

Atmospheric Geoengineering: Weather Manipulation, Contrails and Chemtrails A Review of the "Case Orange" report

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At an international symposium held in Ghent, Belgium May 28-30, 2010, scientists asserted that "manipulation of climate through modification of Cirrus clouds is neither a hoax nor a conspiracy theory." It is "fully operational" with a solid sixty-year history. Though "hostile" environmental modification was banned by UN Convention in 1978, its "friendly" use today is being hailed as the new savior to climate change and to water and food shortages. The military-industrial complex stands poised to capitalize on controlling the world's weather.

"In recent years there has been a decline in the support for weather modification research, and a tendency to move directly into operational projects." -World Meteorological Organization, 2007



Rainmaker Charles Hatfield, in 1915, destroyed much of San Diego.

The only conspiracy surrounding geoengineering is that most governments and industry refuse to publicly admit what anyone with eyes can see. Peer-reviewed research is available to anyone willing and able to maneuver the labyrinth of scientific journals. So, while there is some disclosure on the topic, full public explanation is lacking. A brief list of confirmed cloud seeding events is produced at bottom, starting in 1915.

Going under a variety of names – atmospheric geoengineering, weather modification, solar radiation management, chemical buffering, cloud seeding, weather force multiplication – toxic aerial spraying is popularly known as chemtrails. However, this is merely one technique employed to modify weather. The practice of environmental modification is vast and well funded.

Hosted by the Belfort Group, which has been working for the last seven years to raise public awareness of toxic aerial spraying, the Symposium included chemtrail awareness groups from Greece, Germany, Holland, France and the U.S. Belfort published five videos covering only May 29,[1] when filmmaker Michael Murphy (Environmental Deception and What in the world are they spraying)[2] and aerospace engineer Dr. Coen Vermeeren [3] gave the most dramatic presentations.

Dr Vermeeren, of the Delft University of Technology, presented [4] a 300-page scientific report entitled, "CASE ORANGE: Contrail Science, Its Impact on Climate and Weather Manipulation Programs Conducted by the United States and Its Allies." [5]

Case Orange notes it was prepared for the Belfort Group by a team of scientists but presented anonymously. It was sent to embassies, news organizations and interested groups around the world "to force public debate."

The report spends some time on HAARP, the High Frequency Active Auroral Research Program, [6] which is a military endeavor focused on ionospheric, electromagnetic, and global electrostatic field manipulation, and on other exotic weapon systems that manipulate the environment. While related, they go beyond this discussion of chemtrails.

In the interest of brevity, the health and environmental implications of cloud seeding is not discussed in any depth herein. Case Orange does go into it, as did most of the speakers at the Belfort Symposium. cursory research reveals a debate among researchers as to chemtrail toxicity, but whether that's a 50-50 or 99-1 argument is unknown.

Contrails Are Chemtrails

Case Orange rejects use of the term 'chemtrails' because it is associated with amateur conspiracy theorists. The only credible document it could find that uses it is the Space Preservation Act of 2001 introduced by U.S. Representative Dennis Kucinich (D-OH). [7] H.R. 2977 sought to ban the use of exotic weapon systems that would damage climate, weather, tectonic and biological systems. "Chemtrails" are specifically listed. Though later removed, no version of the bill ever became law.

Instead, the writers prefer the term 'persistent contrails' to describe the phenomenon since all contrails are chemtrails. 'Persistent contrails' distinguishes those that contain weather-altering additives from those that represent normal aircraft exhaust that dissipates after a few seconds or minutes.

Case Orange also rejects misanthropic intentions behind persistent contrails. It shows that geoengineering is fully operational, but rejects it is used to sicken people on the assumptions that 1) public health agencies have the public interest at heart; and 2) the economy is consumer driven. The authors indicate no awareness of numerous reports of collusion between the pharmaceutical industry and government health agencies. This year, a significant conflict-of-interest report appeared in the prestigious British Medical Journal, which further heightened suspicions that the H1N1 flu and its vaccines were a scam.[8] Nor do the authors consider that sick people will spur economic growth in a capitalist (for profit) health system.



Dr. Vermeeren gave his own introductory remarks and conclusions, but spent the bulk of the hour presenting information from Case Orange. He frankly admitted the existence of persistent contrails.

"We also know that chemtrails do exist because we do spraying; for crops, for example, and we know that they have been spraying for military purposes. So, chemtrails is nothing new. We know about it."

