

The Disparity Between IPCC Science Reports, Summary For Policymakers and Reality, Requires a Political Science Solution

[Guest Blogger](#) / [14 hours ago February 22, 2015](#)

Guest Opinion: Dr. Tim Ball

The 2001 Intergovernmental Panel on Climate Change (IPCC) Report was the most influential in establishing global warming as a serious threat demanding political action. It contained the infamous hockey stick that [Richard Muller](#) identified as, “the poster-child of the global warming community.” However, the Report also achieved another distinction, unknown to the media, public and politicians. Disconnect between the Summary for Policymakers (SPM) and the Science Report Of Working Group I reached an extreme. Dr. Christopher Essex pointed out, in his [excellent presentation](#) for the Global Warming Policy Foundation (GWPF) that the 2001 Science report says,

“In climate research and modeling, we should recognize that we are dealing with a coupled non-linear chaotic system, and therefore that the long-term prediction of future climate states is not possible.”

That statement alone disqualifies the IPCC work as the basis for public policy. If it is not enough, consider that the data used for the blade of the stick claimed it was *very likely* (90–99% chance) that temperature

Increased by $0.6 \pm 0.2^\circ\text{C}$ over the 20th century; land areas warmed more than the oceans.

That is a $\pm 33\%$ error factor. Would a media outlet use results from a political poll with such an error range?

The IPCC ignored these limitations and pursued their self-assigned role.

Climate Change 2001: Synthesis Report provides a policy-relevant, but not policy-prescriptive, synthesis and integration of information contained within the Third Assessment Report and also draws upon all previously approved and accepted IPCC reports that address a broad range of key policy-relevant questions. For this reason it will be especially useful for policymakers and researchers, and as a main or supplementary student textbook for courses in environmental studies, meteorology, climatology, biology, ecology, and atmospheric chemistry.

In case the policymakers are unsure about the validity of their work, they indicate it is good enough for university textbooks. (Faint praise?)

So much of the so-called science the IPCC created was to amplify the threat of human produced CO₂ to global warming. The political mandate was the ultimate arbiter of what and how an issue was included. Most people involved with the IPCC likely didn't know what was going on. They saw funding and career opportunities, either as bureaucrats or

academics. Most were graduates of the emerging “environmental science” programs and ideology with its, “humans are the problem so save the planet at all costs”, mentality. For a few, these were secondary to the real objective of using climate and CO2 specifically, as a vehicle for a political agenda. It is likely most people involved in the IPCC process never read any of the Reports, especially the SPM. If they had, why didn’t they protest about the distortions and contradictions? They easily marginalized the few that quit the IPCC because of what was going on. But then, I never heard of an IPCC person protesting the major scientific errors in Al Gore’s movie or the contradictions between their sea level claims. Apparently, this seems like an academic and bureaucratic example, of just following orders.

An early IPCC claim was that even if humans stopped all CO2 production immediately, the warming impact would continue for 100 years; the theoretical “residency time” for a CO2 molecule in the atmosphere. It was designed to increase the pressure for immediate political action. This seems like a specious point, considering the massive limitations identified by Essex, but it is more important because the public understand it. The IPCC know the public won’t understand the science, but they will recoil at the idea that the damage will last 100 years.

The IPCC based the number 100 on a “bottleneck” proposed in a 1959 paper by Bolin and Erickson. As the 2007 Working Group I Report notes,

A more sluggish ocean circulation and increased density stratification, both expected in a warmer climate, would slow down the vertical transport of carbon, alkalinity and nutrients, and the replenishment of the ocean surface with water that has not yet been in contact with anthropogenic CO2. This narrowing of the ‘bottleneck’ for anthropogenic CO2 invasion into the ocean would provide a significant positive feedback to atmospheric greenhouse gas concentrations (Bolin and Eriksson, 1959).

Bolin was, with John Houghton, the first Co-Chair of the IPCC. It appears reasonable to appoint experts to the IPCC, but as the [Wegman Report](#) identified in Recommendation 1 it is unwise.

Especially when massive amounts of public monies and human lives are at stake, academic work should have a more intense level of scrutiny and review. It is especially the case that authors of policy-related documents like the IPCC report, Climate Change 2001: The Scientific Basis, should not be the same people as those that constructed the academic papers.

The 100-year claim was challenged early, as [Marohasy](#) explains.

