A broad region of hotter than normal surface ocean waters off China show temperatures higher than 86F. The heat dome conditions – stifling airflow, concentrating heat and locking in place a layer of heat amplifying haze and smog – have persisted for much of the past month. This combination of less effective ocean cooling and heat dome conditions has resulted in a terribly severe heatwave for this coastal region.

A wet bulb temperature above 35C (95F) is considered lethal for human beings.. [[Robert Scribbler on Aug 5/13](#)]

AUGUST 8, 2013

JETSTREAM FORMS HEAT DOME OVER ARCTIC

The Jet Stream over North America is a complete basket case, writes Robert Scribbler. It is far less a river of air flowing between colder northern regions and warmer southern regions than it is a disassociated hodgepodge of cut off air flows. In the far north over a region of coastal Alaska and the Northwest Territory, an Arctic heat dome has formed and grown more prominent setting off temperatures ranging from the high 70s to high 80s as far north as the shores of the Arctic Ocean.

[[Robert Scribbler Aug 8/13](#)]



AUGUST 14, 2013

RELENTLESS HEAT DOME GRIPS CHINA

In eastern China, some 400 million people endure nearly seven full weeks of broiling heat. Shanghai, China's largest city, broke its previous all-time record high multiple times, including a new all-time record of 105.4°F (40.8°C) on August 7. These extreme temperatures see prolonged sultry conditions, with 31 consecutive days of highs at or above 95°F compounded by brutally warm nights with the city's July 30 nighttime low of 88°F (actual heat index 99°F).

As the heatwave kills dozens of people in 104°F temperatures in at least 40 cities and villages in southeast China, authorities for the first time declare a “level 2” weather emergency- a label normally invoked for typhoons and flooding. “Like in a food steamer!” exclaims 17-year-old student Xu Sichen as people cook shrimps, eggs and bacon in skillets placed on manhole covers or road pavement across the region. Food cooks readily at 140°F temperatures. [[Weather.com Aug 14/13](#)]

AUGUST 20, 2013

UV READINGS “OFF THE CHARTS” IN CALIFORNIA

Dane Wigington puts an expensive instrument in the hands of a 40-year metering veteran, with 20 years government experience and 20 years as a private consultant. “Our findings,” Wigington reports, “are far beyond shocking.” Their independent UV readings diverge so drastically from official sources, the team purchased a second identical meter to check the first. Their readings match.

According to the World Health Organization and a “long list” of recognized U.S. Government sources of UV information, including the National Oceanic and Atmospheric Administration, no more than 5% of the total UV radiation reaching Earth's surface through the protective ozone layer should be UVB. But Wigington's ongoing testing shows that UVB – the most lethal form of solar radiation – has now escalated to nearly 1,400% of the total UV currently burning Northern California. The meters also consistently show “significant levels of UVC.” State, federal and international agencies state that potentially lethal UVC should be zero. [[Geoengineering Watch Aug 20/13](#); [May 13/14](#)]

AUGUST 25, 2013

ACIDIFYING OCEANS HEATING PLANET

Our greenhouse gas emissions don't just warm the planet, they also acidify the oceans. The change in ocean chemistry they cause will feed back into the climate, further driving up temperatures. The shells of some marine snails are already dissolving. Phytoplankton produce a chemical called dimethyl sulphide (DMS) that drifts up into the air and reflects sunlight back into space, cooling the planet. DMS also makes clouds brighter, with the same effect.



Katharina Six of the Max Planck Institute for Meteorology in Hamburg, Germany, and her team estimate that 18% less DMS will be released from the oceans in 2100, compared with pre-industrial times. If temperatures rise 4.5 °C, ocean acidification will add another half-degreeC to that figure. “We were surprised that the effect was so large,” she says. “It certainly speeds up the warming.” [[New Scientist Aug 25/13](#)]

AUGUST 29, 2013

EAST ANTARCTIC ICE SHEET MELTING RAPIDLY

The world's largest ice sheet the East Antarctic Ice Sheet has undergone rapid changes in the past five decades, signalling a potential threat to global sea levels. The EAIS holds enough water to raise sea levels more than 50 meters. [[Common Dreams Aug 29/13](#)]

AUGUST 30, 2013

EARTHQUAKES RELEASE SIBERIAN METHANE

A magnitude 8.3 earthquake hit the Sea of Okhotsk on May 24, 2013. Epicentre depth was over 378 miles. Across Siberia, tremors were felt and buildings trembled. In Moscow, some 4500 miles (7242 km) away, local law enforcement officers evacuated 850 people from two apartment buildings after residents reported the buildings shaking.

This cluster of earthquakes and aftershocks likely caused methane hydrates in the Sea of Okhotsk to destabilize. On May 29 and June 2, 2013, sudden peak levels of methane in the atmosphere were registered at 2241 and 2238 ppb at an altitude of 33,647.8 ft. Seismic activity along the fault line over the Arctic and high seismic readings along the Aleutian Islands with their 57 volcanoes in the northern part of the Pacific Ring of Fire is increasing in frequency and severity, including a trembler with a magnitude of 7 on the Richter scale on August 30, 2013, and several more recent earthquakes with a higher magnitude than 6. [[Arctic News Sept 15/13](#)]

SEPTEMBER 4, 2013

BPA PLAGUE THREATENS ALL CHILDREN IN USA

100% of both young and unborn children now have BPA circulating in their bloodstreams. Though this highly estrogenic substance causes serious neurological damage and behavioural problems, BPA is still added to metal food can linings, thermal paper receipts and plastic containers like baby bottles in the US. [[Natural News Sept 4/13](#)]

SEPTEMBER 27, 2013

THIRD TUNDRA METHANE CRATER FOUND

The newest Yamal crater forms in the Taz district near the village of Antipayuta and has a diameter of about 49 feet. One Taz local describes the day the crater formed: “The earth was first observed to smoke. This continued for some time and then a bright flash followed by a loud bang exploded above the tundra.” After the mists and smoke cleared, a large hole surrounded by mounds of ejected soil was visible. The hole tunnelled like a cone more than 200 feet down. Its walls were frozen permafrost. Explosive eruptions in the permafrost set off by thawing methane blew holes from 200-300 feet deep - deep enough to contact subsoil methane pockets or, in some cases, frozen clathrate. [[Daily Mail July 28/14](#)]

OCTOBER 24, 2013

TORRENTIAL RAINS EVERYWHERE, TAR SANDS ON BRINK OF CATASTROPHE?

[Paul Beckwith](#), visiting professor with the Laboratory for Paleoclimatology and Climatology at the University of Ottawa writes: In recent months we have endured incredible tropical-equatorial-like torrential rain events occurring at mid-latitudes across the planet. Intense rainfall in the Banff region of the Rockies from June 19th to 24th and the enormous volume of water moved downhill through the river systems taking out small towns and running into the heart of Calgary where it caused \$5.3 billion dollars of infrastructure damage; the largest in Canadian history.

Next, it was Toronto’s turn, with 75 mm of rain falling from 5 to 6pm on July 8 (with up to 150 mm overall in some regions) leading to widespread flooding and \$1.45 billion dollars in damages. As bad as these events were, they were dwarfed by the intense rainfalls hitting the state of Colorado from Sept 9th to 15th. Rainfall amounts that would normally fall over 6 months to a year were experienced in less than a week. Widespread flash floods, landslides, and torrents of water ripped apart roads, fracking equipment and pipelines on (at least) hundreds of fossil fuel sites (mostly ignored by mainstream media). Widespread flooding in central Europe from May 30th to June 6th caused a much larger \$22 billion in damages.

Can the Alberta tar sands be hit by such an event? What would be the implications?... This breakdown of the global atmospheric circulation pattern is well underway now, with a global average temperature only 0.8C above the pre-industrial revolution levels. With extreme weather events this terrible now, it is highly irrational, in fact reckless, to continue to have global meetings and discussions about whether or not 2C is safe.

As climate change proceeds and accelerates and we move further from the stable state that we are familiar with (“old climate”) to a much warmer world (“new climate”) we will experience worsening weather extremes and a huge “whiplashing” of events throughout our present “transition period” to a much “simplified” desert climate .

