

A response from a climate change sceptic

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I am one of the six foresters who Piers Maclaren said he knew were “climate sceptics” (New Zealand Journal of Forestry Volume 52, number 3, page 48 - *Rising tide of fact sinking climate sceptics*). My doubts are not about climate change or even global warming (the global climate has always been changing) but that any future climate change is the result of humans increasing the minor atmospheric greenhouse gases (GHGs). There is no doubt that the concentration of the minor GHGs will increase (because of our continuing use of fossil fuels, deforestation, farming, etc). The climate may get warmer but I am not convinced that there is sufficient proof that this will be because of the predictable increase in the minor GHGs, especially carbon dioxide (CO₂).

In no way am I a supporter of a greater use of fossil fuels. For all kinds of reasons the world must move quickly to sustainable energy sources. Wood can be an energy source and is highly energy efficient and environmental friendly, therefore one might expect that I would be a climate change fighter. Certainly the current climate change debate should be the basis of a compelling case for more forestry and a greater use of wood.

However, my lifetime in science has heightened my awareness of the importance of doubters and critics. There have been times when critics were intensely annoying but the research required to prove (or disprove) their concerns have at times been most enlightening. A criticism can prove to be valid (and you get the credit for discovering that, even though at first you were doubtful of its validity) or it may prove invalid (in which case your original critic may become one of your strongest supporters). In the appendix I give an example from own experience. Whether or not criticisms or doubts are proved to have validity, those expressing concerns should never be dismissed as being irrational thinkers, nutters, industry stooges, etc.

I am neither a flat earth believer nor a creationist but I am aware that most politicians, almost all environmentalists and many scientists are convinced that there will be disastrous (even catastrophic) global warming and that this is the result of a human induced increase in GHGs, especially CO₂.

I am conscious, as all climate change sceptics must be, that simply being a CO₂ doubter will attract condemnation. I am not a climate scientist but some high profile climate scientists are CO₂ doubters/sceptics. There are many world-wide, but in New Zealand there are several including the late Augie Auer. If there was convincing proof that increases in surface temperatures in the Northern Hemisphere are the result of the increase in the minor GHGs then there should be few, if any, climate scientists who are doubters. A recurrent theme of most serious doubters/sceptics is that since water vapour accounts for about 95% of the

any atmospheric warming/cooling, any small change in the other 5% must have an insignificant effect. Of the minor GHGs, CO₂ is the most important contributor and accounts for about 3.6% of the global weather. To my knowledge, the relative importance of various GHGs has not been seriously questioned. When commenting on the emphasis given to the GHG (CO₂) the late Augie Auer said “It would be like trying to increase the temperature of a bath tub full of water using one drop [of hot water] from an eye dropper”. To answer these CO₂ doubters/sceptics those supporting the prevailing philosophy must **prove** why these very minor GHGs will be so overwhelmingly important in the future.

In the 1990s I used to give presentations that included a graph (from ice cores) that clearly demonstrated that for the last 160,000 years atmospheric CO₂ and temperature were closely correlated. The inference being that the air temperature of the earth rose after an increase in atmospheric CO₂. I ceased to use that graph when I realised that a correlation did not necessarily mean cause and effect (the opposite may be true; an increase in air temperature could increase the concentration of atmospheric CO₂ (since there may be an 800 year lag); or both could be the result of some other factor(s) in the environment).

This highlights what appears to be a major flaw in the present climate change debate. If a quantifiable increase in the minor GHGs is to be the cause of major climate changes/global warming, why have there been climate changes in the past?

