

Vincent Gray began Greenhouse Bulletins on 10.3.91, as a follow-up to his draft paper "A Sensible Climate Model for Global Warming", which pointed out the lack of agreement of greenhouse models with the facts of climate change, particularly if the main period for build-up of greenhouse gases after 1940 was considered; and proposed an improved model using double the "feedback factor" of the "Low" estimate of IPCC, implying half the rate of increase in global surface temperature proposed by that model.

## Bulletin No 1 10<sup>th</sup> March 1991

Deals with the mean global temperature record, the build up of greenhouse gases, and the reliability of measurements of carbon dioxide, particularly those at the top of the Mauna Loa volcano, and those made from the "Vostok" ice core. The incompatibility of Vostok temperature data with greenhouse theory is pointed out.

## Bulletin No 2 16<sup>th</sup> March 1991

Reviews five recent papers dealing with feedback, temperature delays, sunspots, volcanoes, chaos theory and urban heat islands. Vostok temperature inconsistencies are exposed.

## Bulletin No 3 29<sup>th</sup> March 1991

Discusses ocean carbon dioxide absorption as recently outlined by A.A.Evans. The current assumption that CO<sub>2</sub> absorption is unaffected by an increase in partial pressure goes against the normal assumptions of chemical engineering.

## Bulletin No 4 5<sup>th</sup> May 1991

Revises "A Sensible Climate Model" paper, which now has some support from modellers. Comments on various papers; confusion as to what date you take for doubling CO<sub>2</sub>, Wigley's coming apostasy, and frequencies of climatic oscillations.

## Bulletin No 5 25<sup>th</sup> October 1991

Comments on 4th New Zealand Coal Conference 14-15th October 1991, dealing only with the papers on the greenhouse effect. The conclusions detail four points for future coal research policy.

## Bulletin No 6 :2<sup>nd</sup> November 1991

Gives points required to plot a graph of global surface temperature rise since 1940, together with the predictions of the "high", "best" and "low" estimates of the IPCC, and the "xtra low" estimate put forward by me. The points were obtained from the published graph in IPCC 1990, and have been revised from the amended graph in IPCC 1992.

## Bulletin No 7 16<sup>th</sup> November 1991

At this time the Report "The IPCC Report on Climate Change: an Appraisal" had been submitted in draft. This Bulletin proposes some amendments to the draft. Comments are also made on papers by Plantico et.al. on the absence of temperature rise over the USA, and on a number of other papers.

## Bulletin No. 8 23<sup>rd</sup> January 1992

Comments on Scientific papers by Patrick J. Michaels and B.J.O'Brien.

Bulletin No 9 February 1992

This is the first draft of "The 1992 IPCC Supplement; an Appraisal", which gives a thorough critique of the draft which was circulated to Coal Research, with an injunction "For Review only; not for publication; do not quote" The final version of "The IPCC Report on Climate Change (1990): an Appraisal" and "The IPCC Supplement (1992): An Appraisal" have recently been published in "The Greenhouse Debate Continued: An Analysis and Critique of the IPCC Climate Assessment", Ed. by S.Fred Singer.

Bulletin No 10 14<sup>th</sup> April 1992

Titled "Energy Economics and the Greenhouse Effect" it gives a review of the concepts of Energy Management, Energy Efficiency, Energy Intensity and Sustainability. It reviews a number of recent papers on these topics and concludes with a number of policy recommendations.

Bulletin No 11 20<sup>th</sup> April 1992

A review of "Greenhouse New Zealand: Our Climate, Past, Present and Future" by Jim Salinger, of "Environmental Responsibilities in the Oil and Gas Industry" by Jeremy Leggett, and "The Economic Effects of Reducing Carbon Dioxide Emissions" by the Tasman Institute.

Bulletin No 12. 18<sup>th</sup> May 1992

Where has all the Carbon Dioxide gone?; a review of the recent confusing literature on the inadequacy of the global carbon budget.