For a notion of whiplashing, consider the Mississippi River. There were record river flow rates from high river basin rainfall in 2011, followed by record drought and record low river water levels in December, 2012 making it necessary for the U.S. Army Corp of Engineers to hydraulically break apart rock on the riverbed to keep the country's vital economic transportation link open to barge traffic. Then, 6 months later, the river was back up to record levels

In Alberta, tailings ponds would be breached and the toxic waters would overflow the Athabasca River and carry the pollutants up into the north to exit into the Arctic Ocean. Such an event would be catastrophic to the environment and economy of Canada. [[Boomer Warrior Oct 24/13](#)]



OCTOBER 26, 2013

MORE THAN 15 MILLION AMERICANS LIVE WITHIN A MILE OF A FRACKING WELL

The natural gas boom has led to an “unprecedented industrialization” of many Americans’ backyards. The boom has left some towns inundated with natural gas operations.

In suburban Johnson County, Texas, 99.5% of the area’s 150,000 residents now live within a mile of the county’s 3,900 wells. In 2000, there were fewer than 20 oil and gas wells.

America will have “a million new oil and gas wells drilled over the next few decades,” says a Duke U. professor as some home developers keep the rights to oil and gas reserves under the houses they sell, notifying the homes’ buyers. Then the former home owner can lease the land of an entire neighbourhood to a natural gas company – with or without the residents’ consent.

Fracking has been tied to a range of health effects in people and livestock. There are few federal regulations on the practice. Around the world, more and more cities are voting to ban fracking. [[Think Progress Oct 26/13](#)]



**OCTOBER 29, 2013
GULF RESIDENTS STILL
SUFFERING FROM BP
BLOWOUT**

“We’re seeing spontaneous miscarriages, and cancer is rampant,” says Trisha Springstead, a nurse of 36 years in Crystal River, Florida. “These are occurring in Orange Beach, Alabama, and all over Mississippi and Alabama... women are not carrying to term.”

After sea kayaking after BP's spill, Peter Frizzell was sitting at his desk when he started coughing “up loads of

blood.” Frizzell says his doctor “ran a scope down to the top of my lungs and said my bronchi were full of blood.”

His medical records show that he was exposed to toxic chemicals, and he is far from alone. Dean Blanchard, owner of Dean Blanchard Seafood in Grand Isle, Louisiana, tells *Al Jazeera* he knows many fishermen who participated in the oil clean-up operation who have since died. “I’ve never seen anything like this in my life,” Blanchard says. “I know more than half a dozen guys who were totally healthy before the spill who worked on the clean up. They found out they got cancer and within one or two months were dead.” [[Al Jazeera Oct 29/13](#)]

Newly revised FDA Gulf seafood “safe levels” allow up to 10,000 times more carcinogenic polycyclic aromatic hydrocarbons (PAHs) in seafood than previous “safe” levels. Up to 53% of the shrimp tested had PAH levels exceeding “adjusted” unsafe levels. NRDC researchers express concern for pregnant women who are high consumers of Gulf shellfish. The FDA has no set levels of acceptable PAHs in seafood, but rather reinvents them after each oil spill. [[Alternet Dec 18/11](#)]

DECEMBER 12, 2013

UNDERSEA SIBERIAN ARCTIC SHELF RELEASING METHANE 2X EXPECTED RATE

Methane emissions from the East Siberian Arctic Shelf (ESAS), one of the regions of greatest concern, are conservatively estimated to be about 17 megatons per year – twice that previously estimated by scientists. Igor Semiletov and Natalia Shakhova have been observing a key region of the Arctic called the ESAS since the mid 1990s, when they found no major emissions sources coming from this vast sea.

From 2010 to 2013, other regions of the Arctic also found to be emitting high volumes of both methane and CO2 included Yedoma in Russia, other portions of the Siberian continental shelf, regions off of Svalbard, regions off of Greenland, and regions over Arctic Alaska and Canada. Vast stores of Arctic carbon – totalling around 5,000 gigatons or a little less than 10-times that already emitted via human fossil fuel burning – are beginning to contribute to the world’s atmospheric greenhouse gas stores. [[Robert Scribblers Dec 12/13](#)]

DECEMBER 12, 2013

ICE FREE IMPLICATIONS

Peter Wadhams is a veteran polar researcher with more than 30 years experience studying Arctic sea ice from the vantage of British navy submarines. “What is happening is that the summer sea ice now retreats so far, and for so long each summer, that there is a substantial ice-free season over the Siberian shelf, sufficient for solar irradiance to warm the surface water by a significant amount – up to 7C according to satellite data. That warming extends the 50 m or so to the seabed,” he says.

“And the surface warming is mixed down by wave-induced mixing because the extensive open water permits large fetches. Once the ice disappears, as it has done, the temperature of the water can rise significantly, and the heat content reaching the seabed can melt the frozen sediments at a rate that was never before possible.” Dr. Wadhams predicts a near complete loss of summer sea ice is likely by 2015 or 2016.

Vast regions of Arctic Canada are experiencing temperatures that were warmer than at any time in 120,000 years. During September, October and November 2013, large spikes pushed local readings in some areas as high as 2500 parts per billion – more than a 600 parts per billion above the global average. Large regions around the Arctic frequently showed readings above 1950 parts per billion.

Shakhova finds the permafrost cap over the methane stored beneath the ESAS to be highly perforated and very close to thawing. The top layer has mostly already thawed while the still frozen layers lower down ranged in temperature between 30 and 32 Ft – at the brink of melt.

1999 to 2013 showed the seabed warming by .9F even as air temperatures warmed by 1.8F during the summer. Increasing transport of warmer waters to ESAS bottom zones was facilitated by larger river outflows in the region, likely also a result of human-caused changes to Arctic weather patterns.

“What we’re observing right now is much faster than what we anticipated and much faster than what was modelled,” Shakhova says. “We decided to be as conservative as possible.”

Storms, warming waters, and warmer ocean currents enhance release of methane from the ESAS. As recently as 2007, modellers were stating that near ice free conditions would not happen until the end of this century. Global climate model projections of sea ice loss continue to lag well behind observed trends. [[Robert Scribblers Dec 12/13](#)]

JANUARY 25, 2014

HIGHER ALTITUDE METHANE INCREASE

Hydroxyl levels in the Arctic atmosphere are low, especially at this time of year. As a result, much of the methane that enters the atmosphere over the Arctic Ocean will rise higher up into the atmosphere without being broken down, and much of the methane will continue to be present over the Arctic for years. January 2014 peak levels have increased strongly from January 2013, from 2066 ppb to 2240 ppb. Much of the methane is accumulating at higher altitudes, as confirmed by increasing noctilucent clouds, Sam Carana reports. [Arctic News Jan 25/14]

JANUARY 30, 2014

RECEDING ICE COVER STALLS JETSTREAM

According to Dr. Jennifer Francis and other polar researchers, receding sea ice cover is likely to result in more powerful and long-lasting Rossby Wave type blocking patterns. This happens as more heat becomes concentrated in the polar regions, causing the Jet Stream to meander in great swoops and whirls. These large waves can become fixed into blocking patterns for extended periods. In the up-slope of these waves, warmth and heat predominate. In the trough or down-slope, stormy, wet and cool conditions prevail. World food supply is in the cross-hairs of climate shift, writes Robert scribbler. [KPCC Public Radio Jan 30/14; [Robert Scribbler Feb 6/14](#)]

FEBRUARY 3, 2014

FRACKING TRIGGERS QUAKES

Locals in North Texas call it “incoming.” Some compare the violence of the tremors to living in a war zone. Others say it's like having their homes “hit by a truck.”

The “war zone” assaulting them is Barnett Shale, the largest unconventional gas field in the United States. The industry touted as the new engine of the U.S. economy, has punctured and fractured the landscape with 17,000 gas wells, as well as thousands of disposal sites to “get rid of” related toxic waste fluids.



