

# SUMMARY – Climate Change: The Facts 2017

## Part 2

*[Internet sources for the illustrations are cited at the end of this document]*

LDS comments and footnotes are my additional information



## 7- Taking Melbourne's Temperature

- Melbourne's temperature records at La Trobe Street have changed since 1996 when an automatic weather station was installed.
- Urban Heat Island effect (UHI) has been enhancing temperature records in Melbourne.
- This anomaly has been confirmed by comparing temperatures with Laverton, about 20km away, in a semi-suburban area.
- Melbourne's temperatures have been slowly rising since 1860.
- A jump in recordings occurred with the introduction of new weather station which greatly impacted the long term trends.
- The Bureau of Meteorology has been making adjustments to the temperature records and incorporating them into the ACORN-SAT<sup>1</sup> data set.
- The author of this chapter has calculated a rise in Summer maximum temperature for Melbourne of  $0.03 \pm 0.02^{\circ}\text{C}$  per decade for the period 1856-2015, which equals  $0.3^{\circ}\text{C}$  per century. He used the Botanical Garden temperatures to replace the La Trobe Street values for 1996-2015.

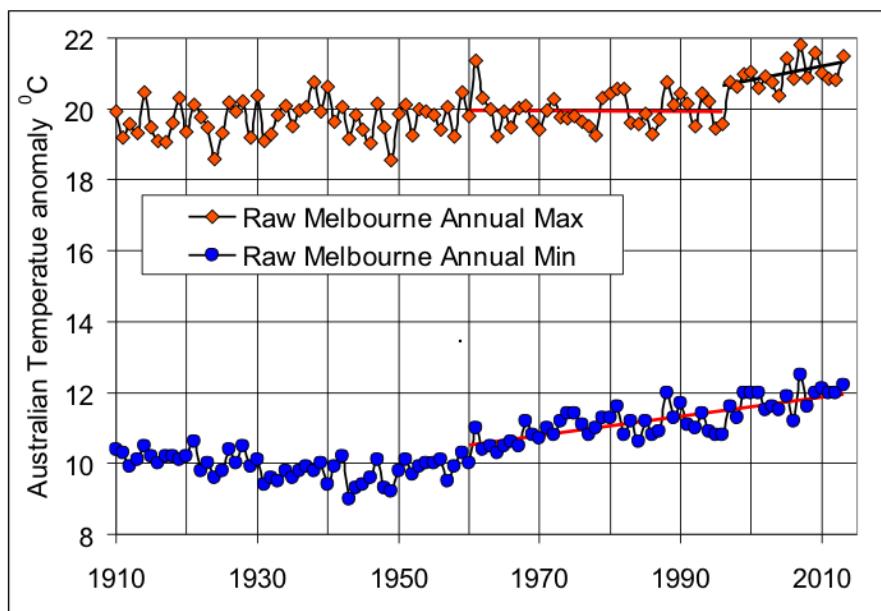


Illustration 1: Melbourne's raw annual maximum and minimum temperatures, 1910-2015

