From: "Graham" <grahamhw@iprimus.com.au>

Subject: FW: CSIRO emails

Date: 22 August 2012 7:06:25 AM AEST To: <malcolmr@conscious.com.au>

7 Attachments, 2.4 MB

Hi Malcolm,

I think first 2 of below emails (which remain unanswered) give a better rundown. Include entire train of emails if you wish, but probably not necessary.

Graham

From: Graham [mailto:grahamhw@iprimus.com.au]

Sent: Tuesday, 21 February 2012 6:31 PM

To: Kevin.Hennessy@csiro.au

Subject: FW: Pacific climate change report: analysing the regional impacts of climate change

Dear Kevin,

My below questions remain unanswered. The one exception, as you pointed out but I failed to acknowledge, was my question as to whether climate science is settled. You did answer that in the negative which I now acknowledge. However, this further underlines my point concerning the governments apparent ignorance of this fact and how this ignorance should be corrected before it is too late.

There are also some additional points.

Especially since scientists advise us that extreme weather is due to global warming, is the current cold spell, here and abroad, also due to global warming? Have you learned anything about the reliability of models from your above predictions? According to Sherwood however (4), in summarising the predictions of climate models, the estimates "must be taken with a grain of salt" because of the variability between the 23 models. "They don't all predict the same outcome, so a large range can sometimes appear - but this probably represents the best we can do at the moment.......of course there is no guarantee that the actual outcome will even be within this range, all the models could be off. But if the models are wrong, it is just as likely to be in the direction of underestimating change rather than overestimating it."

Do you agree?

Australian govern policy, affecting all Australians, is allegedly based upon evidence from scientists. Which scientists? I urge you to correct the misunderstanding and ignorance which currently guides political policy in this country.

You see from the letter of complaint I have enclosed from international scientists regarding the sacking of Trevor McDougall that the reputation of the Australian scientific community is currently being trashed by those on the political gravy train. How low must science sink before scientists unite? Will it be too late?

Regards

Graham Williamson

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- 2. http://awsassets.wwf.org.au/downloads/cl033_global_warming_contributes_to_drought_14jan03.pdf
- 3. http://www.ens-newswire.com/ens/jan2003/2003-01-15-02.html
- 4. http://www.cosmosmagazine.com/news/4604/no-snow-more-drought-climate-report-warns

From: Graham [mailto:grahamhw@iprimus.com.au]

Sent: Friday, 3 February 2012 11:17 PM

To: 'Kevin.Hennessy@csiro.au'

Subject: RE: Pacific climate change report: analysing the regional impacts of climate change

Dear Kevin,

Thank you for taking the time to respond.

Following is my response to the points you made and my questions which you continue to refuse to answer.

Unanswered Questions

Since the government claims their position on AGW, and the CO2 tax as a mitigation measure, is a direct result of the advice of scientists and scientific organisations such as the CSIRO, the following unanswered questions are of absolutely fundamental importance in order to confirm their claims of scientific justification.

- 1. Can humans control climate, either by making it worse or by improving it? Does scientific evidence confirm the controllability of climate as asserted by the government? Can you supply scientific evidence showing how much the CO2 level will need to be lowered to reduce global temperatures by 2 degrees and reduce sea level by 50cm before the end of the century? If Australia completely eliminated all human produced CO2 by 2020 how much would this lower global temperatures and sea levels by the year 2100?
- 2. According to the government this decade (actually before the next election) is a climate tipping point and after that it will be too late to avert a climatic catastrophe. Do you agree with this? Please supply the scientific evidence upon which this claim is based.
- 3. In light of your claim that the contribution of humans to climate change is (1, 2) "poorly understood", and as chief scientific advisors to the Commonwealth government, will the CSIRO be officially advising the government that the science pertaining to human caused climate change is too uncertain and misunderstood to form the basis of government policy? Or has the CSIRO already advised the government it would be foolish to base policy on such a poorly understood area of science?
- 4. The government claims "the science is settled" and they further claim this is their advice from scientists. Do you agree the science is settled and the degree of climate change caused by humans (or more specifically, Australians) has been scientifically confirmed? For instance, what percentage of any sea level rise has been confirmed as being human caused and is therefore reversible by mitigation techniques such as a CO2 tax?
- 5. You make the point that is necessary to choose the best computer model when making climatic predictions, but should climate projections be like choosing a new car where the best looking model is chosen?

CSIRO Continues to Support IPCC Even After the Organisation is Discredited by Enquiries and Top Climate Scientists

As I indicated previously, the IPCC has been vigorously criticised and discredited by leading world climate scientists and lead authors of the IPCC, and these criticisms have been backed up by the IAC review of the IPCC (3, 4) and other experts (see encl). You referred to the IAC report as an endorsement of the IPCC, evidence that the organisation is apparently beyond reproach, so let us take a brief look at this report. Some of the main criticisms of the IPCC by the IAC include the following (4).

- 1. Unclear means of choosing IPCC authors which may result in authors being chosen on political grounds rather than in accord with scientific qualifications.
- 2. IPCC policy results in inclusion of non peer-reviewed data in their reports but the use of such possibly flawed data is not necessarily identified as non-peer reviewed in the reports. In other words, IPCC policy enables the disguising of suspect data sources within their reports. See Himalayan glaciers fiasco.

- 3. IPCC reports favour confirmation bias and suppression or inadequate consideration of opposing points of view. Lead authors are permitted to censor or exclude opposing viewpoints. See Himalayan glaciers fiasco.
- 4. IPCC processes authorise political editing of scientific reports to maximise their acceptability to governments in the final Summary for Policymakers. As a result of this process the Summary for Policymakers tends to be a more sensationalised and less scientific document. For instance, in the 1995 report, scientists state 5 times there is no evidence of humans causing global warming (Is there new evidence since then?) Yet the summary of the 1995 report reads "The balance of evidence suggests a discernible human influence on global climate". Which section of the report is correct?
- 5. Unspecified authorship criteria and political interference of Synthesis Reports.
- 6. IPCC processes do not deal adequately with the inherent uncertainties of climate science. This includes statements of certainty when there is little supportive evidence and the use of vague difficult to refute statements to imply a level of certainty. Downplaying or ignoring uncertainties has led to many errors in IPCC reports. Furthermore, the origin of such mistakes is often not traceable due to the fact the IPCC does not require accountability in this respect.
- 7. IPCC Chairman should be suitably qualified in climate or allied science, unlike present Chair Rajendra K. Pachauri who has a background in railway and mechanical engineering.
- 8. The IPCC does not exclude anyone with a conflict of interest as they have no conflict of interest policy.
- 9. IPCC leaders make non-scientific public statements which could be construed as flagrant political statements.
- 10. IPCC is very slow and reluctant to publicly acknowledge errors.

The IAC review of the IPCC has been summarised by Peter Bobroff (5; See also Appendix B).

The IAC report you cited in support of the IPCC actually reinforces the IPCC criticisms of Lindzen and other experts. Even though the above failings of the IPCC are now widely known, do you still regard the IPCC as being beyond reproach? Do you still endorse the above practices? The thousands of scientists who are critical of IPCC processes, including those of the NIPCC and world famous climate scientists like Lindzen and Christy, may likewise acknowledge you also have the right to your opinion, but it is an opinion which seems increasingly out of step with many others, including CSIRO scientists I cited previously. Given the concerns expressed above that IPCC contributors may be chosen on the basis of politics or political ideology rather than scientific qualifications it is indeed interesting to note Professor Tim Flannery's reported assessment of Professor Richard Lindzen. According to Flannery (6), "the problem with Richard Lindzen is his politics is to the right of Andrew Bolt and Genghis Khan." Since the 'problem' referred to here by Flannery would appear to be Lindzen's opposing view of the science of AGW, any suggestion that this view is the result of political ideology rather than science is indeed alarming. That begs the obvious question; is Flannery's view (or the view of any scientist for that matter) also the result of politics rather than science? Do you agree that the views of scientists in regard to the science of AGW may be influenced more by politics than by science? Surely we must respect Flannery's apparent assessment that politics may be more important than science to certain scientists involved in climate science. In this respect one wonders why so many scientists have ventured beyond their academic discipline to become involved in climate science, a practice which previously was vigorously condemned.

You further cite the PBL report (7) to assert the reliability of the IPCC so it is worthwhile briefly examining this report also.

Although you claim that "the PBL (2010) did examine the validity of the IPCC representation of science" this is not correct as this report has very serious limitations which I list below.

- 1. The PBL report was a political investigation initiated by the Dutch Parliament in an effort to re-establish the 'reliability' of the IPCC following much publicised 'scientific' errors. It was not established by scientists to check scientific accuracy.
- 2. Secondly, and most importantly, the Dutch Parliament took the extraordinary decision to EXCLUDE most of the IPCC report from their investigation. According to the PBL report (7), ", the Minister for the Environment decided to limit her question to PBL to an investigation in the implications of possible errors in the regional chapters of the IPCC report of 2007 on climate-change impacts, adaptation and vulnerability, paying specific attention to the Himalayan glaciers." Amazingly, Working Group 3 and any consideration of human causation or so called AGW was completely excluded from the PBL investigation. Yet, in spite of this glaring omission, the cause and potential reversibility of climate changes by humans is the single most important fact we need to establish. If we cannot establish human causation and reversibility then all mitigating techniques (CO2 tax etc) are completely useless.
- 3. The PBL report acknowledged that because of the vast uncertainties of climate science resort should be given to a new brand of science which they term "post-normal science."

- 4. One of the errors the edited PBL report draws attention to is the IPCC prediction that Australia will experience (7) "3,000 to 5,000 additional heat-related deaths projected for 2050" and these "would be dependent on an increase in temperature." In reality however, according to the facts, "a large part of this increase is solely due to changes in population size and age distribution." Interestingly, the gross inaccuracy of the IPCC report in this regard is highlighted by Figure 4 in your own 2002 report (8). Did you or your colleagues blow the whistle on this misrepresentation of data and did you advise the government accordingly?
- 5. Although it was predicted in the report that fires are "*likely*" to increase in Australia, when this was politically edited for the final Summary for Policymakers report the word "likely" was changed to "*virtually certain*".