In the last three months, the community of Azle, located just northwest of Fort Worth, has suffered a swarm of earthquakes – more than 30 – that have cracked house foundations, frightened local residents, created sinkholes and hit property values. Resident Tracy Strickland says, “It feels like a truck hits the back of the house, and the whole house just shakes. So, it's something.”

In BC, Canada the fracking industry – which uses three times more water and often at higher pressures than other shale gas formations – set off more than 200 quakes in the Horn River Basin between April 2009 and December 2011. At least 19 of the quakes were magnitude two to three; one was a 3.8, surprising industry “experts”.

Large “natural” earthquakes in Japan and Chile are now unsettling injection waste disposal sites in Oklahoma, Texas and Colorado, creating smaller earthquakes. “The remote triggering by big earthquakes is an indication the area is critically stressed,” says Nicholas van der Elst, a researcher at Columbia University's Lamont-Doherty Earth Observatory.

More than 60% of the 60,000 homes in northern Holland have been damaged by scores of recent earthquakes induced by fracking. Daniella Blanken, director of the Groningen Ground Movement, says, “It comes rumbling towards you, louder and louder and louder. Everything starts to shake. It ends with a bang, like a massive weight dropped on the house. Boof! And that is frightening, really really frightening. [Tyee Feb 3/14]

FEBRUARY 6, 2014

SUPER DROUGHTS, WILDFIRES, HUGE POYANG LAKE EVAPORATES

As major wildfires impacted both California and Arctic Norway during winter time, Brazil, Turkey, China, Argentina and Australia were also all experiencing some of their worst or most intense droughts on record.

In Australia, drought conditions are now worse for some locations than at any time since the 2003 to 2009 drought - Australia's worst in 1,000 years. The New South Wales Minister for Primary Industries, Katrina Hodgkinson says "both the severity and speed at which this drought is moving is astonishing."

China's largest lake, the 3,500 square-miles Poyang, has completely dried up following major water diversions to the Three Gorges dam and deepening drought. As the world's primary agricultural basins shrink, reserve planetary food supplies now stand at just 72 days. Late rains may do even more damage as ground baked by drought submerge in flash floods. [[Robert Scribbler Feb 6/14](#)]

FEBRUARY 6, 2014

STALLED JETSTREAM, GEOENGINEERING DRY UP CALIFORNIA

What weather experts are calling a "ridiculously resilient ridge" of invisible high pressure hovering off that doomed northern coast of California for the past 14 months has led to suffocating drought, wild wildfires, negligible snowpack, fast-dropping reservoirs, dying forests, thirsty cattle, dead fish, huge holes in the nation's fruit and veggie basket.

"Like a brick wall, the mass of high pressure air has been blocking Pacific winter storms from coming ashore in California, deflecting them up into Alaska and British Columbia, even delivering rain and cold weather to the East Coast," the *San Jose Mercury News* reports. The gigantic weather wall is "unprecedented in modern weather records and leaving researchers scratching their heads."

"It's like the Sierra - a mountain range just sitting off the West Coast - only bigger," explains Bob Benjamin, a forecaster with the National Weather Service in Monterey. The people who know why this high-pressure ridge is so persistent aren't talking. "It's kind of a mystery about why. Why is the global atmospheric pattern stuck like this?" asks weather wizard Leslie Wanek at the regional headquarters of the National Weather Service.

"I wish I had a really good answer for this," chimes in Daniel Cayan, an oceanographer and atmospheric scientist with the Scripps Institution of Oceanography in La Jolla. 2013 was the driest calendar year in the 160 year recorded history of most California cities. "Governors can't make it rain," Gov. Jerry Brown insists, while making a dire situation worse by allowing massive water diversions from northern California to thirsty cities, agribiz and frackers to the south. [[San Jose Mercury News](#)]

Meanwhile, aerosol-dispensing USAF tanker planes continue spreading persistent plumes over northern California in an apparent attempt to maintain the stalled jetstream's high pressure "retaining wall" divert carom cool wet maritime air up into the sweltering Arctic.

Welcome to the folly of forcing.



FEBRUARY 27, 2014

HIGH-SPEED FRACKING “TRAIN BOMB” DEVASTATES QUEBEC TOWN

A 74-car train carrying Bakken shale crude oil runs away and derailed, resulting in a massive explosion of multiple tanker cars. The blast radius is more than a half-mile in diameter. In Lac-Mégantic, Quebec, a tiny lakeside village of less than 6,000 people, 47 people are killed, and 30 buildings — about half the village's downtown – are levelled.

Rail transportation of Bakken crude is particularly unstable due to high levels of gases and volatile organic compounds trapped in the mix. High amount of corrosives found in the fuel impact the integrity of tanker cars. Vapour pressure can split the tank, sink the roof and emit a flammable gas cloud.

Across the USA in the past six years oil trains have spilled more than 3 million gallons of crude, polluting wetlands, aquifers and residential areas. The spills are not always cleaned up adequately, if at all. In this time, crude oil rail car traffic has increased 40-fold, and will quadruple shipments over the next decade through such densely populated areas as suburban New York, Philadelphia, New Orleans, Albany, Minneapolis, Chicago, Cleveland and Buffalo. [[Altnet Feb 27/14](#)]

FEBRUARY 28, 2014

SIXTH GREAT EXTINCTION CO2 EXCEEDS 400 PARTS PER MILLION

More than 32 billion tons of CO₂ now go into Earth's recirculating atmosphere each year. From the early 1960s the pace of atmospheric CO₂ increase was about 1 part per million each year. As human population, fossil fuel consumption, and industrialized agriculture expanded, annual rates of CO₂ increase up-ticked to about 1.5 parts per million from 1980 to 2000 and again to slightly above 2 parts per million each year from 2000 to the present.

Due to continued increase in fossil fuel burning, the exhaustion of various carbon sinks around the globe, expected changes to ocean and land based photosynthetic life, and the release of various global carbon stores due to amplifying feedbacks related to human-caused warming, rates of CO₂ increase are expected to be as much as 7 parts per million or more each year by the middle of this century.

The current pace of emission has no corollary in the geological record. Based on best observations, the fastest CO₂ increases in the past were during either the PETM extinction event of 55 million years ago or the Permian Extinction, or Great Dying, of 250 million years ago. During these periods, rapid rates of CO₂ increase were observed at about .35 parts per million each year. The current pace is now six or seven times that seen during these dangerous geological epochs and expected rates of CO₂ increase during this century could exceed 20 times that seen in the record.

Total human carbon emissions in CO₂ equivalence for all greenhouse gasses is now over 50 billion tons, or more than 200 times global volcanic emissions. Look to the Pliocene climate of 3.0 to 3.3 million years ago when CO₂ levels stabilized at around the current range of 390 to 405 ppm CO₂. And the Pliocene during this time was 2 to 3C warmer than the 1880s average. It was a climate in which sea levels were up to 110 feet higher than today. It was a climate in which the Greenland and West Antarctica were entirely bereft of glaciers.

As we push above the 405 parts per million threshold, we begin entering a rough corollary to the Miocene climate of 15 million years ago. Passing the 500-600 part per million threshold that puts all ice on Earth at risk of melt and sets in place conditions, according to paleoclimate, where a 4-6C temperature increase is locked in. [[Robert Scribner Feb 28/14](#)]



MARCH 11, 2014

GMOs THREATEN GLOBAL ECOCIDE

Mike Adams writes: Nassim Taleb, author of *The Black Swan* and *Fooled by Randomness*, says GMOs have the potential to cause “an irreversible termination of life at some scale, which could be the planet.” He explains, “If you incur a tiny probability of ruin, as a ‘one-off’ risk, survive it, then repeat the exposure, you will eventually go bust with probability 1 (= 100% chance).”

Murphy's Law – which states that if something can go wrong, it will – is widely recognized as a frustrating truth across physics, medicine, computer science and space exploration. Yet it is magically and irrationally declared null and void only for GMOs, where the roll of the dice quite literally threatens the sustainability of future life on our planet.

Genetic pollution is already well underway across North America, as transgenic effects weaken the world's food crops in ways human scientists never intended or anticipated. When genetic diversity is lost, the entire species becomes vulnerable to being wiped out by epidemic disease. Because GMOs are self-replicating, these seeds of mass destruction threaten the continuation of human life on this planet.

