

#### **4.25 Comments on Professor Hoegh-Guldberg's Land Court testimony**

Based on my eight years of independently investigation, my formal education and practical experience, I submit the following comments.

#### **During his testimony Professor Hoegh-Guldberg provides engineering advice on many occasions and this constitutes an engineering service.**

Professor Hoegh-Guldberg implicitly attributes aspects of coral bleaching events in 1998 and 2002 to '*climate change caused by human carbon dioxide*'. Yet the events were widely accepted scientifically to be due to the confluence of natural El Nino periods of high temperature and natural southward movements of equatorial doldrums.

One wonders why Professor Hoegh-Guldberg did not mention the bleaching of corals in the southern Great Barrier Reef during record cold temperatures in many parts of southern and northern Queensland and the Northern Territory during the winter of 2008 as the ABC reported. Coral bleaching is a natural response to periods of unusual yet nonetheless natural cold or hot temperatures and reduced water movement.

Transcript page 3, Lines 46-47: Professor Hoegh-Guldberg vouches for the United Nations Intergovernmental Panel on Climate Change's (UN IPCC) Working Group One report as presenting the physical science underpinning the work of UN IPCC Working Groups Two and Three. Yet the Working Group One report contains no empirical scientific evidence of human causation. I have previously requested Professor Hoegh-Guldberg to identify the specific location of evidence proving causation and in his replies he has never done so. The reason for his inability is likely to be the fact that there is no such empirical evidence proving causation anywhere in any UN IPCC report. Given the documentation I have provided to him it is remarkable that he answered affirmatively at Line 47.

Page 4, Lines 1-6. Contrary to Professor Hoegh-Guldberg's claim about UN IPCC Working Groups 1-3 being staggered in their work, expert observers of the UN IPCC's methods have stated that the groups work concurrently. Further, Canadian climatologist Professor Tim Ball and British Viscount Monckton quote UN IPCC guidelines requiring UN IPCC reports on the science to be made consistent with the Summary for Policy Makers (SPM) that have been released three months or so ahead of the Working Group One 'science' reports.

Regardless, the ultimate arbiter and decider of science is empirical evidence and the UN IPCC's reports contain no empirical evidence of carbon dioxide from human activity affecting global climate.

Page 4, Lines 13-14: While true that there is extensive literature, there is no empirical evidence of causation anywhere in any UN IPCC reports or literature.

Page 4, Lines 20-41: This seems to imply evidence of the effects of warming yet depends for that to be true on the existence of unusual warming. The UN IPCC has never established that and has no empirical evidence of such. Please refer to the accompanying supporting document (Sub-section 4.4) discussing the empirical evidence and to the accompanying *CSIROh!* Appendix 2. Figure 1.8 is a schematic illustrative of the concept. It is not empirical evidence.

Page 5, Lines 7-10, quoting Professor Hoegh-Guldberg: "*And that's certainly being borne out by the science around bleaching and a whole range of other*

*impacts on coral reefs.*” His statement is false and contradicts empirical evidence.

Page 5, Lines 15-21 discusses a hypothetical shift and, in the context, implies human causation. If that is the intent it contradicts empirical evidence.

Page 5, Lines 23-43. This is based on another schematic and Professor Hoegh-Guldberg’s statements contradict empirical evidence. **In making an assumption about the proportion of human carbon dioxide that has entered the ocean he has provided engineering advice constituting an engineering service. In proclaiming that has affected the ocean’s pH level he has provided engineering advice constituting an engineering service. In his statement, quote: “Also, their ability to bounce back from disturbances such as coral reef – so when we talk about 850 gigatonnes of CO<sub>2</sub> (carbon dioxide) left to emit to the atmosphere before we exceed the two-degree Celsius threshold, that’s probably conservative” he appears to be providing engineering advice constituting an engineering service or is relying on the prominent claim that the world faces a 2<sup>o</sup> Celsius temperature rise when that number has never been substantiated and was selected with no scientific or engineering basis.** The figure of 2<sup>o</sup>C was assigned politically and not derived by science or engineering. Yet Professor Hoegh-Guldberg spreads the claim under oath or affirmation in court.

Page 7, Lines 18-47 and continued on Page 8, Lines 1-32 is implied to be based on empirical evidence yet is not. It contradicts empirical evidence. Referring to Page 8, Lines 10-12, in answering on Line 12 **he is providing engineering service constituting an engineering service.**

Page 8, Lines 40-44 relies on speculation and computerised numerical models—presumably and likely unvalidated—and not on empirical scientific or engineering data. Lines 42-44 **provide engineering advice and contradict empirical evidence.** Figure 5.2 from Exhibit 51 (being the Great Barrier Reef Marine Park Authority (GBRMPA) 2014 Assessment report) is speculation and contradicts empirical evidence.

Page 9, Lines 10-21: Professor Hoegh-Guldberg admits the low certainty due to very short experience of 15-20 years in particular studies of reefs yet then says that he thinks a lot more is changing implicitly due to human production of carbon dioxide. This is **providing engineering advice based on self-admitted low understanding.** Lines 20-21 involve speculation.

