

## SOME ANSWERS

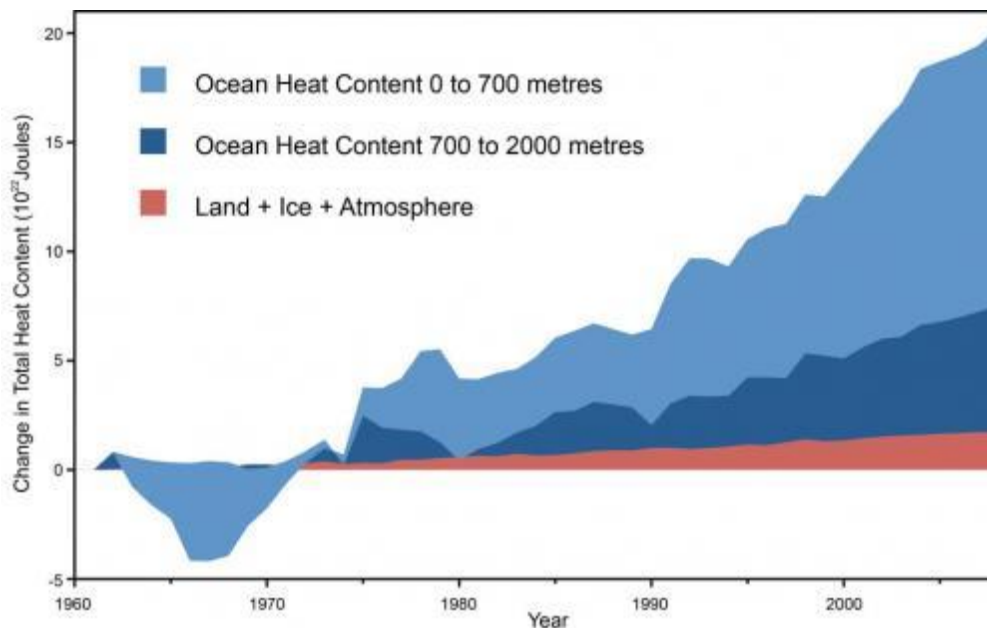
We were given the following – described as a “robust science article” - so let us critically examine it.

*What has global warming done since 1998?*

*What the science says...*

*The myth of no warming since 1998 was based on the satellite record estimates of the temperature of the atmosphere. However, even that argument is no longer accurate. The satellites show warming since 1998 too.*

*To claim global warming stopped in 1998 also overlooks a simple physical reality - the land and atmosphere are just a small fraction of the Earth's climate (albeit the part we inhabit). The entire planet is accumulating heat due to an energy imbalance. The atmosphere is warming. Oceans are accumulating energy. Land absorbs energy and ice absorbs heat to melt. To get the full picture on global warming, you need to view the Earth's entire heat content. More than 90% of global warming heat goes into warming the oceans, while less than 3% goes into increasing the atmospheric and surface air temperatures. Nuccitelli et al. (2012) showed that the Earth has continued to heat up since 1998.*



## CRITIQUE OF THE TEXT

**First paragraph:**

*“The myth of no warming since 1998 was based on the satellite record estimates of the temperature of the atmosphere.”*

- The six Green organisations advising the UN's Intergovernmental Panel on Climate Change (IPCC) on global temperatures, do not use the 1998 figure – they try to avoid this figure.
- These six organisations have stated that global warming stopped in 1990 – 1996 (depending on the different data bases). The IPCC advise all the governments of the World of these figures and refer to this period as the “hiatus in global warming”. This article wants us to ignore this advice claiming global warming has not stopped.
- The 1998 figure was a record warm year and is generally used by sceptical scientists as the start of a natural cooling period.
- It is incorrect to say that the temperature was solely based on satellite record estimates. The record temperature was measured by all six organisations using different measurement systems.
- It is loose and inaccurate language to say global temperatures are measuring the temperature of the “atmosphere”. Global temperatures are measurements of the surface air temperatures.
- This can only be considered a “myth” if we accept that these organisations and the UN's IPCC are in the business of creating myths. Remember, for the past forty years, Greens have demanded that sceptical scientists blindly and unthinkingly accept the work of the IPCC and these six organisations.
- Are they really saying, after forty years, we should no longer listen to the IPCC and those scientists and now listen to a new group of Green scientists?