CLICK LINK Dr Coen Vermeeren Symposium speech, Afternoon Part 1 video, (starting at about 35 mins.) (29 May 2010) <http://www.ustream.tv/recorded/7299427>

“Weather manipulation through contrail formation ... is in place and fully operational.”

Case Orange cites publicly available material that shows geoengineering has been ongoing for “at least 60 years.” Used as a weapon of war in Hamburg by the UK during World War II, it was also used in the Vietnam Conflict by the US. Controversy over its use, revealed by investigative reporter Jack Anderson, spurred Senate hearings in 1972. During those hearings, military officials denied the use of cloud seeding technology. Later, a private letter from Secretary of Defense Melvin Laird admitting that his testimony was false surfaced. He, again unbelievably, claimed he didn't know what was happening. [9]

Environmental modification (EnMod) weaponry was finally banned by treaty in 1978. The UN Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques forced the end of such programs, overtly anyway.[10] (Case Orange authors seem unaware of this international ban, as it is one of their recommendations.)

However, with widespread reporting of rising global temperatures, increasing population, and degradation of water supplies, renewed interest in EnMod is now becoming broadly supported. (See, e.g., Top economists recommend climate engineering, 4 Sep 2009 [11] and similarly, Top science body calls for geoengineering ‘plan B’, 1 Sep 2009.[12])



The crew in Operation Stormfury in 1963. Note the special belly on the Douglas DC6-B for cloud seeding purposes. (From Case Orange)

Building a case for old technology finding a new market, Case Orange discusses several U.S. patents. For example, authors describe a 1975 patent, “Powder Contrail Generation,” [13] for the invention of a:

“specific contrail generation apparatus for producing a powder contrail having maximum radiation scattering ability for a given weight [of] material. The seeding material ... consists of 85% metallic particles and 15% colloidal Silica and Silica gel in order to produce a stable contrail that has a residence period of 1 up to 2 weeks.”

In 2009, researchers published “Modification of Cirrus clouds to reduce global warming,” which proposed two methods of delivery for this same proportion of metallics to silica and the same staying power of one to two weeks.[14]

Case Orange also reveals a 1991 patent held by Hughes Aircraft Company [15] that:

“contains 18 claims to reduce global warming through stratospheric seeding with aluminum oxide... thorium oxide ... and refractory Welsbach material”

The report notes that “the proposed scenario by the IPCC [Intergovernmental Panel on Climate Change] in 2001 is identical to the claims” in Hughes Aircraft’s 1991 patent. Hughes was acquired by Raytheon, a private defense contractor, in 1997, “the same company that acquired E-systems and the HAARP contract.”

Case Orange presents evidence that Raytheon stands to control all weather, which the authors find repugnant given that it is a private corporation. The authors recommend suing private corporations instead of governments. But subcontracting is quite common for governments and agencies, especially the US military. The distinction between large, powerful corporations and governments is a fine line obscure to common folk. And, the effect is the same whether governments are spraying us with nano-sized metals, chemicals or biologicals, or whether corporations do. The authors’ protective posture toward governments is nonsensical.

Case Orange suggests that geoengineering found new life in the global warming scare. Old patents are being dusted off and private interests stand to make substantial sums now that Cap and Trade has been exposed as ineffective in reducing greenhouse gases. (Although, lawmakers are still considering it since substantial sums can be made from the scheme, to wit: Al Gore reportedly achieved billionaire status from it.)

Since 2007, billionaire Bill Gates has spent at least \$4.5 million on geoengineering research. [16] Since reducing emissions is not popular with industry, ‘Plan B’ – geoengineering – is being touted as the answer to climate change and water shortage. A longer description of Plan B is: Add more pollution to the sky and water to offset industrial pollution, without reducing industrial pollution.

Human rights and environmental watchdog, ETC Group, describes the momentum [17]:

“The roll-out of geoengineering as Plan B is being skillfully executed: prominent high-level panels sponsored by prestigious groups, a spate of peer-reviewed articles this January in science journals, and a line-up of panicked politicians in northern countries, nodding nervously in agreement as scientists testify about the ‘need to research Plan B.’”

ETC reports that Gates’ top geoengineering advisor unveiled a plan to grow solar radiation management research “one-hundred-fold, from \$10 million to \$1 billion over ten years.”

