

Dealing in Doubt:

The Climate Denial Industry and Climate Science

A Brief History of Attacks on Climate Science,
Climate Scientists and the IPCC

'Doubt is our product, since it is the best means of competing with the 'body of fact' [linking smoking with disease] that exists in the mind of the general public. It is also the means of establishing a controversy...'

Tobacco company Brown and Williamson internal document, 1969¹

'Scepticism is not believing what someone tells you, investigating all the information before coming to a conclusion. Scepticism is a good thing. Global warming scepticism is not that. It's the complete opposite of that. It's coming to a preconceived conclusion and cherry-picking the information that backs up your opinion. Global warming scepticism isn't scepticism at all.'

- John Cook of Skepticalscience.com²

Introduction

This report describes 20 years of organised attacks on climate science, scientists and the IPCC. It sets out some of the key moments in this campaign of denial started by the fossil fuel industry, and traces them to their sources.

The tobacco industry's misinformation and PR campaign against regulation reached a peak just as laws controlling it were about to be introduced. Similarly, the campaign against climate science has intensified as global action on climate change has become more likely. This time, though, there is a difference. In recent years the corporate PR campaign has gone viral, spawning a denial movement that is distributed, decentralised and largely immune to reasoned response.

For example, prominent UK sceptic Lord Christopher Monckton³ is not known to be funded by big business. He is not a scientist, yet, as a key denier, his challenges to climate science have made him the darling of the industry-funded, US based conservative think tanks such as the Heartland Institute. He has challenged Al Gore to debates, turned up at climate negotiations in Bali, Poznan and Copenhagen, and more recently, conducted a paid speaking tour of Australia. There are many more like him who repeat the denier message for no other reason than because they believe it.

The hysteria that greeted the release of the hacked emails from the University of East Anglia on the eve of the Copenhagen Climate Summit showed the depth of this movement and the willingness of the media to facilitate it, despite its lack of evidence or scientific support. The last peak in the climate denial campaign was in 1997 following the IPCC's Second Assessment Report (SAR). At the time it was accompanied by none of the populist venom that emerged in late 2009, perhaps because the internet was still in its infancy.

¹ <http://tobaccodocuments.org/landman/332506.html>

² <http://news.discovery.com/earth/a-conversation-with-a-genuine-skeptic.html>

³ <http://www.globalwarmingheartland.com/expert.cfm?expertId=349>

Still, the majority of the conservative front groups or conservative think tanks running campaigns against climate science continue to receive funding from big oil and energy interests – not just ExxonMobil, but a raft of other companies and foundations whose profits are driven by the products that cause global warming.

'The side that has been issuing these attacks are extremely well-funded, well-organised. They have had an attack infrastructure of this sort for decades, developed it during the tobacco wars, they honed it further ... in further efforts to attack science that industry or other sceptical interests find inconvenient. So they have a very well honed, well-funded organised machine that they are bringing to bear in their attack now against climate science.'

It's literally like a marine in battle against a cub scout when it comes to the scientists defending themselves... We're not PR experts like they are, we're not lawyers and lobbyists like they are. We're scientists, trained to do science.'

- Climate scientist Michael Mann: February 2010⁴

Meanwhile the world keeps on warming

But none of the climate denial has changed the harsh reality that climate change is happening and it is caused by humans. As US scientists put it in an open letter on March 10:

*'It is essential to emphasise that none of these [climategate] interventions alter the key finding from the AR4 that human beings are very likely changing the climate, with far-reaching impacts in the long run.'*⁵

The IPCC scientific assessment is a rigorous and robust process, probably the biggest ever organised scientific endeavour, with thousands of scientists in many different research institutes around the world, backed up with masses of data. It is also a human endeavour and therefore not perfect.

Greenpeace has, and continues to have, confidence in the IPCC. There is no more reliable guide to the world's climate science than the IPCC reports.

Glossary/definition of terms

apologist: one who speaks or writes in defence of someone or something
<http://www.merriam-webster.com/dictionary/apologist>

deny (ver): refuse to admit the truth or existence of. In this context a **denier** is a person that refuses to accept the overwhelming scientific basis of climate change. http://www.askoxford.com/concise_oed/deny?view=uk

free market (noun): an economic system in which prices are determined by unrestricted competition between privately-owned businesses. http://www.askoxford.com/concise_oed/freemarket?view=uk

front group http://www.sourcewatch.org/index.php?title=Front_groups is an organisation that purports to represent one agenda while in reality it serves some other party or interest whose sponsorship is hidden or rarely mentioned. According to Sourcewatch: *'The front group is perhaps the most easily recognised use of the third party technique... The Global Climate Coalition didn't hide the fact that its funding came from oil and coal companies, but nevertheless its name alone is sufficiently misleading that it can reasonably be considered a front group.'*

sceptic (noun): a person inclined to question or doubt accepted opinions
http://www.askoxford.com/concise_oed/sceptic?view=uk

right wing (noun): the conservative or reactionary section of a political party or system
http://www.askoxford.com/concise_oed/rightwing?view=uk

think tank (noun): a body of experts providing advice and ideas on specific political or economic problems.
http://www.askoxford.com/concise_oed/thinktank?view=uk

⁴ http://www.pointofinquiry.org/michael_mann_unprecedented_attacks_on_climate_research/ interview with Chris Mooney, 26 February 2010

⁵ <http://www.openletterfromscientists.com/> (dated 10 March 2010).

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Part 1: A brief history of denial

The early 1990s: the network of denial is created

In the early 1990s a number of lobby groups were set up to stave off the prospect of political action to prevent climate change. These included the Global Climate Coalition (GCC), the Climate Council and the Information Council on the Environment (ICE).

The GCC called itself an 'organisation of business trade associations and private companies established in 1989 to coordinate business participation in the scientific and policy debate on global climate change'⁶. Its membership was a list of the largest coal, oil and car companies in the US.

The Climate Council worked with lobbyist heavyweight Don Pearlman, who became the right hand man of the Saudi, Kuwait and Russian governments⁷.

ICE was formed by a group of utility and coal companies: the National Coal Association, Western Fuels and the Edison Electric Institute⁸. In 1991, according to journalist Ross Gelbspan, ICE '*launched a blatantly misleading campaign on climate change that had been designed by a public relations firm...[that] clearly stated that the aim of the campaign was to 'reposition global warming as theory rather than fact'. Its plan specified that three of the so-called greenhouse sceptics – Robert Balling, Pat Michaels and S Fred Singer – should be placed in broadcast appearances, op-ed pages and newspaper interviews.*'⁹

One of their arguments may ring a bell today: a newspaper advertisement prepared by the ICE was headlined '*If the Earth is getting warmer, why is Minneapolis getting colder?*' Fox News anchors all suggested that the massive snowstorms on the East Coast of the US in early 2010 called into question the scientific consensus on global warming, comments that climate scientists rejected.¹⁰ It would later turn out that, globally January 2010 was among the hottest on record.¹¹

These groups supported a central team of spokespeople who set out to misinform the world. Their names frequently appear in the media challenging the science of global warming: Fred Singer¹², Sallie Baliunas¹³, Willie Soon¹⁴, Richard Lindzen¹⁵, Patrick Michaels¹⁶ and many others.

This network was constructed using money provided by fossil fuel companies, most notably Exxon who have spent \$23 million US dollars supporting the climate denial movement since 1998. In 2008, after years of adverse publicity about its funding policies, ExxonMobil dropped its funding of nine groups, claiming that their '*position on climate change diverted attention from the important discussion on how the world will secure the energy required for economic growth in an environmentally responsible manner.*'¹⁷ However, ExxonMobil continues to fund 28 groups campaigning against climate science.

This map at ExxonSecrets sets it out clearly - more information on each of the front groups or conservative think tanks is listed here, including details of funding from ExxonMobil
<http://www.exxonsecrets.org/index.php?mapid=1530>

⁶ <http://www.epa.gov/earlink1/earthlink/97novdec.htm>

⁷ http://www.medialens.org/articles/book_reviews/dc_carbon_war.html

⁸ 'Climate Cover Up', James Hoggan, Greystone books, 2009, page 32

⁹ 'The Heat is On', Ross Gelbspan, Addison-Wesley Publishing Co. Inc, 1997, page 34

¹⁰ <http://mediamatters.org/research/200903030006>

¹¹ For an overview of January temperature reports see <http://www.bbc.co.uk/blogs/paulhudson/2010/02/january-2010-warmest-on-record.shtml>

¹² <http://www.desmogblog.com/s-fred-singer> and [http://sourcewatch.org/index.php?title=S. Fred Singer](http://sourcewatch.org/index.php?title=S._Fred_Singer)

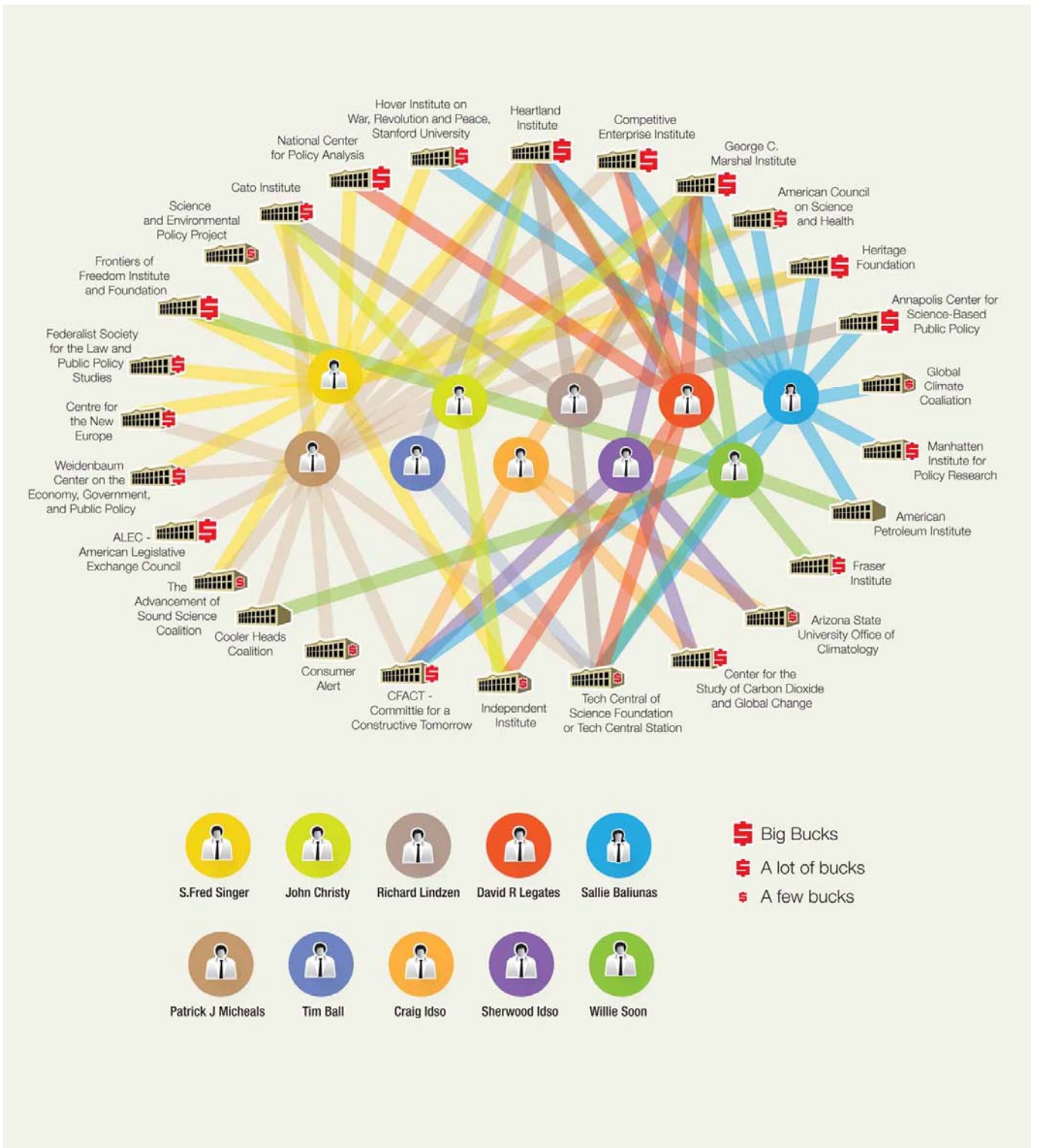
¹³ <http://www.desmogblog.com/sallie-baliunas>

¹⁴ <http://www.desmogblog.com/willie-soon>

¹⁵ <http://www.desmogblog.com/richard-lindzen> and [http://sourcewatch.org/index.php?title=Richard Lindzen](http://sourcewatch.org/index.php?title=Richard_Lindzen)

¹⁶ [http://sourcewatch.org/index.php?title=Patrick Michaels](http://sourcewatch.org/index.php?title=Patrick_Michaels) and <http://www.desmogblog.com/patrick-michaels> and Exxonsecrets map <http://www.exxonsecrets.org/index.php?mapid=1527>

¹⁷ http://www.exxonmobil.com/Corporate/energy_climate_views.aspx, page 41 under the heading 'public policy research contributions'.