*“However, even that argument is no longer accurate. The satellites show warming since 1998 too.”*

- The organisation that provides the satellite data was the first to observe the hiatus and, to date, they have not declared that it has stopped.
- Is this a case of loose language? During the hiatus, temperatures go both up and down significantly each year. Is the warming they refer to in those years when the temperatures go up, and are they ignoring a similar number of years when the temperatures go down, resulting in no movement?

### **Second paragraph**

As a general comment this second paragraph makes several assertions and assumptions that they don't defend, and several are indefensible.

*“To claim global warming stopped in 1998 also overlooks a simple physical reality - the land and atmosphere are just a small fraction of the Earth's climate (albeit the part we inhabit).”*

- After forty years of basing their alarmist stories on average global surface temperatures (both land, sea, and air), these temperatures no longer support their claims. So now they claim we “*overlook a simple physical reality*” and should use another set of temperatures that might help their cause. Notice this changes the definition of “global Warming” – a case of definition deceit. If it is so obvious, why didn’t they have this enlightened view of “*physical reality*” forty years ago?
- The Earth’s climate is made up of elements such as temperature, wind, precipitation, humidity, clouds etc. So, he is using loose language when he talks about land, atmosphere and oceans being part of the climate. They are descriptors of some of the elements that influence our climate.
- It is then a very bold assertion to claim that the land and atmosphere provides only a small fraction of everything that influences our climate. Some would say this assertion is indefensible.

*“The entire planet is accumulating heat due to an energy imbalance.”*

- This statement is just plain wrong and forms the basis of the claim that “the missing heat is in the oceans”.
- There are satellites that measure both incoming and outgoing thermal radiation. The simple logic is that if the two figures do not match one another (the imbalance) then the Earth must be either heating or cooling. Think about the assumptions underlying that claim to see the obvious errors. I will discuss this later.
- Please note that the incoming and outgoing thermal radiation is natural and has very little to do with the multi-trillion dollar villain - carbon dioxide.

*“The atmosphere is warming.”*

- This is “head in the sand” stuff and is not supported by either the Green or sceptical scientists’ belief in the hiatus in warming.
- Are we now to be told that there is a new group of scientists we have to believe and blindly follow – just because their former scientists no longer support their cause?
- 

*“Oceans are accumulating energy”*

- An assertion that underlies this whole idea. A more accurate statement, like the one that follows, is the oceans absorb heat.

*“Land absorbs energy and ice absorbs heat to melt.”*

- A statement of the obvious used to gain credibility.

*“To get the full picture on global warming, you need to view the Earth's entire **heat content**.”*

- See the not too subtle shifting of the goal posts. The definition of Global Warming has been changed. The Greens have spent forty years using average global surface temperatures to support their scare campaign. Now when that measure no longer supports their arguments, they want to ‘swipe the chess board clean’ and start a new game with new rules and new definitions. Surprise, surprise.

- 

*”More than 90% of global warming heat goes into warming the oceans, while less than 3% goes into increasing the atmospheric and surface air temperatures.”*

- This is an unsupported assertion. The two major contributors that heat the Earth are the sun and the molten core of the planet. This assertion wants us to believe that both these sources of heat somehow pass 90% of their heat to the oceans while in effect not heating the rest of the planet (e.g. only giving 10% to the rest). Some would say this assertion is indefensible.

