

Dear Professor Garnaut,

Articles showing errors in ice core CO2 levels & IPCC interpretations

(1) Attached is the required submission sheet with two attached pdf format articles that I wish you to include in your climate change review work, together with the following material and graphs and some commentary, as appropriate.

There are two articles in this material that relate to the vital and erroneous CO2 interpretations made by IPCC as observed by an professional academic in ice science with international reputation (Prof Jaworowski).

(2) I further attach a dialog relating to material that I presented to the parliamentary parties concerning past climate change and current models by Mahowald, which includes aerial transpiration effects, and most importantly, highly beneficial aerial fertilization effects of elevated CO2, which will reverse current desertification effects.

(3) I have been in research for over 30 years in geoscience, ten of which with the CSIRO, and I remain open to be convinced there is credible evidence to substantiate Item 1 of your terms of reference. I am yet to be persuaded by *evidence* not based on assumptions, that humankind has any control over climate changes of significance.

(4) I am greatly concerned that your Climate Change Review shows strong adherence to Item 1 of your terms of reference, and demonstrate clearly and transparently the link of Climate Change to Human causation, and to what extent this exists. I respectfully suggest that if you cannot demonstrate this unequivocally to us all in your review, then derivative calls for carbon cutbacks and tax and trading protocols is premature.

(5) I am strongly supportive of measures that promote effective and efficient use of all resources and reduction of pollution in all its forms – smart use. I contend that carbon tax will be amongst the most damaging and misguided use of a tax since the dark middle ages tax on light.

(6) The empirical evidence from ice core data do not support anthropogenic carbon dioxide impacts of significance. I have this data and my graphs and interpretations show substantive natural climate variations over records as long as 800,000 years, where CO2 is clearly a response after temperature change, and not a driver of change. I attach a few graphs of this data (with references) for your consideration.

(7) I am attaching a submission I put to our Minister for Environment, concerning a set of 17 climate models, that highlight the role of assumptions, and key to this is for the first time the aerial fertilization effects and transpiration effects of elevated CO2 are included; and these latter models show strong beneficial impact on reducing global desertification trends from elevated CO2.

My doctorate is in sedimentology and my reading of the rock and ice records is currently favouring an interpretation that our climate is poised for a major fall in temperatures, which will have a far more immediate and damaging impact of human populations should snowfall over northern land masses not melt across summer, effectively initiating continental ice sheets, and mass migrations. The Romans suffered this when the Dark Ages Ice age took effect and northern tribes were forced south.

Quaternary Research Volume 63, Issue 1 Jan 2005 p45-52 shows relative sea level (RSL) in Eastern Antarctica was 8m above present around 7000 years ago. When sea levels maxed. Levels have fallen since. You will note from the graphs attached, that the temperature max was also maxed around 6000 years ago, and the planet has trended cooler since then. There are recent preserved and dated coral reefs in growth position on Rottenest Island off Perth,

which are over 1m above current sea level – See Dr Phil Playford's work from the Geological Survey of Western Australia (Past Director of GSWA).

There is an abundance of information that does not support the current alarmist stance that humankind is causing climate change. My current view, based on evidence to hand, is that this contention is a fraud bordering on a crime against humanity. I look forward with open mind to real information that can determine the issue conclusively without reliance on assumptions and interests vested in financial gain from tax and prostitution for "climate" research dollars. I remain strongly opposed to teachings and publications scaring our children with poor pseudo science.

(8) Respectfully, our planning for climate change scenarios should be for both directions of change. It is a management issue, and measures to mitigate impacts of this natural phenomena should be managed. I urge you to reflect this in your report.

I present to you a solution to CO2 sequestration that I presented to the Queensland Government 'Science in Parliament Day' in 2003, which I was attending as a CSIRO Scientist. This was recorded and received at the time with enthusiasm by the delegates; however I was later told by my CSIRO management that this technology would be disruptive to research dollars flowing to CO2 burial. ...The concept is as below, which I again posted on the ABC BLOG below... as part of the discussion on your draft interim Climate Change Review report.

• **Dr Guy LeBlanc Smith:**

25 Feb 2008 7:14:24am

I am concerned that many are fearful and despondent about the, dare I say delusion, of "CO2 induced" climate change. There are technologies that I have been aware of since the 1980s that if correctly applied can provide for continual sequestering of large volumes of CO2. What is missing is political will and investment.

Here in a nutshell is one method that I have suggested to the Queensland Parliament at a Science in Parliament day several years back when I was with CSIRO.

Basically, the base-load fossil fuel power stations (new) require to be oxygen fired, which produces a "pure" CO2 stream after burning. This is not vented, but piped to a solar farm in our outback sun belts. These comprises a mass of solar photosynthesis digester cells that put the CO2 together with sun, nutrients and protein producing algae (e.g. Chlorella or Spirulina). This converts the CO2 to bio-protein, around 90%. This can be harvested as a commercial product for textured vegetable protein (vegetarian food). Genetic enhancement is possible. Further, this algae can also be converted to microbial oil (bio-diesel), by seeding the algae mix with bacteria and yeasts like Arthrobacter and Candida, which produce some 70-80 % by weight of microbial oil. This can be sold, or re-cycled as fuel back into the base-load power station. This can all the while harvest carbon credits. A double win.