A recent contribution to the present climate change debate are the theories of the Henrick Svensmark of the Danish National Space Centre (see the recent book *The Chilling Stars - A new Theory of Climate Change* by Henrick Svensmark and Nigel Calder). Central to the Svensmark's theories is that the earth's climate is primarily determined by variations in cloud cover and this in turn is determined by the incidence of cosmic rays reaching the lower parts of the earth atmosphere. The number of cosmic rays that enter our atmosphere is largely controlled by the magnetic field of the sun (a magnetic field that is constantly changing). A strong magnetic field means cosmic rays are deflected so there are fewer clouds and more global warming. A weak magnetic field means more cosmic rays reach down into the earth's atmosphere and result in more clouds and global cooling. Svensmark did experiments to show that cosmic rays produce the building blocks of cloud condensation by freeing up electrons which act to combine sulphuric acid and water. I was attracted to Svensmark's theories because they explain past climate changes and because of the emphasis given to water vapour as the key driver of our climate. For CO₂ doubters to be convinced that the increase in the minor atmospheric GHGs, and especially CO₂, will be the cause of disastrous climate change the

IPCC (Intergovernment Panel on Climate Change) will have to prove that the Svensmark's cosmic ray theory is false. It is not enough to just say the cosmic ray theory is wrong: the IPCC must scientifically and convincingly prove why it is not valid.

We no longer hear of any benefits that might result from a greater concentration of atmospheric CO₂. In the mid 1990s there was some New Zealand research that indicated that an increase in the atmospheric CO₂ resulted in greater tree growth and a lower water uptake. Is there a policy of not reporting any of the benefits of either an increase in atmospheric CO₂ or global warming? [Note: Is there also a policy of not reporting the IPCC conclusion that deforestation of temperate forests (since 1750) has cooled the Earth? When it comes to the IPCC report, some claims appear to be selectively ignored while other claims are accepted.]

The world is about to spend billions, even trillions, because most scientists, environmentalists and politicians have convinced the public that the world faces imminent catastrophe. Before the world spends inordinate amounts on remedial practices (which will mean less money will be available for other socially important activities) there must be convincing proof that the remedial measures will actually achieve their objectives. Most CO₂ doubters are sceptical that any climate change/global warming is the result of an increase in the minor GHGs or that costly efforts to reduce the release of the minor GHGs will actually do anything significant to "control" the climate (because other factors over which we can do nothing, such as cosmic rays, are much more important). If subsequent events demonstrate that our actions were largely unnecessary and/or ineffective there could be public condemnation of science and scientists. It may be decades before the public and the politicians will again listen to the predictions of scientists.

As I accept that there can be natural climate change, I have valid reasons for questioning most of the current claims being made. Those doubts should not be disregarded as being made by a trouble-maker or an irrational thinker. I find as most disturbing the current policy of condemning all those who challenge either the climate change predictions or the proposed methods that will ensure a reduction of any change. Because of the consequences of being wrong (including forecasts of doom and gloom) the climate change/global warming fighters should only have gone public when all (or at least most) doubts had been satisfactorily proved to be invalid.

Appendix

Why science critics are so important? - my personal experience.

As a young scientist at FRI one of my major responsibilities was the effect on radiata pine tree growth

of pruning (the frequency and the intensity - how many pruning lifts should there be and what are the effects on tree growth of different percentages of green crown removals). I designed a major trial and submitted it for approval. Harry Bunn (then in charge of my research) was critical of my proposal to limit pruning to only dominant trees. I deliberately avoided pruning lower dominance trees on the logic that there was no point in pruning trees that had already lost the dominance race - a co-dominant would only be further disadvantaged by any pruning. Harry insisted I include at least one treatment that involved the pruning of co-dominants. When the trial was finally assessed we were most surprised to find that, although they had been more severely pruned, 21% of the pruned co-dominants had grown better than we expected and had even become dominants, whereas 43% of the pruned dominants on the same pruning regime had become co-dominants (Sutton and Crowe, 1975). Another trial demonstrated that in young radiata pine stands tree dominance can change - co-dominant trees can become dominants and vice versa (Sutton, 1973).

Some years later I asked Harry why he had challenged my original assumption. Did he have evidence from other research that some co-dominants could become dominants? "No" he said "I just did not like your arrogance in claiming something that you had not proved". That experience was a very valuable research lesson.

References

- Sutton W. R. J., 1973, Changes in tree dominance and form in a young radiata pine stand. *New Zealand Journal of Forestry Science* 3(3):323-330.
- Sutton W. R. J. and J. B. Crowe, 1975, Selective pruning of radiata pine. *New Zealand Journal of Forestry Science* 5(2):171-195.