Indeed, several watchdog groups recently ramped up calls to address clean water shortage. “At the end of July 2010, the United Nations General Assembly will vote on an important resolution, initiated by the Bolivian government, which would make clean water and sanitation a human right,” reports Food and Water Watch.[18]

Weather as a Force Multiplier: Owning the Weather in 2025



Case Orange ties a 1996 report by top military personnel in the U.S., "Weather as a Force Multiplier: Owning the Weather in 2025" [19] to evidentiary details (like governmental spraying schedules, chemical orders, correct nomenclature used in airline operating manuals, and calls for geoengineering by economists) to support its notion of "heavy involvement of governments at top level in climate control projects."

Owning the Weather in 2025 provides a specific timeline for the use of EnMod technologies in cooperation with the Weather Modification Association (WMA), a business-government group promoting the beneficial uses of environmental modification [20]:

- 2000 Introduce ionic mirrors, with a sharp increase from 2008;
- 2000-2025 Use chemicals for atmospheric seeding by civilian (as well as military) aviation;
- 2004 Create smart clouds thru nanotechnology, with exponential increase after 2010;
- 2005 Introduce 'carbon black dust'.

Though Case Orange decries the paucity of research into EnMod, in 2009 WMA published its position statement on the safety of seeding clouds with silver-iodide, citing three dozen research papers from 1970 through 2006. [21] In 2007, the World Meteorological Organization (WMO) published a statement that included "Guidelines for the Planning of Weather Modification Activities." Acknowledging that the modern technology of weather modification began in the 1940s, it is still "an emerging technology" today. [22] WMO indicated disappointment that research is being abandoned for operations.

Case Orange contains no reference to the WMA position statement citing all that research, although it cites the group. Nor does it mention the World Meteorological Organization, an agency of the United Nations, which has a link to its Weather Modification portal on its Index page.

At the end of the section, The bare necessity of geoengineering through cloud generation for survival of the planet (5.2.7), Case Orange states:

"[O]ur investigation team comes to the conclusion that climate control programs, controlled by the military but approved by governments, are silently implemented in order to avoid the worst case scenarios they obviously do not want. The two basic instruments are temperature control through generation of artificial clouds and manipulation of the ionosphere through ionosphere heaters.

"Both remain basically military combat systems with the option to go into the offensive if deemed necessary. However since several ionosphere heaters are installed on various places around the globe one can assume that there is wide cooperation between governments in order to reach the climate targets by 2025: controlling the weather and thus the planet."

The report published the following images provided by a former meteorologist at the Ontario Weather Service, showing spraying schemes for Europe. For December 6, 2008:





"The spraying schemes seem to be organized in a logical pattern so that the whole of Europe is covered in a 3-day period," the authors write. The following images cover January 3-5, 2010:

Case Orange agrees that climate change needs to be addressed. Regarding Climate-Gate, the authors suggest that the University of East Anglia deliberately manipulated the climate data to gradually prepare the global population for its future on a hotter planet.

They also cite research that supports the notion that climate change is real. During the three-day grounding of most aircraft after 9/11, scientists noticed an increase in temperature of 1.1 °C (2 °F). [23] This is an astounding increase in such a short time frame. The incidence of cloud seeding reports by the public increases exponentially after this.

The 1996 military piece, *Owning the Weather in 2025*, gives climate change skeptics "an insight in what to expect in the 21st century:

"Current demographic, economic and environmental trends will create global stresses that provide the impetus necessary for many countries or groups to turn weather modification ability into capability. In the United States weather modification will likely become part of national security policy with both domestic and international applications. Our government will pursue such a policy, depending on its interests, at various levels."

Recommendations

"Persistent contrails," however, "have a devastating impact on eco-systems on this planet and quality of life in general." Case Orange joins the call of Bill Gates' geoengineering advisor and the WMO for new research measuring the impact on human health and the environment from EnMod programs.

Case Orange also recommends an immediate and full disclosure of current EnMod activities to the public; and that all civil aviation laws be abided.

Of note, in response to policy interest in geoengineering as a means to control climate change and enhance water supplies, on May 14, 2010, the science subcommittee of the United Nations Convention on Biological Diversity proposed a geoengineering moratorium. [24] This proposed ban on "friendly" EnMod programs will be heard at the Tenth Conference of Parties to UN Convention on Biodiversity in Nagoya, Japan this October.