Bulletin No 13 25<sup>th</sup> June 1992

"Modifying the Greenhouse" reviews recent publications which are toning down previous predictions of global warming by incorporating other factors. "Sunbathing and Skin Cancer" is not highly relevant to the coal industry, but it typifies how the public can be persuaded to evade the main issues. In this case skin cancer is caused by sunbathing, not by the ozone hole. "Sustainability" is discussed, and a recent CSIRO statement on "Greenhouse Myths" reviewed.

Bulletin No 14 16<sup>th</sup> July 1992

A review of "Fuel Economy in Motor Vehicles"

Bulletin No 15 15<sup>th</sup> August 1992

A general Review of the Three IPCC Reports and the Critique by Fred Singer's group.

Bulletins No 16 (20.8.92), 17 (25.8.92) 19 (9.9.92), 20 (11.9.92), 21(17.9.92), 22 (17.9.92).

These are all devoted to detailed comparisons between the draft copy of the 1992 IPCC Supplementary Report and the final published documents.

Bulletin No 18<sup>th</sup> October.1992

A study on Scenarios, and in particular those proposed by the IPCC. It is shown that the assumptions for rate of increase of CO<sub>2</sub> do not agree with current projections, and that most of the scenarios are unsustainable (to coin a phrase. A preference for the scenarios for a low temperature rise is established. This Bulletin has been revised several times and written up as a paper entitled "Forecasting the Future under the Greenhouse" which it is hoped will be published, but never was.

Bulletin No 23 16<sup>th</sup> October 1992

"Global Warming- the Evidence" assembles together in one place all the facts of global surface temperature change together with an informed commentary on their reliability. It has been revised several times and written up as a paper "Global Warming- the Evidence".

Bulletin No 24 24<sup>th</sup> November 1992

A review of several books; Gerd R. Weber, "Global Warming: The Rest of the Story", three recent publications of the

Stockholm Environment Institute, and a Report on "Business and Sustainable Development" from the International Chamber of Commerce.

Bulletin No 25 25<sup>th</sup> November 1992.

This index; now issued as a separate document

Bulletin No 26 27<sup>th</sup> November 1992

"The Greenhouse Effect- A Coal Industry Bonanza?", pointing out the bright future for the coal industry implied by IPCC scenarios., and " IPCC Carbon Dioxide Figures", recording the correspondence with IPCC who were unable to confirm their carbon dioxide figures. Also" Aussie Greenhouse Policy", reviewing a CSIRO document on climate change.

Bulletin No 27 December 1992.

Environmental Forecasting. This bulletin reviews the 1972 "Limits to Growth" and " World Dynamics", showing how inadequate are these previous attempts at environmental forecasting, although the recent update is unrepentant The more recent "Gaia Hypothesis" by Lovelock is criticised. Finally the efforts of the New Zealand Energy Ministry to forecast fuel prices in the 1980's are documented and found wanting.

Bulletin No 28 January 3rd 1993

Coal Industry Statistics A survey is given of the statistical information on coal resources and reserves, including information on how to convert tonnes of coal to tonnes of coal equivalent. Historic production figures are compared with IPCC forecasts and pie charts gives proportions of production and resources in different countries.

Bulletin No 29 January 1993

Diversifying Climate Parameters. Deals with the effects of fertilization, ozone, sulphate aerosols, volcanoes and El Niño on climate.

Bulletin No 30 February 1993, (2nd Revision)

Futures for Coal. This Bulletin expands No 28 to give a comprehensive account of coal industry production statistics and future forecasts, including a detailed table of 1990 production and 1987 reserves and resources

Bulletin No 31 March 1993

Greenhouse Economics. Reviews a number of papers on greenhouse economics.

Bulletin No 32 25<sup>th</sup> March 1993

Greenhouse Economics Part 2 Reviews a second series of papers on greenhouse economics.

Bulletin No 33 April 1993

Greenhouse Economics Part 3. A third series of papers on greenhouse economics.

Bulletin No 34 April 1993

Greenhouse Economics Part 4. Yet another series of papers on greenhouse economics.

Bulletin No 35 October 1993

A critique of Barrie Pittock's reply to John Daly, and some comments on MECCA.

Bulletin No 36 October 1993

Fifth New Zealand Coal Conference, October 1993. Discussion of the papers dealing with climate change, particularly those of Peter Mueller, Tom Clarkson and Michael Porter.