[[Natural News Mar 11/14](#)]

MARCH 14, 2014

COMMERCIAL CHEMICAL WARFARE TARGETS CHILDREN

Organophosphates used in Iraqi military chemical attacks during Desert Shield and Desert Storm inhibit cholinesterase, an enzyme that helps regulate acetylcholine, a key chemical messenger in the brain. Without the enzyme, acetylcholine builds up, jamming the traffic of signals between neurons. No wonder heavy chronic exposure is associated with neurodegenerative diseases such as Alzheimer's and Parkinson's. [*Scorched Earth, Bringing The War Home* by William Thomas]

Organophosphate pesticides may disrupt the growth and distribution of fetal brain cells at lower levels of exposure. Children are more vulnerable to pesticides than adults. They take a bigger hit because they eat, drink and breathe more for their body weight, play on the floor where chemicals settle and like to put things in their mouths. They're also less able to metabolize chemicals that get into their systems.

In Europe, where policy is guided by a precautionary approach that emphasizes preventing harm, regulators have been more willing to bar chemicals even when the science is uncertain. Atrazine, a weed killer that is environmentally persistent and has been linked to birth defects and hormone disruption, was banned in the European Union in 2004.

In the United States, it remains one of the most widely used herbicides, thanks in large part to the efforts of its manufacturer, Syngenta, to discredit the research on its ill effects.

Some 10 million pounds of organophosphate pesticides are sprayed on US farms every year, and it remains one of the top ten pesticides used near schools in California. A staggering 47% of US Latino kids are at risk by age 9 of elevated blood pressure, blood sugars and cholesterol that can be a precursor to diabetes, heart disease and stroke. [Nation; [Truthout Mar 14/14](#)]

MARCH 24, 2014

SOLAR POWER SAME PRICE AS CONVENTIONAL ELECTRICITY

Once all its costs are accounted for, the price of commercial solar power has pulled even with retail electricity rates in Italy and Germany. The consulting firm Eclareon looked at a standard 30 kilowatt solar photovoltaic system for your average commercial building. The “levelled cost of energy” of any source of power – solar, natural gas, coal, wind, etc – accounts for everything that goes into determining that electricity’s cost: installation, maintenance, investment, the electricity itself, depreciation, and so forth.

Solar’s LCOE actually dropped significantly from 2012 to 2013. Solar’s LCOE in Italy and Germany is now at “grid parity,” meaning it’s even with retail electricity prices in those countries. Spain’s already gotten there as well, and Mexico and France are coming up.

The analysis also looked at the level of regulatory support solar enjoys in each country. This does not mean subsidies. Right now, regulatory law in both European countries and the States isn’t set up to handle a world in which electricity consumers also generate and sell their own electricity. Sometimes there are added fees for people who generate their own solar power, sometimes they aren’t legally allowed to sell their excess power back to the grid, and sometimes laws can rocket back and forth from solar-friendly to solar-unfriendly in short order. [[Think Progress Mar 24/14](#)]

MARCH 27, 2014

HUMAN BODIES ARE PROFITABLE TOXIC DUMPS FOR CHEMICAL COMPANIES

Significant increases in breast cancer, ovarian infertility, childhood cancer, autism, asthma, ADHD and birth defects are correlated to the explosion of industrial chemicals in the 1950s. Of the estimated 80,000 industrial chemicals entering land, air and drinking water in North America, most have never been tested for long-term effects such as neurological damage, memory or learning impairment or cancer. More than 200 are known to pass through the placenta from an exposed mother to her fetus.



An increasingly unregulated global capitalist system allows profit to trump human health and safety. Chemical industries treat our health and well-being not as an intrinsic good or right worth defending and preserving, but as an annoying hindrance that interferes with the bottom line, Fred Guerin writes. The deadly Big Tobacco model of deception, distraction and massive financial lobbying is deftly employed by other chemical industries to promote the apparently indispensable everyday products: polyvinyl chloride, or PVC (vinyl), made from the polymerization of deadly vinyl chloride monomer, which causes cancer, severe and painful neurological damage, birth defects and immune system damage. Also formaldehyde used in the building industry, pressure-treated wood, household products and by the textile industry and indisputably known to be a human carcinogen affecting everyone exposed to it. Also BPA, an endocrine disruptor that interferes with the human hormone system, young brains and other body organs.

At least 4 billion pounds of persistent toxic chemicals are released into the air, water and groundwater in the USA every year. That's 11 million pounds each day, 456,000 pounds each hour or 7.6 thousand pounds of toxic chemical waste *released each second* by industrial facilities in the United States. Many are known to cause cancer, birth defects and other debilitating diseases. [[Truthout Mar 27/14](#)]

APRIL 3, 2014

**ATMOSPHERIC “ELEVATOR”
TRANSPORTS OZONE DEPLETERS TO
STRATOSPHERE**

An international team of researchers discovers a natural, invisible hole extending over several thousand kilometres over the tropical West Pacific in a layer that would otherwise prevent transport of most of the natural and manmade substances into the stratosphere. Many chemical compounds emitted at the ground pass thus unfiltered through this so-called “detergent layer” of the atmosphere. Scientists call it the “OH Shield” (hydroxyl).



The newly discovered phenomenon over the South Seas boosts ozone depletion in the polar regions and could have a significant influence on the future climate of the Earth. The ozone probes sent up over the western tropics every 400 kilometres have been consistently below detection limits from the surface of the Earth to an altitude of around 15 kilometres. Normal ozone concentrations here are three- to 10-times higher. The complete absence of ozone at all heights is previously unknown to science. Then Markus Rex and his team onboard *Sonne* track down a giant natural hole over the tropical South Seas.

“Even though the sky appears to be an extensively uniform space for most people, it is composed of chemically and physically very different layers,” Markus Rex explains. The air layers near the ground contain hundreds or even thousands of chemical compounds – which is why winter and spring, mountains and sea, city and forests each have a distinct smell.

Most of these substances are broken down into water-soluble compounds in the lower atmosphere and are washed out by rain. Since these processes require the presence of hydroxyl (=OH) radicals, this part of the atmosphere is called the “OH shield”. It acts like a huge atmospheric washing machine in which OH is the detergent.

Substances that make it to the stratosphere – including commercial and military aircraft emissions – unfold a global impact remain up there for many years and spread over the entire globe.

Even where the OH shield is intact, extremely long-lived chemical compounds find their way to the stratosphere. These bad boys include methane, nitrous oxide, halons, methyl bromide and chlorofluorocarbons (CFCs) – all notorious “ozone killers” in polar regions. Actual ozone depletion rates continue to outpace computer models,” Markus Rex points out.

The OH hole over the tropical West Pacific is funnelling greater amounts of ozone-depleting brominated hydrocarbons into the stratosphere than in other parts of the world.

“Imagine this region as a giant elevator to the stratosphere,” suggests Markus Rex. Because sulphur particles and stray geoengineering particles rising to the stratosphere reflect sunlight, having a cooling effect, the atmospheric elevator over the South Seas not only boosts ozone depletion, but influences climate over the entire Earth. Stratospheric sulphur particles have become thicker in recent years.

“The OH hole over the South Seas is above all further evidence of how complex climate processes are,” emphasizes Rex. “Therefore, we should make every effort to understand the processes in the atmosphere as best we can and avoid any form of conscious or unconscious manipulation that would have an unknown outcome.”

The tropical West Pacific is one of the most remote regions on our planet. Extensive measurements of the air composition have yet to take place in this area. One part of ozone per billion by volume (ppbv) means there is one ozone molecule for every billion air molecules. [[Alfred Wegener Inst. Apr 3/14](#)]

APRIL 17, 2014

HOME CARCINOGENS RAMPANT

The carcinogen formaldehyde, used to embalm bodies, is a common chemical found in plywood, hardwood paneling, and furniture. As formaldehyde ages, it evaporates into a vapour, which is inhaled and accumulates in re-exposed bodies, increasing the risk of being embalmed alive and developing cancer. Flame retardants now found in the bodies of “nearly all” Americans according to the CDC, cause early-onset puberty, diminished IQ, and thyroid problems. Teflon makes pans non-stick and causes less convenient cancer.

