ETS? NO!

Christopher Monckton of Brenchley

Nationwide Tour of Australia
July 2011
Global warming

... a brief history

Prof. M.I. Bhat (2007)

The fact of warming does not tell us the cause.
Correlation need not imply causation

Republican Senators

Sunspot numbers

Douglas Keenan
... and your problem is?
Why the truth trumps consensus
1918 Versailles consensus
1920s
Eugenics consensus
6 m dead
1930s
Appeasement consensus: 18 m dead
Lysenko consensus

1950s

20 m dead
1960s
DDT consensus

Before the DDT ban: 50,000
After the DDT ban: 1,000,000

(so far) 40 m dead
‘Quite often in this field politics comes first and science second. We must take a position based on the science and the data.’

Dr. Arata Kochi, WHO, lifting the DDT ban, 15 September 2006
HIV consensus

33 m dead, 33 m infected

1980s

Reuters
Concessions to consensus
Is there a greenhouse effect?
Does it cause warming?
Does CO₂ add to it?
Is CO₂ concentration rising?
Are we causing the increase?
Are we causing warming?
There is a greenhouse effect
It does cause warming
CO₂ does add to it
CO₂ concentration is rising
We are causing the increase
We are causing warming
Are future climate states predictable?
Pythagoras’ theorem is long proven true

Aryabhata, 5th Century
Monckton, 2009
‘In view of the inevitable inaccuracy and incompleteness of weather observations, precise, very-long-range weather forecasting would seem to be non-existent.’

Lorenz, 1963
Chaotic oscillation of a pendulum
$r > 3 \rightarrow \text{chaos}$

Verhulst bifurcation diagram

$p_{n+1} = r \cdot p_n (1 - p_n)$

$0 \leq x \leq 1; \ 0 \leq r \leq 4$
Even the simplest chaotic equation ...

\[ f(z) \leftarrow z^2 + c \]

**Top**  \( c = 0.2500739507702906 \)
**left:**  \( + 0.0000010137903618 i \)

**Bottom**  \( c = 0.2500739507703702 \)
**right:**  \( + 0.0000010137903618 i \)

Mandelbrot (1992)
...may have a complex output:
Brisbane River floods
In climate research and modelling, we should recognize that we are dealing with a coupled non-linear chaotic system, and therefore that the long-term prediction of future climate states is not possible.
‘In climate research and modeling, we should recognize that we are dealing with a coupled non-linear chaotic system, and therefore that the long-term prediction of future climate states is not possible.’

IPCC (2001)
Scientific method, not consensus
‘The seeker after truth does not credit any old consensus: he checks.’
Scientific method

‘The improver of natural knowledge absolutely refuses to acknowledge authority, as such. For him, skepticism is the highest of duties; blind faith the one unpardonable sin.’

T.H. Huxley
Popper (1934)
Checking the climate consensus
What was published...

Atlantic Category 3, 4, & 5 hurricanes, 1970-2005

Webster et al., 2006
‘I believe it is appropriate to have an over-representation of factual presentations on how dangerous this is.’
‘An Inconvenient Truth’ / Dreamworks
Director: Davis Guggenheim / Writer: Al Gore
‘An Inconvenient Truth’ / Dreamworks
Director: Davis Guggenheim / Writer: Al Gore
‘The Armageddon scenario that [Gore] depicts is not based on any scientific view’

– Mr. Justice Burton, October 2007
IPCC: 6 cm sea-level rise from the great ice-sheets in 100 years.

Gore: 610 cm: 100x error!

<table>
<thead>
<tr>
<th>Source of sea level rise</th>
<th>Rate of sea level rise (mm per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal expansion</td>
<td>0.42 ± 0.12</td>
</tr>
<tr>
<td>Glaciers and ice caps</td>
<td>0.59 ± 0.18</td>
</tr>
<tr>
<td>Greenland Ice Sheet</td>
<td>0.06 ± 0.12</td>
</tr>
<tr>
<td>Antarctic Ice Sheet</td>
<td>0.14 ± 0.41</td>
</tr>
<tr>
<td>Sum of individual climate contributions to sea level rise</td>
<td>1.1 ± 0.5</td>
</tr>
<tr>
<td>Observed total sea level rise</td>
<td>1.8 ± 0.5a</td>
</tr>
<tr>
<td>Difference (Observed minus sum of estimated climate contributions)</td>
<td>0.7 ± 0.7</td>
</tr>
</tbody>
</table>
Gore disbelieves his sea-level tale:

Al Gore’s $4m St. Regis condo by the sea, 2005
The polar bears error

‘A scientific study shows for the first time they’re finding polar bears that have ... drowned, swimming long distances up to 60 miles to find the ice.’
Four dead polar bears
Monnett & Gleason (2006)
Sea ice extent in the Beaufort Sea is little changed
**Warm:** more polar bears.  
**Cool:** fewer polar bears.
The Kiluhmanjaro error

“This is Mount Kilimanjaro more than 30 years ago, and more recently.”
Kilimanjaro summit temperature, 1979-2006

Lower Troposphere Kilimanjaro UAH v5.2

Temperature Anomaly °C

Trend Dec 1978 to Aug 2006 +0.01 °C/decade
Cooling over central Africa, 1979-2001

NASA
More ice sublimated before 1936 than after
Global sea-ice extent: steady for a generation
“Colors indicate ice-sheet elevation change rate in cm/year ... from ... satellite altimeter data, 1992-2003. The spatially averaged increase is 5.4 ± 0.2 cm/year.”

Johannessen et al. (2005)
DYE-2 proud of the ice in 1966 ... and surrounded by it in 1998

DYE-3 on the ice surface in 1972 ... ... and engulfed by it in 2006
Eurasian snow cover is just fine

Rutgers Snow & Ice Lab
Hurricanes – just fine

TC Accumulated Cyclone Energy
24-month running sums
JTWC+NHCI Best/Operational Tracks
Updated through August 31, 2009

Global

Northern Hemisphere
Barrier Reef: not a lot hot

GBR Marine Park - Av. Sea Surface Temps

Monthly 12-month running average

degrees C

Gore
Sea level up 20 ft
Pacific atolls evacuated
Ocean conveyor to stop
CO₂ drove temperature
Kilimanjaro melting
Lake Chad drying up
Katrina anthropogenic
Polar bears drowning
Coral reefs bleaching

Judge
Only after millennia
No evidence for it
It will slow, not stop
The other way around
By natural causes
Not ‘global warming’
No proven link
Storm killed 4 bears
Many causes
I’m still waitin’, Al, baby!

CHALLENGE DEBATE
GLOBAL WARMING IS NOT A CRISIS

FOR VS AGAINST

Lord Monckton
Scottish Peer, former advisor to Margaret Thatcher, and international business consultant

Al Gore
Vice President of the US 1993-2001, author, An Inconvenient Truth

For more information about this challenge debate and global warming, please go to www.globalwarmingheartland.org.

The Heartland Institute is a 23-year-old national nonprofit organization devoted to discovering, developing, and promoting free-market solutions to public policy problems. For more information please visit our web site at www.heartland.org.
IPCC (1995): One-man consensus
BEFORE

‘When will an anthropogenic effect on climate change be identified? It is not surprising that the best answer to this question is, “We do not know.”’

IPCC (1995: scientists’ final draft)
AFTER

‘The body of evidence now points to a discernible human influence on global climate.’

IPCC (1995: Dr. Santer’s rewrite)
IPCC (2001): Cancelled consensus
Now you see it ...

IPCC (1990)

Mediaeval warm period

Little Ice Age
... now you don’t
IPCC (2001)

Data from thermometers (red) and from tree rings, corals, ice cores and historical records (blue).
Weighting the ‘hockey stick’

390x

1x
The computer always drew hockey sticks

Temperature proxy data

Random red noise
‘CENSORED_DATA’ (& MWP) restored

MWP
IPCC (2007): Curiouser consensus
Global surface temperature

Hadley/CRU
IPCC (2007)

* Annual mean
/ Linear trend
/ Smoothed series
95% error-bars

IPCC (2007): scientists’ final draft
Global surface temperature

1905-1945 slope 2n
1905-2005 slope n
Consensus is wrong:
it isn’t happening
Global surface temperature

* Annual mean
/ Linear trend
/ Smoothed series

1850 - 2000
1860 - 1940

1910
1975 - 2001

Warming rates
0.16 K/decade

Hadley/CRU
IPCC (2007)

95% error-bars
C.E.T.R.

Warming rate 0.39 K/decade
Soon (2004)
Soon (2004)
Soon et al. (2009)

Solar irradiance v. temperature
Grand Minimum to Grand Maximum: 300 years’ warming

Hathaway (2004)
Global monthly temperature anomalies, January 2001 to February 2011
IPCC predicts warming at +2.4, +3, +3.9, +4.7, +5.3 C/century
The observed cooling trend is equivalent to .1 C/century

Remote Sensing Systems, Inc.
February 2011
‘There has been no global warming for a decade. We cannot explain why. It is a travesty that we can’t.’