Bulletin No 37 November 1993

Energy Efficiency and Energy Intensity A discussion of these two concepts in relation to papers by M.G. Patterson and Geoff Bertram.

Bulletin No 38 November 1993

Two papers on greenhouse economics.

Bulletin No 39 November 1993.

Global Warming Debate. A review of eight recent papers by all sides of the controversy.

Bulletin No 40 November 1993

Greenhouse Economics. Another comprehensive study of recent papers on greenhouse economics.

Bulletin No 41 December 1993

Carbon Dioxide. A discussion of the current atmospheric concentration and rate of increase of carbon dioxide, in relation to the IPCC assumptions.

Bulletin No 42 December 1993

Ian Enting's Floppy. A summary of the contents of the floppy disc given by Ian Enting to Wayne Hennessy. Includes files of data and a very useful list of contact and e-mail addresses.

Bulletin No 43 12<sup>th</sup> December 1993

The Carbon Dioxide Atmospheric Ratio. The assumptions for this ratio made by the IPCC do not correspond with the facts.

Bulletin No 44 11<sup>th</sup> January 1994

Svante Arrhenius. Reviews Arrhenius's pioneering paper on the greenhouse effect, published in 1896.

Bulletin No 45 19<sup>th</sup> January 1994

Reviews the uncertainties in climate modelling; the global temperature record, natural variability, aerosols, the sun,

Bulletin No 46 January 1994

Comments on Draft "Global Warming: an Alternative Perspective" from the Energy Foundation.

Bulletin No 47 2<sup>nd</sup> January 2<sup>nd</sup> 1994

Comments on Draft "The Current State of Trace Gas Research in New Zealand" by Martin Manning

Bulletin No 48 16<sup>th</sup> March 1994

Comments on Draft IPCC "Radiative Forcing of Climate 1994." This summarises my detailed comments sent to the IPCC;

Bulletin No 49 18<sup>th</sup> April 1994

Natural Variability. Discusses the use of the term "natural variability", and its possible value.

Bulletin No 50 April 1994

Extreme Events. Discusses the evidence that the greenhouse effect can influence extreme climate events.

Bulletin No 51 May 1994.

Solar Variability. Discusses the possible influence of solar variability on climate.

Bulletin No 52 June 1994

Radiative Forcing of Climate Change 1994. A discussion of the contents and conclusions of the IPCC draft.

Bulletin No 53 2<sup>nd</sup> August 1994

The Rate of Increase of Atmospheric Carbon Dioxide Further discussion on this controversy, where the IPCC ignore observed facts.

Bulletin No 54 3<sup>rd</sup> August 1994

Atmospheric Aerosols. Surveys the literature on the effects of atmospheric aerosols on climate

Bulletin No 55 August 1994

Errors in NIWA Presentations. Points out errors in Martin Manning's presentation to the "Greenhouse Gases Summit" meeting in Auckland.

Bulletin No 56 30<sup>th</sup> August 1994

Comments on Draft "Summary for Policymakers" of the IPCC "Radiative Forcing of Climate Change".

Bulletin No 57 30<sup>th</sup> August 1994

United Nations Population Statistics. Discusses statistics and trends.

Bulletin No 58 13<sup>th</sup> September 1994

Outlook even Hazier. A review of recent publications of sulphate aerosols.

Bulletin No 59 28<sup>th</sup> September 1994

This Bulletin draws attention to some recent results from Warwick Hughes of the Tasman Institute, Melbourne, Australia, who has found correlations between the rate of carbon dioxide increase and the sea surface, or satellite temperature, as well as the Southern oscillation index.

Bulletin No 60 1<sup>st</sup> October 1994

Extrapolating IPCC Scenarios Backwards. Shows that the "Best Fit" climate sensitivity based on the temperature record since 1940, is 0.8°C

Bulletin No 60A 21<sup>st</sup> October 1994

The Effect of Methane on Climate Change. This seems to have escaped being numbered at the time. It discusses the atmospheric concentration of methane, its trend, and its possible effect on the climate.