More advanced European countries follow the Precautionary Principle to ensure that their citizens are safe and that dangerous products don't make it to market. It's practice is law in the European Union. In the USA, the Precautionary Principle means that regulators should be extra cautious in causing chemical corporations to “waste” money on cursory testing. Since those transnationals are running Washington, lawmakers are shy of the precautionary principle too. [[The Daily Take Apr 17/14](#)]



APRIL 17, 2014

US PRODUCES DEADLY PRODUCE

More than 80% of US leafy greens are grown in “America's Salad Bowl” – California's pesticide-saturated Salinas Valley.

Susan Freinkel writes that since their development as nerve gas in WWII, the use of pesticides in the United States has quintupled.

More than 1 billion pounds of weed killers, insecticides, fungicides and “peoplecides” are used in the United States each year. This is serious chemical warfare: 1,000 chemicals registered to fight pests and pathogens formulated into some 20,000 products. One in five are designated for use in homes and gardens, playgrounds, schools, offices and hospitals.

“A large percentage of US children could be suffering the effects of exposure due to pesticides,” says David Bellinger, an environmental health expert at the Harvard School of Public Health. Produce is the main source of exposure for most children in the United States.

In the brains of the most highly exposed kids, there is less volume in regions associated with working memory, cognition and inhibition. Children with the highest prenatal exposures to pesticides are more likely to have lower IQs. They are also burdened with poor working memory, which affects learning, reading comprehension and the ability to pay attention.

“If one child loses seven IQ points, the teacher may not notice, the parent may not notice. But if 100,000 kids have a loss of seven points, the economy notices,” says Leonardo Trasande, a pediatrician and environmental health specialist at the New York University School of Medicine. A five-point drop in IQ translates into a 50% increase in the number of functionally disabled adults (to 9.4 million) and a 50% decrease in the number of gifted people (down to 2.6 million). This shift brings a host of ripple effects, from an increased number of school kids needing special education to fewer workers capable of complex tasks or high-level decision-making.

Lead poisoning causes roughly the same IQ drop and costs the United States \$51 billion annually in lost economic productivity. The CDC estimates that more than 500,000 children in the U.S. have “elevated” levels of lead in their blood. Even small amounts of lead in children have been linked to crime, behavioural problems, dyslexia, decreased IQ, and a variety of other health problems. [[The Daily Take Apr 17/14](#)]

APRIL 18, 2014

METHANE MONSTER SITS UP

Annually, humans now emit about 13.5 gigatons of carbon, or about 50 gigatons of CO₂ equivalent gasses into the atmosphere – a volume at least six-times the emission seen at any time in the geological past, even during the worst greenhouse gas extinction, the Permian. Only a fraction remains in the atmosphere for any substantial period of time.

The rest goes into carbon sinks. As terrestrial and deep ocean carbon sinks become saturated, they are becoming emissions sources themselves. Erosion of the hydroxyl methane sink coincides with rising rates of natural methane store emissions.

The heat potential of a single methane molecule is 80-times that of a single CO₂ molecule. In the presence of aerosols, it jumps to 105-times that of CO₂, reducing the aerosol cooling effect. Without the rapid oxidization powers of the disintegrating hydroxyl layer, methane’s heat forcing would be far, far greater. [[Robert Scribblers Apr 18/14](#)]



APRIL 21, 2014

BP DISASTER FOUR YEARS ON

Dahr Jamail writes: *Like many* Florida fisherman, Joe Yerkes was exposed to both oil and dispersants after joining BP's oil cleanup program because he was put out of work by BP's 2010 Deepwater Horizon oil disaster. *Blamed on penny-pinching shortcuts by a company already notorious for oil spills and injuries*, the blowout killed 11 and gushed for 87

days until it was capped nearly three months later after releasing at least 4.9 million barrels of oil into the Gulf of Mexico - plus 1.9 million gallons of toxic chemical dispersants.

Yerkes says, "I have spent the years since the spill happened literally trying to survive... I've lost five friends now who were also exposed to BP's oil and dispersants, who were unable to seek proper treatment to extract the chemicals from their bodies before the exposure killed them."

In the four-state impact zone of BP's oil spill, the disaster continues. Not long after his exposure, Yerkes became violently ill, started bleeding from his nose and ears, and began vomiting blood, *which tests linked to the BP spill*. "I have chronic headaches, a fever, and suffer chronic unbearable pain in my muscles and joints, and have had chemical pneumonia twice so far," Yerkes says.

Oil from BP's disaster is linked to heart defects in both tuna and amberjack, and has floated underwater nearly all the way to the southern tip of Florida sickening fish along the way. Insects living in wetland grasses along Louisiana's coast that was oiled in the aftermath of BP's disaster are still dying almost four years after the disaster began.

People living in low-lying coastal communities are having to consider moving, hence abandoning their culture and way of life, due to the erosion of oiled marsh coupled with rising seas from climate change. President Obama's Environmental Protection Agency has decided to allow the oil giant back into Gulf waters to search for more oil leases. A full 25 years after the *Exxon Valdez* disaster in Alaska, the ongoing presence of relatively fresh oil in Prince William Sound continues to surprise scientists.

More than 900 dolphins have been found dead or stranded in the impact zone of the disaster since it began. In 2013, dolphins were still stranding at more than three times the average annual rates they were prior to the spill. Many of the dolphins were severely ill, underweight, anemic, and showing signs of liver and lung disease, with many of them so ill they did not survive while being tracked by the group. Sea turtle deaths have spiked dramatically, along with tuna, red snapper, mahimahi, blue crab, oysters, brown pelicans, common loons, coral, foraminifera, Gulf killifish, seaside sparrows, sperm whales and white pelicans.

Dr Riki Ott, a toxicologist, marine biologist, *Exxon Valdez* survivor says, "I would expect to see increased rates of early-term miscarriages for women, early developmental issues for children born to women who were exposed to breathing these fumes and vapours, and also continuing chemical hypersensitivity."

The dispersants BP used made the oil 52 times more toxic than the oil itself. BP told the public that Corexit is “as harmless as Dawn dishwashing liquid.”

Yerkes is into his second year of walking with a cane to assist his balance. He owes \$85,000 for alternative health care “in order to save my life.” In Louisiana more than 200 miles of shoreline have “some degree of oiling,” including 14 miles that are moderately or heavily oiled. [[Truthout Apr 21/14](#)]

APRIL 26, 2014

EARTHQUAKE OFF GREENLAND

Greenland's ice loss is accelerating by 22 billion tons / 22 cubic kilometers of meltwater every year, raising the sea-level by increments worldwide and threatening to further destabilize Earth's rebounding crust, as evinced by increased earthquake frequency and magnitude around Greenland. [[Live Science Dec 7/01](#)]

A 5.1 magnitude earthquake strikes in the Greenland Sea, on the fault line that crosses the Arctic Ocean, at 73°N. The trembler follows four recent earthquakes off Svalbard between March 6 and April 13, 2014. As Greenland's ice sheet melting speeds up, isostatic rebound will cause earthquakes around Greenland to become stronger and occur more frequently. Earthquakes in this region can destabilize hydrates in the sediments beneath the Arctic Ocean, triggering sudden methane releases and more earthquakes near that fault line. [[Arctic News Apr 26/14](#)]



MAY 1, 2014

GEOENGINEERING PROGRAMS CONTINUE TO DESTROY OZONE LAYER

There is in fact now a massive Northern Hemisphere ozone hole that appears to be growing and worsening by the day... SAG (Stratospheric Aerosol Geoengineering) and SRM (Solar Radiation Management) aka “chemtrails”, are virtually shredding the ozone layer day in and day out, Dane Wiggington reports. [[Geoengineering Watch May 1/14](#)]

MAY 5, 2014

MORE THAN 100 FIRES BURNING IN IRKUTSK REGION

As March temperatures of 60-70F soared above normal highs of 36-40F, more than 542 square miles of taiga are now burning. [[Discovery May 5/14](#)]

JUNE 1, 2014

AMERICANS BEING ROUNDED UP – FEET FIRST

Thanks to Monsanto, America is drowning in Roundup, a glyphosate poison that defoliates plants. Breast milk carries Roundup, at levels up to 1600-times higher than the European Drinking Water Directive allows for individual pesticides. Only “Frankencrops” such as genetically modified corn, cotton, canola and sugar beets can cope with Roundup, sprayed on an estimated 90% of US farmland. 2,4D will certainly be approved, making it legal and even recommended for farmers to spray their fields with Agent Orange, the defoliant used to clear jungles in the Vietnam war.