View online at <http://www.exxonsecrets.org/index.php?mapid=1539>

1990 – the IPCC’s First Assessment Report

During the final drafting of the IPCC’s First Scientific Assessment Report in 1990, Brian Flannery, Exxon’s Chief Scientific Advisor and climate lobbyist, took issue with the recommendation for 60% to 80% cuts in CO₂ emissions, in light of what he suggested were ‘uncertainties’ about the behaviour of carbon in the climate system.¹⁸ (In keeping with UN rules, the IPCC grants industry association members like ExxonMobil ‘observer status’ at its meetings, along with NGOs).

Although the consensus of opinion remained against him, Flannery continued to demand that the IPCC report’s Executive Summary stated that the range of model results were ‘quite scientifically uncertain’¹⁹. He was unsuccessful: the summary concluded that greenhouse gas emissions at present rates would **certainly** lead to warming²⁰.

This statement made the IPCC report a direct threat to business-as-usual in the fossil fuel sector. Having failed to derail the IPCC from within, industry set out to discredit it. The attack focused on the IPCC’s statement that it was ‘certain’.

In February 1992, at a press conference in New York during the negotiations that led to the UN Framework Convention on Climate Change (UNFCCC), the GCC used Fred Singer to attack the IPCC science, issuing a briefing entitled ‘Stabilising carbon dioxide emissions would have little environmental benefit’,²¹ in which it cited denier Professor Richard Lindzen of the Massachusetts Institute of Technology

Singer is a serial denier and has published little, if any, peer-reviewed climate science in the last 20 years.²² He has spoken out as a scientific expert on subjects including smoking, ozone depletion, nuclear energy and toxic waste.²³

Throughout 1992 the GCC used well-known climate deniers like Patrick Michaels, Robert Balling²⁴ and Fred Singer (all of whom have been partly funded by either Exxon or other energy companies at one time or another) as ‘experts’ at press conferences in its attempts to undermine the credibility of accepted climate science and the findings of the IPCC.²⁵

The same year, Exxon’s Flannery was quoted by the World Coal Institute in a briefing for climate negotiators: ‘...because model-based projections are controversial, uncertain, and without confirmation, scientists are divided in their opinion about the likelihood and consequences of climate change.’²⁶

In 1994, the GCC continued the attack on the IPCC when it hired a public relations firm to take climate sceptic Dr. Sallie Baliunas²⁷ on a media tour.²⁸

Baliunas is an expert in astrophysics, not climate. She built her denial career downplaying the significance of the destruction of the ozone layer, publishing a report entitled ‘The Ozone Crisis’ in 1994 for the George C Marshall Institute²⁹. Baliunas was, at the time, the chair of the Marshall Institute’s Science Advisory Board and pro-tobacco campaigner, now deceased Fred Seitz³⁰ chaired the Marshall Institute Board.

Through the George C. Marshall Institute, Baliunas has published several reports that attempt to show that human activities such as the burning of fossil fuels play no role in global warming, that science does not support the prospect of dangerous climate change³¹, and that scientific findings do not support federal regulation of emissions.³²

¹⁸ Jeremy Leggett, *The Carbon War: Global Warming and the End of the Oil Era* (Routledge879, 2000), 2-3.

¹⁹ Jeremy Leggett, *The Carbon War: Global Warming and the End of the Oil Era* (Routledge879, 2000), page 3.

²⁰ http://www.viswiki.com/en/IPCC_First_Assessment_Report

²¹ Jeremy Leggett, ‘A Catalogue of Carbon Club Manipulation, Distortion, Sabotage or Lying at the Climate Negotiations’, available at <http://www.guardian.co.uk/commentisfree/2006/apr/25/exxonmobilsonglivedemulatio>

²² <http://research.greenpeaceusa.org/?a=view&d=3164>

²³ <http://research.greenpeaceusa.org/?a=view&d=3971>

²⁴ <http://www.desmogblog.com/more-bumpf-on-balling> and http://www.sourcwatch.org/index.php?title=Robert_C._Balling

²⁵ See e.g. GCC press release: ‘World’s Energy Policy Should Not be Based on Feelings’, 27 February 1992. Held on file by Greenpeace US Research Unit.

²⁶ ‘Ecoal’, World Coal Institute briefing no. 7, INC 5, New York, April 1992.

²⁷ <http://www.desmogblog.com/sallie-baliunas> ExxonSecrets map of her affiliations: <http://www.exxonsecrets.org/index.php?mapid=1526>

²⁸ Ties that Bind, Ozone Action, March 1996. (on file with Greenpeace US Research Unit)

²⁹ The Ozone Crisis - http://www.atmos.washington.edu/~davidc/ATMS211/articles_optional/Baliunas94_ozone.pdf

³⁰ <http://tobaccodocuments.org/pm/2023266534.html>

³¹ ‘Are Human Activities Causing Global Warming?’ Published by George C. Marshall Institute, 1996; and ‘Human Activity is Not the Cause of Global Warming,’ Press Release from the Marshall Institute, 10 April 1996.

³² Sallie Baliunas, ‘Ozone and Global Warming: Are the Problems Real?’ George C. Marshall Institute, December 1994.

She also worked for the Greening Earth Society, a front group for the Western Fuels Association (the coal industry) that promoted the idea that the increased CO₂ released by the burning of fossil fuels is greening the earth (leading to more plant growth)³³.

By the mid-90s the GCC started to draw heavy criticism, and leading members began distancing themselves from it. Instead companies like Exxon and Mobil turned to front groups and conservative think tanks who could continue the campaign on their behalf.

They were already funding The Advancement of Sound Science Coalition (TASSC), set up by the tobacco industry in 1993 to 'promote sound science'³⁴.

Other groups in the core list of Exxon's funding included the American Enterprise Institute, the Competitive Enterprise Institute, the Heartland Institute, Frontiers of Freedom and the Hoover Institute. By 1998 when Exxon and Mobil merged, they were funding 21 different organisations that challenged climate science. In total, over the years since then, ExxonMobil has funded a total of 70 groups running the campaign³⁵.

1995 - the Second Assessment Report (SAR)

When the IPCC released its Second Assessment Report (SAR) in 1995, it met a similarly aggressive response. Among the key findings of the IPCC was the acknowledgement of a 'discernable' human impact on climate and a prediction that sea levels could rise 15 to 95cm by 2100, in line with temperature increases ranging from 1°C to 3.5°C (1.8°F to 6.5°F)³⁶.

The SAR's Summary for Policymakers contained the conclusion that, '*The balance of evidence suggests a discernible human influence on global climate.*' That one sentence set the sceptics on fire. One called it the '*most disturbing corruption of the peer-review process in 60 years*'³⁷.

Charles DiBona, president of the American Petroleum Institute, called the report 'inflammatory'³⁸, while oil-producing countries such as Kuwait and Saudi Arabia tried to delay the report's release because of this 'strong language', and argued against the use of the words 'appreciable', 'notable', 'measurable' and 'detectable' in place of 'discernable'.³⁹

However the attacks weren't restricted to the science or the report. This time the scientists were fair game. The GCC co-ordinated vicious personal attacks on Dr Ben Santer, one of the key authors of the report. The aim was to discredit the process by which the IPCC worked. This and other personal attacks are detailed in Part Two of this report.

Fred Singer meanwhile used the 1997 climate negotiations to launch an attack on the chair of the IPCC, Bert Bolin. Following a debate at the talks, Singer fabricated quotes from Bolin, attempting to suggest that he had changed his mind about climate change, saying '*Bolin remained adamant that there has been some human influence on climate, but conceded that 'man-made increases in temperature are so small as to be barely detectable*'.⁴⁰

Bolin, the chair of both the World Meteorological Organisation and the IPCC for nine years, was forced to release a press statement rejecting the allegations as 'inaccurate and misleading'. He said '*Regarding Singer's self-congratulatory statement that the 'discussion appeared to go decidedly against Dr. Bolin's IPCC position,' I had rather the impression that Dr. Singer's views did not convince those present..*⁴¹ *I find it most annoying that the account of the meeting in Stockholm has been presented in such a biased manner.*⁴²

³³ Sallie Baliunas, 'Ozone and Global Warming: Are the Problems Real?' George C. Marshall Institute, December 1994; and Greening Earth Society

³⁴ 'Climate Cover Up', James Hoggan, Greystone Books 2009, page 34

³⁵ <http://research.greenpeaceusa.org/?a=view&d=4677>

³⁶ IPCC Summary for Policy Makers, Second Assessment Report <http://www1.ipcc.ch/pdf/climate-changes-1995/spm-science-of-climate-changes.pdf>

³⁷ Fred Pearce, 'Climate change special: State of denial'. New Scientist, 4 November 2006.

<http://environment.newscientist.com/article/dn10445>

³⁸ 'Petroleum Group Disputes that Burning Fossil Fuels Warms Planet', *Thomson Energy Report*, 18 March 1996.

³⁹ *ibid*

⁴⁰ SEPP press release 23 June 1997 <http://www.sepp.org/Archive/Publications/pressrel/jun23.html>

⁴¹ IPCC press release, Geneva, 26 June 1997, Climate Change: IPCC Chair Denies Attack on VP Gore, Environmentalists – available at <http://www.heatisonline.org/contentserver/objecthandlers/index.cfm?id=3641&method=full>

⁴² *Ibid*.

The mid 90s – a new front ‘down under’

With a massive coal and mining industry backing him, Australian Prime Minister John Howard’s government was the perfect breeding ground for climate denial. This was recognised by the Competitive Enterprise Institute (CEI) in 1996, which began strategising to develop the Australian arm of their campaign.

In November 1996 a strategy meeting was held at the CEI in Washington that would begin to cement the cross-pollination of people and ideas between Australia and the US⁴³.

At the meeting, RJ Smith from the CEI argued that it was clear that ‘Australia if possible would be a key player in this’, so the CEI decided to hold a conference⁴⁴.

The CEI⁴⁵ is a Libertarian anti-regulation ‘free market’ think tank based in the USA. For many years it has attacked global warming science and received more than \$2 million US dollars in funding from Exxon since 1998. The CEI coordinates the ‘Cooler Heads Coalition’ and the website <http://www.globalwarming.org>. It is perhaps best known for its bizarre ‘CO₂ is life’ advertisements⁴⁶ in 2006. Shortly after these ran ExxonMobil dropped its funding, under pressure from, among others, the UK Royal Society⁴⁷.