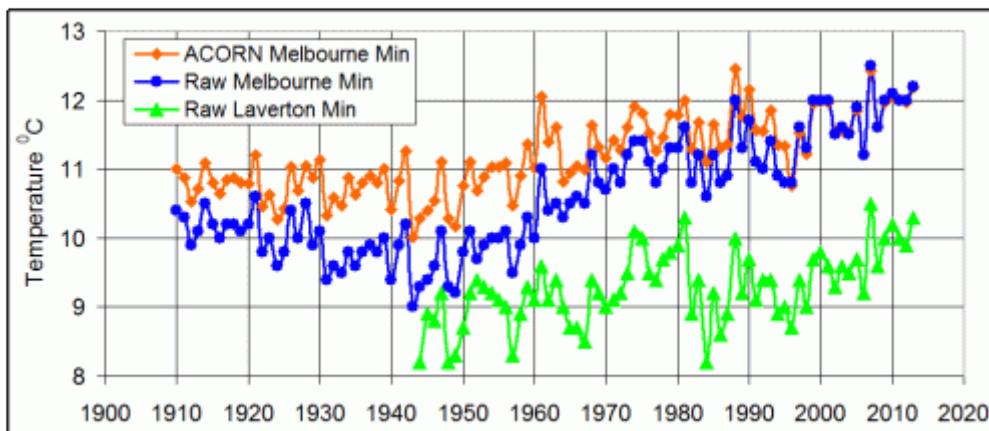
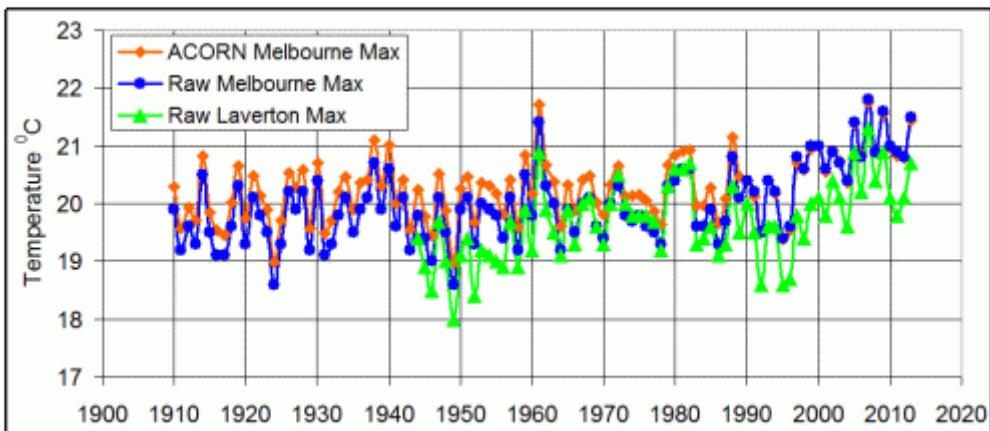


Illustration 2: The comparison of the average annual minimum temperatures for Melbourne and Laverton

1 – Bureau of Meteorology's Australian Climate Observations Reference Network – Surface Air Temperature



*Illustration 3: The comparison of the average annual maximum temperatures for Melbourne and Laverton*

Locations	Minimum temperature increase °C per decade	Maximum temperature increase °C per decade
ACORN-SAT Melbourne	$0.18 \pm 0.02$	$0.13 \pm 0.03$
Raw Melbourne	$0.35 \pm 0.02$	$0.21 \pm 0.03$
Raw Laverton	$0.14 \pm 0.03$	$0.16 \pm 0.03$
Raw Melbourne – Raw Laverton	$0.21 \pm 0.03$	$0.05 \pm 0.05$

*Illustration 4: Comparison of Melbourne & Laverton temperature increases from 1944-2013 using raw data and ACORN-SAT data*

## 8- Mysterious Revisions to Australia's Long Hot History

- The Bureau of Meteorology (BOM) moderates the temperature records before using them in predictions and data sets.
- Analysis of adjusted data has shown that historic temperatures have been raised as much as 2°C.
- The hottest day ever officially recorded in Australia was 50.7°C at Oodnadatta on 2 January 1960. The new moderated Bureau of Meteorology hottest record is 44°C in Albany on 8 February 1933.
- The switch to electronic sensors across Australia has seen a step up in temperatures.
- Carbon dioxide levels were lower in the 1800s than today yet there are many references to temperatures of 125°F (51.5°C) ‘in the shade’.
- Charles Sturt (the explorer) recorded temperatures of 127-132°F at locations during his explorations in 1828, 1829 & 1844.
- The Bureau of Meteorology has records of Bourke 51.7°C (1909) and Brewarrina 50.6°C.
- In the 50 years in the period 1890-1950 there was a 1-2°C cooling in much of Australia with an accompanying 20% reduction in rainfall.
- The Bureau of Meteorology adjustment method is kept secret by the department.
- Science isn’t audited like banks and government departments so peer-review process of science by like-minded scientists is greatly flawed.
- This goes for climate science as well.