Kevin Trenberth
Climategate, 2009
GHCN raw & adjusted temperatures
Darwin Airport, Australia
Joseph d’Aleo
\[ \Delta T / \Delta t = 0.16 \text{ K/dec} \]

1976-2001
$\Delta T_2 / \Delta t_2 = 0 \text{ K/dec}$

$\Delta T_1 / \Delta t_1 = 0.16 \text{ K/dec}$

$\Delta T_3 / \Delta t_3 = 0.14 \text{ K/dec}$

1976-2011
Aus. Govt. credibility gap

0.57 K/dec

0.12 K/dec observed, 1950-2010
Max. CO2 warming
2010-2100 (projected)

\[ \Delta T = \Delta F \lambda_{\text{tra}} \text{ IPCC (2001, 2007)} \]
\[ = 5.35 \ln(836/390) \times 3.4/8 \]
\[ = 1.7 \text{ K} \]

You can’t forestall more CO2 warming than this!
Counter-consensus: peer-reviewed results
<table>
<thead>
<tr>
<th>Model</th>
<th>Temperature (K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCSM 3</td>
<td>4.2</td>
</tr>
<tr>
<td>ECHAM5 / MPI-OM</td>
<td>1.4</td>
</tr>
<tr>
<td>FGOALS G1.0</td>
<td>22.4</td>
</tr>
<tr>
<td>GDFL CM 2.1</td>
<td>1.6</td>
</tr>
<tr>
<td>INM CM 3.0</td>
<td>2.4</td>
</tr>
<tr>
<td>IPSL CM4</td>
<td>2.5</td>
</tr>
<tr>
<td>MRI CGCM 2.3.2</td>
<td>∞</td>
</tr>
<tr>
<td>MIROC 3.2 HI-RES</td>
<td>3.8</td>
</tr>
<tr>
<td>MIROC 3.2 MED-RES</td>
<td>3.0</td>
</tr>
<tr>
<td>UKMO HADGEM 1</td>
<td>3.8</td>
</tr>
</tbody>
</table>

11 Models

Lindzen & Choi (2011)
Warming at CO₂ doubling

ERBE/CERES

CCSM 3: 4.2 K
ECHAM5 / MPI-OM: 1.4 K
FGOALS G1.0: 22.4 K

GDFL CM 2.1: 1.6 K
INM CM 3.0: 2.4 K
MIROC 3.2 HI-RES: 3.8 K
MIROC 3.2 MED-RES: 3.0 K
UKMO HADGEM 1: 3.8 K

GISS-ER: 2.5 K
IPSL CM4: 19.5 K

Negative feedback
Zero feedback
Pos.
‘Striations in 9 years of global average CERES radiative fluxes from the Terra satellite have a slope around 6 W m−2 K−1 in net (LW + SW) radiative flux variability. This is similar to the feedbacks diagnosed by Lindzen and Choi (2009) from interannual variability in recently recalibrated Earth Radiation Budget Satellite data.’

Spencer & Braswell (2010)
How much more surface evaporation per 1 C° of surface warming?

\[ \frac{\Delta E}{\Delta T} : \text{Modelled} \quad 1-3\% \]

\[ \text{Observed} \quad 5.7\% \]

\[ 5.35 \ln\left(\frac{836}{390}\right) \]

\[ (0.82 \frac{\Delta E}{\Delta T}) = 0.9K \]

Wentz et al., 2007
Natural solar forcing
Natural volcanic forcing
Manmade greenhouse forcing
Manmade ozone forcing
Manmade aerosol forcing
5 radiative forcings combined

No hot spot: 1.1 K
IPCC (’07) Santer (’03)
IT'S THE SUN: changes in solar radiance striking the ground explain recent temperature changes.

Warming at 2x CO2

Computer model predictions: 3.3 K

Radiation reaching satellites: 0.7 K

Cloud feedback is negative: 0.7 K

Evaporation at 3x predicted rate: 0.9 K

No hot spot 6 miles above tropics: 0.9 K
How much warming will an ETS prevent?
Australia’s proposed ETS
Proportion of global CO\textsubscript{2} emissions forestalled:
5\% of 1.2\% = 0.06\%
CO\textsubscript{2} concentration by 2020:
411.987 instead of 412 ppmv
Global warming forestalled:
< 0.000007 K by 2020
Annual cost of Australia’s proposed ETS

Carbon trading $10.1 bn
Admin costs $1.6 bn
Renewables $0.9 bn
Other costs $0.3 bn

Total $13 bn/year at least

Gillard (2011); Wong (2010)
A poll tax on the poor

Sen. Barnaby Joyce, 2011

Water & sewerage
Fuels in the home
Electric power
All utilities

Labor - Dec-07 to Mar-11
Coalition - Mar-96 to Dec-07
Total cost of ETS:
$231 billion by 2020
Mitigation cost-effectiveness:
$634 trillion per C°
Global abatement cost:
$21,000 per capita to 2020
or 21.3% of global GDP
What’s the welfare loss from climate inaction?
Inaction vs. action costs