Interviewed by Bob Burton in 1997 Smith said ‘Early last winter, right after Tim Wirth of the US State Department announced they were going to call for mandatory controls in Kyoto, we said what do we do? How do we stop this?’⁴⁸

The CEI’s RJ Smith met Ray Evans of Australia’s Western Mining Corporation (WMC), and the two began planning.

They held a conference in Washington 1997, and several key deniers were in attendance, along with the Australians. According to *PR Watch* it ‘offered blanket dismissals of the scientific evidence for climate change and predicted staggering economic costs for any policies aimed at restricting emissions’⁴⁹. Australian Embassy Chief of Mission Paul O’Sullivan, gave the address.

In August 1997, the CEI and the Frontiers of Freedom front group sponsored another conference, this time in Canberra, Australia, along with the Australian and New Zealand Chambers of Commerce and the WMC. Ray Evans and WMC’s Managing Director Hugh Morgan played a significant role at the conference, and attendees included the Australian Deputy Prime Minister Tim Fischer and Environment Minister Robert Hill. Fisher claimed that tough emission reduction targets could put 90,000 jobs at risk in Australia and cost more than \$150 million⁵⁰.

Speakers included American climate sceptic Patrick Michaels, climate sceptic politicians, Rep. John Dingell⁵¹, Senator Chuck Hagel and Richard Lawson (President and Chief Executive Officer of the US National Mining Association and present at the earlier CEI meeting).

According to RJ Smith from the CEI, the purpose of the Canberra conference was to ‘try and buck [Prime Minister John Howard] up a little more and let him know that there is support of the American people’ for his government’s obstructionist stance⁵².

Later that year, an Australian at the CEI, Hugh Morley, noted on the CEI’s website that ‘If Australia sticks to its gun [sic], there might not be a Kyoto treaty after all’⁵³.

⁴³ B. Burton (1997) ‘WMC’s Campaign to Scuttle Binding Targets’, *Mining Monitor*, Vol.2(4), December 1997, p1

⁴⁴ B. Burton (1997) ‘WMC’s Campaign to Scuttle Binding Targets’, *Mining Monitor*, Vol.2(4), December 1997, p1

⁴⁵ <http://www.exxonsecrets.org/html/orgfactsheet.php>

⁴⁶ <http://cei.org/pages/co2.cfm>

⁴⁷ http://royalsociety.org/Report_WF.aspx?pageid=8256&terms=ExxonMobil and <http://www.guardian.co.uk/environment/2006/sep/20/oilandpetrol.business>

⁴⁸ B. Burton (1997) ‘WMC’s Campaign to Scuttle Binding Targets’, *Mining Monitor*, Vol.2(4), December 1997, p1;

<http://www.cei.org/gencon/005.01305.cfm>; <http://www.prwatch.org/prwissues/1997Q4/warming.html>

⁴⁹ <http://www.prwatch.org/prwissues/1997Q4/warming.html>

⁵⁰ <http://www.prwatch.org/prwissues/1997Q4/warming.html>

⁵¹ <http://www.opensecrets.org/politicians/industries.php?cycle=Career&cid=N00001783&type=I> Dingell’s top industry contributor is the electricity industry

⁵² B. Burton (1997) ‘WMC’s Campaign to Scuttle Binding Targets’, *Mining Monitor*, Vol.2(4), December 1997, p1 and

<http://www.prwatch.org/prwissues/1997Q4/warming.html>

⁵³ <http://cei.org/gencon/005.01305.cfm>

The Australian denial movement, funded by the WMC and other big business groups, and led by the Institute of Public Affairs, has had a relationship with the US climate sceptics ever since. Meanwhile, Australia has adopted a weak climate policy, only signing the Kyoto treaty after the Howard administration lost power in 2008.

1998 - the American Petroleum Institute's Communications Plan

In early 1998, a small group sat down together at the American Petroleum Institute⁵⁴ in the US to draw up a communications plan to challenge climate science. The group included representatives from Exxon, Chevron, the Southern Company (a large US coal company), the American Petroleum Institute and people from a number of the front groups and conservative think tanks that are still campaigning against climate science today, including the George C Marshall Institute, Frontiers of Freedom, the Advancement of Sound Science Coalition and the Committee for a Constructive Tomorrow. All have received long-term funding from ExxonMobil and other big industries⁵⁵.

The plan they drew up⁵⁶, leaked to Greenpeace, proposed:

'...a national media relations programme to inform the media about uncertainties in climate science; to generate national, regional and local media on the scientific uncertainties and thereby educate and inform the public, stimulating them to raise questions with policymakers.'

The plan would roll out up to and beyond the UNFCCC meeting (COP4) later that year in Buenos Aires. The plan's milestones were:

'Victory will be achieved when

- *Average citizens understand (recognise) uncertainties in climate science; recognition of uncertainties becomes part of the 'conventional wisdom'*
- *Media 'understands' (recognises) uncertainties in climate science*
- *Those promoting the Kyoto treaty on the basis of extant science appear to be out of touch with reality.'*⁵⁷

Part of the strategy was to co-ordinate *'a complete scientific critique of the IPCC research and its conclusions'* and to enable decision makers to raise *'such serious questions about the Kyoto treaty's scientific underpinnings that American policy makers not only will refuse to endorse it, they will seek to prevent progress towards implementation at the Buenos Aires meeting in November, or through other way.'*⁵⁸

This would be achieved by recruiting and training five 'independent' scientists – *'new faces... without a long history of visibility in the climate debate'* to participate in media outreach. The API aimed to *'maximise the impact of scientific views consistent with ours, with Congress, the media and other key audiences'* and admitted shamelessly that it would target teachers and students, in order to *'begin to erect a barrier against further efforts to impose Kyoto-like measures in the future.'*⁵⁹

2001 – the Third Assessment Report (TAR)

In its Third Assessment Report released in 2001, the IPCC reported the consensus view on climate change, including these key findings:

'Globally, it is very likely that the 1990s was the warmest decade and 1998 the warmest year in the instrumental record, (1861-2000)⁶⁰, and '[M]ost of the observed warming over the last 50 years is likely to have been due to the increase in greenhouse gas concentrations'⁶¹ and 'Emissions of CO₂ due to fossil fuel burning are virtually certain to be the dominant influence on the trends in atmospheric CO₂ concentration during the 21st century'.⁶²

⁵⁴ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=11>

⁵⁵ List of organisations here <http://www.exxonsecrets.org/html/listorganizations.php> - click on each to find separate list of ExxonMobil funding, and links to Exxon documents showing that finding.

⁵⁶ Memo about Global Science Communications Action plan, from Joe Walker, American Petroleum Institute, April 1998 <http://research.greenpeaceusa.org/?a=view&d=4383>

⁵⁷ Global Science Communications action plan, page 2 of .pdf

⁵⁸ Ibid, page 4 of the .pdf

⁵⁹ Memo about Global Science Communications Action plan, from Joe Walker, American Petroleum Institute, April 1998 <http://research.greenpeaceusa.org/?a=view&d=4383> page 7 of the .pdf

⁶⁰ IPCC Third Assessment Report Summary for policymakers page 4 http://www.grida.no/publications/other/ipcc_tar/

⁶¹ IPCC Third Assessment Report Working Group 1 Summary for Policymakers page 10 http://www.grida.no/publications/other/ipcc_tar/

⁶² ibid page 12

As with the first Assessment Report, the IPCC had to contend with the fossil fuel lobby even as it was being written. In September 2001, the IPCC met in London to reach agreement on the final chapter and summary of the TAR. The IPCC's draft final report contained the following line: '*The Earth's climate system has demonstrably changed on both global and regional scales since the pre-industrial era, with some of these changes attributable to human activities*'.⁶³

At this meeting, ExxonMobil's Brian Flannery suggested an amendment deleting the clause '*with some of these changes attributable to human activities*.' The IPCC ignored Exxon and kept the clause⁶⁴.

American Petroleum Institute – contracted analysis of TAR

In the summer of 2001, prior to the release of the IPCC TAR working group reports, the American Petroleum Institute distributed an internal memo⁶⁵, authored by oil industry employee Lenny Bernstein, that laid out the industry's primary talking points for attacking the conclusions of the international science body.

Bernstein⁶⁶ was well positioned to critique the Third Assessment Report, given that he was one of its lead authors. His analysis coached the API membership on how to attack the IPCC report, laying out many of the arguments that have been repeated since by sceptics, industry and the Bush administration.

'*The IPCC itself is made up of government representatives... The Summary for Policymakers... have a much more political flavour,*' he wrote. Never mind that the SPM is agreed by a consensus process that produces a very conservative outcome.

Above all, Bernstein stressed the 'uncertainty' argument, asserting that sceptics can maintain the appearance of an unsettled 'debate' on climate science by repeatedly referencing the 'considerable uncertainties' involved in this 'complex' area of study.

Bernstein instructed the oil industry to point out the 'beneficial effects' of increasing CO₂ concentrations and rising temperatures, which have led to 'longer growing seasons in Europe'⁶⁷ and could 'help feed a growing world population'⁶⁸.

American Enterprise Institute attacks the Third Assessment Report

Early copies of the TAR were leaked long before they were finalised and published, prompting an early attack by the denial industry.

The American Enterprise Institute for Public Policy Research's⁶⁹ (\$2.1 million from ExxonMobil since 1998⁷⁰) Kenneth Green was central to this strategy. He wrote several articles over the year before the TAR was released, attacking the models and labelling the process political.⁷¹

He wrote in 2001 that '*IPCC, a political organisation, produces the policy guidance documents that dominate international policy discussions. The reports of the IPCC are portrayed as scientific documents. Yet IPCC reports are outlined by governmental representatives ... The process departs dramatically from standard scientific methodology and publishing procedures. Document architects only selectively include relevant studies. The peer review process is, at best, a fig leaf.*'⁷²

Green called the Summary for Policymakers a 'derivative document' which condenses and expresses IPCC findings 'in a language suitable for moderately educated readers'.⁷³

According to Green, the summaries were loaded with 'speculative scenarios' and not reflective of the full reports. He argued that the summary document '*has not been peer-reviewed. Its author is anonymous,*

⁶³ IPCC Third Assessment Report Summary for policymakers page 3 http://www.grida.no/publications/other/ipcc_tar/

⁶⁴ Report from Greenpeace participant at the meeting.

⁶⁵ http://georgewbush-whitehouse.archives.gov/ceq/foia_extreme.html document entitled [extreme_weather_ceq_10.pdf](#)

⁶⁶ <http://www.exxonsecrets.org/html/personfactsheet.php?id=1012>

⁶⁷ http://georgewbush-whitehouse.archives.gov/ceq/foia_extreme.html document entitled [extreme_weather_ceq_10.pdf](#) page 23

⁶⁸ http://georgewbush-whitehouse.archives.gov/ceq/foia_extreme.html document entitled [extreme_weather_ceq_10.pdf](#) page 2

⁶⁹ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=9>

⁷⁰ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=9>

⁷¹ Kenneth Green, 'Politics foils objective UN Climate Change Report – again', Tech Central Station, 26 February 2001.

<http://www.tcsdaily.com/printArticle.aspx?ID=022601F>

⁷² Kenneth Green, 'Science Matters – Even for the Environment', Tech Central Station, 5 February 2001.

