

Climate Change – The Big CC Discussion - Briefing notes and links

Wednesday 1st November 2017; Victoria Hall, Westmount, Quebec, Canada

1. Scientific Method – the Gold Standard for doing “Good” Science

Start with an idea; a theory; a concept. Construct a **Hypothesis** – that can be **tested** by multiple scientists at multiple institutes – the experiments and tests must be **reproducible** (within a reasonable error range) and the hypothesis must be **refutable** (i.e. possible to prove the hypothesis false – **ONE** counter example is sufficient – [Karl Popper](#)). Good examples of the Scientific Method are the physical Gas Laws – [Boyle](#) (1662: $PV=k$); [Charles](#) (1720: $V \propto T(^{\circ}K)$); Newton’s Laws of Motion (1687); Maxwell Equations (1861); and Einstein’s General Relativity (1915). All are validated laws used in CC.

2. **Observational Science** – Collect Data: Analyse. Correlation does not prove Causation. (*Silver Science*).

Collect data from multiple sources – analysed by different institutes. Good Climate Change (CC) examples are NASA & NOAA satellites; Terabytes of data are analysed daily by UAH and RSS. Covers the last ~40 years. Large sample size gives confidence (high probability of truth) in any analysis – this is the basis for large epidemiological studies. For medical studies – a double blind trial at multiple locations is their gold standard. For worldwide CC studies, there is only one planet Earth! There is no Planet B – so **the sample size is 1**.

3. **Modelling and Simulation** – must be back-tested to verify model (*Bronze Science*)

Climate Scientists and IPCC rely on many different CC models. A clear majority of CC models fail any back-test over the last 40 years of “good” (satellite) data. Only one or two of over a hundred models can reproduce the 18-year hiatus between 1998 and 2015. A paper by [Judith Curry](#) reviews this aspect of the “Science”. IPCC has relied on simulations for projections to the end of this century – which are blatantly in error as compared to the satellite temperature record (low probability of being true). The Paris Accord is based on the hypothesis that man-made CO₂ is the main driver of CC - this is an **unproved hypothesis**. Three counterexamples will be given.

Carbon Pollution – conflated ideas that mislead

Carbon comes in many forms – some are good and vital for life on earth – others are poisonous (toxic) or just unhealthy for living organisms.

Anyone who uses the term Carbon Pollution is usually thinking of carbon dioxide (CO₂), but here is a quick summary of some different carbon forms in everyday use, starting with diamonds!?. . .

C – pure black carbon is used in a Brita water filter, but C PM_{2.5} (Particulate Matter 2.5 microns) creates smog.

CO – carbon monoxide is a toxin, which will kill organisms in a brief time.

CO₂ – carbon dioxide is a building block for photosynthesis (along with water and sunlight). Photosynthesis is responsible for all the food that ~7 billion people ate yesterday. Observational studies from satellite data have calculated a world “Leaf Index” which has increased 14% over 33 years. Is rising CO₂ responsible or a factor?

Burning fossil fuels creates all these forms of carbon, both the good and the bad. If the Paris Accord concentrated on **real pollution and toxin reduction in the first instance, it would have my support**. CO₂ is not a pollutant!

It is now possible to burn most fossil fuels with little to no pollution (e.g. [VW scandal](#) – a NO_x factor of 40) and as shown by coal plants in [Taiwan](#) and Japan, which have clear/clean air smoke stacks. Aeroplanes, transport rigs and farm equipment will continue to need fossil fuels for decades to come – but pollution reduction is possible.

Alternate energy (sun and wind) should improve and be subsidy free. However, they are small, intermittent energy sources and require a [baseload generation system](#) or large scale electrical storage. Nobody wants nuclear (NIMBY), but the future may be in fast breeder reactors, which have a high safety standard and would use the large stockpile of partially spent nuclear fuel (no new mining needed!).

Google Searches

Videos on Youtube

Curry Christy Mann Pielke << Type this if you have a paper copy or click on the link below
[Congress Committee session](#) – long (yes – 142 minutes!!) but has all the main actors in the Big Debate.
[Judith Curry on hurricanes](#) [Curry in Congress and much more](#) [Climate models](#)
[CC, clouds & cosmic rays: Svensmark & Shaviv](#) [BBC CC documentary](#)

Mark Steyn Mann 10th IPCC << Type this if you have a paper copy or click on link below
[My favourite with a laugh a minute](#) June 2015.

[Tony Abbott 38 minutes on CC in Australia](#) October 2017.

Links to papers, etc.

Ratzer 20 Questions << Type into Google search or click on link below.
[20 Questions \(and answers\) on Climate Change](#)

Leaf Index zhu myneni << Type into Google or click on link below.

[14% increase in Leaf Index](#)

This is huge increase, equivalent to 2 continental USAs of new green vegetation, over just 33 years.

Ludecke Weiss << Type into Google or click link below

[Harmonic Analysis of 2,000 years](#)

This is a summary of a new (August 2017) paper. Full paper accessible in references.

Nicola Scafetta, Aberto Mirandola and Antonio Bianchini (September 2017)

[Part 1 is here](#) [Why AGW hypothesis and the IPCC climate models are wrong](#)

[Ed Berry](#) is an active climate scientist with a wide range of interests and an extensive web site.

[Dr Ed Berry tells us why he thinks the IPCC Bern CO2 model is wrong](#)

[Michael Mann vs. Tim Ball legal case on fraudulent science - the Hockey Stick](#)

Contains links to the similar Mark Steyn versus Michael Mann legal case.

Carbon Dioxide Feeds the World << Google or click on link below

[44-page document in praise of CO2](#)

A former Australian PM tells us about his take on Climate Change and why subsidies are not appropriate for unreliable solar and wind turbine energy generation. October 2017.

[Tony Abbott - transcript](#)