Peer-reviewed   Stern (2006)

Inaction   Action   Inaction   Action

Lomborg
(2007)
<table>
<thead>
<tr>
<th>Source</th>
<th>Pure r-o-t pref.</th>
<th>Loss (% GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>discount rate %</td>
<td></td>
</tr>
<tr>
<td>Stern (2006)</td>
<td>0.10%</td>
<td>5.0-20%</td>
</tr>
<tr>
<td>Garnaut (2008 #1)</td>
<td>1.35%</td>
<td>2.2-8.6%</td>
</tr>
<tr>
<td>Garnaut (2008 #2)</td>
<td>2.65%</td>
<td>1.0-4.1%</td>
</tr>
<tr>
<td>HM Treasury #1</td>
<td>2.75%</td>
<td>1.0-3.9%</td>
</tr>
<tr>
<td>HM Treasury #2</td>
<td>3.22%</td>
<td>0.8-3.1%</td>
</tr>
<tr>
<td>HM Treasury std.</td>
<td>3.50%</td>
<td>0.7-2.7%</td>
</tr>
<tr>
<td>President Klaus</td>
<td>5.00%</td>
<td>0.4-1.5%</td>
</tr>
</tbody>
</table>

Welfare loss from inaction (% GDP)
## The Bottom Line:

**Action cost > inaction cost**

<table>
<thead>
<tr>
<th>Discount rate</th>
<th>0.1%</th>
<th>1.35%</th>
<th>2.65%</th>
<th>3.5%</th>
<th>5.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy cost x</td>
<td>$153 \text{ bn}$</td>
<td>$142 \text{ bn}$</td>
<td>$132 \text{ bn}$</td>
<td>$127 \text{ bn}$</td>
<td>$117 \text{ bn}$</td>
</tr>
<tr>
<td>Mitig. cost-eff. $M$</td>
<td>$2.1 \text{ qd K}^{-1}$</td>
<td>$2.0 \text{ qd K}^{-1}$</td>
<td>$1.8 \text{ qd K}^{-1}$</td>
<td>$1.7 \text{ qd K}^{-1}$</td>
<td>$1.6 \text{ qd K}^{-1}$</td>
</tr>
<tr>
<td>Abatemt. /head $J$</td>
<td>$71,500$</td>
<td>$66,500$</td>
<td>$62,000$</td>
<td>$59,000$</td>
<td>$55,000$</td>
</tr>
<tr>
<td>Abatemt. cost $H$</td>
<td>$499 \text{ tr}$</td>
<td>$465 \text{ tr}$</td>
<td>$433 \text{ tr}$</td>
<td>$414 \text{ tr}$</td>
<td>$383 \text{ tr}$</td>
</tr>
<tr>
<td>$H$ as % GDP</td>
<td>70.4%</td>
<td>65.6%</td>
<td>61.1%</td>
<td>58.4%</td>
<td>54.0%</td>
</tr>
<tr>
<td>Inaction cost $I$</td>
<td>5-20%</td>
<td>2.2-8.6%</td>
<td>1.0-4.1%</td>
<td>0.7-2.7%</td>
<td>0.4-1.5%</td>
</tr>
<tr>
<td>Ratio $H:I_{\text{max}}$</td>
<td>3.5X</td>
<td>7.6X</td>
<td>15X</td>
<td>22X</td>
<td>36X</td>
</tr>
</tbody>
</table>
Case history #2: EU carbon trading

EU [−20%] in 10 yr

$2.7 tr cost by 2020

0.003 K forestalled

$855 tr/K mitigation CE

28.8% global GDP to 2020

$29,000/head global pop.
Case history #3: Waxman/Markey

USA [−83%] in 40 yr

$7 tr cost by 2050

0.07 K forestalled

$84 tr/K mitigation CE

2.1% global GDP to 2050

$14,000/head global pop.
Case history #4: Climate Change Act

UK [−80%] in 40 yr

$1.2\text{ tr} \text{ \ cost \ by \ 2050}

0.006 \text{ K forestalled}

$167 \text{ tr/K mitigation CE}

4.2\% \text{ global GDP to 2050}

$27,600/\text{head global pop.}
Case history #5: Thanet Wind Array

World record windfarm

$1.96 bn cost by 2030
0.0000002 K forestalled

$891 tr/K mitigation CE

28% global GDP to 2030
$66,000/head global pop.
Case history #6: gesture politics