The fact that you, and the CSIRO, still support the IPCC in spite of the abovementioned shortcomings, continues to undermine the scientific credibility of the CSIRO. You have endorsed the credibility and accuracy of the above reports and their assessment of IPCC practices. Do you therefore agree with the above IAC and PBL criticisms of the IPCC? And do you agree with the decision to completely exclude the subject of human causation from the PBL enquiry? And why do you assert that "the PBL (2010) did examine the validity of the IPCC representation of science" when the PBL refused to investigate evidence of human causation?

Let us see what just a few of the thousands of scientists opposed to the scientific distortions of the IPCC have to say.

Dr Robert Balling: "The IPCC notes that "No significant acceleration in the rate of sea level rise during the 20th century has been detected." (This did not appear in the IPCC Summary for Policymakers).

Dr. Lucka Bogataj: "Rising levels of airborne carbon dioxide don't cause global temperatures to rise.... temperature changed first and some 700 years later a change in aerial content of carbon dioxide followed."

Dr John Christy: "Little known to the public is the fact that most of the scientists involved with the IPCC do not agree that global warming is occurring. Its findings have been consistently misrepresented and/or politicized with each succeeding report."

Dr Robert Davis: "Global temperatures have not been changing as state of the art climate models predicted they would. Not a single mention of satellite temperature observations appears in the (IPCC) Summary for Policymakers."

Dr Willem de Lange: "In 1996, the IPCC listed me as one of approximately 3,000 "scientists" who agreed that there was a discernable human influence on climate. I didn't. There is no evidence to support the hypothesis that runaway catastrophic climate change is due to human activities."

Dr Vincent Gray: "The (IPCC) climate change statement is an orchestrated litany of lies."

Dr Kenneth Green: "We can expect the climate crisis industry to grow increasingly shrill, and increasingly hostile toward anyone who questions their authority."

Dr Georg Kaser: "This number (of receding glaciers reported by the IPCC) is not just a little bit wrong, but far out of any order of magnitude ... It is so wrong that it is not even worth discussing,"

Dr Aynsley Kellow: "I'm not holding my breath for criticism to be taken on board, which underscores a fault in the whole peer review process for the IPCC: there is no chance of a chapter [of the IPCC report] ever being rejected for publication, no matter how flawed it might be."

Dr Madhav Khandekar: "I have carefully analysed adverse impacts of climate change as projected by the IPCC and have discounted these claims as exaggerated and lacking any supporting evidence."

Dr Hans Labohm: "The alarmist passages in the (IPCC) Summary for Policymakers have been skewed through an elaborate and sophisticated process of spin-doctoring."

Dr. Andrew Lacis: "There is no scientific merit to be found in the Executive Summary. The presentation sounds like something put together by Greenpeace activists and their legal department."

Dr Chris Landsea: "I cannot in good faith continue to contribute to a process that I view as both being motivated by preconceived agendas and being scientifically unsound."

Dr Richard Lindzen: "The IPCC process is driven by politics rather than science. It uses summaries to misrepresent what

scientists say and exploits public ignorance."

Dr Philip Lloyd: "I am doing a detailed assessment of the IPCC reports and the Summaries for Policy Makers, identifying the way in which the Summaries have distorted the science. I have found examples of a summary saying precisely the opposite of what the scientists said."

Dr Martin Manning: "Some government delegates influencing the IPCC Summary for Policymakers misrepresent or contradict the lead authors."

Dr Johannes Oerlemans: "The IPCC has become too political. Many scientists have not been able to resist the siren call of fame, research funding and meetings in exotic places that awaits them if they are willing to compromise scientific principles and integrity in support of the man-made global-warming doctrine."

Dr Roger Pielke: "All of my comments were ignored without even a rebuttal. At that point, I concluded that the IPCC Reports were actually intended to be advocacy documents designed to produce particular policy actions, but not as a true and honest assessment of the understanding of the climate system."

Dr Jan Pretel: "It's nonsense to drastically reduce emissions ... predicting about the distant future-100 years can't be predicted due to uncertainties."

Dr Paul Reiter: "As far as the science being 'settled,' I think that is an obscenity. The fact is the science is being distorted by people who are not scientists."

Dr Murray Salby: "I have an involuntary gag reflex whenever someone says the "science is settled. Anyone who thinks the science is settled on this topic is in fantasia."

Dr Tom Segalstad: "The IPCC global warming model is not supported by the scientific data."

Dr Fred Singer: "Isn't it remarkable that the Policymakers Summary of the IPCC report avoids mentioning the satellite data altogether, or even the existence of satellites--probably because the data show a (slight) cooling over the last 18 years, in direct contradiction to the calculations from climate models?"

Dr Roy Spencer: "The IPCC is not a scientific organization and was formed to regulate carbon dioxide emissions. Claims of human-cause global warming are only a means to that goal."

Dr Richard Tol: "The IPCC attracted more people with political rather than academic motives. In AR4, green activists held key positions in the IPCC and they succeeded in excluding or neutralising opposite voices."

Professor Christopher Landsea, renowned internationally as the eminent Authority on storms was a UNIPCC scientist who resigned in disgust at the UN IPCC's tactics: "My view is that when people identify themselves as being associated with the IPCC and then make pronouncements far outside current scientific understandings that this will harm the credibility of climate change science and will in the longer term diminish our role in public policy."

Timeline of shady IPCC practices have been summarised here ($\underline{9}$) and the reasons why the IPCC should be disbanded have been summarised here ($\underline{10}$).

In view of all these facts as assessed by eminent scientists, do you, and the CSIRO, still endorse this corruption and politicisation of science which has been presided over by the IPCC?

The "Settled" Science of Climate Change and AGW

Regarding the science of climate change, you cite the same recycled discredited material, based upon flawed data and computer models, in defence of your case but you completely failed to disprove the validity of the real life data I supplied to you as quoted below (see also enclosed graphs).

"The ignoring of the levelling of average global temperatures since 1998 and the actual cooling trend which has
developed in recent years. The two attached graphs from the most prestigious measuring centres in the world (GISS
and HadCRUT) both show these trends. The LACK of correlation with steadily rising CO2 levels is obvious.
Furthermore, the cooling period between 1940 and 1975 alone is enough evidence for to say that the CO2 /warming
connection is flimsy indeed.

- 2. Average sea level has been shown by real life satellite measurements to be increasing by an average 1.7 mm per year (=17 cm per century) up until 2007. However that rate of rise (trivial by comparison with the IPCC computer model prediction of a metre rise per century) has shown a remarkable reversal over the last 4 years and average sea levels have actually dropped by 5mm in that period. Warmists cannot explain this and are simply hoping that a positive trend will soon resume.
- 3. Many meteorologists are recognising that variations in the Australian Climate are caused largely by the 'Southern Oscillation' between El Nino and La Nina movements in cold and warm ocean currents. These variations are not well understood in terms of what causes them but it is certainly NOT greenhouse gases.
- 4. Latest reports confirm, based upon real life measurements rather than computer models, that Australian sea levels are increasing very slowly, only around 1mm per year (11, 12, 13, 14), and the rate of increase is actually decreasing, in contrast with CSIRO data. However as has been noted by Doug Lord on Channel 7 News (14), there has been a refusal to publish sea level information which conflicts with government policy even though the data is soundly based. Do you agree with this political censoring of scientific information?

As I indicated previously, many experts are reversing or moving away from earlier claims that we are on the verge of a human caused climatic catastrophe. Even the IPCC itself is moving away from its earlier exaggerated or fictitious catastrophic anthropogenic claims (<u>15</u>, <u>16</u>, <u>17</u>). Your report (<u>1</u>, <u>2</u>, <u>26</u>) contradicted the government's assertion that the science of climate change and AGW is settled beyond doubt by highlighting the many uncertainties and unknowns of climate science (<u>27</u>):

"The climate projections are subject to a great deal of uncertainty, both in terms of the limitations of the models on which they depend, and uncertainty about future global greenhouse gas emissions."

The many unpredictabilities and uncertainties of climate change have also been noted by Professor Tim Flannery (28, 29):

"We're dealing with an incomplete understanding of the way the earth system works... When we come to the last few years when we haven't seen a continuation of that (warming) trend we don't understand all of the factors that create earth's climate...We just don't understand the way the whole system works... See, these people work with models, computer modelling. So when the computer modelling and the real world data disagree you've got a very interesting problem... Sure for the last 10 years we've gone through a slight cooling trend."

This view has also been reinforced by the Australian Academy of Science which states (30):

"According to the bulk of scientific opinion, the world is getting warmer. It is difficult, if not impossible, to prove the causes of this warming*, but many scientists are convinced that increasing concentrations of greenhouse gases in the atmosphere are at least partly to blame."

*Emphasis added

So why is it that these uncertainties have not been communicated to the government by the CSIRO? Or is the government acting against CSIRO advice? The government is introducing its mitigation package based upon supposed scientific certainty when the scientists advice is that "it is difficult, if not impossible, to prove the causes of this warming". How can this be? Who is responsible for falsely advising the government about the degree of scientific certainty?

I also made the following unanswered points previously.

"You refer to page 52 of your report (26) as supplying confirmation of human causation. However, this page refers again to unsubstantiated or discredited IPCC data and further makes the claim that "little research has been conducted to quantify the relative importance of human-induced change and natural variability as causes of the observed trends in the PCCSP region." You refer in your email to the "uncertainties" of climate science which must be considered by "decision makers", as described on page 11 of your Report which states: "Determining the extent to which climate trends are attributable to natural variability and to human activities is also a priority." But the decision makers (ie the government) have already based their policy on the alleged fact that there are no uncertainties (ie the science is settled), claiming this is confirmed by their scientific advisors. But now, after the Australian people have been advised by government that the science is settled, and the government have legislated their policy on the very basis of their being NO uncertainty, you make the startling claim that there must be more research to enable differentiation of natural climate variability and human induced variability.

While I acknowledge the honesty of your assessment regarding uncertainties, and the fact that it is consistent with the evidence and the opinions of many scientists, it nevertheless does not seem to have been communicated to the government

effectively. Clearly it is foolish to base policy on uncertainties and unknowns and yet this is exactly the situation we are in.

According to the government the answer is in the affirmative. We can make the climate warmer with more CO2 emissions, and by reducing CO2 emissions with a CO2 tax we can reverse these changes.. In other words, according to the government, a CO2 tax has the ability to lower global temperatures, lower global sea levels, increase polar ice, reduce rainfall when it is excessive, and increase rainfall when it is insufficient and these results can be witnessed this century. Furthermore, the government also claims that according to scientists, including the CSIRO, "the science is settled" in regard to these matters. Is this correct? Does scientific evidence confirm the controllability of climate as asserted by the government? If the Australian CO2 tax reduced Australian CO2 emissions to zero in the next decade, can you confirm this will result in significant lowering of global temperatures and sea levels this century? Yes or no answers are sufficient.