IF carbon dioxide emissions from fossil fuels only stayed in the atmosphere a few years, say five years, then there may not be quite the urgency currently associated with anthropogenic global warming. Indeed, it might be argued that the problem of elevated levels of atmospheric carbon dioxide could be easily reversed as soon as alternative fuel sources were found and/or just before a tipping point was reached.

Marohasy presented a 2009 paper by Robert Essenhigh showing that the actual residency time is between 5 and 15 years. Many others have since confirmed the value at between 6 and 7 years.

IPCC Assessment Report 5 (AR5), in a section discussing [“What Happens to the Carbon Dioxide After It Is Emitted Into The Atmosphere?”](#), says,

Before the Industrial Era, the global carbon cycle was roughly balanced. This can be inferred from ice core measurements, which show a near constant atmospheric concentration of CO₂ over the last several thousand years prior to the Industrial Era.

This is false. The Ice Core plot for Antarctica shows considerable variation of approximately 150 ppm (Figure 1). But the variation is greater because a 70-year smoothing curve is applied. Compare a 2000-year period of smoothed ice core record against a stomata record (Figure 2).

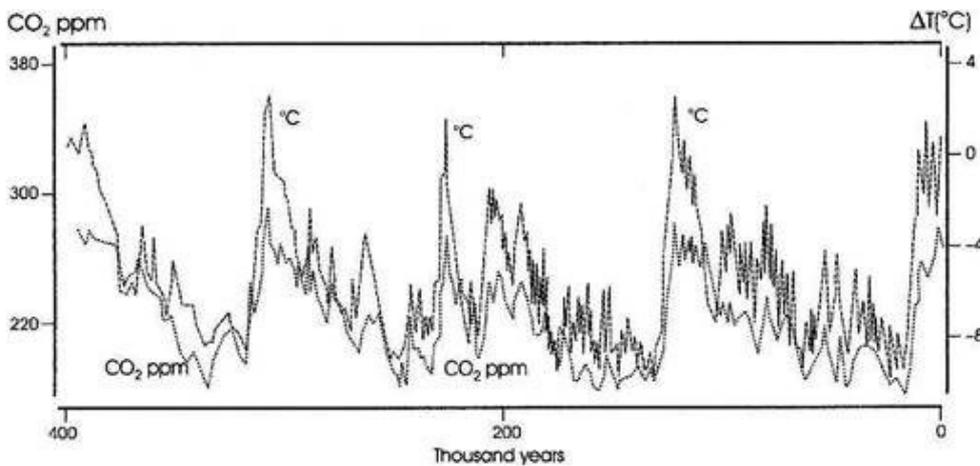


Figure 1

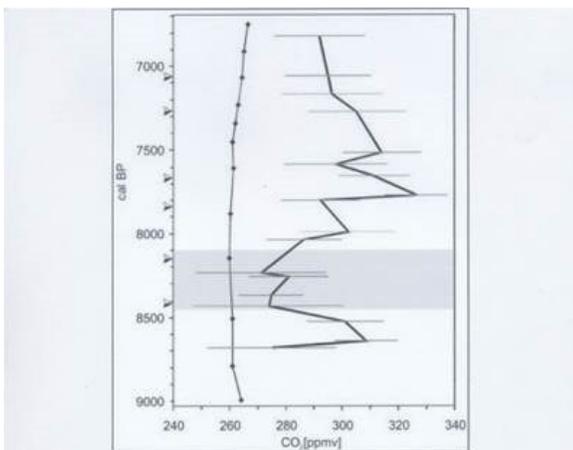


Fig 2.

Reconstructed CO₂ concentrations for the time interval between ≈8,700 and ≈6,800 calendar years B.P. based on CO₂ extracted from air in Antarctic ice of Taylor Dome (left curve; ref. 2; raw data available via www.ngdc.noaa.gov/paleo/ta/lorchaylor.html) and SI data for fossil *B. pendula* and *B. pubescens* from Lake Lille Gribso, Denmark (right curve; see Table 1). The arrows indicate accelerator mass spectrometry ¹⁴C chronologies used for temporal control (Table 1). The shaded time interval corresponds to the 8.2-ka-B.P. cooling event (3–12). Quantification of mean CO₂ concentrations is based on the rate of historical CO₂ responsiveness of the European tree birches (Fig. 1); ±1σ CO₂ estimates are derived from the standard deviation of the SI mean values.

Proc Natl Acad Sci U S A. 2002 September 17; 99(19): 12011–12014.

Figure 2

Both the average atmospheric level and variability are distinctly different.

AR5 then claims,

Anthropogenic emissions of carbon dioxide into the atmosphere, however, have disturbed that equilibrium.