Illustration 5: 1953 newspaper headline

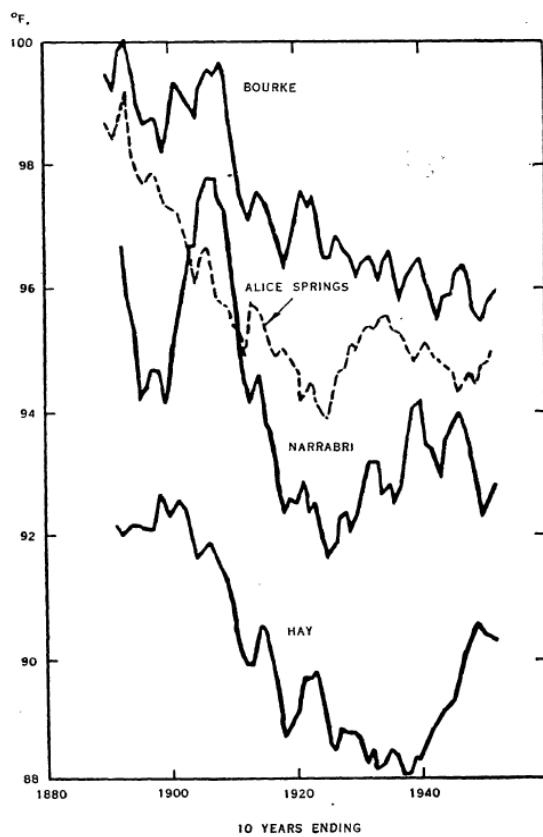
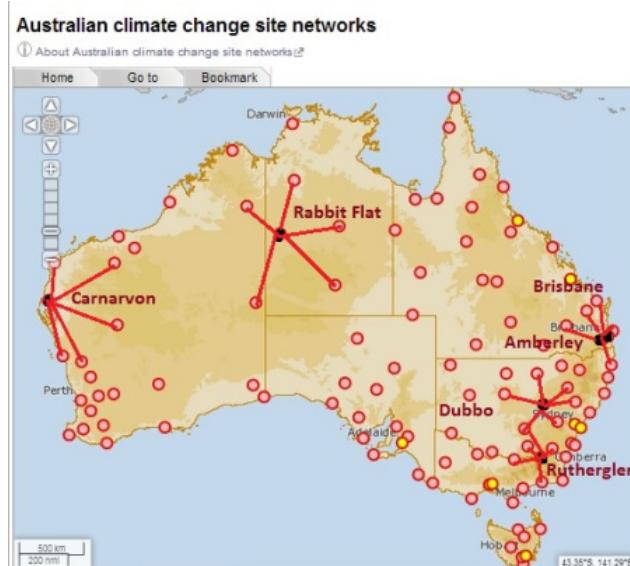


Illustration 6: Australian town's reported cooling trend of average maximum summer temperatures (1890-1950)



*Illustration 7: Locations where large adjustments are made using temperatures from other regional sites*

## 9- The Homogenisation of Rutherglen

- The Bureau of Meteorology (BOM) does not rely on satellite data in their production of the official historical temperature record for Australia.
- ACORN-SAT<sup>2</sup> data is based entirely on surface temperature records from 112 weather stations.
- 109 of these are homogenised using a technique that can't be easily replicated. This is poor science.
- Rutherglen's data is homogenised even though there are no statistical problems with its long-term data.
- The mild cooling trend at Rutherglen of minimum temperatures have been adjusted by BOM to give a significant warming trend.
- This data now supports anthropogenic global warming (ABW), but the raw data doesn't.