The government has introduced national policy affecting all Australians apparently based upon advice from CSIRO scientists and other scientists. The government claims that according to scientists the science is settled pertaining to these matters. You claim in your Report that the influence of humans upon climate is "poorly understood". I repeat the following unanswered question from my earlier correspondence:

Unless you can supply the scientific evidence as requested above, and unless you can confirm that the science is settled and uncertainties eliminated, then I urge you to advise the government about these uncertainties of climate science, the discrediting of the IPCC, and the thousands of scientists who claim there is no scientific evidence of humans having a significant or catastrophic effect upon climate."

It is vitally important these matters are clarified, both to the government and the public.

Political Gagging and Credibility of the CSIRO

In regard to the credibility and independence of the CSIRO, as I stated previously:

"Since you mentioned the CSIRO web site and publications I draw your attention to two vitally important facts. Firstly, since the CSIRO continues to depend upon discredited data from the IPCC, the CSIRO itself unfortunately becomes tainted by association with this organisation. Secondly, although leading world climate scientists and former lead authors of the IPCC such as Professors Lindzen and Christy and thousands of scientists around the world (NIPCC), have openly identified the failings of the IPCC and their anthropogenic global warming claims, the CSIRO has so far refused to publicise this side of the story. Sadly, this is hardly surprising when various scientists, including CSIRO scientists, have alleged that the CSIRO is required to adhere to strict guidelines by refraining from publishing material that could be perceived as being critical of government policy (18, 19, 20, 21, 22, 23, 24, 25). Is this correct?"

While again refusing to answer the questions I asked you offered the following defence of the independence of the CSIRO:

"Regarding public comment, the Government's Public Research Agency Charter with CSIRO

(http://www.csiro.au/resources/pf1lc.html) states that The Minister and CSIRO agree to (among other things) open communication and dissemination of the findings of research; encouragement of debate on research issues of public interest; and independence and integrity of public research institutions in their research activities. CSIRO's Public Comment Policy

(http://www.csiro.au/Portals/About-CSIRO/How-we-work/Governance/PolicyOnPublicComment.aspx) states (among other things) that scientists are CSIRO's frontline communicators; they are encouraged to communicate the outcomes and implications of their scientific work and, where relevant, policy options and scenarios stemming from their scientific findings. However, CSIRO staff should not advocate, defend or publicly canvass the merits of government or opposition policies (including policies of previous Commonwealth governments, or State or local or foreign governments)."

However, you seem to dismiss the concerns of fellow CSIRO scientists who have long been complaining about political interference or gagging of CSIRO scientists, especially climate scientists (see above and Appendix A below) Do you disagree with the various CSIRO scientists I have cited above and in the Appendix?. It is of course common knowledge what happened to former CSIRO scientist Clive Spash when he attempted to publish a report which was critical of the underlying basis of government climate policy (see Appendix A below). Chief CSIRO scientist at the time, Dr Megan Clark, was even quoted as suggesting Dr Spash would be "punished" (see Appendix A). Do you agree with this type of "punishment" or do you think Dr Spash was not treated fairly? And why would there be even the remotest suggestion that scientists should be "punished" for contributing to the scientific debate?

The bottom line is, as I repeat again, have you advised the government of the many failings of the IPCC as outlined above, including your own claims of the uncertainties of climate science, including also the corruption of the peer review process

and the corruption, alteration or exaggeration of data and conclusions in the Summary for Policymakers? Did you for instance, advise government that the prediction of 3000-5000 global warming caused deaths by 2050 was a complete misrepresentation of the facts?

Currently the policies of the government are dividing Australia and destroying the credibility of government associated scientists and scientific institutions. I urge you to reconsider your stance in the interests of science and the wider Australian community.

Regards

Graham Williamson

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APPENDIX

Appendix A

A Climate of Change Within the CSIRO

So called human caused climate change has brought with it a climate of change within the CSIRO as CSIRO scientists rush to support government policies, or should I say, conceal any disagreement with government policies (20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35). Headlines splashed out across the country testified to apparent bias and political interference in the CSIRO: "CSIRO Gagging Climate Debate"; "Gagging Row Rattles CSIRO Executives"; "CSIRO Moves to Put Gag on Scientists"; "Gagged CSIRO Scientist Resigns"; "Clive Spash Resigns from CSIRO after Climate Report 'Censorship'"; and "Rudd Government Accused of Censoring CSIRO Scientist Dr Clive Spash". Even former CSIRO chief scientist Dr Megan Clark has openly supported government climate policy (37, 38), clearly confirming the politicisation of a once great Australian scientific organisation. Sounding very much like a politician Dr Clark described global warming as (38) "probably one of the most challenging issues we have ever faced as humanity" and claimed "clearly we need a price on carbon and a policy response." Once again the same 'cure' is proposed by scientists as that favoured by politicians, even though there is absolutely no cost benefit analysis or scientific evidence of effectiveness (assuming of course, human caused global warming is real). Surely our top scientists would not recommend a 'solution' to supposed man made climate change in the absence of scientific proof of effectiveness.

Interestingly, in spite of the abovementioned claims regarding gagging of CSIRO scientists, Dr Clark emphasised that the CSIRO will continue to make climate change information available to everyone (38):

"Despite recent criticism, Dr Clark says the CSIRO will continue to offer observations and clarity on the science of global warming.

'Our role as the leading science agency in the nation is very, very clear, and that is to make sure we provide to the community, to industry, to government and policy makers, that we provide clarity on the observations', Dr Clark said. 'We will continue to put forward that information and make it available for everyone'."

But it seems Megan Clarke was involved in gagging of CSIRO scientists and the resignation of CSIRO scientist Dr Clive Spash who dared to produce a report which disagreed with government policy (23, (30, 32, 33, 34, 35). Apparently, because the Spash report disagreed with government climate policy, Dr Clark (33) "warned Dr Spash would be punished for his behaviour and his refusal to amend it." It seems Megan Clark certainly was not providing 'clarity' and 'information' for everyone in this instance.

The Clive Spash controversy revolved around a CSIRO report he produced entitled "<u>The Brave New World of Carbon Trading</u>" which argued that the government's proposed emissions trading scheme was (<u>31</u>) "fundamentally flawed". This apparently resulted in (<u>31</u>) "the CSIRO saying Professor Spash couldn't publish his paper, even though it had been peer reviewed and cleared for publication in an international journal." Clive Spash explains during an interview with Mark Colvin on the ABC (<u>31</u>):

MARK COLVIN: "Did you think that there was any restriction on you doing scientific reporting when you were an employee of the CSIRO?"

CLIVE SPASH: "I should make clear from the start that I'm an economist and there seems to be some confusion about the terms of the scientist versus social scientist. My area of work and the area of work I was employed to engage in is public policy on environmental issues. So if I was employed by the CSIRO to do that job, I have no problem with publishing the type of work I was doing."

MARK COLVIN: "So your understanding was that you were not in the position of say a public servant in a minister's department who's really gagged from speaking publicly?"

CLIVE SPASH: "Oh certainly not. When I was employed I was told that I would have a free remit. I was employed as a science leader to do blue skies thinking. The whole point of my position was to actually push the boundaries for the CSIRO."

MARK COLVIN: "They have a policy on public comment apparently which says: "as representatives of CSIRO staff should avoid making direct comment for or against government or opposition policy". That seems to be in direct contradiction to having you as a blue sky thinker as you call it."

CLIVE SPASH: "I think they've certainly got themselves into a total mess both with their public policy statements and also their charter signed with the Minister. It seems impossible for the CSIRO to conduct research engaging on public policy issues and yet maintain a statement which prevents them from doing that."

MARK COLVIN: "So you would see a CSIRO employee in your position as, closer for instance, to an employee of the ABC who's actually employed to talk about public policy?"

CLIVE SPASH: "Yes, or you could say a university professor. That's what I was before, I was a research professor who has the freedom to speak and engage on any issue and to be judged by their peers on the validity and quality of their work."

MARK COLVIN: "But a university professor isn't paid to give evidence directly to the government."

CLIVE SPASH: "No but they do actually feed into public inquiries, write reports for government agencies. I was for ten years doing research in Europe which directly fed into public policy in the European Commission."

MARK COLVIN: "And you never had anything like this there?"

CLIVE SPASH: "Never."

MARK COLVIN: "So what do you think it was about your paper that they wanted to suppress?"

CLIVE SPASH: "The paper I was told was politically sensitive. Presumably this relates to the fact that the emissions trading scheme was going through the Senate and when I first started the paper and it was first submitted in February 2009 the issue looked like it wasn't going to be problematic.

By the time the Senate had rejected the emissions trading scheme for the first round, suddenly everything became much more politically sensitive. I think the main point is that I'm arguing in general terms about emissions trading schemes and their problems which cannot be redesigned. Most economists are arguing that you can redesign emissions trading schemes."

In a further report in *The Australian* entitled "Climate Expert Clive Spash 'Heavied' by CSIRO Management", Nicola Berkovic states (32):

"A CSIRO economist whose research criticising emissions trading schemes was banned from publication said last night he had been subjected to harassment by the senior agency management.

Clive Spash also accused the agency of hindering public debate and trampling on his civil liberties by preventing the research being published in British journal New Political Economy. Dr Spash defended the paper, The Brave New World of Carbon Trading, saying it was a dispassionate analysis of ETS policies and was not politically partisan.

He was told in February he could publish the work if it were peer reviewed. But in July, CSIRO management said it could not be published after it was cleared for publication.

This month, he was informed he could not publish it even in his private capacity, because it was "politically sensitive". Within 24 hours, he also received a letter outlining a list of trivial instances in which he was accused of breaching CSIRO policy, for example not completing a leave form properly.

Dr Spash said he believed the letter was intended to, and did, intimidate him and denied him due process. None of the matters were raised with him prior to the letter being sent and each of the alleged misdemeanours could be explained. "We are not members of the Defence Department, we are scientists who are supposed to be discussing research in an open forum. How do you advance knowledge if you stop people from publishing their work? "I am totally happy to have my work criticised and debated but I'm not happy to have it suppressed." Dr Spash said it was impossible to publish research in his field that did not have an impact on government policy. "The idea that you cannot discuss something like ETS policy when you're working on climate change as a political economist seems ridiculous," he said.