Early laboratory tests at the University of Toronto of the algae to microbial oil conversion scaled-up to around 50,000 barrels of oil equivalent per hectare per year, using 200 watts of light energy per square metre.

The concept was enthusiastically received by the Qld Parliament discussion group at the time, but inertia has since prevailed for whatever reasons. I am now pursuing this

in Asia with power and chemical industry interests, where hopefully it can make a real difference. There is technology that can scuttle much of the unnecessary fear about CO2. This is what I term "smart CO2 sequestering" and I live in hope that our leadership will see the light and promote real funding to CSIRO and similar organisations to make it a reality.

Best regards
Guy

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support innovation!*

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From: Guy LeBlanc Smith -RKSs [mailto:guy.lbs@rockknowledge.com.au]
Sent: Monday, January 14, 2008 1:57 AM
To: 'Peter.Garrett.MP@aph.gov.au'; 'hopkinsn@theaustralian.com.au'
Subject: Climate Model Problems: III. Deserts
Importance: High

Minister for Environment: Climate Model Problems: III. Deserts

Dear Peter,

As an earth scientist I found the following scientific paper reviewed on the CO2 science web site very interesting; and I suggest it provides meaningful input that will help to clarify further the natural continuum of climate change and the debate that has sprung up around it.

Hopefully this will help you best determine the evolving truth that best assists correct navigation of environmental policy into the future, and which does not fall foul of bad modelling based on loose assumptions and vital omissions.

Best regards

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www.co2science.org

Climate Model Problems: III. Deserts

Volume 11, Number 2: 9 January 2008

In this third of our series of editorials concerning *climate model problems*, we focus on the study of Mahowald (2007), who used simulations produced by 17 different climate models in conjunction with the BIOME4 vegetation model to convert precipitation and temperature changes derived from the suite of climate models for the AD 1880-2080 period into predictions of simultaneous changes in the sizes of earth's desert areas. This she did both *with* and *without* the inclusion of two very important plant physiological phenomena: the *aerial fertilization effect* and the *anti-transpiration effect* of atmospheric CO₂ enrichment, the first of which phenomena enhances plant growth in response to rising atmospheric CO₂ concentrations and the second of which simultaneously reduces plant water loss, with the net effect that plant *water use efficiency* (the amount of CO₂ converted into biomass per unit of H₂O transpired in the process) rises significantly as the air's CO₂ content rises.

So what did Mahowald learn from this exercise?

She reports, first of all, that "in the global mean, the models predict drying of the desert regions due to warmer temperatures with an increase in greenhouse gases." And with no CO₂ fertilization or anti-transpiration effects in the BIOME4 model, she finds that this *climatic* phenomenon leads to "an increase in desert regions globally." However, when she includes the two CO₂-induced *biological* effects in the simulations, she finds that the two phenomena produce "a decrease in desert area, as the higher carbon dioxide levels allow the plants to respond to the increased aridity more effectively."

In discussing her findings, Mahowald notes that "predicting precipitation in a general circulation [model] is very difficult, and the models do not agree what will happen in the future," as we have also discussed in our editorials of [26 December 2007](#) and [2 January 2008](#). This problem, in her words, "leads to a wide disagreement from the models on which [desert] areas will increase or decrease in the future," and she says that "unfortunately it is not known which model (if any) is correct." However, we do know that *all* desert areas will be benefited by the ongoing rise in the air's CO₂ content, which will provide a powerful ameliorating effect that works against warming- and drying-induced desertification tendencies that might otherwise prevail in the absence of the aerial fertilization and anti-transpiration effects of atmospheric CO₂ enrichment.

Looking to the future, Mahowald makes a most important point in her final sentence, stating that "desert area changes, and especially [changes in] desert dust itself, may significantly change climate (Yoshioka et al., 2007), and these impacts should be considered in future studies." In fact, declining desert area due to atmospheric CO₂ enrichment is a *multi-faceted* feedback phenomenon that has *several* climate-relevant impacts in addition to changed amounts of airborne desert dust, such as changed surface albedo, changed surface-to-air evaporative and convective heat fluxes, and altered emissions of plant-derived aerosols. What is more, declining desert area is only *one of many* multi-faceted feedbacks to climate that occur in response to atmospheric CO₂ enrichment over both land and water (see [Feedback Factors \(Biophysical\)](#) in our Subject Index), most of which are not included in today's climate models. Consequently, knowing that including the aerial fertilization and anti-transpiration effects of the expected rise in the air's CO₂ content in the group of climate models studied by Mahowald *totally overpowered* the predicted climatic effects of the

increase in atmospheric CO₂ on the area of the world's deserts, one can begin to understand how the proper inclusion of the many other biophysical effects of atmospheric CO₂ enrichment might nullify even the basic *climatic* effects that are currently predicted by state-of-the-art climate models.

Sherwood, Keith and Craig Idso

References

Mahowald, N.M. 2007. Anthropocene changes in desert area: Sensitivity to climate model predictions. *Geophysical Research Letters* **34**: 10.1029/2007GL030472.

Yoshioka, M., Mahowald, N., Conley, A., Collins, W., Fillmore, D. and Coleman, D. 2007. Impact of desert dust radiative forcing on Sahel precipitation: Relative importance of dust compared to sea surface temperature variations, vegetation changes and greenhouse gas warming. *Journal of Climate* **20**: 1445-1467.