The certainty of this statement is unwarranted because it is virtually impossible to substantiate and likely wrong because the estimates of natural production are very crude. Error of estimates for two natural sources, ground bacteria/rotting vegetation and oceans exceed human annual production. That figure is also suspect because the IPCC produce it. In the [FAQ section](#) of the 2007 Report they answer the question “*How does the IPCC produce its Inventory Guidelines?*” as follows.

Utilizing IPCC procedures, nominated experts from around the world draft the reports that are then extensively reviewed twice before approval by the IPCC.

[Tom Quirk](#) concludes in “*Sources and Sinks of Carbon Dioxide*” that

The constancy of seasonal variations in CO2 and the lack of time delays between the hemispheres suggest that fossil fuel derived CO2 is almost totally absorbed locally in the year it is emitted. This implies that natural variability of the climate is the prime cause of increasing CO2, not the emissions of CO2 from the use of fossil fuels.

[Mike MacCracken](#), whose Ph.D., dissertation involved producing an early climate model, has been involved in the IPCC from its inception. Figure 3 shows him in a photo from the 1985 IPCC formation meeting in Villach Austria, and though retired, he continues to defend the science.



Figure 3 (“Tom” is Wigley).

In a recent email to a climate group, MacCracken invoked the “bottleneck” when he wrote, *“However, a good fraction of each year’s CO2 increment lasts for many centuries...”*

In an attempt to support the “bottleneck” claim we learn this from [SkepticalScience](#).

Dissolution of CO2 into the oceans is fast but the problem is that the top of the ocean is “getting full” and the bottleneck is thus the transfer of carbon from surface waters to the deep ocean.

There is no evidence that the surface waters are “getting full”. It is just another assumption that supports the narrative. At best we only have computer model estimates of input and output of all gases, including CO2. The general failure of the [iron filings](#) ocean seeding program to increase absorption rates indicates that we don’t know.

SkepticalScience (SS) modify the pure 100-year claim as follows.

“Individual carbon dioxide molecules have a short life time of around 5 years in the atmosphere. However, when they leave the atmosphere, they’re simply swapping places with carbon dioxide in the ocean. The final amount of extra CO2 that remains in the atmosphere stays there on a time scale of centuries.

The argument here is that it may not be the same CO2 molecule that humans produced. This replaces the initial claim that they could identify the CO2 from burning fossil fuel. It argues that in a series of “boxes” containing CO2, additions are offset by displacement of others. What a surprise! SS provides the AR4 definition.

“Turnover time (T) (also called global atmospheric lifetime) is the ratio of the mass M of a reservoir (e.g., a gaseous compound in the atmosphere) and the total rate of removal S from the reservoir: $T = M / S$. For each removal process, separate turnover times can be defined. In soil carbon biology, this is referred to as Mean Residence Time.”

SS interprets that as follows,

“It is true that an individual molecule of CO2 has a short residence time in the atmosphere. However, in most cases when a molecule of CO2 leaves the atmosphere it is simply swapping places with one in the ocean. Thus, the warming potential of CO2 has very little to do with the residence time of CO2.”“What really governs the warming potential is how long the extra CO2 remains in the atmosphere.”

So, it is not the human CO2 *per se* that causes the warming. It simply overloads the natural capacity to absorb. This assumes, incorrectly, that we know what that is, which is very unlikely with a natural range of atmospheric CO2 from ~250 to 7000 ppm over the millennia. The 2007 IPCC identifies some of the problems.

Unfortunately, the total surface heat and water fluxes (see Supplementary Material, Figure S8.14) are not well observed.

For models to simulate accurately the seasonally varying pattern of precipitation, they must correctly simulate a number of processes (e.g., evapotranspiration, condensation, transport) that are difficult to evaluate at a global scale.

It is also very likely that the current increase is entirely natural. It certainly is within the error range of any of the IPCC numbers. It also ignores the fact that in every single record of any duration for any period, temperature increases before CO₂.

IPCC speculations differ depending on the objective. The macro speculations are wrong as Essex and others explain, but they are too complex for the public and by default establish scientific credibility. Some micro speculations are obscure, such as the claim that CO₂ is evenly distributed, but necessary to make their computer models work. Others, like the 100-year 'residence time' claim, are politically necessary to support demands for immediate action. Ideally, the latter extend the threat to the children and the grandchildren.

The only 'residence time' of importance is how long the IPCC can stay in business and continue to push their totally discredited AGW hypothesis.