<http://www.tcsdaily.com/printArticle.aspx?ID=020501E>

⁷³ Kenneth Green, 'Mopping up After a Leak: Setting the Record Straight on the 'New' Findings of the Intergovernmental Panel on Climate Change (IPCC)', Reason Public Policy Institute, 29 October 2000. <http://www.rppi.org/ebrief105.html>

*the document is created independent of the actual report, and the summary is so short that issues were overly simplified.*⁷⁴

Writing in his role as Director of Environmental Programs for another front group, the Reason Public Policy Institute⁷⁵, Green summarised what we know as the key denier attacks on the IPCC in an October 2000 briefing report:⁷⁶ - attack the models, attack the objectivity, claim that the IPCC is 'political' rather than 'scientific', attack the data and attack the scientists.

Other attacks on the Third Assessment Report

'The Summary for Policymakers... represents a consensus of government representatives (many of whom are also their nations' Kyoto representatives), rather than of scientists. The resulting document has a strong tendency to disguise uncertainty, and conjures up some scary scenarios for which there is no evidence.'

- Richard Lindzen⁷⁷, The Wall Street Journal, 11 June 2001.⁷⁸

The release of the Summary for Policy Makers 'has everything to do with political spin and very little to do with climate science', says Myron Ebell⁷⁹, who runs the global warming programme at the Competitive Enterprise Institute.

The 18-page summary, said Ebell, 'is not a fair or accurate summary of the IPCC's full Third Assessment Report, which is over 1,000 pages long and which has not yet been released in final form.'⁸⁰

2007 – the Fourth Assessment Report (AR4)

At the end of 2007, the IPCC released the final document in its fourth assessment (AR4): the Synthesis report. It confirmed and built on the previous reports, saying that the warming of the Earth's climate systems was now 'unequivocal'.⁸¹

*'Most of the observed increase in global average temperatures since the mid-20th century is **very likely** due to the observed increase in anthropogenic GHG concentrations. It is likely that there has been significant anthropogenic warming over the past 50 years averaged over each continent (except Antarctica).'*⁸²

It also noted:

*'There is **high agreement** and **much evidence** that with current climate change mitigation policies and related sustainable development practices, global GHG emissions will continue to grow over the next few decades.'*⁸³

It also outlined and updated its 'reasons for concern'⁸⁴ on the vulnerability of ecosystems to survive climate change, risks of extreme weather events, costs of impacts and sea level rise.

American Enterprise Institute offers cash to trash IPCC

In July 2006, six months ahead of the AR4 release, the American Enterprise Institute was gathering its forces to undermine it. In a letter⁸⁵ leaked to the media⁸⁶ the AEI was looking for accredited scientists who might be willing to 'review' the upcoming Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change.⁸⁷

⁷⁴ Kenneth Green, 'Playing Politics with Climate Report Hurts Science', Tech Central Station, 27 November 2000. <http://www.tcsdaily.com/printArticle.aspx?ID=112700H>

⁷⁵ Reason public policy institute and its sister organisation Reason Foundation – details here <http://www.exxonsecrets.org/html/orgfactsheet.php?id=63>

⁷⁶ Kenneth Green, 'Mopping up After a Leak: Setting the Record Straight on the 'New' Findings of the Intergovernmental Panel on Climate Change (IPCC)', Reason Public Policy Institute, 29 October 2000. <http://reason.org/news/show/e-brief-105>

⁷⁷ <http://www.exxonsecrets.org/html/personfactsheet.php?id=17> and <http://www.desmogblog.com/richard-lindzen>

⁷⁸ <http://www.opinionjournal.com/editorial/feature.html?id=95000606>

⁷⁹ <http://www.csmonitor.com/2001/0124/p2s1.html>, http://www.sourcewatch.org/index.php?title=Myron_Ebell

⁸⁰ 'Latest IPCC Summary Politics, not Science, Says Analyst', The Electricity Daily, 25 January 2001

⁸¹ IPCC AR4 Summary for Policymakers page 2. <http://bit.ly/IzWl4>

⁸² ibid page 5

⁸³ ibid page 7

⁸⁴ ibid page 19

⁸⁵ <http://www.desmogblog.com/sites/beta.desmogblog.com/files/AEI.pdf>

⁸⁶ DeSmog Blog, AEI Seeks Scientists for Sale: \$10,000 to First Taker, 9 November 2006. <http://www.desmogblog.com/aei-want-ad-seeks->

The AEI hoped to find a scientist - at a rate as high as \$10,000 for 10,000 words - whose review *'thoughtfully explores the limitations of climate model outputs as they pertain to the development of climate policy.'*

It would appear that the idea behind the recruitment drive seems to be an effort to find academic scientists with a low-profile or non-existent record of talking to the press about global warming. That way, the AEI would be able to use an 'unblemished' critic's credentials to support their arguments.

The story hit the media at the time of the AR4's first report release in February 2007⁸⁸. Professor Steve Schroeder of Texas A&M University turned down the offer. He told the Washington Post⁸⁹ that he *'worried his contribution might have been published alongside 'off-the-wall ideas' questioning the existence of global warming.'*

The letter's authors were the AEI's chief climate lobbyists Kenneth Green⁹⁰ and Steven F Hayward⁹¹. Both have a long history of connections with a number of the front groups funded by industry.

Hayward's list includes the Pacific Research Institute for Public Policy, (\$530,000 from Exxon⁹² since 1998), the Heritage Foundation (\$585,000 from Exxon⁹³ since 1998) and Reason magazine (\$381,000 from Exxon since 1998⁹⁴).

Green, a visiting scholar at AEI, is contributing author on Tech Central Station (\$95,000 from Exxon since 1998), but set up by Exxon's PR firm, DCI⁹⁵, the Executive Director of the Environmental Literacy Council, a group heavily funded by oil and other extractive industries⁹⁶ to infuse industry propaganda into classrooms), Chief Scientist at the Fraser Institute⁹⁷ (\$120,000 from Exxon since 2003) and Director of the Environmental Program at Reason Public Policy Institute. (See map, above). Green, to this day, is a widely-quoted 'independent' source on climate and energy in Washington.

Fraser Institute launches 'independent' assessment

Three days after the first of the AR4's four reports was released in Paris, Canadian think tank, the Fraser Institute, held a press conference in London, headed by its senior fellow, economist Ross McKittrick⁹⁸.

The Fraser Institute released its 'Independent scientific assessment', a document whose layout bears a remarkable similarity to the IPCC documents. The Institute questions the models, and questions the conclusions of the IPCC.

Unlike the IPCC, which receives funding only from the UN system and relies almost totally on voluntary input from the majority of those who work on it, the Fraser Institute's team of 'experts' included several scientists with direct connections with industry front groups and conservative think tanks, none of whom appear to have published any peer-reviewed articles on global warming.⁹⁹

The 'usual suspects' join in

The AR4 flushed out the denial 'A list' who have been campaigning to undermine the science of climate change since the early 1990s - Fred Singer¹⁰⁰, Richard Lindzen¹⁰¹, Patrick Michaels¹⁰² and William O'Keefe¹⁰³ and organisations like the George C Marshall Institute¹⁰⁴, the Cato Institute (\$125,000 from Exxon since 98)¹⁰⁵

⁸⁷ [scientists-for-sale-10-000-to-first-taker](#)
Ibid (3).

⁸⁸ <http://environment.guardian.co.uk/climatechange/story/0,,2004397,00.html>

⁸⁹ <http://www.washingtonpost.com/wp-dyn/content/article/2007/02/04/AR2007020401213.html>

⁹⁰ <http://www.exxonsecrets.org/html/personfactsheet.php?id=511>

⁹¹ <http://www.exxonsecrets.org/html/personfactsheet.php?id=46>

⁹² <http://www.exxonsecrets.org/html/orgfactsheet.php?id=61> and http://sourcewatch.org/index.php?title=Pacific_Research_Institute

⁹³ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=42> and http://sourcewatch.org/index.php?title=Heritage_Foundation

⁹⁴ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=63> and <http://www.exxonsecrets.org/html/orgfactsheet.php?id=64>

⁹⁵ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=112>

⁹⁶ Funders List at <http://www.enviroliteracy.org/article.php/701.html> (API, Koch, XOM, GE, Georgia Pacific, International Paper, Weyerhaeuser, etc.) Reference now removed from that website

⁹⁷ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=107>; <http://www.desmogblog.com/fraser-institute-keeping-bad-company>;

http://sourcewatch.org/index.php?title=Fraser_Institute

⁹⁸ <http://www.desmogblog.com/ross-mckittrick>

⁹⁹ <http://www.realclimate.org/index.php/archives/2007/02/fraser-institute-fires-off-a-damp-squib/>

¹⁰⁰ <http://www.exxonsecrets.org/html/personfactsheet.php?id=1>

¹⁰¹ <http://www.exxonsecrets.org/html/personfactsheet.php?id=17>

¹⁰² <http://www.exxonsecrets.org/html/personfactsheet.php?id=4>

¹⁰³ <http://www.exxonsecrets.org/html/personfactsheet.php?id=289>

¹⁰⁴ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=36>

¹⁰⁵ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=21>

and the Competitive Enterprise Institute¹⁰⁶.

Fred S Singer¹⁰⁷ attacked the models, and the politics in an article in the New York Sun¹⁰⁸.

The Competitive Enterprise Institute returned to another familiar theme. '*The Summary for Policymakers is designed to be a propaganda document that will promote global warming alarmism. It is not written by the scientists who wrote the report, but by the governments that belong to the IPCC*¹⁰⁹,' stated Marlo Lewis, a CEI lobbyist¹¹⁰.

The CEI had been planning for the AR4 for some time, with one of its key deniers, 'senior fellow' and attorney Christopher Horner (not a climate scientist), releasing his new book, 'The politically incorrect guide to global warming and environmentalism' – a book all about climate science - at a special event at the Heritage Foundation on 15 February 2007¹¹¹.

2009-10 – no scandal behind these gates

'The very fact that Climategate was newsworthy is evidence that reporters hold scientists to a much higher standard than they hold denialists, even if they won't admit it in their quest to report a controversy.'

- Mark Boslough¹¹², Physicist at Sandia National Laboratories

In late 2009 hacked emails from the University of East Anglia's Climate Research Unit (CRU) surfaced on the internet. These sparked a succession of climate stories that found willing homes in the media, with the UK media providing the staging ground. This time the organised sceptics found themselves following the news, repeating and publicising a succession of non-stories dug up by amateur experts, convinced that they had found evidence of either global conspiracy or scientific failure.

CRU hacked emails

As this video¹¹³ explains, nothing in the emails stolen from the CRU did anything to call into question any climate science. As the video documents, that didn't stop deniers alleging that not only did they bring the whole edifice of climate science crashing down, they also claim they brought to light a conspiracy of truly epic proportions - claims that some of the media were all too willing to repeat.

Several independent investigations are underway, and are to be welcomed, but already some investigations have exonerated the scientists (see below). Whether police investigations will ever uncover how the emails were hacked and who hacked them, leading to criminal prosecution of the perpetrators remains unknown.

'Not pretty but not faked' was the conclusion of five Associated Press reporters reading and rereading the 1,500 or so stolen emails - around 1 million words in total:

'In the past three weeks since the e-mails were posted, long-time opponents of mainstream climate science have repeatedly quoted excerpts of about a dozen e-mails. Republican congressmen and former vice presidential candidate Sarah Palin have called for either independent investigations, a delay in US Environmental Protection Agency regulation of greenhouse gases or outright boycotts of the Copenhagen international climate talks. They cited a 'culture of corruption' that the e-mails appeared to show.