The gagging of Dr Spash's work is embarrassing for Science Minister Kim Carr, who defended academic freedoms in opposition and last year trumpeted a new CSIRO charter he said would give scientists the right to speak publicly about their findings."

It seems rather odd that the government was so upset with Dr Spash, who after all, supports the science of climate change, he just disagrees about the best solution to the problem (31). Dr Spash, in his report (cited in part), lists various reasons why the government's emission trading scheme is not likely to be effective (46):

"A contention of this paper is that the serious problems posed by human induced climatic change soon become lost amongst concerns for designing complex exchange

mechanisms to handle the large scale transfer and management of financial assets*......

Complexity means lack of public transparency and considerable room for manipulation of the process by powerful vested interests, while unintended incentives and

consequences are likely and little GHG reduction may be achieved.......
Yet, the design of carbon trading schemes has involved several controversial aspects which undermine the effectiveness of hoped for pollution control......
The first is the calculation of and accounting for the amounts of gases being released and absorbed in the global system (e.g. carbon budgets); the second, the allocation of allowances; the third, permitted actions meant to offset the impacts of GHG pollution after its release.......In practice the carbon budget is surrounded by unknowns, ignorance and social indeterminacy* (see Spash, 2002 Chapter 5)......"

"With very few exceptions, nobody is actually going to be measuring carbon emissions. It's not a matter of putting a gizmo in a smoke stack and measuring carbon as it goes past, it is really about getting the accounting systems in place."*
(Hatfield-Dodds quoted in ECOS, 2008: 23)......

"Where individuals are solely motivated by 'warm glow' giving they will have no concern for the actual consequences of their expenditure (Andreoni, 1989). Indeed firms

selling such credits may play on the 'feel good factor' of warm glow by selling credits as

assuaging guilt rather than abating GHGs. That is, all the utility gained is derived from the act of giving rather than what that giving achieves. Those concerned to promote their self image as 'Green' may pay little attention to the outcome of their actions as long as they are regarded as trying to 'do the right thing', e.g. the band Coldplay funding carbon offset trees which never actually grew (Lohmann, 2006c: 269-270).

*Emphasis added

Spash drew the following disturbing conclusions (cited in part) in his study into the feasibility of emissions trading (46):

ineffective in terms of actually reducing GHGs. Despite this apparent failure, ETS remain politically popular amongst the industrialised polluters.* The public appearance is that action is being undertaken. The reality is that GHGs are increasing and society is avoiding the need for substantive proposals to address the problem of behavioural and structural change......

Perhaps the most worrying aspect of the ETS debate is the way in which an economic

model bearing little relationship to political reality is being used to justify the creation of complicated new financial instruments and a major new commodity market.* In 2008 the financial sector was in a global crisis having manipulated bad debts and mismanaged its own finances to the point of requiring international banks to seek government bailouts. Yet ETS proposals place a new multi-billion dollar market in the hands of the same people and organisations. Recent experience illustrates how market players continually seek new ways to profit from adapting institutional rules, and regulators struggle to keep-up.

There is also something incongruous in governments proposing to host financial markets in their own countries for competitive advantage on the basis that their institutions are well regulated, secure, trustworthy, have good labour and environmental standards, and so on. The incongruity is because they then wish to buy products (i.e., offsets) from countries which clearly fail to meet the same standards. The justification that this is cheaper, least-cost or economically efficient can only be supported if standards are the same across countries. Basic environmental and social standards clearly do matter more than price across all traded commodities, otherwise we might as well, for example, buy shoes made cheaply using unpaid child labour. Non-equivalence is more than a matter of an accounting system to equate units of some physical product (even if this were possible). Such matters are far from irrelevant to how ETS is designed and operated.

An ETS can in theory provide a similar incentive as under a tax by pricing of all units of pollution. This is meant to encourage development of pollution control technology so as to reduce abatement costs. However, the major difference from a tax is that the revenue stream need not go to government,* depending upon how the scheme is established and run. For example, if the government gives all existing polluters permits for free then the public purse gains no revenue; instead polluters can sell the permits on the open market and so avail themselves of a windfall. This adds an incentive for polluting parties to form lobby groups in order to influence policy design to avail themselves of such gains.

The billions of dollars now being generated in trading carbon and offsets has created a powerful institutional structure which has many vested interests whose opportunities for making money rely on maintaining GHG emissions, not reducing them.* The transaction costs inherent in these markets are actually being seen as a source of economic growth rather than a deadweight loss to society. Once created, how politicians will cut the market by 80 percent—even within the 40 years they are allowing themselves—is hard to imagine. After all, the reason for emissions trading is that corporations and the technostructure proved too powerful for the political process to establish a tax or direct regulation in the first place."*

The difficulties and impracticalities of an ETS system have been clearly outlined by Clive Spash. The ETS system will become a self-perpetuating industry in itself. Although nothing will be produced, nothing will change hands, and there will be no way of assessing 'value for money', a trading juggernaut will be produced which will see the major players having a clear vested interest in maintaining a level of highly profitable pollution. The losers in all of this are the people. The bankers, economists, and major players are clearly motivated by profits. The politicians of course, will be given unprecedented powers to control people and redistribute wealth in line with their ideological dreams. And when the CO2 tax changes to an ETS in 2015 the huge flow of financial assets from Australia to third world countries will be additional to any government revenue and beyond direct government control.

Interestingly, the United Nations has also noted that funds obtained from an ETS system are beyond direct government control, are not part of government budget revenue, and therefore may be relied upon as likely to generate a more permanent revenue stream (47).

I digress, returning to the matter at hand......

Recently, during a political rally in Canberra, Art Raiche, a former CSIRO scientist with 35 years experience, told of his experiences with the CSIRO and his dismay regarding the increasing politicisation of the organisation (26):

"The organisation employed me for 35 years -the last 15 of which I had the rank of Chief Research Scientist – I worked on computer modelling by the way – the CSIRO that I joined in 1971 was a very lean, world class organisation and it was run by scientists for the benefit of Australia...... Here's an important thing – CSIRO was called a QANGO – that's a bureaucratic term meaning Quasi Autonomous Non-Governmental Organisation – financed by government but set to act independently of government. That meant that my day, our research and publications were judged on the quality of their science and how useful it was, and not whether or not it agreed with government policy....... But, we came under increasing pressure at the end of the 1980s and it was pretty terrible. We had to become more business like. The doors were opened to

management consultants....... We scientists were given very strict guidelines – and I have to tell you this – very strict - we got lots of memos on not publishing any public discussion, not publishing anything or public discussion of any research that could be seen as critical of government policy. Those who did not do it could be subject to dismissal.

The days of CSIRO as a QANGO were over. We had now become a government enterprise."

Similar concerns have also been expressed by former CSIRO chief climate scientist, Graeme Pearman (29, 30):

"In an ideal democracy, where you have taxpayers investing their money in research, you want scientists to be able to say what the hell they've found. It should not be based on some ideological or political view of what is correct or incorrect -- that's not in the interest of the Australian community."

Dr Geoff Davies, writing in support of more stringent Australian efforts to control greenhouse gases, also expresses serious concerns about political interference in science (39):

"The real issue underlying alleged censoring of CSIRO scientists' public statements is a long-standing bias in the policies of CSIRO and government and their intolerance of unwelcome scientific evidence. For two decades or more CSIRO has provided only small

and erratic support to technologies that capture renewable energies or use available energy much more efficiently while giving large and stable support to fossil fuels......

Critics of government policies are routinely ignored or dismissed with epithets like "emotional", "hysterical", "disgruntled" or "living in the past". Fundamental scientific

objections, questionable evidence supplied by vested interests, obvious practical difficulties and serious financial questions are thereby excluded from policy formulation.

On top of the policy bias, CSIRO scientists are kept on a very short leash through job insecurity*. The problem started with Labor's introduction of a 30% target for external earnings, but has become acute under the regime of Howard appointed Chief Executive, Dr Geoff Garrett. At least seven distinguished senior atmospheric and environmental scientists have been discarded, annual staff turnover is around 20%, and 93% of new appointments last financial year were short-term......

What emerges is that scientists whose professional judgement is contrary to government inclinations are ignored, denigrated, undermined and censored in the name of economic fundamentalism and the interests of the big end of town. This problem needs to be seen as part of the larger corruption of our political process by big money*."

However, it's not just that a lot of taxpayers' money is potentially wasted, nor even that **our democratic process is subverted***. Climate change fundamentally threatens our

environment, and possibly even the survival of our society. The suppression of science and scientists puts the lives of future Australians at risk so that deceitful governments can cling to power and the rich can get richer, temporarily."

The matter of political interference and censorship of the CSIRO has probably been best summarised by Peter Pockley writing in **Australasian Science** (25):

"The wide relevance of these exchanges became apparent when The Canberra Times revealed CSIRO's boost to fossil fuel research while cutting renewable energy (4 February), and ABC's Four Corners (13 February) exposed the gagging of CSIRO scientists

on environmental issues, especially climate change. Three former senior scientists spilled the beans on how CSIRO managers restricted them from engaging with the media – Dr Graeme Pearman (AS, April 2005, p.43), Dr Barrie Pittock and Barney Foran. CSIRO Executive Dr Steve Morton tied himself in knots while Dr Kevin Hennessy, CSIRO's

Climate Impact Group Coordinator, answered simple factual questions five times with "I can't comment"........

In The Canberra Times (3 March) Prof John Warhust, a political scientist at the Australian National University (ANU), recalled CSIRO's earlier glory days of open public involvement, and argued compellingly against restrictions that lead to "self-censorship". He unravelled Garrett & Co's spiel about a clear dividing line between "informing policy"

and "writing or commenting on policy". ANU geophysicist Dr Geoff Davies has continued this theme, writing that censorship of scientists "needs to be seen as part of the larger corruption of our political process by big money" (see conSCIENCE, p.42).

Characteristically, Garrett reacted with defensive "management-speak". Guided by Staunton's experience in defending tobacco, his claims like "CSIRO scientists are not gagged" (15 February) proved unpersuasive.

Within 5 days Garrett issued a memo to staff outlining the establishment of an eight-member panel that would conduct "focus group discussions in the domain of policy development to which we in CSIRO wish to see our science contribute". Notably absent form the panel was Staunton, who wrote CSIRO's disciplinary "Policy on Public Comment" and controls staff appearances in the media. The panel includes Dr Jim Peacock, who has since been appointed Australia's Chief Scientist (see pp.36–37) but is still working half-time in CSIRO, much of this directly with Garrett.