Case Orange reports that China and Russia openly admit to cloud-seeding, while the U.S. denies such activities. The U.S. does permit open air testing of chemical and biological weapons but not under the law the authors cited, which they paraphrased:

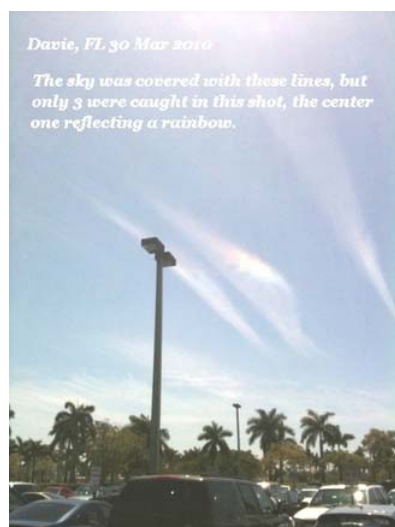
The secretary of defense may conduct tests and experiments involving the use of chemical and biological agents on civilian populations.

Public law of the United States, Law 95-79, Title VIII, Sec. 808, July 30, 1977.

Codified as 50 USC 1520, under Chapter 32 Chemical and Biological Warfare Program, Public Law 85-79 was repealed in 1997 by Public Law 105-85. In its place, 15 USC 1520a provides restrictions (such as informed consent). 50 USC 1512, however, allows open air testing of chemicals and biologicals and allows presidential override of notices and of public health considerations for national security reasons. [25] Case Orange authors are thus correct in asserting that such programs are legal in the U.S.

Epilogue

Having heard enough conspiracy theories to last me a lifetime, I hesitated researching the subject of chemtrails, and maintained skepticism. That all changed in March when I personally observed two jets seeding clouds, along with about 30 other people in the parking lot at lunchtime. Someone took a picture from her cell phone:



The trails lasted for hours, and looked distinctly different from other clouds. Since then, I've been watching the skies and can now tell when they've been seeded. We often have a white haze instead of a deep blue sky, even when persistent contrails aren't visible.

A few days ago, someone sent me a link to the Belfort Symposium videos. Four hours into it, I became riveted when Dr. Vermeeren began his presentation of the Case Orange report. That's when I decided to seriously look into the subject. As informative as Case Orange is for the newcomer, any serious research into the subject reveals that what all those "conspiracy theorists" suggest is true: they are spraying the skies, and they're not telling us.

Discovering that the World Meteorological Organization has a tab on its website called Weather Modification shocked me. Reading their disappointment that governments are going ahead with operations instead of doing more research confirmed all of it for me. And that was published in 2007!

So, while we're not being told, the information is publicly available to any armchair researcher.

Being so late to the game on all this accords me sympathy for others. Military leaders have for centuries recognized that it rains after a heavy battle, but harnessing that power in a way that doesn't cause a deluge like in San Diego in 1915 has been a task. I came upon other stories like that in my research – misdirected hurricanes, farm wars, massive flooding and mudslides. It's no wonder there are so many books on the subject. It's no wonder this turned into a 3,000-word essay.

Chemtrails are no hoax: I spent time going to as many original sources as I could find. The record is replete with mainstream news accounts of the early days of the modern EnMod program. If its birth can be marked by Britain's successful use of chaff in 1943 to jam enemy radar, the program is 67 years old. That's quite a history to keep under the radar of most people. That reflects most poorly on mainstream news sources, who are supposed to expose government shenanigans.

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A Brief History of Cloud Seeding

Cloud seeding, as a US military research project, began as early as the 1830s, according to Colby College professor, James R. Fleming. [26] Verifiably successful rainmaking attempts did not occur until 1915.

1915 To end a prolonged drought, San Diego hired reputed rainmaker Charles Hatfield, who claimed that the evaporation of his secret chemical brew atop wooden towers could attract clouds. San Diego was rewarded with a 17-day deluge that totaled 28 inches. The deadly downpour washed out more than 100 bridges, made roads impassable over a huge area, destroyed communications lines, and left thousands homeless. [27]



Charles Hatfield's rain washes out dam 1915, San Diego. Dozens died.

1943 "The first operational use of chaff (aluminium strips which are precisely cut to a quarter of the radar's wavelength) took place in July 1943, when Hamburg was subjected to a devastating bombing raid. The radar screens were cluttered with reflections from the chaff and the air defence was, in effect, completely blinded." [28]

1946 General Electric's Vincent Schaefer dropped six pounds of dry ice into a cold cloud over Greylock Peak in the Berkshires, causing an "explosive" growth of three miles in the cloud. [29]



DRY-ICE SEEDING cut race-track patterns into clouds over Rome, N.Y. Dropping dry ice from plane was first successful way of making rain artificially.