*That is not what the AP found. There were signs of trying to present the data as convincingly as possible.'*¹¹⁴

Even the deniers themselves have admitted that the hacked emails do not bring the large body of climate science into doubt. When questioned by the UK House of Lords Science and Technology Committee on 1 March 2010¹¹⁵, climate deniers Lord Lawson and Benny Peiser, of the newly-formed UK front group, the

¹⁰⁶ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=2>

¹⁰⁷ <http://www.exxonsecrets.org/html/personfactsheet.php?id=1>

¹⁰⁸ 'Not so dire after all', Op Ed, New York Sun, 2 February 2007 page 8 <http://www.nysun.com/opinion/not-so-dire-after-all/47920/>

¹⁰⁹ <http://cei.org/gencon/003.05741.cfm>

¹¹⁰ <http://www.exxonsecrets.org/html/orgfactsheet.php?id=2>

¹¹¹ <http://www.heritage.org/press/events/ev021507b.cfm>

¹¹² http://www.csicop.org/si/show/mann_bites_dog_why_climategate_was_newsworthy/

¹¹³ http://www.youtube.com/watch?v=7nnVQ2fROOg&feature=player_embedded

¹¹⁴ <http://abcnews.go.com/Technology/wireStory?id=9319400>

¹¹⁵ http://www.parliament.uk/parliamentary_committees/science_technology/s_t_cru_inquiry.cfm response to Q24: 'Dr Peiser: Personally I do not think that the disclosure of these emails makes a big difference to the overall scientific debate...'

Global Warming Policy Foundation¹¹⁶ both admitted that, at worst, the emails revealed a problem with the CRU's process, but didn't actually unravel any of the climate science¹¹⁷.

Neither Peiser nor Lawson are climate scientists, something Peiser admitted to the Committee, yet they continue to concentrate on the science as their main platform. Bob Ward of the London School of Economics pointed out an error on the foundation's website in a graph of 21st century temperature, but it hasn't been corrected.

'While it is a relatively small error, it is the kind of discrepancy that many sceptics would be seizing upon if it had been found on the website of the Climatic Research Unit,' wrote Ward in a blog on the Guardian website¹¹⁸.

On another occasion, former IPCC working group chair, Sir John Houghton, who was misquoted by UK sceptic Benny Peiser in *The Observer*¹¹⁹, who claimed Houghton had said, *'Unless we announce disasters no one will listen.'* *'[He] thereby attributed to me and the IPCC an attitude of hype and exaggeration. That quote from me is without foundation. I have never said it or written it,'* Houghton told the *Observer*¹²⁰.

One of the scientists at the centre of the emails, Michael Mann, has been largely cleared by Penn State University where he is the Director of the Earth System Science Centre in the Meteorology Department.

*'The internal inquiry has found that Mann did not 'participate in, directly or indirectly, any actions with an intent to suppress or to falsify data'.*¹²¹

Penn State is still undertaking one further investigation.

IPCC references challenged

From the leaked emails, the deniers then moved on to link the CRU's problems to their favourite target, the IPCC. The UK media led the charge, fed by the now lively UK denial community, dubbing each accusation a 'gate' so as to highlight the so-called 'scandal' in each.

The accusations centred around three different references in the IPCC. These points have been thoroughly rebutted by climate scientists on the RealClimate blog.¹²² In summary, two errors were found in the IPCC report, the third allegation having been thoroughly discounted.

The 2,800-page AR4 report contains around 18,000 references. The two incorrect references identified have rightfully pointed to a need for the IPCC to review the way its processes work, a review that the IPCC has announced it is undertaking.

But, again, what these 'gates' have not done is undermine the massive body of evidence pointing to the fact that climate change is happening and is being caused by human activity.

The IPCC has now announced an independent review into its processes¹²³, which, again, is a welcome move but, as UN Secretary General Ban Ki-moon said when he announced the review, *'Let me be clear: the threat posed by climate change is real. Nothing that has been alleged or revealed in the media recently alters the fundamental scientific consensus on climate change. Nor does it diminish the unique importance of the IPCC's work.'*¹²⁴

The hacked emails provided a platform for the denial movement, which has launched an all-out campaign, from everyone from Marc Morano, Fox News, Rush Limbaugh, the UK deniers – including climate denier and Republican Senator James Inhofe¹²⁵.

Inhofe is now attempting to use the hacked emails and IPCC references to run 'McCarthy-style' 'criminal investigations' on a list of 17 of the world's top climate scientists and lead authors in the IPCC. He is using

¹¹⁶ Both from the UK front group the Global Warming Policy Foundation – they refused to disclose their funding to the select committee. http://sourcewatch.org/index.php?title=Global_Warming_Policy_Foundation

¹¹⁷ <http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsstech/uc387-i/uc38702.htm>

¹¹⁸ <http://www.guardian.co.uk/environment/2010/mar/05/global-warming-thinktank-double-standards>

¹¹⁹ <http://www.guardian.co.uk/commentisfree/2010/feb/07/robin-mckie-benny-peiser-climate>

¹²⁰ <http://www.guardian.co.uk/theobserver/2010/feb/14/climate-change-scepticism-robin-mckie>

¹²¹ http://www.research.psu.edu/orp/Findings_Mann_Inquiry.pdf

¹²² <http://www.realclimate.org/index.php/archives/2010/02/ipcc-errors-facts-and-spin/>

¹²³ http://www.un.org/News/briefings/docs//2010/100310_IAC.doc.htm

¹²⁴ <http://www.unmultimedia.org/radio/english/detail/92042.html>

¹²⁵ <http://www.opensecrets.org/industries/summary.php?ind=E01&cycle=All&recipdetail=M&sortorder=U>

the (non) scandals to question not only the IPCC's conclusions, but also to challenge the scientific basis of new US EPA rules on regulating greenhouse gas emissions¹²⁶.

On 16 February 2010, the Competitive Enterprise Institute, along with Fred Singer, filed a lawsuit to the US EPA,¹²⁷ demanding that, on the basis of the hacked emails and so called 'flawed datasets', the EPA drop all its proposed regulation on CO₂ and other greenhouse gases.

20 years on - the global denial industry

The denial industry has worked itself into the international arena, slowly but surely, over the past 20 years. It remains a largely English-speaking affair centred around the United States, but has spread further into key countries targeted by the deniers and think tanks.

Along with the US, the countries listed below all pursue climate policies that are hopelessly inadequate when compared to the challenge we face.

Australia

Recent events in Australia have led to the ousting of the leader of the Opposition, Malcolm Turnbull, with much of the controversy over his support for a proposed Emissions Trading Scheme¹²⁸. Turnbull faced a backbench climate denier revolt, and lost his leadership to Tony Abbott, a confirmed climate sceptic¹²⁹.

There is a close relationship between Australia's key deniers: Bob Carter¹³⁰, Ian Plimer¹³¹, David Evans – and the US groups. The Australian Institute of Public Affairs and business groups are continually bringing deniers like Patrick Michaels for speaking tours of the country¹³². The Emissions Trading Scheme is still not off the ground.

Canada

The Canadian denial industry has been especially vigorous, with key deniers McIntyre, McKittrick and the Fraser Institute at its centre. The Canadian Government is one of the most recalcitrant in action on global warming, backing off commitments to cuts in emissions. It has now even limited the amount of media exposure its scientists are allowed, leading to a massive reduction in coverage of climate science there¹³³.

New Zealand

The campaign has made it to New Zealand, where the Business Roundtable has regularly hosted a slew of denial tours, from Fred Singer in the early '90's to Lord Lawson as recently as 2007¹³⁴. The New Zealand government's international stance on climate change is one of the weakest in the industrialised world.

The New Zealand and Australian deniers have joined forces with Canadian deniers to form the International Climate Science Coalition¹³⁵. The New Zealand Climate Science Coalition, formed in 2006, has given international fame to a small group of retired colonels and scientists, who managed to get the Heartland Institute to pay for them to attend conferences, and were supported, in part, by Heartland to go to the Bali climate negotiations in 2008¹³⁶.

¹²⁶ http://www.climatewatch.org/index.php/csw/details/sen_inhofe_inquisition_seeking_to_criminalize_climate_scientists/

¹²⁷ <http://cei.org/rcandtestimony/2010/02/16/late-breaking-events-trigger-new-call-epa-reconsider-its-global-warming-de>

¹²⁸ http://www.timesonline.co.uk/tol/comment/columnists/guest_contributors/article6962198.ece

¹²⁹ <http://www.smh.com.au/opinion/politics/climate-sceptics-have-made-their-triumphant-return-20091201-k3xm.html>

¹³⁰ <http://www.desmogblog.com/rm-bob-carter> and Exxonsecrets map <http://www.exxonsecrets.org/index.php?mapid=1536>

¹³¹ <http://www.desmogblog.com/ian-plimer>

¹³² For Example: Patrick Michaels visit August 2009 <http://www.ipa.org.au/events/information/year/2009/month/8/event/patrick-j.-michaels---climatologist-and-climate-change-sceptic>

¹³³ <http://www.montrealgazette.com/technology/Climate+change+scientists+feel+muzzled+Ottawa+documents/2684621/story.html>

¹³⁴ <http://www.stuff.co.nz/business/20841>

¹³⁵ <http://www.climateinternational.org/>

¹³⁶ http://www.listener.co.nz/issue/3541/columnists/10716/some_like_it_hot.html

Part 2: How the campaign of doubt operates

It is important to distinguish clearly between those scientists who have challenged the theories of global warming in good faith, seeking to put forward other possible explanations for our changing climate, and the efforts of the denier campaign to undermine the credibility of the scientific establishment.

Arguments about sunspots, the Earth's rotation about the sun, the accuracy of temperature measurements, the likely severity of global warming and other theories have all played out over the last 20 years through the scientific literature. The IPCC's conclusions reflect the fact that the only remaining theory that is supported by the evidence is that global warming is caused by emissions of greenhouse gases, and that human activity is responsible.

In contrast a handful of scientists supported by the denier campaign have sought to muddy the waters of the political debate through interventions in the academic literature. The denier campaign has consistently sought to provide its publications and claims with the trappings of genuine science. Part 2 of this report starts by documenting instances of this.

The report then looks at examples of scientists who have come under sustained personal attack for nothing more than reporting their results.

Finally we look at how the denier campaign was able to place key individuals into positions of power within the Bush White House, and how the denial industry's messages have been taken up by the Republican Party.

Bad science versus hockey sticks

Michael Mann of Pennsylvania State University has been repeatedly singled out for harsh criticism by sceptics ever since the 2001 IPCC Third Assessment highlighted¹³⁷ Mann's graph of historic temperature records, famously dubbed the 'Hockey Stick' graph, which illustrates a temperature spike in the 20th century following 900 years of stable climate. The graph is easy to understand, and is a compelling piece of scientific evidence.

In 2003, Sallie Baliunas and Willie Soon managed to get a study published in *Climate Research*¹³⁸, which challenged the Hockey Stick study. Mann himself, in a recent interview¹³⁹, said of the paper:

'It really was one of the poorest pieces of scholarship that any of us in the climate research community had ever seen ... it was clear that there was an effort by some on the editorial board to compromise the PR process and allow through this deeply, deeply flawed paper in the professional literature where it was immediately held up by those in Washington opposed to taking action against climate change ... as somehow being the dagger in the heart of the case for global warming, when in fact it was just an extremely bad study that never should have published'...

After publication it seemed that plenty of people agreed. The journal's publisher Otto Kline, eventually stated that '[the conclusions drawn] *cannot be concluded convincingly from the evidence provided in the paper*'.¹⁴⁰

The paper was partly funded by the American Petroleum Institute¹⁴¹. The editor was New Zealand denier Chris de Freitas¹⁴², who published the study despite at least one of the peer reviewers expressing concern at the paper¹⁴³. The ensuing furore over the peer review process caused three of *Climate Research* editors to resign¹⁴⁴.