Bulletin No 61 November 1994

Comments on the New Zealand "State of the Environment" Report.

Bulletin No 62 12<sup>th</sup> December 1994

Warming Trends. Gives results of linear regression on the published temperature records for globe, Northern Hemisphere, and Southern Hemisphere.

Bulletin No 63 8<sup>th</sup> January 1995

The Carbon Dioxide Information and Analysis Center. Describes the above center at Oakridge, Tennessee, and their latest publication "Trends 93."

Bulletin No 64 January 1995

Global Temperature Trends. Discusses the possible uncertainties in the published global temperatures.

Bulletin No 65 9<sup>th</sup> February 1995

Natural Variability. Further discussion of the IPCC concept of natural variability.

Bulletin No 66 28<sup>th</sup> February 1995

Carbon Dioxide Emissions. Gives the latest figures, to 1992, from the CDIAC.

Bulletin No 67 28<sup>th</sup> February 1995

Comments on IPCC WGIII Second Assessment report.

Bulletin No 68 9<sup>th</sup> March 1995

Assessing Climate Models Lists recent climate models, and shows that their results do not agree with IPCC assumptions.

Bulletin No 69 23<sup>rd</sup> March 1995

Discusses the role of volcanic eruptions in climate change. Lists major volcanic eruptions since 1815.

Bulletin No 70 27<sup>th</sup> March 1995

Comments on the IPCC Working Group II Second Assessment Report

Bulletin No 71 3<sup>rd</sup> July 1995

Review of the published IPCC "Climate Change 1994", subsequently published in "Chemistry in New Zealand".

Bulletin No 72 1<sup>st</sup> July 1995

Carbon Dioxide Problems. Comments on recent papers from Keeling and Conway et al.

Bulletin No 73 26<sup>th</sup> July 1995

Greenhouse Miscellany. Includes "sulphates" and "natural variability revisited",

Bulletin No 74 3<sup>rd</sup> August 1995

Global Temperatures since 1400. A survey of temperature records since 1400, largely from Bradley and Jones.

Bulletin No 75 3<sup>rd</sup> August 1995

Future Emissions and Concentrations of Carbon Dioxide. A review of the paper by Enting, Wigley and Heimann, used as the basis for IPCC projections.

Bulletin No 76 20<sup>th</sup> September 1995

The Earth's Energy Budget. A review of the earth's energy budget, with particular regard to the views of Peter Toynbee.

Bulletin No 77 15<sup>th</sup> October 1995

Greenhouse Roundup. Deals with "A validated model" (?), Detection, The cost of human life, another comeback for the sun, Carbon cycle revisited.

Bulletin No 78 29<sup>th</sup> November 1995

Subjective Judgements. A review of a paper on subjective judgements from "Environmental Science and Technology."

Bulletin No 79 16<sup>th</sup> December 1995

The Hadley Centre Model. A review of the recent model, incorporating aerosols, published by the UK Hadley Centre.

Bulletin No 80 8<sup>th</sup> January 1996

The Thermohaline Circulation. A review of recent papers relating ocean circulation with climate.

Bulletin No 81 28<sup>th</sup> January 1996

A review of the IPCC emissions scenarios, with six diagrams showing that they mostly exaggerate current trends in carbon emissions, carbon dioxide and methane concentrations, coal production, population, and temperature.

Bulletin No 82 13<sup>th</sup> February 1996

Differences between the hemispheres. A reworking of Bulletin No 62, with revised linear regression equations for the globe, Northern and Southern Hemispheres, showing that there is no significant difference between the hemispheres. However, the model used by Wigley to obtain the latest IPCC temperature projections involves an assumption of a large difference between the hemispheres.

Bulletin No 83 21<sup>st</sup> February 1996

Gives a list of greenhouse publications by V.R. Gray up to this date.

Bulletin No 84:27<sup>th</sup> February 1996

The Hadley Centre Climate Model.