- 

*“. Nuccitelli et al. (2012) showed that the Earth has continued to **heat up** since 1998.”*

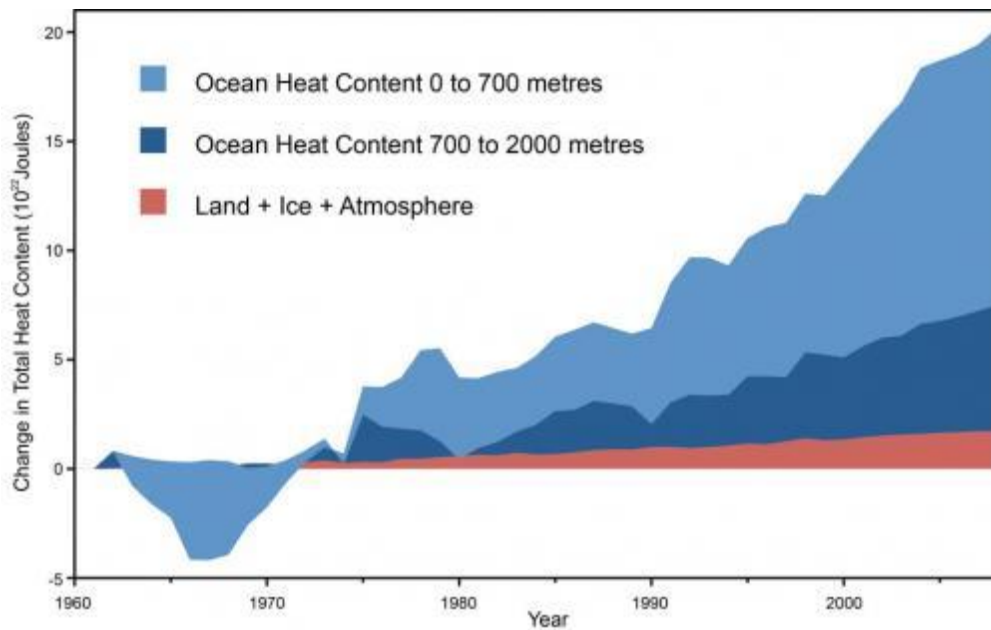
- This statement introduces the alarming graph below which is meant to undermine all the previous forty years of work by both Green and sceptical scientists.
- Is this the start of the new game?
- So, let's look at the graph.

## THE GRAPH

### General Comments

Before anyone starts to assert that there has been an alarming change from the ‘normal’, they should make sure they know what is ‘normal’. Valid questions such as “Have we seen this sort of change before?” needs to be answered over a variety of meaningful time frames.

We have spent trillions of dollars unsuccessfully trying to reduce the CO<sub>2</sub> concentrations in the atmosphere believing that Man's small contribution of CO<sub>2</sub> added to the natural CO<sub>2</sub> will cause catastrophic global warming. Yet, in the new game, we are now told that the atmosphere is less than 3% of the problem. Does this mean the vilification of CO<sub>2</sub> is now over? Since carbon dioxide is only 0.004% of the atmosphere, it must play an insignificant role while all the land, ice, and the oceans have more than 97% impact.



The Greens should take care before they mount an argument that carbon dioxide is still the most important conduit in passing heat to everything else. They will then have to explain why the carbon dioxide over the oceans passes a massive amount of heat into the oceans, while the same carbon dioxide over the land appears to be impotent.

### SPECIFIC COMMENTS

I have trouble with the veracity of the data displayed between 1961-2004. It wasn't until the introduction of the Argo buoy system that we finally had some credible data on ocean temperatures.

#### The Argo System

Before the Argo system became operational in 2004, we knew next to nothing about the ocean temperatures. Although only covering the top half of the ocean, the Argo buoys now give us comprehensive information about the top 2,000 metres of the oceans.