Other deniers such as Canadian Ross McKittrick and Stephen McIntyre also attempted to take down Mann's work. But Mann's Hockey Stick has been repeated by a number of different studies, and was included in the

¹³⁷ http://www.grida.no/climate/ipcc_tar/wg1/005.htm

¹³⁸ <http://www.int-res.com/articles/cr2003/23/c023p089.pdf>

¹³⁹ http://www.pointofinquiry.org/michael_mann_unprecedented_attacks_on_climate_research/ interview with Chris Mooney, 26 February 2010

¹⁴⁰ <http://www.int-res.com/articles/misc/CREditorial.pdf>

¹⁴¹ <http://www.int-res.com/articles/cr2003/23/c023p089.pdf> page 17 of study (page 10t climate research)

¹⁴² <http://www.exxonsecrets.org/html/personfactsheet.php?id=1271>

¹⁴³ <http://www.sciam.com/article.cfm?articleID=000A0746-83A1-1EF7-A6B8809EC588EEDF>

¹⁴⁴ http://www.sgr.org.uk/climate/StormyTimes_NL28.htm

IPCC's AR4, which has now taken the timeframe back 1,300 years. RealClimate provides the complete details¹⁴⁵, but Mann sums up the key point:

*'Our attackers never want to look at the big picture; they never want to look at the question of whether these critiques have any impact at all on the bottom line conclusions because they know that they don't. Even if they had been successful in taking down the Hockey Stick - which they haven't been - it still wouldn't amount to undermining the central case for the science.'*¹⁴⁶

Fake science and polar bears

With peer review having proved problematic, the sceptics took a different approach in 2007.

In March 2007 a 'viewpoint' was published in the journal *Ecological Complexity* that announced that polar bears were not under threat from global warming and that Arctic sea ice decline was less severe than stated in recent peer-reviewed literature¹⁴⁷. *Ecological Complexity* publishes peer-reviewed research, but viewpoints aren't subject to such review. Because the peer-reviewed and non peer-review reports look almost identical it would be almost impossible for a reader to tell the difference.

The authors included sceptics well connected with the denial industry: Sallie Baliunas, Willie Soon, David Legates¹⁴⁸ and Tim Ball¹⁴⁹.

They argued that scientific modelling showing that polar bear populations were threatened by climate change could not be trusted. They went on to question not only the climate science showing that the Arctic was warming, but also tried to show that things like tourism were a much bigger threat to polar bears than the disappearance of their habitat¹⁵⁰.

The article landed around the time that the US government was making decisions on whether to list the polar bear as an endangered species, a decision which could have had large knock-on effects in terms of American climate legislation. It was widely quoted in submissions by Sarah Palin, then Governor of Alaska's office in her (unsuccessful) submission against the listing.

Willie Soon acknowledges in the article¹⁵¹ that it was partly sponsored (for Willie Soon's work) by ExxonMobil, the American Petroleum Institute and the Charles G Koch Charitable Foundation (the Koch Brothers have the largest privately-owned oil company in the US and regularly fund climate sceptics). Dr. Soon has not disclosed how much he was paid by these entities or for what period of time.

Nor has he or his funders stated on the record the remit for this research project. Dr Baliunas' and Soon's research institute is the Harvard-Smithsonian Astrophysics Observatory which received \$76 000 from ExxonMobil in 2007¹⁵². ExxonMobil Foundation tax records and company documents confirm a series of grants from 2005-2008 totalling over \$340,000.

One scientist noted at the time it was released that the analysis's references stopped in 2002, after which the Arctic experienced four very warm years. The following year leading polar bear experts, Stirling and Derocher, published a response:

*[the authors] ... suggest that factors other than climate warming are responsible for a decline in the polar bear population of Western Hudson Bay ... In our examination of their alternative explanations, and the data available to evaluate each, we found little support for any.'*¹⁵³

Unlike Soon and Baliunas's article which was conveniently published just ahead of the US government's decision on whether to list polar bears as endangered because of global warming, Stirling and Derocher's paper

¹⁴⁵ <http://www.realclimate.org/index.php/archives/2005/02/dummies-guide-to-the-latest-hockey-stick-controversy/>

¹⁴⁶ http://www.pointofinquiry.org/michael_mann_unprecedented_attacks_on_climate_research/ interview with Chris Mooney, 26 February 2010

¹⁴⁷ *Ecological Complexity*, vol 4 issue 3 pages 73-84

¹⁴⁸ <http://www.desmogblog.com/david-legates>

¹⁴⁹ <http://www.desmogblog.com/climate-change-denier-research-old>

¹⁵⁰ *Ecological Complexity* vol 4 issue 3 – page 82: conclusions

¹⁵¹ *ibid*: page 83 - acknowledgements

¹⁵² http://www.exxonmobil.com/Corporate/community_contributions_report_public.aspx

¹⁵³ *Ecological Complexity* Vol 5 issue 3, September 2008 pp 193 -201

couldn't be taken into account by the decision makers. Three years later, the sceptic viewpoint remains one of Ecological Complexity's most downloaded papers.

The viewpoint prompted a letter to ExxonMobil from Brad Miller, Chair of the US House Sub Committee on Investigations and Oversight, which raised a key question about Exxon's funding:

*'To people outside the scientific community, one PhD may seem like another. Certainly Exxon knows better, however. Yet according to Dr Soon, an astrophysicist by profession, ExxonMobil funded the development of his 'opinions' on global warming and its potential impact on polar bear populations. The Congress and the Public have a right to know why ExxonMobil is funding a scientist whose writing is outside his area of expertise to create the impression that expert scientists have conducted vigorous, peer reviewed work that says the problems with polar bears [and climate change] are unproven or unserious.'*¹⁵⁴

Exxon didn't respond to the letter.

Fake scientific conferences

In March 2008, the Heartland Institute¹⁵⁵ organised the first of its climate sceptic conferences in New York, offering \$1000 to anyone who wanted to speak at it.¹⁵⁶

The climate scientists at RealClimate, some of whom were invited, posted a blog entitled 'What if you held a conference and no (real) scientists came?'¹⁵⁷

'Normal scientific conferences have the goal of discussing ideas and data in order to advance scientific understanding. Not this one. The organisers are surprisingly open about this in their invitation letter'¹⁵⁸ to prospective speakers, which states:

The purpose of the conference is to generate international media attention to the fact that many scientists believe forecasts of rapid warming and catastrophic events are not supported by sound science, and that expensive campaigns to reduce greenhouse gas emissions are not necessary or cost-effective'

RealClimate concluded: 'So this conference is not aimed at understanding, it is a PR event aimed at generating media reports.'

The conference was attended by hundreds of people but, as Andrew Revkin noted in the New York Times¹⁵⁹, 'The meeting was largely framed around science, but after the luncheon, when an organiser made an announcement asking all of the scientists in the large hall to move to the front for a group picture, 19 men did so.'

ABC news's coverage¹⁶⁰ of the event included an interview with career sceptic Fred Singer, who admitted during the interview that he had once received an unsolicited cheque from ExxonMobil for \$10,000. The story created a storm of rage from the denier blogosphere, with Heartland and the other sponsors of the conference putting enormous pressure on the broadcaster who refused to retract the story.

Heartland held two more conferences, in New York and in Washington - and plans another one in Chicago in 2010.¹⁶¹ None of them have come out with any conclusion other than the premise of the conference they set out to 'prove' - that 'global warming isn't a crisis/isn't happening'.

Of the 19 sponsors of the 2008 conference, only five were not Exxon-funded front groups or conservative think tanks running denial campaigns¹⁶².

¹⁵⁴ <http://research.greenpeaceusa.org/?a=download&d=4675>

¹⁵⁵ <http://www.exxonsecrets.org/index.php?mapid=1521>

¹⁵⁶ <http://www.realclimate.org/docs/Heartland.pdf>

¹⁵⁷ <http://www.realclimate.org/index.php/archives/2008/01/what-if-you-held-a-conference-and-no-real-scientists-came/>

¹⁵⁸ <http://www.realclimate.org/docs/Heartland.pdf>

¹⁵⁹ http://www.nytimes.com/2008/03/04/science/earth/04climate.html?_r=1

¹⁶⁰ <http://abcnews.go.com/Technology/GlobalWarming/story?id=4506059&page=1>

¹⁶¹ <http://www.heartland.org/events/2010Chicago/>

¹⁶² <http://www.heartland.org/events/NewYork08/sponsorships.html> For the full list of Exxon-funded groups see 'organisations' at Exxonsecrets <http://www.exxonsecrets.org/maps.php>

Fake scientific support

At a meeting of Exxon shareholders in May 2000, Chairman and Chief Executive Lee Raymond aggressively questioned the scientific consensus by citing a petition signed by '17,000 scientists' that dismissed warnings of human-induced global warming¹⁶³.

Doubts about the petition's credibility were quick to surface when it turned out that the signatures included those of the Spice Girls. It also turned out not to have been organised by the National Academy of Sciences as was initially believed.

'The NAS Council would like to make it clear that this petition has nothing to do with the National Academy of Sciences,'¹⁶⁴ said the NAS statement, which also noted that 'The petition was mailed with an op-ed article from The Wall Street Journal and a manuscript in a format that is nearly identical to that of scientific articles published in the Proceedings of the National Academy of Sciences.'

In reality the petition was prepared by the so-called Oregon Institute of Science and Medicine, a tiny outfit in Texas. The accompanying paper was roundly rebutted by three climate scientists¹⁶⁵.

This tactic was recycled in June 2007, the Heartland Institute and Hudson Institute published an article by Denis Avery, entitled '500 Scientists Whose Research Contradicts Man-Made Global Warming Scares' to publicise a book written by Fred Singer and Avery. The appendix included a long list of scientists' research they claimed supported Singer and Avery's allegation that global warming wasn't happening – or wasn't a crisis. When blogger Kevin Grandia and others at <http://www.desmogblog.com> contacted a number of the scientists listed, and outraged climate scientists wrote back arguing their work did *not* support the contention.

'I am very shocked to see my name in the list of '500 Scientists with Documented Doubts of Man-Made Global Warming Scares'. Because none of my research publications has ever indicated that the global warming is not as a consequence of anthropogenic greenhouse gases, I view that the inclusion of my name in such list without my permission or consensus has damaged my professional reputation as an atmospheric scientist.'¹⁶⁶

- Dr. Ming Cai, Associate Professor, Department of Meteorology, Florida State University.

'They have taken our ice core research in Wyoming and twisted it to meet their own agenda. This is not science.'¹⁶⁷

– Dr. Paul F. Schuster, Hydrologist, US Geological Survey

Of those scientists who contacted DeSmogBlog, none could see how their research contributing to the IPCC could have supported Singer and Avery's claims.

Personal attacks

Over the last 20 years a number of scientists have been subjected to personal attacks by the denier campaign, often for the role they played in IPCC reports.

Dr Benjamin Santer

Dr Ben Santer of the Lawrence Livermore Laboratory in California was lead author of chapter 8 in the 1995 IPCC SAR report, the chapter that first confirmed the human impact on climate change.¹⁶⁸ The policy makers summary contained the sentence '*The balance of evidence suggests a discernible human influence on global climate*', a sentence that placed Santer squarely in the sights of the deniers. In fact, Santer didn't even write the sentence or come up with the word 'discernible' – it was IPCC chair Bert Bolin.¹⁶⁹

¹⁶³ <http://www.oism.org/pproject/>

¹⁶⁴ <http://144.16.65.194/hpg/envis/doc97html/globalssi422.html>

¹⁶⁵ <http://naturalscience.com/ns/forum/forum01b.html>

¹⁶⁶ <http://www.desmogblog.com/500-scientists-with-documented-doubts-about-the-heartland-institute>

¹⁶⁷ <http://www.desmogblog.com/500-scientists-with-documented-doubts-about-the-heartland-institute>

¹⁶⁸ Summary for policymakers, Working Group 1, IPCC Second Assessment Report <http://www1.ipcc.ch/ipccreports/assessments-reports.htm>

¹⁶⁹ <http://www.realclimate.org/index.php/archives/2010/02/close-encounters-of-the-absurd-kind/>

This marked the beginning of a long-running personal attack on Santer. He was falsely accused of 'scientific cleansing', in a GCC press release before the report was released. He was accused of 'political tampering' with the text of the summary for policy makers and of 'research irregularities' in his own work.

