

# **NEW LIGHT ON MAN-MADE CLIMATE CHANGE**

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## **ABSTRACT**

Three, major, foundational assumptions, embedded in the programming of General Circulation Models (GCM's) used to "project" future climates, are identified. The empirical data acquired in three separate research projects are shown to invalidate these assumptions. It is concluded that the computer models are invalid and that CO<sub>2</sub>-emissions-reduction programs will fail to alter natural climate change.

## **INTRODUCTION**

All claims for human-induced "Climate Change," formerly known as Anthropogenic Global Warming (AGW), are based on the output of computer models (GCM's), in other words, the claims are not based on empirical data.

The computer programs have three, major, assumptions embedded:

1. Variations in atmospheric CO<sub>2</sub> concentrations are predominantly caused by mankind's use of fossil fuels.
2. The major sources of CO<sub>2</sub> are located in the developed world.
3. Atmospheric temperature is driven by the atmospheric CO<sub>2</sub> concentration.

This article presents the results of three research projects that have found empirical evidence which invalidates all three of the programmers' assumptions.

## CONCLUSIONS

1. Mankind's use of fossil fuels has a negligible effect on atmospheric CO<sub>2</sub> concentrations.
2. The world's major sources of CO<sub>2</sub> emissions are the heavily forested regions in Africa, Asia, and South America with sparse human populations and little industrial development. The heavily populated and industrialized areas of North America and northern Europe are net sinks of CO<sub>2</sub>.
3. Atmospheric CO<sub>2</sub> arises from natural sources in proportion to the integral of atmospheric temperature.
4. CO<sub>2</sub>-emissions-reduction programs, targeting the economies of the developed nations in an attempt to reduce atmospheric CO<sub>2</sub> concentrations, will fail.
5. CO<sub>2</sub>-emissions-reduction programs for the purposes of reducing atmospheric temperatures and preventing climate change, will fail.

## DISCUSSION

This section will provide evidence in support of each of the conclusions.

*Mankind's use of fossil fuels has a negligible effect on atmospheric CO<sub>2</sub> concentrations.*

Common estimates of annual, global emissions of CO<sub>2</sub> from all sources, natural and man-made, total 211 +/- 15 Gt C (Appendix). Mankind's contribution is estimated to be 9.5 Gt C (2010) which is  $9.5/211 = 4.5\%$  of total emissions. So, total anthropogenic emissions are less than 1/3 of the 30 Gt C error-band for total emissions; this means that, should anthropogenic emissions be totally eliminated, it would not be possible to verify such a small change in total CO<sub>2</sub>...it would be lost in the overall uncertainties.

*The world's major net sources of CO<sub>2</sub> emissions are the heavily forested, tropical regions...  
The heavily populated and industrialized areas...are net sinks of CO<sub>2</sub>.*

In August, 2011, Prof. Murry Salby, Climate Chair, MacQuarie University, Australia, startled all sides in the climate debate by announcing his findings based upon 10 years of satellite data. In particular, he identified the regions that were the major CO<sub>2</sub> emitters.

"Notice [the emitters] are not found in the industrialized centers...the Ohio River Valley of the US, northern Europe, not even China. Rather, [the emitters] appear over the Amazon basin, tropical Africa, and southeast Asia. Those regions have little population, let alone industrialization" (Ref. 1).

In June, 2009, the Japanese space agency, JAXA, launched the IBUKU satellite which, among other objectives, was to "discover how much each region needs to reduce CO<sub>2</sub> emissions."

In announcing their results, they reported that, "... industrialized nations emit far less carbon dioxide than the Third World." The Japanese satellite map showed that the regions that were net absorbers of CO<sub>2</sub>... [were]... "predominantly those developed nations of Europe and North America; thus indicating built-up environments absorbed more CO<sub>2</sub> than they emitted into the atmosphere."

In contrast, the bulk of the regions recognized as so-called 'carbon polluters' were in the undeveloped, densely forested, equatorial regions of Africa and South America (Ref. 2).