Oldbury wind turbine

$8,943 cost by 2030

0.0000000000007 Knixed

$12,300 tr/K mitigation CE

382% global GDP to 2030

$900,000/head global pop.
The West: not the problem, therefore not the solution
Kyoto: costly and futile
The heavy cost of mitigation vs. the far, far lower cost of focused adaptation
The political cost: farewell democracy
‘The scheme for the new institutional arrangement under the Convention will be based on three basic pillars: government; facilitative mechanism; and financial mechanism …’

Copenhagen Treaty draft, 15 September 2009, Annex 1, Para. 38,
The government will be ruled by the COP with the support of a new subsidiary body on adaptation, and of an Executive Board responsible for the management of the new funds and the related facilitative processes and bodies. …

Copenhagen Treaty draft, Annex 1, Para. 38
‘... a facilitative mechanism drawn up to facilitate the design, adoption and carrying out of public policies, as the prevailing instrument, to which the market rules and related dynamics should be subordinate ...’

Copenhagen Treaty draft, Annex 1, Para. 36
Vast economic cost

- Wealthy-nations tax: 2% of GDP
- 2% tax on all financial transactions
- More than 300 new bureaucracies
- Power to interfere in economies
- ... and in environmental affairs
- Worldwide cap-and-trade regime
- Unlimited non-compliance fines

Copenhagen Treaty draft, passim
Nowhere in the Copenhagen Treaty draft
1. Adaptation Framework Body
2. Least Developed Countries’ Adaptation Planning Body
3. Adaptation Committee
4. International Center to Enhance Adaptation Research
5. Body to Clarify Assumptions and Conditions in National Greenhouse-Gas Emission Reductions Pledges
6. Negotiating Body for an Overall Level of Ambition for Aggregate Emission Reductions and Individual Targets
7. Office to Revise Guidelines for National Communications
8. Multilateral Communications Process Office
9. Body for the Process to Develop Modalities and Guidelines for the Compliance Process
10. Registry of Nationally Appropriate Mitigation Actions by Developed Countries
11. Office of International Consultation and Analysis
12. Body to Supervise the Process for Understanding Diversity of Mitigation Actions Submitted and Support Needed
13. Body to Develop Modalities for the Registry of Nationally Appropriate Mitigation Actions
14. Office to Conduct a Work Program for Development of Various Modalities and Guidelines
15. Fund in Addition to the Copenhagen Green Fund
The New World Order

16. Office of the Work Program on Agriculture to Enhance the Implementation of Article 4, Paragraph 1(c) of the Convention Taking Into Account Paragraph 31


18. Work Program Office to Address the Impact of the Implementation of Response Measures

19. Interim Secretariat for the New Fund’s Design Phase
20. Body to Review the Needs of Developing Countries for Financial Resources to Address Climate Change and Identify Options for Mobilization of Those Resources

21. Body to Assist the Conference of the Parties in Exercising its Functions with respect to the Financial Mechanism

22. Expert Workshop on the Operational Modalities of the Technology Mechanism
23. Body to Launch a Process to Further Define the Roles and Functions of the New Body to Assist the Conference of the Parties in Exercising its Functions with respect to the Financial Mechanism

24. Technology Executive Committee

25. Climate Technology Center and Network

27. Work Program Body for Policy Approaches and Positive Incentives on Issues Relating to Reducing Emissions from Deforestation and Forest Degradation in Developing Countries


29. International Insurance Facility
30-32. One or more Mechanisms to Establish a Market-Based Approach to Enhance the Cost-Effectiveness Of And To Promote Mitigation Actions

33-62. Regional Network Centers

63-70. Twinning Centers for the Promotion of North-South, South-South and Triangular Partnerships with a View to Encouraging Co-operative Research and Development
71-264. National Adaptation Institutions
365-558. Network of National Forest Reference Emission Level And/Or National Forest Reference Level Bodies
559-752. Network of National Forest Monitoring Systems
The New World Order


Almost 1000 new bureaucracies

Cancun Treaty, passim
Is CO₂ worse than poverty & disease?
Life expectancy (years) v. CO2 emissions (tons per capita)
Child mortality
(per 1000 born)
v. CO2 emissions
(tons per capita)
Africa’s energy cycle

Energy source:

Energy transmission:

Energy use:
‘When millions are going hungry, it is a crime against humanity that food should be diverted to biofuels.’

Herr Jean Ziegler, UN Right-to-Food Rapporteur, 2007
Sight restored for $8
To the heroes of labour who hew the darkness underground to bring men light
A moral issue for our generation
OMNIS SPIRITVS
LAVDET DOMINVM