Commenting on the 'scientific cleansing' charge, Santer said '*The GCC accused me of 'scientific cleansing' at a time when 'ethnic cleansing' was being committed in Bosnia. My paternal grandparents died in concentration camps during the Second World War. They were subjects of Hitler's 'ethnic cleansing.' So maybe you can understand why the 'scientific cleansing' charge was so abhorrent.*'¹⁷⁰

In a 12 June 1996 Wall Street Journal Op Ed, Fred Seitz¹⁷¹ of the George C Marshall institute¹⁷² and long-time tobacco apologist, accused Santer of working to 'deceive policy makers and the public into believing that the scientific evidence shows human activities are causing global warming.'¹⁷³

Santer stated in an August 2006 interview with the journal Environmental Science and Technology, '*I'd guess that about a year of my life was spent defending that scientific conclusion and my own personal scientific reputation... I was a messenger bearing news that some very powerful people did not want to hear. So they went after the messenger. They were very good at it.*'¹⁷⁴

A scientist interviewed about the targeting of Santer by deniers said it was '*one of the most vicious attacks I have ever seen on the integrity of a scientist.*'¹⁷⁵

Santer has now spelt out the full story on the RealClimate¹⁷⁶ blog, in response to the whole issue being (again incorrectly) repeated in The Guardian¹⁷⁷.

Kevin Trenberth

Five years later the Third Assessment report triggered a new round of personal attacks. This time Kevin Trenberth, the head of climate analysis at the National Centre for Atmospheric Research was the target. Trenberth was one of the ten most cited authors of studies about global warming in the 10 years to 2001.¹⁷⁸

He has been repeatedly attacked for a study he co-authored¹⁷⁹ asserting that global warming has intensified storms and hurricanes, particularly evidenced by the 2005 Atlantic hurricane season (famous for the devastation of New Orleans by Hurricane Katrina).

Meteorologist denier William Gray¹⁸⁰ described Trenberth as having 'sold his soul to the devil',¹⁸¹ and Senator James Inhofe launched an investigation into Trenberth's employer after the release of the study linking increased storm intensity to global warming.¹⁸²

Trenberth hit back, saying '*The attacks on me are clearly designed to get me fired or to resign.*'¹⁸³

Fred Singer also joined the fray, saying Trenberth was 'out of his specialty'¹⁸⁴, an interesting accusation coming from Singer, who has purported, at various times, to be a scientific expert on everything from second hand cigarette smoke, to the ozone layer, nuclear energy and the climate.

¹⁷⁰ Paul D. Thacker, American Chemical Society, The many travails of Ben Santer, page 5837, available at, <http://pubs.acs.org/doi/pdf/10.1021/es063000t>

¹⁷¹ http://www.sourcewatch.org/index.php?title=Fred_Seitz

¹⁷² Marshall Institute was one of the first front groups, set up by Seitz.

http://www.sourcewatch.org/index.php?title=George_C._Marshall_Institute

¹⁷³ <http://www.sepp.org/Archive/controv/ipcccont/Item05.htm>

¹⁷⁴ Paul D. Thacker, American Chemical Society, The many travails of Ben Santer, page 5837, available at, <http://pubs.acs.org/doi/pdf/10.1021/es063000t>

¹⁷⁵ Paul D. Thacker, American Chemical Society, The many travails of Ben Santer, page 5834, available at, <http://pubs.acs.org/doi/pdf/10.1021/es063000t>

¹⁷⁶ <http://www.realclimate.org/index.php/archives/2010/02/close-encounters-of-the-absurd-kind/#more-3041>

¹⁷⁷ <http://www.guardian.co.uk/environment/2010/feb/09/ipcc-report-author-data-openness>

¹⁷⁸ <http://esi-topics.com/gwarm/authors/b1a.html>

¹⁷⁹ <http://www.ucar.edu/news/releases/2006/hurricanes.shtml>

¹⁸⁰ http://sourcewatch.org/index.php?title=William_Gray and <http://www.exxonsecrets.org/html/personfactsheet.php?id=370>

¹⁸¹ http://www.rockymountainnews.com/drmn/local/article/0_1299_DRMN_15_5094006_00.html

¹⁸² Fred Pearce, 'Climate change special: State of denial.' New Scientist, 4 November 2006.

<http://environment.newscientist.com/article/dn10445>

¹⁸³ Fred Pearce, 'Climate change special: State of denial.' New Scientist, 4 November 2006.

<http://environment.newscientist.com/article/dn10445>

¹⁸⁴ http://naturalscience.com/ns/letters/ns_let06.html

Michael Mann

Attacks on Mann's work on the 'Hockey Stick' have already been addressed. But perhaps the most virulent attack on Mann came from Congressman Joe Barton who in 2005 sent letters¹⁸⁵ to Mann and a handful of his colleagues, essentially demanding they reproduce their entire life's work so it could be discredited.

Mann was dragged through Senate hearings in 2006 to defend his work.

As The New Scientist reported in November 2006:

'Texas Republican Congressman Joe Barton'¹⁸⁶, chair of the House Committee on Energy and Commerce, ordered Mann to provide the committee with voluminous details of his working procedures, computer programmes and past funding.

Barton's demands were widely condemned by fellow scientists and on Capitol Hill.

'There are people who believe that if they bring down Mike Mann, they can bring down the IPCC,' said [Ben] Santer at the time. Mann's findings, which will be endorsed in the new IPCC report, have since been replicated by other studies.'¹⁸⁷

The American Association for the Advancement of Science (AAAS), publishers of the peer-reviewed journal *Science*, protested about the witch hunt in a June 2005 letter to Barton:

'Your letters, however, in their request for highly detailed information regarding not only the scientists' recent studies but also their life's work, give the impression of a search for some basis on which to discredit these particular scientists and findings, rather than a search for understanding.'¹⁸⁸

A *Washington Post* editorial titled 'Hunting Witches'¹⁸⁹ accused Barton of 'outrageous' behaviour, stating that, 'The only conceivable purpose of these letters is harassment.' Science writer Chris Mooney further details this 'congressional inquisition' in an article in *American Prospect*¹⁹⁰ in July 2005 entitled 'Mann Hunt'.

Personal attacks go viral

One particularly nasty outcome of the front-group-led denial campaign has been the abuse of climate scientists. The *Scientific American*¹⁹¹, George Monbiot in the *Guardian*¹⁹² and Clive Hamilton blogging on Australia's ABC website¹⁹³ have all written recently about the storm of abuse climate scientists are getting.

The target of sceptic attacks for some years, Kevin Trenberth, told *Scientific American*, 'In science there's a whole lot of facts and basic information on the nature of climate change, but it's not being treated that way. It's being treated as opinion.'¹⁹⁴

'In recent months, each time they enter the public debate through a newspaper article or radio interview these scientists are immediately subjected to a torrent of aggressive, abusive and, at times, threatening emails. Apart from the volume and viciousness of the emails, the campaign has two features - it is mostly anonymous and it appears to be orchestrated,' writes Clive Hamilton¹⁹⁵.

Hamilton authored 'Scorcher – the dirty politics of climate change'¹⁹⁶, a book where he outlines the decade-long, coal-industry funded campaign in Australia to deny climate science and its close relationship with then Prime Minister and climate sceptic John Howard who refused to ratify the Kyoto Protocol.

He tells of a respected climate scientist, Professor David Karoly at the University of Melbourne, who received these emails. 'It is probably not to [sic] extreme to suggest that your actions (deceitful) were so criminal to be

¹⁸⁵ <http://www.realclimate.org/index.php?p=172> See also <http://www.washingtonpost.com/wp-dyn/content/article/2005/07/17/AR2005071701056.html> For a full summary of the furore see <http://www.realclimate.org/index.php?p=109>

¹⁸⁶ Barton's biggest contributor in his career has been the oil and gas industry, totaling nearly \$3.2 million

¹⁸⁷ <http://www.opensecrets.org/politicians/industries.php?cycle=Career&cid=N00005656&type=l>
¹⁸⁸ <http://www.newscientist.com/article/mg19225765.000-climate-change-special-state-of-denial.html>

¹⁸⁸ <http://www.aaas.org/news/releases/2005/0714letter.pdf>

¹⁸⁹ <http://www.washingtonpost.com/wp-dyn/content/article/2005/07/22/AR2005072201658.html>

¹⁹⁰ <http://www.prospect.org/web/page.wv?section=root&name=ViewWeb&articleId=9932>

¹⁹¹ <http://www.scientificamerican.com/article.cfm?id=climate-cyber-bullying&page=2>

¹⁹² <http://www.guardian.co.uk/environment/georgemonbiot/2010/jan/27/james-delingpole-climate-change-denial>

¹⁹³ <http://www.abc.net.au/unleashed/stories/s2826189.htm>

¹⁹⁴ <http://www.scientificamerican.com/article.cfm?id=climate-cyber-bullying&page=2>

¹⁹⁵ <http://www.abc.net.au/unleashed/stories/s2826189.htm>

¹⁹⁶ <http://www.clivehamilton.net.au/cms/index.php?page=scorcher>

compared with Hitler, Stalin and Pol Pot. It is called treason and genocide' and 'Oh, as a scientist, you have destroyed peoples trust in my profession. You are a criminal. Lest we forget.'¹⁹⁷

Comments across the blogosphere follow a similar vein, such as this, posted on a Chicago Tribune blog explaining the robustness of the climate science conclusions:

*'Global warming is a genocidalist scam to kill us all by 2050. There is no scientific basis for climate science, there is no such thing as radiative forcing. This hoax is bringing down the US government and the rest because we see by their going along with this \$45 trillion scam, they are just lining their own pockets. Both the Clintons and Obamas are personally involved in this mass murder ring worse than Hitler's Nazi Germany, in fact this plan is Nazi in origin, like the original Green Movement.'*¹⁹⁸

- Stan_Lippmann (03/03/2010, 4:30 AM)

Climate scientists are used to robust debate through the peer review process with challenges coming from new research that proves or disproves their research. But when they are faced with a barrage of abuse from non-scientists, fed by the denial industry, it's much more difficult for them to deal with. This is made worse because like most practicing academics the contact details of climate scientists are almost always publically listed on university websites.

Political influence and the Bush White House

During the 2000 presidential campaign debates, George W. Bush declared that global warming was '*an issue that we need to take very seriously*'¹⁹⁹. He promised to sign up to the Kyoto Protocol, but backed off that promise soon after coming into power.

In early 2001 communications expert Frank Luntz, provided the following advice to the White House.

*'The scientific debate [on climate change] remains open.
Voters believe that there is no consensus about global warming within the scientific community.
Should the public come to believe the scientific issues are settled,
their views about global warming will change accordingly. Therefore,
you need to continue to make the lack of scientific certainty a primary issue in the debate...*²⁰⁰

This became the guiding strategy of the White House and the Republican Party for the remainder of the administration. In 2003 the advice given on global warming in the Luntz memo was circulated to all Republicans on the Hill by the GOP press office. Frank Luntz has, since then, changed his mind on global warming and now believes it's caused by human activities²⁰¹.

Deniers placed in key positions

From 2001 to 2008 the denier industry enjoyed easy access to the Bush White House, principally via former employees of the American Petroleum Institute (API), on whose board Lee Raymond, Exxon CEO sat until 2005 when he retired.

In early 2001 Lawyer Phil Cooney²⁰² left his 15-year stint at the API (where he was 'climate team leader') to take up a position as chief of staff at Bush's White House Council on Environmental Quality (CEQ), where he advised the President on global warming policy and science. In 2005 it was revealed that he had been watering down scientific reports.²⁰³ He resigned soon after and went to work for Exxon.