Bulletin No 85 6<sup>th</sup> March 1996

The WEC/IIASA Global Energy perspective. Discusses the two recent Energy perspectives issued by the World Energy Council (WEC) and the International Institute for Applied Systems Analysis (IIASA)

Bulletin No 86: March 23<sup>rd</sup> 1996 (29 pages)

Examination of final Draft of *Climate Change 1995* in relation to comments submitted by Coal Research

Bulletin No 87: April 1996

Effective Carbon Dioxide. Calculation of the other greenhouse gases, treated as if they behaved like carbon dioxide.

Bulletin No 88 19<sup>th</sup> May 1996

Radiative Forcing. Shows that the IPCC assume a sudden change in 1990, not backed up by observation.

Bulletin No 89 28<sup>th</sup> May 1996

The European Science and Environment Forum. Reviews their *Global Warming Debate*

Bulletin No 90 8<sup>th</sup> June 1996

Review of *Climate Change 1995* by Michael Jefferson of the WEC.

Bulletin No 91 5<sup>th</sup> August 1996

Comments on *Climate Change Policy: A Durable Response* issued by the Ministry of the Environment. Their science figures are all wrong.

Bulletin No 91A July 1996

Response to Martin Manning, on "How Sensitive is the Climate"

Bulletin No 92 5<sup>th</sup> August 1996

Comments on the background science of *Climate Change and CO<sub>2</sub> Policy*, Ministry of the Environment July 1996. All the science figures are wrong.

Bulletin No 93 27<sup>th</sup> August 1996

"Discernible Human Influence"- the evidence. The evidence is demolished.

Bulletin No 94 14<sup>th</sup> September 1996

Runaway Greenhouse. The maximum surface temperature increase is 11°C.

Bulletin No 95 22<sup>nd</sup> November 1996

The End of Global warming. Latest data show that the earth is not warming.

Bulletin No 95 6<sup>th</sup> December 1996

Hemisphere differences. Shows that the aerosol theory predicts temperature differences between the hemispheres which are not observed.

Bulletin No 97 22<sup>nd</sup> December 1996

IPCC Technical Papers 1 and 2 are discussed.

Bulletin No 98 27<sup>th</sup> December 1996

Aerosol Forcing of the Climate. A Review of the book by R.J. Charlson and J. Heitzenberg

Bulletin No 99 January 1997

Current Climate Data. Gives the latest records for mean surface temperature, Satellite temperature measurements, atmospheric carbon dioxide concentrations, and atmospheric methane concentration.

Bulletin No 100 2<sup>nd</sup> February 1997

Carbon Dioxide Emissions. Gives the latest figures for global carbon dioxide emissions from combustion of fossil fuels, from the Carbon Dioxide Information and Analysis Center, Oakridge, Tennessee.

Bulletin No 101 16<sup>th</sup> April 1997

Updating Satellite Temperatures. The latest figures and graphs from the University of Alabama. The figures show no temperature trend for the past 18 years.

Bulletin No 102 21<sup>st</sup> May 1997

The Line Goes Dead. No significant scientific papers on the greenhouse effect are at present being published.

Bulletin No 103 14<sup>th</sup> June 1997

World Population Trends. The latest United Nations projections have been scaled down, rendering the IPCC projections exaggerated.

Bulletin No 104 September 1997

Updating the data. Surface global temperatures fell last year, but the information was suppressed. Satellite temperatures continue to show no change. Emissions are now available to 1996, from the World Energy Council. Atmospheric carbon dioxide concentration has been increasing linearly for 25 years. Atmospheric methane is approaching a constant value.

Bulletin No 105 8<sup>th</sup> October 1997

Human Influence on the Climate. Examines the Carbon Budget, and shows it is so inaccurate that future carbon dioxide predictions are highly uncertain.

Bulletin No 106 21<sup>st</sup> November 1997

The Airborne Fraction. The fraction of carbon dioxide emissions entering the atmosphere is falling steadily, by 33% in 25 years. Cutting emissions will have no effect on their amount entering the atmosphere.

Bulletin No 107 22<sup>nd</sup> November 1997

The Carbon Cycle. The "Carbon Budget" published by the IPCC is shown to be so inaccurate as to make future projections extremely unreliable.