The panel has been attacked for its lack of independent, external representatives."

It is abundantly clear that over the past decade there have been increasing concerns regarding political interference and censorship of the CSIRO. These concerns originate from CSIRO scientists who have personally experienced or witnessed this increasing politicisation of a once great scientific organisation. Although the CSIRO has half heartedly attempted to defend their publication guidelines and deny they are gagging scientists (36), fundamental questions remain: why is the CSIRO web site so biased and why does it exclude evidence from thousands of scientists, including world famous climate scientists? Why does the CSIRO endorse a discredited political organisation such as the IPCC, and why does the CSIRO fail to mention the former IPCC climate scientists who have discredited IPCC global warming claims and IPCC methodologies? There is no doubt that the CSIRO web site does not represent a complete or balanced analysis of climate science. The question is, why? Who is responsible for this misrepresentation and selective use of scientific evidence? And why is it that the data included on the CSIRO web site is supportive of government policy while evidence which would contradict government policy seems to be excluded? Is this a deliberate attempt to deceive and mislead the public?

Australian Labor Party Calls for Investigation into Political Gagging of CSIRO Climate Scientists

Such were the gagging concerns, even back in 2006, that the Federal ALP wanted an enquiry into gagging of CSIRO scientists (22) while Senator Christine Milne also called for changes to ensure the independence of the CSIRO (40). But the ALP of course, were in opposition at that time, now they are in government it seems things have changed. Labor's science spokesperson, Jenny Macklin, even went so far as to call the situation at that time a "national disgrace" and expressed concerns about whether the Howard government had deliberately gagged CSIRO scientists (22):

"Labor is calling for a broad inquiry into allegations by senior CSIRO scientists they were gagged from airing their concerns over climate change. Environmental group Greenpeace also wants an inquiry that would also include wider claims of coal industry interference in government policy-making on climate change. Three eminent Australian scientists have told the ABC's Four Corners program to be broadcast on Monday night that they have been censored.

Labor's science and training spokeswoman Jenny Macklin described the situation as a national disgrace. She said Labor would pursue the claims at Senate estimates

this week but wanted a broader inquiry.

"These scientists have been gagged for talking about one of the most important issues facing the world, and that is climate change*," Ms Macklin told reporters.

"We want to make sure that our scientists can speak freely, can make sure that

our politicians, our government departments and the public really do understand the critical importance of the science of climate change, and we cannot afford to have these scientists gagged.*

"What Labor wants to do is get to the bottom of this.

"We will certainly be pursuing this matter at Senate estimates this week.

"We think that there should be a broader inquiry into whether or not the Howard government has extensively sought to gag these senior scientists."

*Emphasis added

Given increasing concerns about the CSIRO over such a long period, the Labor Party's call for an enquiry is not only an excellent idea, it is the only proper option given the enormous cloud hanging over the CSIRO and the science of climate change. In fact, why not call the enquiry now, before debating the CO2 tax, so the current divisiveness and uncertainty may be settled?

Doesn't the present government believe the CSIRO deserves to have its tarnished reputation restored by a thorough investigation?

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Appendix B

(see http://www.galileomovement.com.au/docs/UN IPCC IAC-Report-Overview-Long.pdf)

Inferences concerning the quality of AR4 drawn from the IAC Report.

The InterGovernmental Panel on Climate Change (IPCC) commissioned the InterAcademy Council (IAC) to review the IPCC's processes and procedures, presumably to ensure that the upcoming Fifth Assessment Report (AR5) would be perceived as a credible unbiased scientific assessment. The IAC is the world peak academic body to which the various national academies of science belong. The governments of the world use the IPCC's Fourth Assessment Report (AR4) as the justification for their actions on climate change.

[All inferences, listed below, have links back to the appropriate area of the IAC Report at http://accessipcc.com/IAC-Report-Overview-Long.html]

Political interference: The IPCC process is rife with political interference.

ñ "Assessments"" were provided where no reliable information existed."

IAC statement: "Scientists should not feel obligated to provide an assessment where no reliable information exists."

ñ Deliberate political interference in the SPM caused it to differ in content from the underlying report.

IAC statement: "difference in content between the Summary for Policymakers and the underlying report"

ñ Government representatives negotiated the SPM line by line, making AR4 a wholly political document.

IAC statement: "Government representatives then negotiate and agree to the final wording line by

ñ There was political interference with the scientific results.

IAC statement: "Scientists and government representatives who responded to the Committee's

questionnaire suggested changes to reduce opportunities for political interference with the scientific results and to improve the efficiency of the approval process."

- ñ **AR4** prescribed policy and did not present the range of thoughtful scientific viewpoints. *IAC* statement: "Although policy-makers are the primary target audience, the reports are intended to be policy relevant, not policy prescriptive, and to present the range of thoughtful scientific viewpoints."
- ñ The majority of nations represented expect to receive vast sums of money as a major outcome of the IPCC process.

IAC statement: "194 representatives of Member nations of WMO and/or UNEP)-Determines the IPCC structure, principles, procedures, work program, and budget; nominates and elects the IPCC Chair and Bureau members; agrees on the scope, outline, and work plan for an assessment report; nominates authors and reviewers; approves the Summaries for Policymakers; and accepts the reports"

ñ The production of AR4 was controlled fromstart to finish by government policymakers. IAC statement: "Representatives of 194 participating governments agree on the scope of the assessment, elect the scientific leaders of the assessment, nominate authors, reviewthe results, and approve the summaries written for policymakers."

Bias: The precautions necessary to produce a credible unbiased scientific assessment (or systematic review) are well known to scientists but were ignored by the IPCC.

ñ The scoping of AR4 was not done by people selected by a transparent process and criteria.

IAC recommendation: "The IPCC should make the process and criteria for selecting participants for scoping meetings more transparent."

ñ The writing of AR4 was not controlled by people selected by a formal process and criteria. IAC recommendation: "The IPCC should establish a formal set of criteria and processes for selecting Coordinating Lead Authors and Lead Authors."

ñ Properly documented alternative views were not given due consideration.

IAC recommendation: "Lead Authors should explicitly document that a range of scientific viewpoints has been considered, and Coordinating Lead Authors and ReviewEditors should satisfy themselves that due consideration was given to properly documented alternative views."

ñ Genuine controversies were not adequately reflected.

IAC recommendation: "The IPCC should encourage ReviewEditors to fully exercise their authority to ensure that reviewers' comments are adequately considered by the authors and that genuine controversies are adequately reflected in the report."

ñ Authors did not respond effectively to significant review issues in many cases. IAC recommendation: "The IPCC should adopt a more targeted and effective process for responding to reviewer comments. In such a process, ReviewEditors would prepare a written summary of the most significant issues raised by reviewers shortly after reviewcomments have been received. Authors would be required to provide detailed written responses to the most significant reviewissues identified by the ReviewEditors, abbreviated responses to all noneditorial comments, and no written responses to editorial comments."

ñ AR4 is not a proper "assessment"" as the authors were not independent and did not consider the full range of available knowledge."

IAC statement: "An assessment is a process by which independent experts reviewand synthesize available scientific and technical knowledge relevant to climate change that is needed by policymakers to help make decisions"

n Selection bias was rampant - both in terms of personnel and the publications included for assessment

IAC statement: "Most important are the absence of criteria for selecting key participants in the assessment process and the lack of documentation for selecting what scientific and technical information is assessed."

- ñ **AR4 did not even get to the first step in considering the range of thoughtful views.**IAC statement: "Having author teams with diverse viewpoints is the first step toward ensuring that a full range of thoughtful views are considered"
- \tilde{n} Controversial issues did not receive appropriate consideration as even the weak existing procedures were not followed.

IAC statement: "The Committee found that some existing IPCC reviewprocedures are not always followed and that others are weak. In particular, ReviewEditors do not fully use their authority to ensure that reviewcomments receive appropriate consideration by Lead Authors and that controversial issues are reflected adequately in the report"

$\tilde{\mathsf{n}}$ There is no evidence that all thoughtful views were considered.

IAC statement: "The Committee also recommends that Lead Authors document that they have considered the full range of thoughtful views, even if these views do not appear in the assessment report."

ñ The IPCC indulged in advocacy.

IAC statement: "Straying into advocacy can only hurt IPCC's credibility."

\tilde{n} Authors placed too much weight on their on views relative to other views.

IAC statement: "Equally important is combating confirmation bias-the tendency of authors to place too much weight on their own views relative to other views (Jonas et al., 2001). As pointed out to the Committee by a presenter [[FOOTNOTE: 10]] and some questionnaire respondents, alternative views are not always cited in a chapter if the Lead Authors do not agree with them."

$\tilde{\mathbf{n}}$ WG2 SPM amplified the negative impacts of climate change contained in the underlying report.

IAC statement: "A recent reviewby the Netherlands Environmental Assessment Agency, for example, observed that the Working Group II Summary for Policymakers in the fourth assessment is more focused on the negative impacts of climate change than the underlying report"

ñ Lead Authors were at liberty to reject critical review comments without justification.

IAC statement: "Lead Authors have the final say on the content of their chapter"

Uncertainty: Many conclusions of AR4 were based upon little or no evidence, and y

Uncertainty: Many conclusions of AR4 were based upon little or no evidence, and were not traceable to the underlying science if it existed.

ñ Unpublished and non-peer-reviewed literature was used in violation of even the weak procedure then existent and was almost never appropriately flagged.

IAC recommendation: "The IPCC should strengthen and enforce its procedure for the use of unpublished and non-peer-reviewed literature, including providing more specific guidance on how to evaluate such information, adding guidelines on what types of literature are unacceptable, and ensuring that unpublished and non-peer-reviewed literature is appropriately flagged in the report."

ñ There was no traceability in the assignment of ratings for level of scientific understanding and likelihood.

IAC recommendation: "Chapter Lead Authors should provide a traceable account of howthey arrived at their ratings for level of scientific understanding and likelihood that an outcome will occur."

ñ Quantitative probabilities (as in the likelihood scale) were used to describe the probability of well-defined outcomes when there was insufficient evidence i.e exaggeration

IAC recommendation: "Quantitative probabilities (as in the likelihood scale) should be used to describe the probability of well-defined outcomes only when there is sufficient evidence. Authors should indicate the basis for assigning a probability to an outcome or event (e.g., based on measurement, expert judgment, and/or model runs)."