At the API, Cooney's boss for many years had been William O'Keefe, former chair of the GCC. O'Keefe left the API to concentrate on his front group the George C Marshall Institute. From 2001-2005 he was employed by ExxonMobil to lobby the Executive Office of the President, the White House and Senate on climate change²⁰⁴.

¹⁹⁷ <http://www.abc.net.au/unleashed/stories/s2826189.htm>

¹⁹⁸ <http://www.chicagotribune.com/news/ct-met-0228-climate-science-questions-20100302,0,4670437.full.story>

¹⁹⁹ Commission on Presidential Debates, Transcript of the 2nd Gore – Bush Presidential Debate, 11 October 2000.

<http://www.debates.org/pages/trans2000b.html>

²⁰⁰ http://www.ewg.org/files/LuntzResearch_environment.pdf

²⁰¹ <http://news.bbc.co.uk/2/hi/programmes/panorama/5005994.stm>

²⁰² http://www.sourcewatch.org/index.php?title=Philip_A._Cooney

²⁰³ <http://www.climatewatch.org/index.php/csw/details/on-editing-scientists-at-ceq/> and

http://www.nytimes.com/2005/06/08/politics/08climate.html?_r=1 and <http://www.nytimes.com/2005/06/15/science/14cnd-climate.html?scp=1&sq=cooney%20exxon&st=cse>

²⁰⁴ For example <http://soprweb.senate.gov/index.cfm?event=getFilingDetails&filingID=0f80378e-d779-4ba5-87b2-8bd4d9f8b5f7> is one of his filings with the US lobby registration system.

Perhaps coincidentally, ExxonMobil dropped O'Keefe's lobby contract at the same time Phil Cooney left the CEQ to work for Exxon.

A memo obtained by the National Resource Defence Council (NRDC) under the Freedom of Information Act showed Exxon lobbyist Randy Randol suggesting replacements the Bush Administration could make to the IPCC membership, *'to assure none of the Clinton/Gore proponents are involved in any decisional activities'*.²⁰⁵ The suggested recruits included John Christy and Richard Lindzen.²⁰⁶

It also recommended the Administration employ Dr Harlan Watson. The Bush Administration subsequently did appoint Harlan Watson to head both its UNFCCC and IPCC delegations.²⁰⁷

Spreading doubt becomes policy

A few months later, in July 2001, Exxon's lobbyist, Randy Randol, met with Secretary of State Undersecretary Paula Dobriansky - a meeting recommended by US Ambassador-designate to Sweden and former ExxonMobil board member, Charles Heimbald. Briefing notes written ahead of the meeting²⁰⁸ discussed the uncertainties in the science. *'Heimbald feels we should hear from ExxonMobil scientists who have perspectives on the climate change debate that are not consistent with our support of the climate change policy until now,'* Dobriansky was advised by her department ahead of the meeting. She should *'understand Exxon's position that there should be no precipitous policy decisions if scientific uncertainties remain.'*²⁰⁹

Bush's climate policies, announced later in the year, consisted only of 'research' and little else which would move the world forward in tackling the issue.

In its 28 pages of formal comments blasting the IPCC's TAR draft Synthesis Report in late 2001, the Bush State Department complained that the report *'does not sufficiently acknowledge the uncertainties involved in climate change science and assessment'*.²¹⁰

The State Department made many of the arguments the deniers embraced, stating that the report failed to *'reflect the same balance and tone regarding uncertainties that appear in the underlying report... Our specific comments seek to ensure that information is presented in a way that reflects its characterisation in the TAR.'*²¹¹ The fossil fuel industry had effectively co-opted the US government as a lobbyist.

Bush administration forces out IPCC chair Robert Watson

The same memo which recommended Harlan Watson contained a direct request: *'Can [IPCC Chair Dr Robert] Watson be replaced now at the request of the US?'*

It launched a successful effort to oust then IPCC Chair Dr Robert Watson. Watson, an atmospheric scientist, had been at the forefront of the climate issue for over 20 years, coordinating international reaction to the ozone hole crisis, then global warming. He had served as Chair of the IPCC between 1996-2002.

In April 2002, the Bush Administration opposed Watson's re-appointment, instead successfully backing IPCC vice-chairman Rajendra Pachauri, to replace him.

Robert Watson himself commented, *'So those who say I'm an advocate don't want to hear the message that indeed the earth is warming; that most of the warming of the last 50 years is attributable to human activities; that carbon dioxide is the key human-induced greenhouse gas and that most of it comes from fossil fuels. There are some people who clearly don't want to hear that message, but that is the message of the IPCC...'*²¹²

Fred Singer made an oblique reference to Watson's demise after the AR4 was published, saying *'Compared to earlier reports, the Fourth Assessment is really quite sober, perhaps because a real scientist less given to ideology heads the effort.'*²¹³

²⁰⁵ <http://www.nrdc.org/media/pressreleases/020403.asp> Page 5 of the PDF file.

²⁰⁶ Ibid. at page 5

²⁰⁷ Ibid. At page 5

²⁰⁸ <http://www.greenpeace.org/usa/press-center/reports4/exxonmobil-state-department-me> All FOIA documents of that and other meetings here <http://www.greenpeace.org/usa/news/kyoto-now/read-our-foia-documents>

²⁰⁹ <http://www.greenpeace.org/usa/press-center/reports4/exxonmobil-state-department-me> page

²¹⁰ 'Bush says UN Global Warming Summary Slants Report's Findings', Power Engineering, 1 November 2001.

²¹¹ 'Bush says UN Global Warming Summary Slants Report's Findings', Power Engineering, 1 November 2001.

²¹² Salon.com, 'Watson, Come Here, I Want to Fire You: Angry at His Predictions of Global Warming, the Bush Administration and the Energy Industry Strive to Unseat a Prominent Scientist', by Damien Cave, Salon.com, 5 April 2002 http://www.salon.com/technology/feature/2002/04/05/global_warming/index.html

²¹³ 'Not so dire after all', Op Ed, New York Sun, 2 February 2007 page 8 also available at <http://www.sepp.org> 'The week that was', February 2007

Political influence and the Republican Party

The Republicans were also rallying around the issue. As with the think tanks and front groups, many of them used climate change denial to campaign against any regulation on climate change. Since 1990, the oil and gas industry has channelled 75% of its funding to Republicans; 25% to Democrats²¹⁴.

The denier campaigns' rhetoric about uncertainty, and the politicisation of the science has been swallowed wholesale.

'Clearly, the scientific community has made impressive gains in its understanding of climate change,' [Rep Senator Larry] Craig said in 2001. *'But increased understanding has come with increased uncertainties.'*²¹⁵

[Senator Chuck] Hagel, famous for leading a 95-0 vote in the Senate against the Kyoto Protocol in 1997²¹⁶, said the summaries of the IPCC report were written by 'UN environmental activists'²¹⁷, not the scientists who wrote the report's individual chapters.

'These reports are political documents, drafted by government representatives during intense negotiating sessions,' Hagel said, claiming that in some cases the people negotiating the IPCC summary texts were the same people negotiating terms of the Kyoto Protocol. *'So you have the same people defining the problem who are also trying to create a solution'*²¹⁸

'In short, some parts of the IPCC process resembled a Soviet-style trial, in which the facts are predetermined, and ideological purity trumps technical and scientific rigour,' said Sen. James Inhofe in a Floor Speech on 28 July 2003.²¹⁹

Inhofe is one of the US congress's top recipients of money from the oil and gas industry,²²⁰ receiving \$1.7 million from the oil and gas industry in the 10 years to 2010. He is a mouthpiece on the Hill for the deniers' arguments, helped, from 2006-2009, by his assistant Marc Morano²²¹ who left Inhofe's employ in 2009 to run his new website, <http://www.climatedepot.com>, is a project of the Committee for a Constructive Tomorrow²²², one of the industry-funded denial front-groups funded and then dropped by ExxonMobil.

In Conclusion

Climate change is happening now, is caused by people and will have catastrophic consequences. Those three assertions are backed by the most rigorous scientific undertaking in history. Indeed, as this report was being written, the UK Meteorological office published a review of 100 different science papers, concluding that it was 'even more likely' that climate change is happening and that we are causing it.²²³

This briefing outlines the lengths to which the fossil fuel industry has been willing to go to prevent these conclusions from being accepted. It provides just a flavour – a few examples of some of the more virulent attacks aimed at undermining public confidence in the climate science, and preventing government action to fight the climate crisis.

All of which means, the correct response to attacks on climate science is scepticism.

²¹⁴ <http://www.opensecrets.org/industries/indus.php?ind=E01>

²¹⁵ 'GOP Trashes IPCC, Scientists Back 'No Regrets' Action', Environment and Energy Daily, 7 May 2001)

²¹⁶ <http://www.nationalcenter.org/KyotoSenate.html>

²¹⁷ New York Times, 1 May 2001 (reporting Senate committee hearing)

²¹⁸ ibid

²¹⁹ <http://inhofe.senate.gov/pressreleases/climate.htm>

²²⁰ <http://www.opensecrets.org/industries/summary.php?ind=E01&cycle=All&recipdetail=M&sortorder=U>

²²¹ <http://www.desmogblog.com/marc-morano> and <http://thebenshi.com/2010/03/04/18-interview-with-marc-morano-part-ii-naming-names-bill-mckibben-exxon-mobil-george-monbiot-al-gore-john-kerry-joe-romm-dan-weiss-robert-murtha-mike-mann-ed-begley-jr-andy-revkin-an/> Morano's website is a project of the Committee for a Constructive Tomorrow, an ExxonMobil-funded think tank.

²²² <http://www.climatedepot.com/> 'a project of CFACT' is at the top of the page

²²³ 'Detection and attribution of climate change: a regional perspective', Stott, Gillett, Hegerl, Karoly, Stone, Zhang, Zweirs, Wiley interdisciplinary Reviews, 5 March 2010 <http://wires.wiley.com/WileyCDA/WileyArticle/wisId-WCC34.html>

Resources

Recommended blog reading to get past the junk science:

RealClimate blog – a blog by climate scientists discussing science in a very scientific way. <http://www.realclimate.org>

Climate progress by Joe Romm <http://climateprogress.org/>

Skeptical science: blog by John Cook, that answers the main denier arguments. <http://www.skepticalscience.com/>

Deltoid: An Australian blog by scientist Tim Lambert - exposes the scientific holes in denier arguments: <http://scienceblogs.com/deltoid/>

Desmogblog – a Canadian blog exposing climate denier junk science and business links <http://www.desmogblog.com>

Hot Topic – New Zealand science writer Gareth Renowden on climate science and denial arguments <http://www.hot-topic.co.nz>

Grist 'How to talk to a climate sceptic' <http://www.grist.org/article/series/skeptics/>

Former 'gagged' US climate scientist Rick Piltz follows the abuse of climate science at <http://climatesciencewatch.org/>

For a more detailed and full historical account of the denier war on science we recommend 'Climate Cover Up' by James Hoggan, Greystone Books 2009, and 'Science as a Contact Sport' by Stephen H Schneider (intro by Tim Flannery) – a scientist's account of years of denier attacks, Random House, 2009.

The Greenpeace logo is displayed in a stylized, hand-drawn green font. The letters are thick and slightly irregular, giving it a grassroots, activist feel. The word "GREENPEACE" is written in all caps.

Greenpeace is an independent global campaigning organisation that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace.

Published by
Greenpeace International
Ottho Heldringstraat 5
1066 AZ Amsterdam
The Netherlands
Tel: +31 20 7182000

JN 317

For more information, contact:
enquiries@greenpeace.org

greenpeace.org