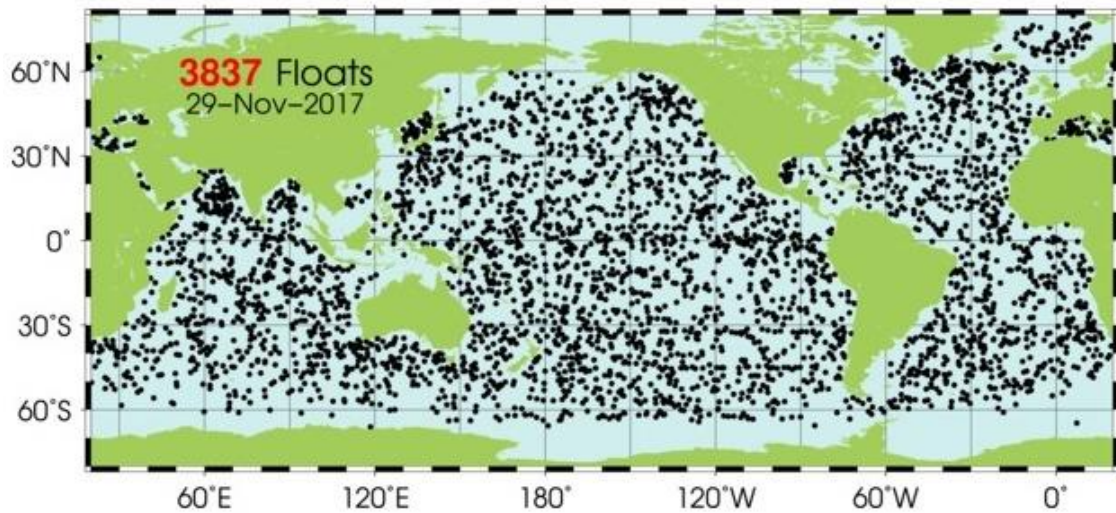
For example, the data in the graph from 1961-2004 is based on sparse and sporadically collected information. It was this lack of data that led to the creation of the Argo System.

For example, a recent analysis of Atlantic currents relied on just five research measurements spread over forty years – hardly enhancing confidence in their conclusions.

In contrast, the Argo system now has approximately 4,000 buoys spread over all the oceans that allows continuous monitoring of the temperature, salinity, and

velocity of the upper ocean, with all data being relayed and made publicly available within hours after collection.

### Position of Argo Floats as of 29<sup>th</sup> November 2017



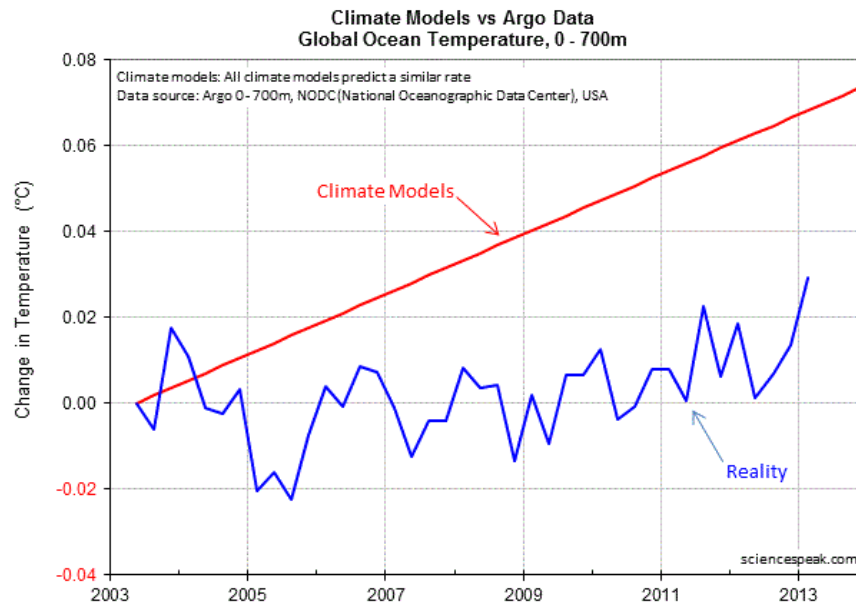
### Alarmist Graphs

Alarm bells should ring when we see this graph. It has all the Greens' hallmarks of graphical deception.

Look at the vertical axis measurement in 10 to the 22<sup>nd</sup> Joules. The Greens love large numbers that the readers conceptually might understand but have no practical use for them. Relying on the large number, the ignorance of the reader, and his vivid imagination, they encourage the reader to see Armageddon in such a graph.

Would a doctor tell a patient that his body heat content had risen by a million Joules in describing a mild fever or tell the patient his temperature had risen 0.2 degrees above normal. Which statement would scare the patient most?