ñ The confidence scale was used to assign subjective probabilities to ill-defined outcomes. IAC recommendation: "The confidence scale should not be used to assign subjective probabilities to ill-defined outcomes."

\tilde{n} Formal expert elicitation procedures were not used to obtain subjective probabilities for key results.

IAC recommendation: "Where practical, formal expert elicitation procedures should be used to obtain subjective probabilities for key results."

ñ Inappropriate use of unpublished and non-peer reviewed material which has not been critically evaluated compounds the uncertainty of any conclusions.

IAC statement: "An analysis of the 14,000 references cited in the Third Assessment Report found that peer-reviewed journal articles comprised 84 percent of references in Working Group I, but comprised only 59 percent of references in Working Group II and 36 percent of references in Working Group III (Bjurstrom and Polk, 2010)."

ñ High confidence was attributed on little evidence and to vague statements.

IAC statement: "However, authors reported high confidence in some statements for which there is little evidence. Furthermore, by making vague statements that were difficult to refute, authors were able to attach 'high confidence' to the statements. The Working Group II Summary for Policymakers contains many such statements that are not supported sufficiently in the literature, not put into perspective, or not expressed clearly."

ñ Many statements have weak evidentiary basis.

IAC statement: "The use of the level-of-understanding scale (Table 3.1), rather than the

confidence scale (Table 3.2), would have made clear the weak evidentiary basis for these statements."

ñ Conclusions were stated so vaguely as to make themimpossible to refute.

IAC statement: "In the Committee's view, assigning probabilities to imprecise statements is not an appropriate way to characterize uncertainty. If the confidence scale is used in this way, conclusions will likely be stated so vaguely as to make them impossible to refute, and therefore statements of `very high confidence' will have little substantive value."

ñ Authors reported high confidence in statements for which there is little evidence.

IAC statement: "However, the guidance was not consistently followed in the fourth assessment, leading to unnecessary errors. For example, authors reported high confidence in statements for which there is little evidence, such as the widely quoted statement that agricultural yields in Africa might decline by up to 50 percent by 2020. Moreover, the guidance was often applied to statements that are so vague they cannot be disputed. In these cases the impression was often left, incorrectly, that a substantive finding was being presented."

$\tilde{\mathbf{n}}$ Anonymous unsubstantiated ratings are worthless.

IAC statement: "However, it is unclear whose judgments are reflected in the ratings that appear in the Fourth Assessment Report or howthe judgments were determined."

ñ WG2 SPM assigned high confidence on little evidence.

IAC statement: "However, such guidance was not always followed, as exemplified by the many statements in the Working Group II Summary for Policymakers that are assigned high confidence but are based on little evidence. Moreover, the apparent need to include statements of `high confidence' (i.e., an 8 out of 10 chance of being correct) in the Summary for Policymakers led authors to make many vaguely defined statements that are difficult to refute, therefore making them of `high confidence.' Such statements have little value."

Conflict of interest: The IPCC never considered conflict of interest to apply to it.

ñ There was no evidence of any procedure to exclude conflicts of interest in the preparation of reports.

IAC recommendation: "The IPCC should develop and adopt a rigorous conflict-of-interest policy that applies to all individuals directly involved in the preparation of IPCC reports, including senior IPCC leadership (IPCC Chair and Vice Chairs), authors with responsibilities for report content (i.e., Working Group Co-chairs, Coordinating Lead Authors, and Lead Authors), ReviewEditors, and technical staff directly involved in report preparation (e.g., staff of Technical Support Units and the IPCC Secretariat)."

ñ Conflict-of-interest within the senior leadership was not even considered.

IAC statement: "The IPCC does not have a conflict-of-interest or disclosure policy for its senior leadership (i.e., IPCC Chair and Vice Chairs), Working Group Co-chairs and authors, or the staff of the Technical Support Units."

ñ The presence at important meetings of government representatives, who control funding, probably strains the objectivity of scientist who receive the funding.

IAC statement: "A complication could arise when Lead Authors are sitting side by side with their government representative, which might put the Lead Authors in the difficult position of either supporting a government position at odds with the Working Group report or opposing their government's position. This may be most awkward when authors are also government employees."

Management: The IPCC management had no idea how to conduct an unbiased scientific assessment as indicated by the significant shortcomings uncovered by the IAC.

ñ Dr R Pachauri should not have been IPCC chair.

IAC recommendation: "The term of the IPCC Chair should be limited to the time frame of one assessment."

ñ Working group Co-chairs should not have had a second term.

IAC recommendation: "The terms of the Working Group Co-chairs should be limited to the time frame of one assessment."

\tilde{n} The Bureau members, including the IPCC chair, did not necessarily have the highest scholarly qualifications or leadership skills and acted without proper definition of roles and responsibilities.

IAC recommendation: "The IPCC should develop and adopt formal qualifications and formally articulate the roles and responsibilities for all Bureau members, including the IPCC Chair, to

From: Kevin.Hennessy@csiro.au [mailto:Kevin.Hennessy@csiro.au]

Sent: Monday, 30 January 2012 1:16 PM

To: grahamhw@iprimus.com.au

Subject: Pacific climate change report: analysing the regional impacts of climate change

Dear Graham,

John Christy and Richard Lindzen are of course entitled to their views, but there are many climate scientists who would disagree with them. I've been part of the IPCC process for about 20 years and I don't think it's a political process. The Summary for Policymakers is prepared by all of the Lead Authors and Working Group Chairs, and approved line by line in a plenary including government representatives (hence the name Intergovernmental Panel). As indicated in my previous email, there have been two recent peer-reviews of the IPCC, and these should be given strong consideration in your own assessment of the IPCC. The review by PBL Netherlands Environmental Assessment Agency found no errors that would undermine the main conclusions in the 2007 report of IPCC on possible future regional impacts of climate change. I don't give much weight to views expressed in blogs and the media because they are not peer-reviewed.

A number of your other queries relate to the causes of short term and long term climate variability. This is explained in IPCC FAQ 9.2 http://www.ipcc.ch/publications and data/ar4/wg1/en/faqs.html, which states:

Although natural internal climate processes, such as El Niño, can cause variations in global mean temperature for relatively short periods, analysis indicates that a large portion is due to external factors. Brief periods of global cooling have followed major volcanic eruptions, such as Mt. Pinatubo in 1991. In the early part of the 20th century, global average temperature rose, during which time greenhouse gas concentrations started to rise, solar output was probably increasing and there was little volcanic activity. During the 1950s and 1960s, average global temperatures levelled off, as increases in aerosols from fossil fuels and other sources cooled the planet. The eruption of Mt. Agung in 1963 also put large quantities of reflective dust into the upper atmosphere. The rapid warming observed since the 1970s has occurred in a period when the increase in greenhouse gases has dominated over all other factors.

Causes of climate variability are also explained at http://www.csiro.au/Outcomes/Climate-Variability.aspx and http://www.csiro.au/Outcomes/Climate/Has-Global-Warming-Stopped/In-detail.aspx.

Regarding sea level data, see the CSIRO website http://www.cmar.csiro.au/sealevel/. Since 1993, the rise has been around 3.2 mm/year (Cazenave and Llovel, 2010), not 1 mm/year. Sea level projections include a wide range of uncertainty – see Church and White (2011) and the sea level section in the report at

http://www.cawcr.gov.au/projects/PCCSP/publications.html. The rise projected by the year 2100 is between 18 and 200 cm, based on various different estimates in peer-reviewed literature, with large uncertainty about the contribution from ice sheets.

Regarding public comment, the Government's Public Research Agency Charter with CSIRO (http://www.csiro.au/resources/pf1lc.html) states that The Minister and CSIRO agree to (among other things) open communication and dissemination of the findings of research; encouragement of debate on research issues of public interest; and independence and integrity of public research institutions in their research activities. CSIRO's Public Comment Policy (http://www.csiro.au/Portals/About-CSIRO/How-we-work/Governance/PolicyOnPublicComment.aspx) states (among other things) that scientists are CSIRO's frontline communicators; they are encouraged to communicate the outcomes and implications of their scientific work and, where relevant, policy options and scenarios stemming from their scientific findings. However, CSIRO staff should not advocate, defend or publicly canvass the merits of government or opposition policies (including policies of previous Commonwealth governments, or State or local or foreign governments).

Regarding your question about whether the science is settled, I answered this in my email on 1 Dec 2011. The IPCC (2007) Synthesis Report (Chapter 6) lists the robust findings and key uncertainties. The robust findings provide multiple lines of evidence for the risks and opportunities posed by climate change, and the need to manage these issues. Global action to reduce greenhouse gas emissions can slow climate change, as indicated in many peer-reviewed scientific papers and reports. Adaptation is also needed to manage climate change that cannot be avoided due to inertia in the climate system. Peer-reviewed literature published since the IPCC report, including our report on Pacific climate change, has strengthened many of these findings. The uncertainties (also summarised on page 11 of our Pacific report) are being addressed by ongoing

research and must be borne in mind by decision-makers.

Regarding your query about CSIRO advice to the Australian government, I answered this question in my email on 1 Dec 2011. CSIRO published a book in April 2011 titled "Climate change: science and solutions for Australia" http://www.csiro.au/en/Outcomes/Climate/Climate-Change-Book.aspx. This is one of the ways in which we provide advice to government and a range of other members of the community.

Most of the answers to your queries are in the peer-reviewed literature. I encourage you to read that literature rather than blogs and media reports.

Regards

Kevin.

From: Graham [mailto:grahamhw@iprimus.com.au] **Sent:** Thursday, 22 December 2011 8:51 PM **To:** Hennessy, Kevin (CMAR, Aspendale)

Subject: RE: Pacific climate change report: analysing the regional impacts of climate change

Dear Kevin,

Thank you for your response.

According to Professor John Christy, former lead author at the IPCC (1):

"I have served as a Lead Author of both the IPCC and CCSP reports and will demonstrate with published data that these reports are not always "factual" but written (a) to give the impression of certainty where large uncertainty is the reality or (b) to actually suppress results which run counter to the more alarming conclusions.....the great majority of the IPCC authors were, on the one hand, not climate scientists and were, on the other hand, pre-approved by their governments in a political process.....A fundamental notion contained in the IPCC and CCSP reports, and stated in the EPA quote above, is that climate models are capable of producing "facts" when in fact they cannot. They are models — which means they are the sum of the assumptions and prejudices of the organizations building the models (and do rather poorly when measured against the real world as shown later.) Here is a simple fact: There is no instrument that can measure Earth's temperature change which can unambiguously determine what part of the temperature change might be due to humans and what part might be due to nature."