“If the Americans like to eat GMO products, let them eat it then. We don’t need to do that; we have enough space and opportunities to produce organic food,” Russian Prime Minister Dmitry Medvedev tells Russian farmers. [[Alternet June 1/14](#)]

JUNE 8, 2014

ICE CAPS MELTING ICE EVERYWHERE

The Greenland, Antarctic and Arctic ice cap are melting mostly from underneath by warming ocean waters. The rate of melting of the Antarctic ice sheet has doubled, and the carbon dioxide added to the atmosphere by human fossil fuel burning is equivalent to about 700 Pinatubo-size eruptions per year. The rate of heat input is equal to four Hiroshima atomic bomb detonations *every second*.

JUNE 8, 2014

UNDER THE SPREADING METHANE VEIL

The entire northern hemisphere is now covered by a thickening atmospheric methane veil that is spreading southwards at about 1 km a day and it already totally envelopes the United States. A giant hole in the equatorial ozone layer has also been discovered in the west Pacific, which acts like an elevator transferring methane from lower altitudes to the stratosphere, where it already forms a dense equatorial global warming stratospheric band that is spreading into the Polar regions

The spreading atmospheric methane global warming veil is raising the temperature of the lower atmosphere many times faster than carbon dioxide does, causing the extreme summer temperatures in Australia and the United States. [Malcolm P.R. Light, Harold Hensel and Sam Carana June 8/14]



JUNE, 2014

GERMANY SETS SOLAR RECORD

Germany sets a solar power record, using sunshine to generate 50% of overall electricity demand for part of a day. In the first half of 2014, renewable energy accounted for nearly 31% of all electricity produced in Germany. For the first time ever in Germany – the cloudiest country in western Europe – solar power and other forms of renewable energy created more energy and electricity production than dirty coal. [[Truthout July 10/14](#)]

JUNE 10, 2014

HYDROXYL HOLE SPURS METHANE VEIL

A massive hydroxyl and linked ozone hole is developing over the western Pacific and Indonesia. Hydroxyls are nature's air cleaners, removing air pollution and methane from the atmosphere. The Indonesian hydroxyl hole is spreading southward, 9 km to 11 km high, allowing the methane warming veil to ascend into the stratosphere and return to northern Polar regions – further thickening its concentration and increasing warming.

Spectacular rates of heating from the Gulf Stream waters off the US east coast flow northeast to Norway, where they split to enter the Barents Sea and dives beneath the Arctic Ocean icecap. Subsea slope and abyssal plane methane hydrates are extremely extensive in these warming regions. Gulf Stream water temperatures now range up to 13°C to 26.5°C. [[Arctic News June 10/14](#)]

JULY 1, 2014

ARCTIC SEAFLOOR METHANE RELEASES 2X HIGHER THAN THOUGHT

Once again, Arctic methane is leaking out from the ocean floor nearly twice as fast as was previously thought.

Lead researcher Natalia Shakhova says that methane releases from the Arctic seafloor are, “now on par with the methane being released from the arctic tundra, which is considered to be one of the major sources of methane in the Northern Hemisphere.” Just seven years ago, estimates suggested that only 500,000 tons of methane were being released into Earth's atmosphere each year. Now we're measuring 17 million tons of it. Just in the Arctic. [[Truthout July 1/14](#)]

JULY 4, 2014

GREENLAND SETS ANOTHER HEAT RECORD

Following Greenland's June 2014 heat record, sea surface temperature anomalies in the Arctic are high enough to trap and intensify the layer of warm water below – while allowing burgeoning burps of subsea methane to bubble up through the mushy ice. “The risk is intolerable and calls for action,” Sam Carana says. [[Arctic News July 4/14](#)]

JULY 18, 2014

NORTHERN CANADA BURNS

As boreal forests burn at rates “unprecedented” in the past 10,000 years, dry, unseasonably warm weather fuels 186 wildfires in the Northwest Territories. With northern regions warming at twice the rate as areas further south, the acreage burned in the NWT is six-times greater than the 25-year average.

The boreal forests of Canada, Europe, Russia and Alaska account for 30% of the world's carbon. Forest fires in Russia in 2012, 2013 and 2014 released centuries of stored carbon into the atmosphere, further warming the air and priming forests for more wildfires that release still more carbon in what could become a runaway feedback loop.

For every 1.8 degree Fahrenheit rise in temperatures, wildfire activity is expected to double. Over a few weeks in July 2012, fires in Siberia enough soot to shock melt 95% of Greenland’s ice sheet surface. In the western USA, wildfire season has lengthened by 75 days compared to 40 years ago as rising temperatures and shrinking snowpack spur more big forest fires. [[Mother Jone July 18/14](#)]

JULY 24, 2014

THREE MASSIVE CRATERS IN SIBERIA EXPLAINED

Three massive holes found in Siberia from explosions in thawing methane pockets buried beneath warming permafrost. The massive explosions ripped 200-300 foot deep and 13-98 foot wide holes in the Siberian earth. Three holes of similar structure have appeared over a 700 mile wide expanse of Siberian tundra.

The name for the place where this strange event first happened, in Russian, is Yamal, which roughly translates to mean “The End Of The Earth”. The Arctic contains 40% of all the planet's carbon. The theory advanced by Russian Arctic scientists, is that a pocket of gas beneath the permafrost spontaneously destabilized. The destabilized gas then is thought to have violently blown away the surface layer “like the popping of a cork in a champagne bottle.”

Is a sleeping dragon awakening in the Arctic? Human warming is more than six-times faster than at any time during the geological past. Two Siberian methane holes formed in the course of just one week. We may have a compost bomb smoking gun and a potential mechanism for rapid destabilization and explosive release of gas pockets deeply embedded in the frozen tundra all wrapped into one. [[Robert Scribbler July 24/14](#)]

Remember the Siberian Traps? The methane releases triggered by these greenhouse volcanic eruptions 252 million years ago nearly ended life on Earth. [[IB Times Feb 11/14](#)]



JULY 28, 2014

LARGE LAPTEV METHANE PLUMES

Emerging from the Gulf Stream, a pulse of warmer than normal water is flowing north past Iceland and into the Barents Sea, where it dives to a depth of around 200-500 meters, heating the entire water column and destabilizing methane hydrate stores.

In 2011, plumes from the sea bed stretched 1 kilometer across. The scientific study vessel *Oden* also found “elevated methane levels, about ten times higher than in background seawater.”