The graph below shows average annual Argo ocean temperatures, with the vertical axis showing temperatures in degrees centigrade. Instead of a change of billions and trillions of something we cannot understand, we see temperatures have moved between +/- 0.02 degrees. We are now not alarmed. On seeing the changes measured in hundredths of a degree and before our minds starts to think of measurement errors, our eyes glaze over and we move on with my life.



The second point you might notice is the significant annual variations. This near horizontal jagged line looks nothing like the smooth rapidly rising line in their graph. We need to ask where is the raw data and how have they manipulated this data (e.g. what sort of averaging or smoothing has occurred)?

We might also note that their graph does not reflect the Argo data. The Argo data from 2004-2010 is near level, whereas their graph displays this period in its most rapid rise. When the Argo data shows a small rise in 2010-2013, their data is then showing a diminishing rise.

These average temperatures hide some data that is germane to the carbon dioxide story – the crux of the issue. Argo data shows temperatures in the Indian Ocean are rising while the temperatures in the North Atlantic Ocean are falling. The remaining oceans have annual fluctuations but are largely steady – remembering we are talking of temperature movements measured in one hundredths of a degree.

So, why has the CO<sub>2</sub> only gone to work on the Indian Ocean, but has completely failed its mission on the North Atlantic Ocean, and is having little effect on the remaining oceans? Maybe the temperature changes are not connected to Man's CO<sub>2</sub> and are natural.

We should despair when we see the smooth ocean temperature lines from 1960-2004 knowing they are extrapolations from a meagre supply of uncoordinated temperature data taken at different times pretending to represent an annual average as robust as that of the Argo system. To put it bluntly, I wouldn't even describe the data as an educated guess – it is more a wild arse guess.

Before we say something is abnormal here, we must establish what is normal using solid data not meagre data. There are all sorts of oscillations in ocean

currents that happen over decades and centuries. Since we have just entered the game in 2004, we should not be jumping to conclusions about the 'normal' let alone the 'abnormal' after such a short period.

Remember, all this work is an exercise in trying to keep a campaign intact, after realising the theory underlying all their predictions has been falsified. Rather than facing up to that reality, the Greens are scouring the World to try and find any area that has rising temperatures. They then grasp this and claim this is the "missing heat" - "*proving that global warming is real*".

### **The Missing Heat**

The Greens themselves have spent hundreds of millions of taxpayers' dollars on multiple temperature measuring systems that track the temperature of the atmosphere, land, and sea surfaces. Not one of these systems has shown any temperature rises in the past 25 years (let alone a rise caused by Man), so what has prompted this crusade to find the 'missing heat'.

The Greens have also spent more taxpayers' dollars to have a satellite monitor both the incoming and outgoing infrared radiation. In their simplistic view, if there is an imbalance between the incoming and outgoing heat then the planet must be either heating or cooling. Presently, more heat is coming in than being re-radiated out, so the planet must be heating. Hence, we must find the 'missing heat'.

This idea is based on two fallacious assumptions. First the sun is the only source of heat and, second, the thermal energy involved is not being converted into any other type of energy.

Geologists point out that the very hot molten core of the planet (measured in thousands of degrees) is a significant source of heat that cannot be ignored. Theoretically, there will never be a "balance" and, by considering nothing else, outgoing heat should always be greater than incoming heat because of the molten core. So, what is happening?

Physicists then explain that there is a myriad of ways that thermal energy can be converted into other forms of energy, and consequently lost in the balance equation. The climate scientists' assumption that this will not happen is a blinkered view which is just plain wrong.

Because of this, it is virtually impossible to identify what remains to either cool or heat the planet, with one physicist describing it as a fool's errand.

All this advice from other areas of science is largely ignored by climate scientists, as they assert they know precisely how much heat is being used to heat the planet.



## **Early Warning Bells**

The thrust of this article suggests that changes of heat content of the oceans are nine times larger than that of the land. When we look at this ratio and find how it is calculated several warning bells ring.