And according to Professor Richard Lindzen, former lead author at the IPCC, IPCC reports are unscientific, misrepresent scientists, and are not subject to proper peer review (2, 3):

"Senator Inhofe was absolutely right. All that's coming out Friday is a summary for policymakers that is not prepared by scientists. Rob is wrong. It's not 2,500 people offering their consensus, I participated in that. Each person who is an author writes one or two pages in conjunction with someone else. They travel around the world several times a year for several years to write it and the summary for policymakers has the input of about 13 of the scientists, but ultimately, it is written by representatives of governments, of environmental organizations like the Union of Concerned Scientists, and industrial organizations, each seeking their own benefit."

Lindzen continues (3): "There's little doubt, Lindzen said, that the IPCC process has become politicized to the point of uselessness. He advised U.S. policymakers simply to ignore it."

While I detest being forced to make academic comparisons as many on the side of climate alarmism seem to delight in doing, the fact that you seem so dismissive of experts such as Professors Christy and Lindzen, forces me to clarify the issue. Do your credentials and experience in climate science measure up to theirs? Do they have more experience as IPCC lead authors or is it you that has more experience?

If you cannot answer these in the affirmative, don't you think it wise to respect, acknowledge, and act upon their assessment? Or do you think they should be ignored?

Have a wonderful Christmas and a fabulous New Year.

I trust we can clarify the many unresolved issues I have raised with you in the New Year.

Regards

Graham Williamson

From: Kevin.Hennessy@csiro.au [mailto:Kevin.Hennessy@csiro.au]

Sent: Wednesday, 21 December 2011 10:12 PM

To: grahamhw@iprimus.com.au

Subject: Pacific climate change report: analysing the regional impacts of climate change

Dear Graham,

There have been two recent reviews of the IPCC

- 1. PBL (2010). Assessing an IPCC Assessment: An Analysis of Statements on Projected Regional Impacts in the 2007 Report, The Hague, Netherlands, 100 pp. http://www.pbl.nl/en/publications/2010/Assessing-an-IPCC-assessment-An-analysis-of-statements-on-projected-regional-impacts-in-the-2007-report
- 2. InterAcademy Council (2010). *Committee to Review the Intergovernmental Panel on Climate Change* http://reviewipcc.interacademycouncil.net/report.html.

The InterAcademy Council report states on page 2 of the Introduction that "This report examines the procedures and processes used to carry out IPCC assessments; it does not examine climate change science or the validity of its representation in the assessment reports".

The PBL (2010) did examine the validity of the IPCC representation of science. The key conclusion on the front page of their website is:

PBL Netherlands Environmental Assessment Agency has found no errors that would undermine the main conclusions in the 2007 report of the Intergovernmental Panel on Climate Change (IPCC) on possible future regional impacts of climate change. However, in some instances the foundations for the summary statements should have been made more transparent. The PBL believes that the IPCC should invest more in quality control in order to prevent mistakes and shortcomings, to the extent possible.

I stand by the comments in my email dated 1 Dec 2011.

I am now on leave and look forward to spending some time with my family.

Best wishes for Christmas.

Regards

Kevin Hennessy
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From: Graham [mailto:grahamhw@iprimus.com.au] Sent: Wednesday, 21 December 2011 9:17 PM
To: Hennessy, Kevin (CMAR, Aspendale)

Subject: FW: Pacific climate change report: analysing the regional impacts of climate change

Mr Kevin Hennessy

Principal Research Scientist Climate Impacts CSIRO Dear Kevin.

I have not as yet, received a response to the matters raised in my earlier email below.

When can I expect a response?

Regards

From: Graham [mailto:grahamhw@iprimus.com.au]

Sent: Saturday, 3 December 2011 8:35 AM

To: 'Kevin.Hennessy@csiro.au'; bwilshire@2gb.com; malcolmr@conscious.com.au; bolta@heraldsun.com.au; alanjones@2gb.com

Cc: 'S.Power@bom.gov.au'; 'd.jones@bom.gov.au'; 'Simon.Torok@csiro.au'

Subject: RE: Pacific climate change report: analysing the regional impacts of climate change

Mr Kevin Hennessy

Principal Research Scientist Climate Impacts CSIRO

Dear Kevin,

Thank you for your reply.

Since you have referred to back up data, including the 2007 IPCC report, I shall consider this first.

The IPCC, as you no doubt realise, has been thoroughly discredited and previous claims allegedly substantiating human caused global warming have been invalidated or proven to be gross exaggerations (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11). Even former lead authors of the IPCC such as Professor Richard Lindzen have recanted and acknowledged there is no scientific evidence of significant or catastrophic human caused global warming. Not only does all this evidence invalidate any claims which depend upon this data, but furthermore the IPCC itself is moving away from its earlier exaggerated or fictitious catastrophic anthropogenic claims (12, 13, 14).

The credibility problems of the IPCC have been highlighted by former CSIRO scientist, John Reid (15):

"The implication is that climate prediction, as it is carried out by those organisations which come under the aegis of the IPCC, is not science. It is a superstition similar to astrology or homeopathy. The IPCC is promoting the AGW proposition as if it were an established scientific theory, when it is not. If the IPCC were a pharmaceutical company it could face fraud charges for doing this.. This is a good analogy. The IPCC claims to have diagnosed a planetary disorder, global warming, and has proposed a remedy, the limitation of man-made carbon dioxide production. They have produced no convincing scientific evidence that either the diagnosis or the cure is valid."

Similarly, according to Hayward and colleagues (<u>16</u>):

"The Intergovernmental Panel on Climate Change's (IPCC) new Summary for Policymakers (SPM) of its Synthesis Report (SR) should be taken with several chunks of salt.1 The summary itself is a political document that downplays assessments of uncertainty from the scientific reports written by the main body of the IPCC, which themselves are far more subjective than the IPCC would have one believe. Equally important, both the IPCC's

summaries and main reports omit much contrary evidence. In several cases, the SR disagrees with the reports on which it is based, and it fails to take account of cautionary publications in the scientific literature that were available early enough to have been incorporated into the SR. Climate change and climate policy are key issues for future human welfare, but that concern should translate into sober analysis and actions that are likely to do more good than harm. The people of the world should not let themselves be steamrolled by a report that reflects the IPCC's interest in promoting climate change fears, rather than in conveying the weight of the scientific evidence."

Your report, in underlining the fact that any human contribution to global warming is poorly understood, is consistent with current trends to reverse previous exaggerated catastrophic human caused global warming predictions and yet, for some reason, you appear to have taken issue with me on this matter.

Some of the scientific reasons for this turnaround include the following.

- The ignoring of the levelling of average global temperatures since 1998 and the actual cooling trend which has
 developed in recent years. The two attached graphs from the most prestigious measuring centres in the world (GISS
 and HadCRUT) both show these trends. The LACK of correlation with steadily rising CO2 levels is obvious.
 Furthermore, the cooling period between 1940 and 1975 alone is enough evidence for to say that the CO2 /warming
 connection is flimsy indeed.
 - 2. Average sea level has been shown by real life satellite measurements to be increasing by an average 1.7 mm per year (=17 cm per century) up until 2007. However that rate of rise (trivial by comparison with the IPCC computer

model prediction of a metre rise per century) has shown a remarkable reversal over the last 4 years and average sea levels have actually dropped by 5mm in that period. Warmists cannot explain this and are simply hoping that a positive trend will soon resume.

- 3. Many meteorologists are recognising that variations in the Australian Climate are caused largely by the 'Southern Oscillation' between El Nino and La Nina movements in cold and warm ocean currents. These variations are not well understood in terms of what causes them but it is certainly NOT greenhouse gases.
- 4. Latest reports confirm, based upon real life measurements rather than computer models, that Australian sea levels are increasing very slowly, only around 1mm per year (26, 27, 28, 29), and the rate of increase is actually decreasing, in contrast with CSIRO data. However as has been noted by Doug Lord on Channel 7 News (29), there has been a refusal to publish sea level information which conflicts with government policy even though the data is soundly based. Do you agree with this political censoring of scientific information? Of course the bottom line here is, what percentage of any sea level rise has been confirmed as being human caused and is therefore reversible by mitigation techniques such as a CO2 tax?

Since you mentioned the CSIRO web site and publications I draw your attention to two vitally important facts. Firstly, since the CSIRO continues to depend upon discredited data from the IPCC, the CSIRO itself unfortunately becomes tainted by association with this organisation. Secondly, although leading world climate scientists and former lead authors of the IPCC such as Professors Lindzen and Christy and thousands of scientists around the world (NIPCC), have openly identified the failings of the IPCC and their anthropogenic global warming claims, the CSIRO has so far refused to publicise this side of the story. Sadly, this is hardly surprising when various scientists, including CSIRO scientists, have alleged that the CSIRO is required to adhere to strict guidelines by refraining from publishing material that could be perceived as being critical of government policy (17, 18, 19, 20, 21, 22, 23, 24). Is this correct?

You refer to page 52 of your report (25) as supplying confirmation of human causation. However, this page refers again to unsubstantiated or discredited IPCC data and further makes the claim that "little research has been conducted to quantify the relative importance of human-induced change and natural variability as causes of the observed trends in the PCCSP region." You refer in your email to the "uncertainties" of climate science which must be considered by "decision makers", as described on page 11 of your Report which states: "Determining the extent to which climate trends are attributable to natural variability and to human activities is also a priority." But the decision makers (ie the government) have already based their policy on the alleged fact that there are no uncertainties (ie the science is settled), claiming this is confirmed by their scientific advisors. But now, after the Australian people have been advised by government that the science is settled, and the government have legislated their policy on the very basis of their being NO uncertainty, you make the startling claim that there must be more research to enable differentiation of natural climate variability and human induced variability.

While I acknowledge the honesty of your assessment regarding uncertainties, and the fact that it is consistent with the evidence and the opinions of many scientists, it nevertheless does not seem to have been communicated to the government effectively. Clearly it is foolish to base policy on uncertainties and unknowns and yet this is exactly the situation we are in.