*Atmospheric CO<sub>2</sub> arises from natural sources in proportion to the integral of atmospheric temperature.*

Figures 1, 2, and 3 show the divergence of temperature from apparent correlation with CO<sub>2</sub> (CO<sub>2</sub>-T divergence) just prior to the turn of the century. Figure 2 shows, in addition, an earlier CO<sub>2</sub>-T divergence prior to 1977 that is representative of repeating cycles of observed warmings and coolings with a periodicity of approximately 60 years. The present divergence is not unique.

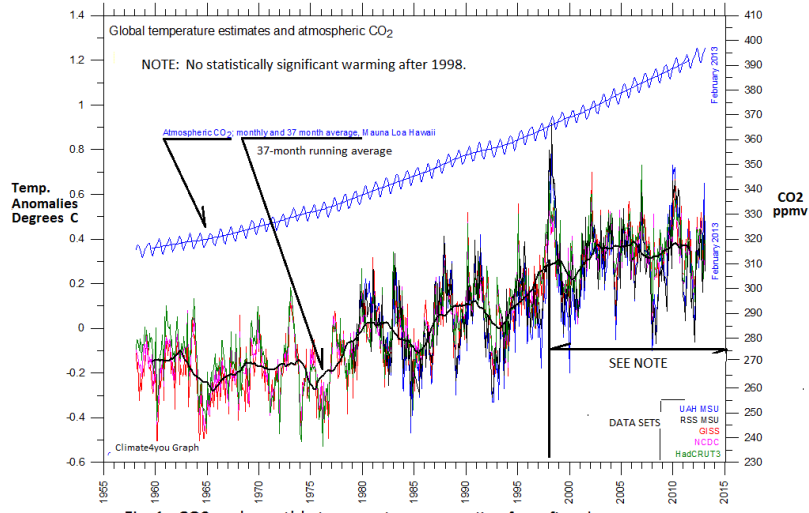


Fig. 1 - CO2 and monthly temperature anomalies from five data sets.

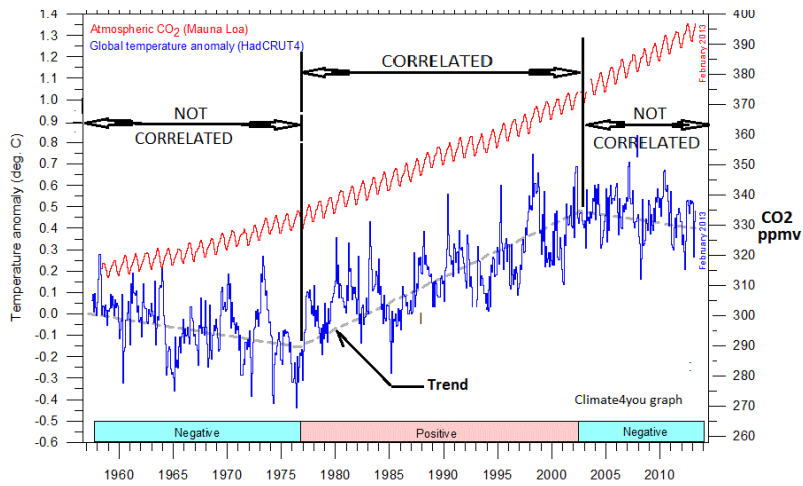


Fig. 2 - Global temperatures showing warming and cooling trends.

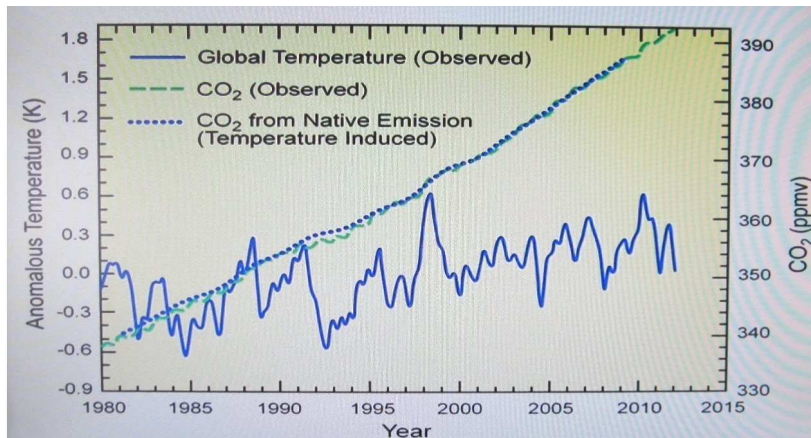


Fig. 3 - The integral of global temperature is shown to track CO2 from temperature-induced native (natural) emissions. (Ref. 3)