Page 9, Lines 36-38 involve the **provision of engineering advice on the effects of carbon dioxide from human activity and contradicts empirical evidence.**

Pages 10 and 11, Professor Hoegh-Guldberg relies on the GBRMPA report (Exhibit 51) that contains no empirical evidence proving human production of carbon dioxide effects the reef or regional climate or global climate while misrepresenting that it does. On Page 11, Lines 18-19 Professor Hoegh-Guldberg **provides an engineering service** in claiming that human production of carbon dioxide affects temperature and ocean pH (Alkalinity/”acidification”). In doing so his advice is not supported by empirical evidence anywhere in the world and it contradicts empirical evidence. Further, there has been no process change (ie, exceptional variation) in ocean pH levels or temperature.

Page 12, Lines 44-45: Professor Hoegh-Guldberg **provides engineering advice constituting an engineering service and contradicts empirical evidence.**

Page 13, Lines 11-15. Professor Hoegh-Guldberg implies that carbon dioxide is a pollutant. This is false. On Saturday 18 June 2011, Dr. Mary Jean Burer, Scientific Consultant to the UN IPCC replied to an inquiry as to whether or not carbon dioxide is a pollutant. In her reply she stated, quote: "*On your question about whether CO2 (carbon dioxide) is a pollutant. I can not answer that as I have not found the answer in one of our reports.*" According to the UN IPCC, nature annually produces an estimated 32 times more carbon dioxide than does human use of hydrocarbon fuels. Nature alone determines carbon dioxide levels in earth's atmosphere. Earth's past carbon dioxide levels have been far higher than today and life thrived. Carbon dioxide from human activity cannot be a pollutant. Further, carbon dioxide is known to be an aerial fertiliser essential to life on earth and higher levels of carbon dioxide have beneficial effects on plant species and have no known negative impacts. Reportedly, American nuclear warheads are entrusted to sailors in submarines with atmospheres reportedly containing carbon dioxide levels 20 times and up to almost 30 times the level in earth's atmosphere. Carbon dioxide is exhaled from animal and human breath at levels far higher than exist in the atmosphere—100 times greater in the case of human exhalations. These and many other facts explain the reason that carbon dioxide is not classified as a pollutant. It is not a pollutant.

It is certainly not a pollutant at any of the levels that the UN IPCC projects, including the UN IPCC's wildest projected levels.

Regardless, Professor Hoegh-Guldberg's classification of a gas from human activity as a pollutant would seem to be **providing an engineering service.**

Page 16 and pages 35-38. Astoundingly, Professor Hoegh-Guldberg implies and then states carbon dioxide from human activity is a toxin.

Page 13, Lines 31-36 and Page 14, Lines 1-2 and Line 11 involve **providing engineering advice constituting an engineering service.**

Page 16, Lines 11-15. Professor Hoegh-Guldberg is **providing engineering advice and contradicting empirical evidence.**

Page 18, Lines 28-31. Professor Hoegh-Guldberg is **providing engineering advice and relying on calculations to determine the claimed dangerous threshold and on calculations of human production of carbon dioxide to determine the timing by when his claimed thresholds will be surpassed.** On page 19, Lines 7-8, he is again **providing engineering advice.**

Professor Hoegh-Guldberg was a member of the Climate Commission's Science Advisory Panel. None of the Commission's publications claiming climate change due to human activity has ever provided empirical evidence and logical reasoning necessary to establish causation. The Commission's reports contradict empirical evidence and make or imply false claims clearly misrepresenting science and climate. Respected scientists have exposed the Commission's work and its 'science' as unscientific. Even journalists apparently without scientific knowledge accurately provided data exposing its claims as nonsensical.

He is a Lead Author of the UN IPCC Fifth Assessment Report and cited its work in court testimony. Analysis of the data cited and relied upon by the UN IPCC for its Working Group One 'science' reports shows that carbon dioxide levels in air are a result of temperature variability, not a cause. **This contradicts Professor Hoegh-Guldberg's fundamental core claim and court testimony.**

Professor Hoegh-Guldberg's numerous written replies to me have never provided empirical evidence of causation of global warming by human or natural sources of carbon dioxide. Empirical evidence proves there is no causal link and proves that carbon dioxide from human production can have no impact on global climate.

At best, Professor Hoegh-Guldberg's testimony and report are unsubstantiated speculation and unsubstantiated opinion that contradict empirical evidence. His claims—public and in court—do not meet community needs for integrity, accuracy, independence, accountability and trustworthiness.

**Until Professor Hoegh-Guldberg provides the empirical evidence and the logic establishing causation of global climate change by carbon dioxide from human activity, his associated claims lack integrity and are unethical.**

Professor Hoegh-Guldberg's behaviour and claims raise serious questions about his competence and ethics. His approach on climate is contrary to the scientific method and his claims contradict empirical evidence. He has apparent conflicts of interest and his behaviour appears to be more akin to that of the activists from whom he has received payment for over two decades than to that of a scientist following the scientific method.

In reviewing Professor Hoegh-Guldberg's testimony I am reminded of Martin Luther King's statement: "*Nothing in all the world is more dangerous than sincere ignorance and conscientious stupidity.*"