To measure the heat content of any substance, you multiply the specific heat index of the substance, by its mass and then its temperature. Although having different values, both the specific heat index and the mass of oceans and land are constants. So, any changes in total heat content in either will be caused by a change in temperatures.

The article tells us that the change in heat content of the oceans between 1960-2010 is nine times more than the change in heat content of the land. This means that the temperature change of the land in this period must be nine times smaller than the temperature change of the oceans.

The specific heat index of the land causes the land to heat up, or cool down, approximately four times faster than the oceans. For this not to be happening in this period, the change in temperatures of the land must be four times smaller than the change in ocean temperatures.

Finally, the mass of the land is 84 times larger than the oceans. For this difference not to affect the suggested heat content ratio of 9:1, the temperature change of the land must be 84 times smaller than that of the oceans.

So, what is the temperature change of the oceans between 1960-2010. Using the specific heat index and mass of the oceans and the change in heat content measured in joules we find that the temperature change is  $0.4^{\circ}\text{C}$ . This figure is nowhere as alarming as hearing the heat content change figure that is measured in  $10$  to the  $22^{\text{nd}}$  joules.

To calculate the change in temperature of the land between 1960-2010, we divide the temperature change in the oceans ( $0.4^{\circ}\text{C}$ ) by  $9 \times 4 \times 84$ . This is a change of approximately  $0.00013^{\circ}\text{C}$  – 1.3 ten thousandths of one degree.

This should surprise us to hear that a group of scientists have been measuring the average temperature of land/the planet for fifty years with an accuracy of thousandths of a degree for fifty years.

## **THE MAJOR DECEIT**

### **Measuring Average Land Temperatures.**

In contrast with ocean temperatures, we have no measurements of the average temperature of the land/solid planet – just educated guesses.

To get just one reading of an average land temperature, we would need to drill a hole six thousand kilometres deep and take temperature measurements all the

way down this hole, like the Argo buoys. The deepest hole ever drilled into the planet is less than 30 kilometres and did not come close to the molten core.

If we were to have the same coverage as the Argo buoys, we would need six thousand very deep holes.

The educated “scientific” guesses of the temperature of the molten core range from 3,000-7,000 degrees Celsius.

If the science has been represented accurately in this Green article, some scientists are trying to tell us that they have been measuring or guessing the average temperature of the land for the past fifty years and have measured a slight rise in temperature to an accuracy of ten thousandths of one degree.

We can confidently say that such a claim is rubbish.

### **WHY USE THE 9:1 RATIO**

Why didn't the Green movement avoid this foolish claim and remain on much firmer ground by only talking about the temperature rise in the oceans during this period? Some sceptics suggest that a rise of 0.4°C was not alarming enough for these Greens. Of course, they could have used the large number deception tool to hide the small 0.4°C and turn it into a 10 to the 22<sup>nd</sup> joules figure.

Apparently, that was not good enough. So, it was far more alarming to be able to say that oceans were heating up nine times faster than the land. However, then the scientists had to apply their “robust science” to be very creative in making guesses about the very small changes of land temperatures needed.

### **DECEPTION TOOLS USED IN THE ARTICLE**

In this very short article, the following deception tools have been used;

- Factual errors,
- Unsupported assertions,
- Fallacious assumptions,
- Inaccurate and loose language,
- Definition deceit,
- Several illogical arguments (e.g. Appealing to Authority),
- Claiming “normal” is “abnormal”,
- Graphical deceit,
- Large number deceit,
- Visual deceit,
- Smoothing data, and
- Fabricated data,

## **CONCLUSION**

Has this short swim in the “Trivia Swamp” been refreshing? Remember it has proved nothing and has not unfalsified the theory, nor rewritten history to have global temperatures and CO<sub>2</sub> concentrations moving in ‘lockstep’.

However, it does show us how much time and effort is needed to critique a “swamp issue” and receive little in return. It does show how many deceit tools can be used in a short Green article – described as a “robust scientific article”.

We should avoid swimming in the swamp and encourage all to focus on the crux of this debate. With a falsified theory and no correlation, we certainly should not be spending any more taxpayers’ dollars on this issue while the theory is still ‘raining’ failed predictions.