One of the fundamental difficulties for those who allege imminent human caused global warming catastrophes is their dependence upon unproven computer models. Former CSIRO scientist John Reid (15), an expert on computer modelling, is one of many scientists who have pointed out the limitations and unreliability of such models. As I indicated in my previous correspondence, your Report also draws attention to the unreliability of models. You also emphasise that different models give different results and there is therefore a process of picking the 'best' model. But should climate projections be like choosing a new car where the best looking model is chosen?

The bottom line is; can humans control climate, either by making it worse or by improving it?

According to the government the answer is in the affirmative. We can make the climate warmer with more CO2 emissions, and by reducing CO2 emissions with a CO2 tax we can reverse these changes.. In other words, according to the government, a CO2 tax has the ability to lower global temperatures, lower global sea levels, increase polar ice, reduce rainfall when it is excessive, and increase rainfall when it is insufficient and these results can be witnessed this century. Furthermore, the government also claims that according to scientists, including the CSIRO, "the science is settled" in regard to these matters. Is this correct? Does scientific evidence confirm the controllability of climate as asserted by the government? If the Australian CO2 tax reduced Australian CO2 emissions to zero in the next decade, can you confirm this will result in significant lowering of global temperatures and sea levels this century? Yes or no answers are sufficient.

The government has introduced national policy affecting all Australians apparently based upon advice from CSIRO scientists

and other scientists.. The government claims that according to scientists the science is settled pertaining to these matters. You claim in your Report that the influence of humans upon climate is "*poorly understood*". I repeat the following unanswered question from my earlier correspondence:

"In light of this startling report, and as chief scientific advisors to the Commonwealth government, will the CSIRO be officially advising the government that the science pertaining to human caused climate change is too uncertain and misunderstood to form the basis of government policy? Or has the CSIRO already advised the government it would be foolish to base policy on such a poorly understood area of science?"

Unless you can supply the scientific evidence as requested above, and unless you can confirm that the science is settled and uncertainties eliminated, then I urge you to advise the government about these uncertainties of climate science, the discrediting of the IPCC, and the thousands of scientists who claim there is no scientific evidence of humans having a significant or catastrophic effect upon climate.

Regards

Graham Williamson

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From: Kevin.Hennessy@csiro.au [mailto:Kevin.Hennessy@csiro.au]

Sent: Thursday, 1 December 2011 10:27 AM

To: grahamhw@iprimus.com.au

Cc: S.Power@bom.gov.au; d.jones@bom.gov.au; Simon.Torok@csiro.au

Subject: Pacific climate change report: analysing the regional impacts of climate change

Dear Graham,

In your reply to Scott Power, you claim that our "report not only fails to make any serious attempt to clarify the effects of humans upon climatic factors but rather, to the contrary, seeks to underline the uncertainty".

Firstly, doing new research on human contributions to climate change in the Pacific was not within our terms of reference, but we plan to address this in the next 18 months. This is because there are very few "attribution" studies focussed on the western tropical Pacific, so the causes of climate change in this region are not well understood. However, the studies that are available in the peer-reviewed literature indicate a human contribution to some aspects of climate change in the Pacific, as noted in Chapter 3 of our report and summarised on page 52.

Secondly, for other parts of the world, there is substantial peer-reviewed evidence for a human contribution to some aspects of climate change. This is reviewed in Chapter 9 the IPCC (2007) Working Group 1 report http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch9.html and more recently in the paper by Stott et al (2010: http://onlinelibrary.wiley.com/doi/10.1002/wcc.34/abstract). In summary:

- Most of the warming since the mid-20th century is very likely (more than 90% confidence) due to anthropogenic increases in greenhouse gases (IPCC, 2007)
- Discernible human influences include:
 - ocean warming, tropospheric warming and stratospheric cooling, continental-average temperatures, temperature extremes and wind patterns (IPCC, 2007)
 - less Arctic sea ice, changes in the hydrological cycle, global and regional patterns of precipitation changes, and increases in ocean salinity in the tropical Atlantic (Stott et al., 2010).

The science is not settled. The IPCC (2007) Synthesis Report (Chapter 6) lists the robust findings and key uncertainties. The robust findings provide multiple lines of evidence for the risks and opportunities posed by climate change, and the need to manage these issues. Peer-reviewed literature published since the IPCC report, including our report on Pacific climate change, has strengthened many of these findings. The uncertainties (also summarised on page 11 of our Pacific report) are being addressed by ongoing research and must be borne in mind by decision-makers.

In the Australian context, CSIRO published a book in April 2011 titled "Climate change: science and solutions for Australia" http://www.csiro.au/en/Outcomes/Climate/Climate-Change-Book.aspx. This is one of the ways in which we provide advice to government and a range of other members of the community.

Regards

Kevin.

From: Graham [mailto:grahamhw@iprimus.com.au]
Sent: Tuesday, 29 November 2011 7:12 AM
To: Hennessy, Kevin (CMAR, Aspendale)

Subject: Mr Kevin Hennessy: analysing the regional impacts of climate change

Dear Kevin,

Your latest CSIRO/BOM climate report (1), made the following astounding claim (2):

"Trends in climate are evident over the Pacific as a whole, including the PCCSP region, however the extent to which these trends are attributable to natural variability and to human activities is not yet well understood."

In light of this startling report, and as chief scientific advisors to the Commonwealth government, will the CSIRO be officially advising the government that the science pertaining to human caused climate change is too uncertain and misunderstood to form the basis of government policy? Or has the CSIRO already advised the government it would be foolish to base policy on such a poorly understood area of science?

The report underlines the uncertainties and unreliability of models $(\underline{3})$:

"The climate projections are subject to a great deal of uncertainty, both in terms of the limitations of the models on which they depend, and uncertainty about future global greenhouse gas emissions."

In contrast with earlier CSIRO reports of increasing droughts and a drying Australia the report also predicts floods and more opportunities for hydropower.

Since, the government, for some reason, is under the impression the science is "settled" and seems unaware just how poorly understood this area of science really is, your advice to government regarding these facts is urgently required. When will you be advising them?

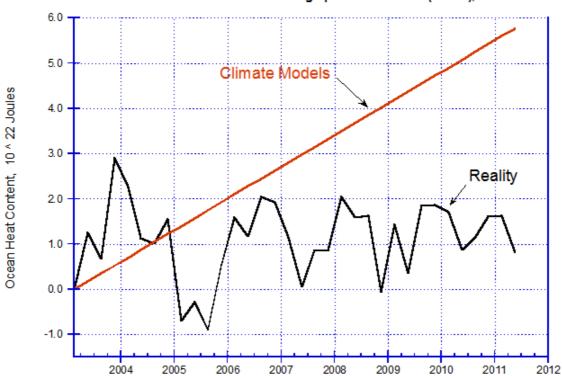
Regards

Graham Williamson

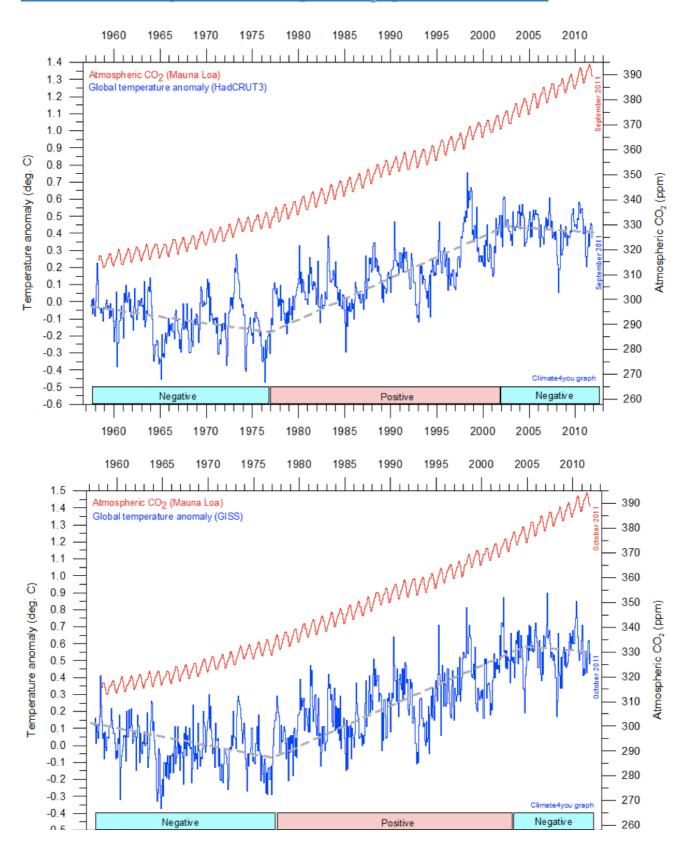
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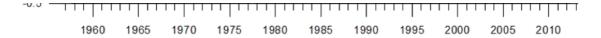


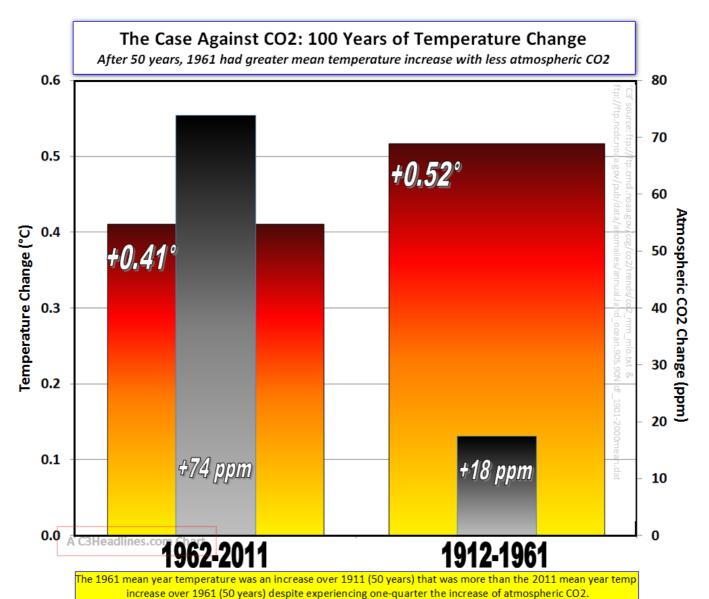
Ocean Temperature as Measured by ARGO, 0-700 meters Data source = National Oceanographic Data Center (NODC), USA



Global surface air temperature and atmospheric CO₂, updated to October 2011







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