Bulletin No 108 4<sup>th</sup> December 1997

Does Global Warming Exist? John Daly has collected temperature records from 55 remote sites all over the world which show no global warming. I include Hokitika, Chatham Island and Hobart.

Bulletin No 109 11<sup>th</sup> December 1997

Sea Level. Changes in sea level have been between 1 and 2.5mm per year for the last century, and the rate is constant.

Bulletin No 110. 19<sup>th</sup> December 1997

The Kyoto Protocol. The main provisions of the Kyoto Protocol to the United Nations Framework Convention on Climate Change are summarised.

Bulletin No 111 29<sup>th</sup> January 1998

The Missing Sink. It is shown that the proportion of carbon dioxide emissions from the combustion of fossil fuels which appears in the atmosphere ( the airborne fraction) is falling, despite increases in emissions. Where does the rest go?

Bulletin No 112 24<sup>th</sup> March 1998

Errors and bias in the surface temperature record. Questions the reliability of the amalgamated surface temperature records.

Bulletin No 113. 16<sup>th</sup> May 1998

Regional Temperature Change. Examines published figures for regional temperature change over the past century and shows that, for the Northern Hemisphere, they are heavily dependent on high figures from the former Russian Empire/ Soviet Union. Figures from the Southern Hemisphere are so sparse as to be unreliable.

Bulletin No 114 8<sup>th</sup> June 1998

Stabilisation of atmospheric methane. Official figures now confirm that atmospheric methane is about to reach a constant value.

Bulletin No 115 28<sup>th</sup> June 1998

The One Percent Solution. A fairy story for grown-ups

Bulletin No 116 17<sup>th</sup> August 1998

Validation of computer-based climate models. Shows that no model has yet been shown to provide a satisfactory representation of any period of climate change. It is also shown that the uncertainties of the models are so great that they are compatible with almost any conceivable climate sequence, including global cooling.

Bulletin No 117 9<sup>th</sup> December 1998

The sun, El Niño and the carbon dioxide thermometer. Reviews the recent draft paper by Nigel Calder which finds that carbon dioxide changes are caused by temperature changes and that the sun is the main influence on global temperatures.

Bulletin No 118 12<sup>th</sup> January 1999

Hansen's reappraisal. Discusses the recently expressed views of James Hansen of the Goddard Institute of Space studies, that our forecasts for future radiative forcing are now without scientific basis.

Bulletin No 119 15<sup>th</sup> February 1999

Population projections. Points out that the most recent United Nations population forecasts are significantly lower than those assumed by the IPCC scenarios.

Bulletin No 120 27<sup>th</sup> February 1999

Atmospheric carbon dioxide. Reviews recent work on the carbon dioxide content of air trapped in ice cores. It is now evident that there was never a "pre-industrial" equilibrium concentration, and that there are several aspects of the newly presented record of atmospheric carbon dioxide which are unexplained by current models.

Bulletin No 121 16<sup>th</sup> March 1999

Greenhouse Warming Reduced. A new formula relating atmospheric carbon dioxide concentration to radiative forcing shows a reduction from the previous formula.

Bulletin No 122 April 4<sup>th</sup> 1999

Carbon dioxide and methane revisited. Recent papers have confirmed the conclusions of the previous bulletin, and have also confirmed that atmospheric methane is now stabilised.

Bulletin No 123 April 28<sup>th</sup> 1999

Validation of Computer-based Climate Models. Shows that the best estimate of climate sensitivity is 0.8°C

Bulletin No 124 April 29<sup>th</sup> 1999

Regional Temperature Change 1901-1996. Calculates the surface temperature rise for each region on the earth's surface. They vary widely

Bulletin No 125 September 23<sup>rd</sup> 1999

IPCC Scenarios Old and New. Reviews recent proposals and shows that they are still exaggerated upwards

Bulletin No 126 January 24<sup>th</sup> 2000

The Surface Temperature Record. Reviews the Surface Temperature record, and displays its shortcomings

Bulletin No 127 June 2000

Forecasting the Future. Points out that the models cannot forecast the future

Bulletin No 128 July 2000

Russian Temperature Records. Summarizes behaviour of 45 Russian Stations listed on the GISS website

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