In 2014, the size of the release zone in the ice-free Laptev Sea covers several kilometers of seabed and includes over 100 methane seepage sites. High and above normal methane readings are recorded in the Laptev, Kara and East Siberian Seas, over the Nares Strait near Greenland and off the US East coast - all areas experiencing substantial deep ocean warming over the past few decades. [[Robert Scribbler July 28/14](#)]

AUGUST 2, 2014

SIBERIAN HEAT WAVE THAWS TUNDRA, RELEASES METHANE

A major heat wave settles over Siberia, pushing temperatures of 77 to 86F all the way to the shores of the Arctic Ocean, even as it causes numerous massive blazes to emerge both on open tundra and throughout Siberia’s boreal forests. A jet stream mangled by human emissions and a large heat dome have enabled the formation of this heat wave, and a large and disturbing methane pulse greater than 1950 parts per billion over a wide region of Arctic Russia and the Kara Sea. This event is so massive that an area of about 500 x 500 miles is nearly completely filled with higher readings even as a much broader region, stretching about 2,000 miles in length and about 800 miles at its widest experienced scores of large pulses. [[Robert Scribbler Aug 2/14](#)]

AUGUST 19, 2014

PERSISTENTLY HIGH METHANE CONCENTRATIONS OVER BEAUFORT SEA

Methane continues to erupt from clathrates under the seabed, triggered by very warm water reaching the bottom of the Arctic Ocean. These fresh methane eruptions helped mean methane levels reach new records, with mean global methane readings as high as 1835 parts per billion recorded at several altitudes on August 17, 2014. Very high sea surface temperature anomalies also show the inflow of warm water from the Pacific Ocean through the Bering Strait. Sam Carana [[Arctic News Aug 19/14](#)]

AUGUST 27, 2014

GREAT PLUMES OF METHANE BUBBLES OFF ATLANTIC COAST

Streams of methane bubbles are percolating along the Atlantic coast between North Carolina’s Outer Banks and Massachusetts’ Cape Cod flowing from hundreds of ocean-floor leaks.

SEPTEMBER 26, 2014

SOOT FROM CANADIAN WILDFIRES INCREASES GREENLAND ICE MELT

Soot from burning coal, diesel, dung, wood and a record number of fires in Canada’s Northwest Territories continues to darken immense areas of Greenland’s ice-sheet, increasing its heat absorption and causing melting to increase as 3.5 million hectares of forest goes up in smoke. Forest fires that used to average 1 million hectares a year, have doubled due to human-induced climate change.

More heat-trapping dust covering the glacier may be coming from the drying Arctic as once-snow covered soil is exposed to strengthening winds. [[Geological Survey Sept 26/14](#); [Radio Canada International Oct 24/14](#)]



SEPTEMBER 21, 2014

GLOBAL CLIMATE RALLIES DEMAND ACTION

As world leaders arrive in New York City for another climate summit, more than 400,000 people take to the streets to demand action to address the climate crisis. Supporting rallies take place in Berlin, Bogotá, New Delhi, Istanbul, Johannesburg, Vienna, Lagos, London, Paris, Rio de Janeiro, Melbourne and other cities worldwide.

Described as “an invitation to change everything,” the march was called by 350.org.

Over 1,500

endorsing organizations include unions, churches, schools and community and environmental justice organizations as a response to the scheduled U.N. Climate Summit of world leaders taking place in New York City two days later. The rallies are the largest single event on climate that organized to date. [Wiki]



NOVEMBER 16, 2014

METHANE SPIKE HITS 2040 ppb

A “huge” sudden atmospheric spike in the concentration of atmospheric methane occurring at Svalbard north of Norway in the Arctic reaches 2040 ppb. This sudden anomalous increase in atmospheric methane on the East Siberian Arctic Shelf is where a recent Russian - US expedition found widespread, continuous methane seepages into the atmosphere.

Methane “fountains” up to 1 kilometer across are producing atmospheric methane concentrations 100-times higher than normal. Extremely high maximum temperature anomalies from the Antarctic region reflect atmospheric methane concentration peaks caused from the destabilization of methane hydrates by early warming of the submarine slope regions. Long periods of freezing have been getting progressively shorter and occur at higher maximum temperature anomalies in each successive cycle. The length of each of the freezing cycles has shrunk from 20 years (1960 - 1980) to about 2 years (2004 – 2006). [[Arctic News June 10/14](#)]

NOVEMBER 19, 2014

NEW EMISSIONS PLEDGES FROM U.S., EU, CHINA TOO LITTLE VERY LATE

President Barack Obama and Chinese President Xi Jinping surprise everyone by unveiling their targets together at a Beijing summit. Nice try, but we’ll probably ask you to cut more carbon next year – that’s the early message of United Nations scientists taking their first look at the new greenhouse-gas targets of the US, China and the European Union, billed as a historic step for the leading emitters to cut back carbon dioxide through 2030 in order to limit climate change.

The EU announced its emissions targets in October.

The plans of the three biggest economies will not be enough to stop the Earth from warming more than 2C. “We’re narrowing the gap but not closing it,” says Joseph Alcamo, chief scientist at UNEP. Alcamo and his colleagues had just published a report estimating that in 2030 the world will probably be releasing 14 to 17 billion metric tons more carbon dioxide than it should be in order to limit average temperature gains to 2C. Energy-related CO2 emissions in the USA alone totalled 5.4 billion tons in 2013. An estimate out of the UK predicts the latest pledges would allow temperatures to creep up over 3C this century.

Following detailed presentations of all leading economies’ emissions plans in March 2014, UN scientists will release another formal assessment of how well the world is doing to avoid crossing the “red line” of another 2C of warming. That estimate next year may spur calls for countries to cut emissions further as a part of the international climate negotiations, which are set to wrap up with an agreement late next year in Paris. [[Real Time Economics Nov 19/14](#)]



DECEMBER 1, 2014 WILD WEATHER CONTINUES

Guy McPherson: “The snowstorm in Buffalo, New York was the biggest snowstorm ever recorded in Buffalo, at 6 feet 4 inches in 24 hours. It’s the largest one ever recorded in the United States.

“Australia, meanwhile, is on fire. In New Zealand, “People were commenting on how hot it was, and “how far into summer we already are,” and it was early to mid-spring. [[Truthout Dec 1/14](#)]

DECEMBER 23, 2014

HALF OF US CHILDREN WILL BE AUTISTIC BY 2025 – MONSANTO IMPLICATED

New evidence points to glyphosate toxicity from the overuse of Monsanto’s Roundup herbicide on food and GMOs in it. Published by more than 170 scholarly peer-reviewed articles, Stephanie Seneff, PhD concentrates on the relationship between nutrition and health, as well as the impacts of corporate toxins on human health. These impacts include cardiovascular diseases, Alzheimer’s and autism.

Noting that symptoms of autism closely mimic those of glyphosate toxicity, plus presents data showing a remarkably consistent correlation between the use of Roundup-ready GMO crops and Monsanto’s ubiquitous pesticide with rising rates of autism. Dr. Seneff surprises a special panel discussion about GMOs when she declares, “At today’s rate, by 2025, one in two children will be autistic.”

A fellow panelist reports that after Dr. Seneff's presentation, "All of the 70 or so people in attendance were squirming, likely because they now had serious misgivings about serving their kids, or themselves, anything with corn or soy, which are nearly all genetically modified and thus tainted with Roundup and its glyphosate."

Dr. Seneff underlines the near-totality of glyphosate contamination. Because it's used on corn and soy, all soft drinks and candies sweetened with corn syrup, and all chips and cereals that contain soy fillers have small amounts of glyphosate in them, as do North American beef and poultry since cattle and chicken are fed GMO corn and soy. Wheat is often sprayed with Roundup just prior to being harvested, which means that all non-organic bread and wheat products are also be sources of glyphosate toxicity and could underly feel-better the rush to be "gluten-free". (Works for me.)

Though the amount of glyphosate in each product may be "small", the cumulative effect – especially the prodigious amounts of processed food Americans eat – could be devastating. Pregnant women living near farms where pesticides are applied have a 60% increased risk of children having an autism spectrum disorder. Wireless pollution is also linked to autism. So is air pollution from fine particulates...

JANUARY 2, 2015

REMAINING THIN ARCTIC ICE BEING PUSHED OUT TO SEA

Nearly half-a-century ahead of predictions, Sam Carana writes that we are on course to the first ice free season in the Arctic Ocean. After strong winds finish pushing the last remaining ice into the Atlantic Ocean in early 2015, newly forming winter sea ice will face the full force of the Atlantic waves. "That could mean extremely highly fractured sea ice across the Russian side by the return of spring 2015 sunlight. I think we are witnessing a historic transition right now with no ice in the summers," Carana writes. [Arctic News Jan 2/15]

JANUARY 4, 2015

SIXTH MASS EXTINCTION GAINS KILLING MOMENTUM

"Our planet is now in the midst of its Sixth Mass Extinction of plants and animals – the sixth wave of extinctions in the past half-billion years," reports the Center for Biological Diversity. "We're currently experiencing the worst spate of species die-offs since the loss of the dinosaurs 65 million years ago.