Since CO<sub>2</sub> cannot be controlling the atmospheric temperature, as shown by the CO<sub>2</sub>-T divergence, there are other heat sources...the subject of on-going studies...driving the temperature. Analysis has shown that CO<sub>2</sub> varies as the integral of temperature; using IPCC data, Prof. Murry Salby has shown, in the plot of "CO<sub>2</sub> from Native Emissions" on Figure 3, the excellent agreement between the integral of temperature and the variations of CO<sub>2</sub> (Ref. 3).

*CO<sub>2</sub>-emissions-reduction programs, targeting the economies of the developed nations in an attempt to reduce atmospheric CO<sub>2</sub> concentrations, will fail.*

As shown above, the developed nations are predominantly net sinks of CO<sub>2</sub>, therefore, mitigation efforts would be futile for this group. The predominant net sources of CO<sub>2</sub>, being the regions that are heavily forested, with small populations and little industrialization, will present formidable obstacles to mitigation attempts.

Most importantly, since human emissions constitute less than 5% of the total, annual CO<sub>2</sub> emissions, the balance (95%), comprised of natural emissions, is provided by respiration (humans, animals, phytoplankton) and such temperature-dependent processes as ocean out-gassing, soil bacteria decomposition, soil de-gassing, etc. These are all processes over which mankind has no control.

*CO<sub>2</sub>-emissions-reduction programs for the purposes of reducing atmospheric temperatures and preventing climate change, will fail.*

As reported above, analysis of empirical data has shown that CO<sub>2</sub> varies as the integral of temperature; therefore, temperature controls CO<sub>2</sub>. This CO<sub>2</sub> temperature-dependence is verified by data from ice-core studies which show temperature changes always preceding CO<sub>2</sub> changes, often by many decades.

Both the GCM algorithms and current mitigation strategies have it backwards by assuming that CO<sub>2</sub> controls temperature and climate change.

## SUMMARY

In the development of the GCM's, fundamental atmospheric processes were assumed:

- a. mankind's use of fossil fuels was responsible for the rise in CO<sub>2</sub> concentrations;
- b. the major sources of CO<sub>2</sub> were in the developed nations;
- c. atmospheric temperatures were driven by the CO<sub>2</sub> concentration.

It has been shown that mankind's annual CO<sub>2</sub> emissions, at less than 5%, are dwarfed by the 95% of emissions from natural processes.

Measurements by satellite of the distribution of CO<sub>2</sub> concentrations have revealed that heavily forested and underdeveloped regions are net sources and regions with built-up environments are net sinks.

After 1998 and prior to 1977, CO<sub>2</sub> and temperature were divergent, thereby negating any illusion of correlation. Using IPCC data, excellent agreement was shown between CO<sub>2</sub> variations and the integral of temperature. Thus, temperature controls CO<sub>2</sub> concentration and not the reverse as programmed in the GCM's.

Being based on false premises, both the GCM algorithms and current mitigation strategies will fail to produce the intended consequences on atmospheric temperatures and climate change.

## REFERENCES

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## **APPENDIX**

<b><u>Annual Carbon Dioxide Emissions</u></b>	<b><u>Gt C per annum</u></b>
Respiration (Humans, animals, phytoplankton)	45 to 52
Ocean out-gassing (tropical areas)	90 to 100
Volcanic and other ground sources	0.5 to 2
Ground bacteria, rotting and decay	50 to 60
Forest cutting, forest fires	1 to 3
Anthropogenic emissions Fossil Fuels (2010)	9.5
<b>TOTAL</b>	<b>196 to 226.5</b>

Source: Dr. Dietrich Koelle