New York dry ice seeding 1946 (Life Magazine)

1947 Australian meteorologists successfully repeated the process. [30]

1949 Project Cirrus: Nobel Laureate Irving Langmuir and General Electric researcher Vincent Schaefer fed ten ounces of silver iodide into a blowtorch apparatus and brought down 320 billion gallons of rain across half of New Mexico from a desert near Albuquerque. [31]

1950 Harvard meteorologist Wallace Howell seeded New York City skies with dry ice and silver iodide smoke, filling the city's reservoirs to near capacity. [32]

1952 The UK's Operation Cumulus resulted in 250 times the normal amount of rainfall, killing dozens and destroying landscapes. [33]

1962-1983 Operation Stormfury, a hurricane modification program, had some success in reducing winds by up to 30%. [34]

1966-1972 Project Intermediary Compatriot (later called Pop Eye) successfully seeded clouds in Laos. The technique became part of military actions in Cambodia, Vietnam and Laos from 1967 to 1972. Initially revealed by Jack Anderson in the Washington Post, 18 Mar 1971. [35]

1986 The Soviet air force diverted Chernobyl fallout from reaching Moscow by seeding clouds. Belarus, instead, was hit. [36]



China weather rocket (2008 by ImpactLab)

2008 Chinese government used 1,104 cloud seeding missiles to remove the threat of rain ahead of the Olympic opening ceremony in Beijing. [37]



2009 Moscow Halo. Case Orange cites this as evidence of cloud seeding, but others suspect it is electromagnetic in origin. Russian authorities said it was an optical illusion. [38]

This is by no means a comprehensive list; indeed, volumes are dedicated to the subject.

Notes:

- [1] Belfort Group videos of International Symposium on Chemtrails, May 29, 2010 proceedings. <http://www.ustream.tv/channel/belfort-test>
- [2] Michael Murphy website: <http://truthmediaproductions.blogspot.com/>
- [3] Dr Coen Vermeeren, Delft University of Technology bio, n.d.
- [4] Dr Coen Vermeeren Symposium speech, Afternoon Part 1 video, (starting at about 35 mins..) (29 May 2010) <http://www.ustream.tv/recorded/7299427>
- [5] Anonymous, "CASE ORANGE: Contrail Science, Its Impact on Climate and Weather Manipulation Programs Conducted by the United States and Its Allies," 10 May 2010. PDF without appendices: http://coto2.files.wordpress.com/2010/07/case_orange-5-10-2010-belfort-chemtrails.pdf
- [6] High Frequency Active Auroral Research Program, Fact Sheet, 15 Jun 2007. <http://www.haarp.alaska.edu/haarp/factSheet.html>
- [7] [Space Preservation Act of 2001](#), H.R.2977, 107th Congress, 1st Session. Introduced by U.S. Representative Dennis Kucinich.
- [8] Deborah Cohen and Philip Carter, "Conflicts of Interest: WHO and the pandemic 'flu conspiracies,'" *British Medical Journal* 2010;340:c2912, 3 Jun 2010. http://www.bmj.com/cgi/content/full/340/jun03_4/c2912
- [9] The Sunshine Project, "The Limits of Inside Pressure: The US Congress Role in ENMOD," n.d. Accessed July 2010. http://www.sunshine-project.org/enmod/US_Congr.html
- [10] United Nations, "Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques," Resolution 31/72, 10 Dec 1976, effective 1978. Geneva. <http://www.un-documents.net/enmod.htm>
- [11] Copenhagen Consensus Center, "Top economists recommend climate engineering," 4 Sep 2009. Press release [pdf] http://www.copenhagenconsensus.com/Admin/Public/DWSDownload.aspx?File=%2fFiles%2fFiler%2fPress+Releases+2010%2fCC_PRESS_STATEMENT__4september2010_.pdf
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- [13] Donald K. Werle, et al., "Powder contrail generation," U.S. Patent 3,899,144, 12 Aug 1975. Assignee: U.S. Secretary of the Navy. <http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetacgi%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=3,899,144.PN.&OS=PN/3,899,144&RS=PN/3,899,144>
- [14] David L Mitchell and William Finnegan, "Modification of Cirrus clouds to reduce global warming," *Environmental Research Letters* Vol. 4 No. 4, 30 Oct 2009. Available by subscription: <http://iopscience.iop.org/1748-9326/4/4/045102>
- [15] David B. Chang and I-Fu Shih, "Stratospheric Welsbach seeding for reduction of global warming," U.S. Patent 5,003,186, 26 Mar 1991. Assignee: Hughes Aircraft Company.