Naturally-occurring extinction occurs at a natural 'background' rate of about one to five species per year. We're now losing species at 1,000 to 10,000 times the background rate."



"Unlike past mass extinctions, caused by events like asteroid strikes, volcanic eruptions and natural climate shifts, the current crisis is almost entirely caused by us – humans," says the Center.

“In fact, 99% of currently threatened species are at risk from human activities, primarily those driving habitat loss, introduction of exotic species and global warming.”

“The world is losing dozens of species every day in what experts are calling the sixth mass extinction in Earth’s history. As many as 30 to 50 percent of all species are moving toward extinction by mid-century – and the blame sits squarely on our shoulders,” adds Hyacinth Mascarenhas.

“Habitat destruction, pollution or overfishing either kills off wild creatures and plants or leaves them badly weakened,” lists Derek Tittensor, a marine ecologist at the World Conservation Monitoring Centre in Cambridge. “The trouble is that in coming decades, the additional threat of worsening climate change will become more and more pronounced and could then kill off these survivors.”

Disappearing species include mammals, reptiles, amphibians, fish, birds and invertebrates such as corals, earthworms and butterflies. Each species loss destabilizes Earth’s pyramid of complex life forms – with the planet’s premier apex predator species teetering precariously at the top: us.

Some “critically endangered” species that may not live to see 2016, thanks to humans:

Black & Javan Rhino, Soala (“Asian unicorn”), South China Tiger, Yangtze Finless Porpoises, Western Lowland & Mountain Gorillas, Sumatran Elephants, Sumatran Orangutans, Siberian Leopards, leatherback turtles, the Vaquita (entangled and drowned in gillnets) and Greater bamboo lemurs. [[Ecowatch Jan 3/15](#); [Matador Net Jan 4/15](#)]



JANUARY 6, 2015

GREED + WORLDWIDE “UPWISING” = HARD TIMES IN OIL PATCH

Robert Scribbler writes that plummeting pump prices from the fracking boom are blowing back on producers. Compounding the issue of high production cost is a stranding of assets caused by a little televised but widespread phenomena called Blockadia. Ongoing campaign against the Keystone Excel and Northern Gateway Pipelines that have left tar sands oil stranded.

The resulting isolation of Canada’s tar sands that has now driven local prices for a barrel of oil to less than \$37, shrinking Alberta tar oil profits and halting expansion. The US fracking story is similar. From outright bans to constant legal action on the part of communities and individuals, Blockadia has arisen both in the form of protests and in the form of litigation. We are now all in what Naomi Klein calls “the

sacrifice zone” – a region where the “externalities” of fossil fuel use become visible and an increasingly violent impediment to daily life and well being. This is why so many pipelines and oil ventures are now under threat of blockade. People are fed up, and everyone from moms to scientists to cowboys to Native Americans to activists are willing to put themselves on the line to prevent the worst outcomes of fossil fuel burning. People don’t like being sacrificed or having their children sacrificed for company profits which is the primary reason we don’t want your fracking crude.

Meanwhile, economies of scale will continue to reduce solar panel prices, increase battery storage capacity and economics, and provide electric vehicles at lower costs and ever-greater capabilities. within 5-10 years the next price war on marginal oil may well be spearheaded by renewables themselves. [[Robert Scribbler Jan 6/15](#)]



JANUARY 7, 2015

2014 IN CLIMATIC REVIEW

While special edition “Year In Review” magazines and websites focus on human events over the past year, the biggest human folly – the melting of the polar ice caps and accelerating release of ferociously heat-trapping methane deposits – merits little mention next to even hotter celebrity gossip.

Meanwhile, back in reality, Robert Scribbler reports that dark water and thinner, less contiguous, ice absorbing more of the sun’s heat is causing a rapid, massive realignment of the Earth’s radiative balance. Loss of sea ice and related increased heat absorption has pushed melt season onset times a full week sooner than 1982 onsets 32 years ago. Earlier melt season starts lead to more heat absorption – a classic feedback cycle.

Worldwide temperatures now show a severe pace of warming of .70 C per century. By comparison, the end of the last ice age featured century scale warming at the rate of .04 to .05 C per century. So the current rate of warming is 14-17 times faster than the warming that ended the last ice age. This is huge news , as a cascade of freak weather conditions continues to attest.

Most of 2014 saw the hottest temperatures ever recorded for the world ocean. North Pacific and North Atlantic Ocean temperatures were particularly hot, with a West Coast heat pool driving ocean “dead zones” and starfish die-offs. Off the US East Coast, ocean temperature anomalies regularly topped 4 C above average, as tropical fish fled south into Arctic waters to survive the record warmth.

2014 featured some of the wildest weather on record with the US experiencing extraordinary “dipole anomalies” as polar vortex collapses pumped cold Arctic air south and warm air north. The UK also went through its stormiest winter and hottest year since record-keeping began in 1649.

Throughout the world severe droughts ravaged wide regions with the US Southwest still in the grips of the worst multi-year drought in 1,200 years. Amazon drying and wildfires paced severe drought gripping the Sao Paulo megalopolis in southeastern Brazil. With monsoonal moisture shut off, taps shut ran dry, forcing residents to ration water and forcing city water officials to consider using mud for municipal water supplies.

As massive sections of Antarctic land ice reached the point of irreversible collapse, the City of Miami began installing pumps to rid streets of flooding at times of high tide and assessed a new property tax to start defences against the surge human-induced of waters. Apparently unaware of the global warming “hoax”, sea levels are now rising as high as 7-8 mm per year in some regions.

Sections of Siberia and Canada experienced extraordinary warmth during winter and spring of 2014 – setting off severe early season wildfires that raged well into late summer. These megafires continue the trend of recent years in which massive blazes rip through the Siberian tundra region disgorging methane and CO2 laden smoke plumes that then encircle the Northern Hemisphere, further warming temperatures and darkening the ice cap.

For Canada’s Northwest Territories, the summer of 2014 was its worst fire year ever recorded with massive blazes forming towering pyrocumulus clouds over vast burning regions of Arctic permafrost. “A fitting backdrop,” Scribbler notes, “for the Mordor-like activities of Alberta tar sands extraction.” About 1,300 billion tons (gigatons) of carbon are stored in the now thawing permafrost.





JAN 7, 2015

DENMARK KICKING FOSSIL FUELS

Once upon a time in 1971, Robert Scribblor continues, on the eve of the world's first global oil shocks, the European country of Denmark generated more than 80% of its electricity from crude. As the '70s progressed and the nation staggered under rising energy costs, Denmark embarked on an unprecedented campaign to rid itself of a destructive dependence on economically volatile, climatologically destructive, and easily manipulated fossil fuels.

Situated on a peninsula between the North and Baltic Seas, Denmark is awash in wind energy. By the year 2000 resulted, Denmark was providing slightly more than 10% of its electricity from wind, solar and geothermal sources – with wind providing the bulk of this portion. At this point, manufacturing economies of scale began to kick in as wind power adoption in Denmark began to expand exponentially. The amount of oil used for electricity generation in Denmark is now... less than 3%.

Denmark is now within striking distance of achieving its goal of getting more than 50% of its electricity from renewables by 2020 and becoming completely fossil fuel free by or before 2050.

Meanwhile, global installed wind capacity continues to increase along an exponential curve. Germany is now at 27% renewables, California at 23%. Electric vehicles, with their large batteries, provide grid storage when plugged in at home or at a smart charging station. With Germany seeing a 25% fall in the cost of battery storage in 2014 alone, the advent of new, very large battery factories like those being built by Tesla, Solar City and Byd are likely to continue to drive down battery costs over the next few years.

With wind and solar energy now increasingly beating out coal and natural gas generation costs on a cents per kilowatt/hr basis, it's a megatrend which, has the potential to start bending down the fossil fuel emissions curve soon. [[Robert Scribbler Jan 7/15](#)]

Good work!

And good luck to all critters everywhere.

Especially to the most endangered species of all.



CLIMATE **CRISIS** IS **REAL**

