PARLIAMENT OF AUSTRALIA
HOUSE OF REPRESENTATIVES

THE HON DANNA VALE MP
FEDERAL MEMBER FOR HUGHES

26 March 2010

Senator the Hon Kim Carr
Minister for Innovation, Industry, Science and Research
Parliament House
CANBERRA ACT 2600

Dear Minister, Kim

**CSIRO/BoM "State of the Climate" Report**

Further to my previous correspondence I write to raise another important issue with you regarding the State of the Climate Report.

The keynote statement in the State of the Climate Report: "There is greater than 90% certainty that increases in greenhouse gas emissions have caused most of the global warming since the mid-20th century", appears to be grossly misleading.

As the responsible Minister I am confident you will see the need to investigate this matter promptly and ensure that the CSIRO and Bureau of Meteorology issue any necessary corrections.

In their research paper {"How Much More Rain Will Global Warming Bring?" by Frank J. Wentz, Lucrezia Ricciardulli, Kyle Hilburn & Carl Mears (May 2007)} Wentz et al. note "Of significance is the fact that E, P and V all exhibit similar magnitudes for interannual variability". A perusal of the charts in Wentz et al. (Fig. 2) makes apparent the fact that for the water cycle in the real world evaporation (E), precipitation (P) and atmospheric water vapour (V) not only increase, but also decrease by about the same percentage and this interannual relationship is proved repeatedly over the 20-year period of the study. Fig. 2 also shows that for the virtual water cycles built into the major global climate models (GCM) increases and decreases in precipitation and hence evaporation, while similar in timing and duration to what was happening in the real world, are severely constrained to be only a small fraction (about a quarter) of the increases and decreases in atmospheric water vapour.

This factual discrepancy is so significant that it destroys the historical integrity of the joint CSIRO and Bureau of Meteorology GCM. The evaporation phase of the water cycle provides three times (78 Watts per square metre) as much cooling of the earth's surface as the net cooling (26 W/sqm) provided by radiation at wavelengths affected by greenhouse gases. Since at least the late eighties until now the water cycle in the real world has provided negative feedback and reduced any temperature increases caused by anthropogenic greenhouse gas emissions. In contrast the virtual water cycle built into the joint CSIRO/BoM GCM has erroneously provided positive feedback since the late

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eighties and this amplification of any temperature increases caused by anthropogenic greenhouse gas emissions is grossly misleading.

Question 1:- Before publishing their report did the CSIRO/BoM run a version of their GCM which had been corrected to replicate the actual behaviour of the water cycle in the real world by having "E, P and V all exhibit similar magnitudes for interannual variability" since the late eighties or earlier?

The CSIRO/BoM are certain that, although "E, P and V all exhibit similar magnitudes for interannual variability" since at least the late eighties until now, increases and decreases in evaporation (E) from now on will be only a small fraction (about a quarter) of the increases and decreases in atmospheric water vapour (V). The discussion below recognises that the CSIRO/BoM are therefore likely to use a GCM, in which they severely constrain evaporation from now on, for the purposes of predicting future changes in the climate.

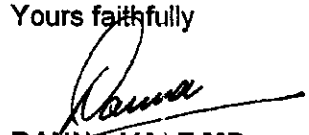
The CSIRO/BoM validated their GCM by comparing their GCM's calculation of the past with historical data. However, this procedure presupposes that the virtual water cycle built into their GCM faithfully replicates the behaviour of the water cycle in the real world. For the period from the late eighties until now, as noted above, the behaviour of the virtual water cycle built into their GCM provided positive feedback, but in contrast the water cycle in the real world provided negative feedback. Consequently, their validation process was hopelessly compromised and was a misleading exercise in curve-fitting. No one, including the CSIRO/BoM, can have any confidence in predictions of future changes in the global climate produced by a GCM validated in this way.

Question 2:- Will the CSIRO/BoM correct their GCM so that "E, P and V all exhibit similar magnitudes for interannual variability" since at least the late eighties and revalidate their GCM?

Question 3:- Will the CSIRO/BoM then re-run their GCM to produce forecasts of future climate change, which are not hopelessly compromised?

Having regard to the widespread publicity accompanying the recent publication of "State of the Climate", I trust that you will on behalf of the people of Australia, seek a prompt answer from CSIRO/BoM.

Yours faithfully



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