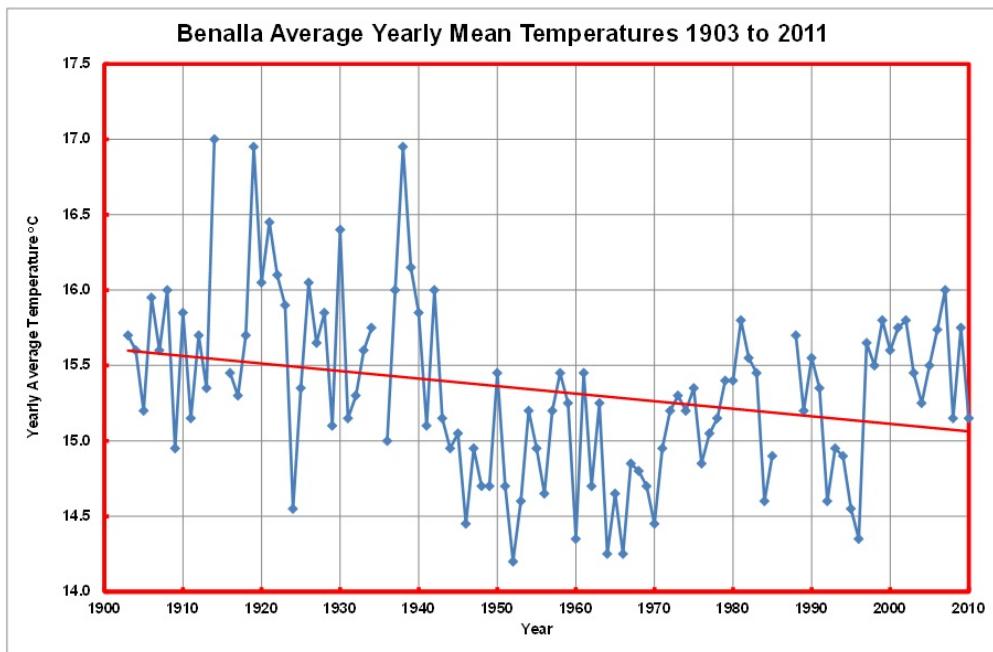


Illustration 8: Benalla's long term cooling trend from raw temperature data. (average in red)

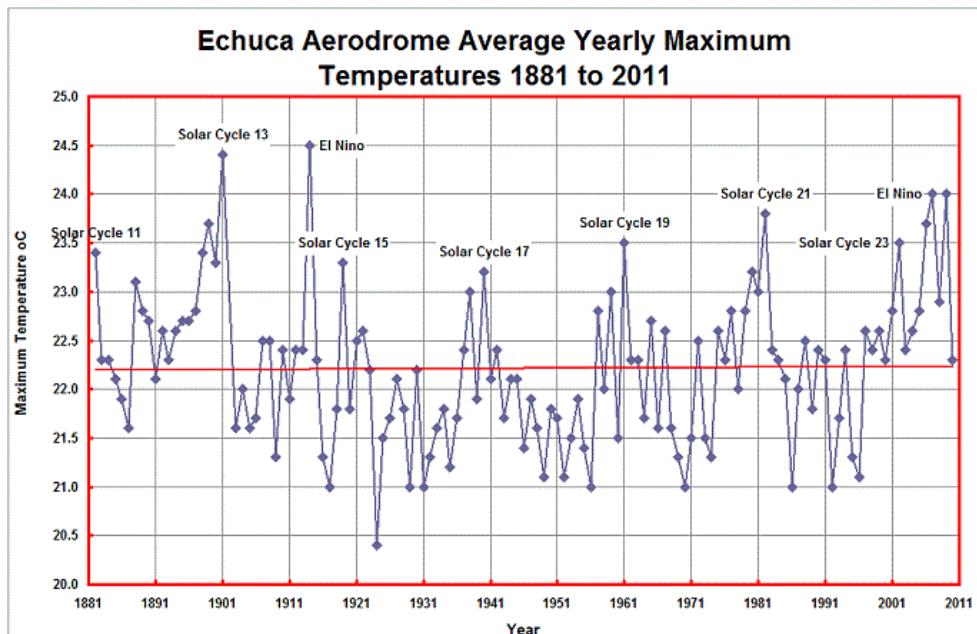


Illustration 9: Echuca aerodrome's static long term temperature and the solar effects which caused the changes. (average in red)

## 10- Moving in Unison: Maximum Temperatures From Victoria, Australia

- The Bureau of Meteorology (BOM) modified/remodelled ('homogenised') temperatures for Victoria showing a 1°C rise per century.
- Raw data actually shows a cooling for 1910-2015.
- Temperature trends can be manipulated using specific starting dates and different sets of individual temperatures.
- Australian and international researchers use ACORN-SAT<sup>3</sup> temperature data, however, raw data provides more realistic insight into climate history.
- ACORN-SAT temperature data has a secret formula for the remodelling the numbers.
- Marohasy & Abbott's calculation using raw data and a transparent remodelling formula have calculated a 0.3°C per century rise in Victoria's temperature.
- Climate scientists use a false assumption to support Climate Change. This assumption is: A subset of homogenised and weighted data provides accurate results.
- The 289 sets of individual maximum temperatures from ACORN-SAT locations all move in unison. This should not happen as Urban Heat Island effects and other geographical influences affect maximum temperatures. There should be lots of variations.
- Adding all the yearly temperatures for each location over time won't give a realistic indication of Climate Change as more stations have been added last century, especially more cooler alpine stations since the 1980s.

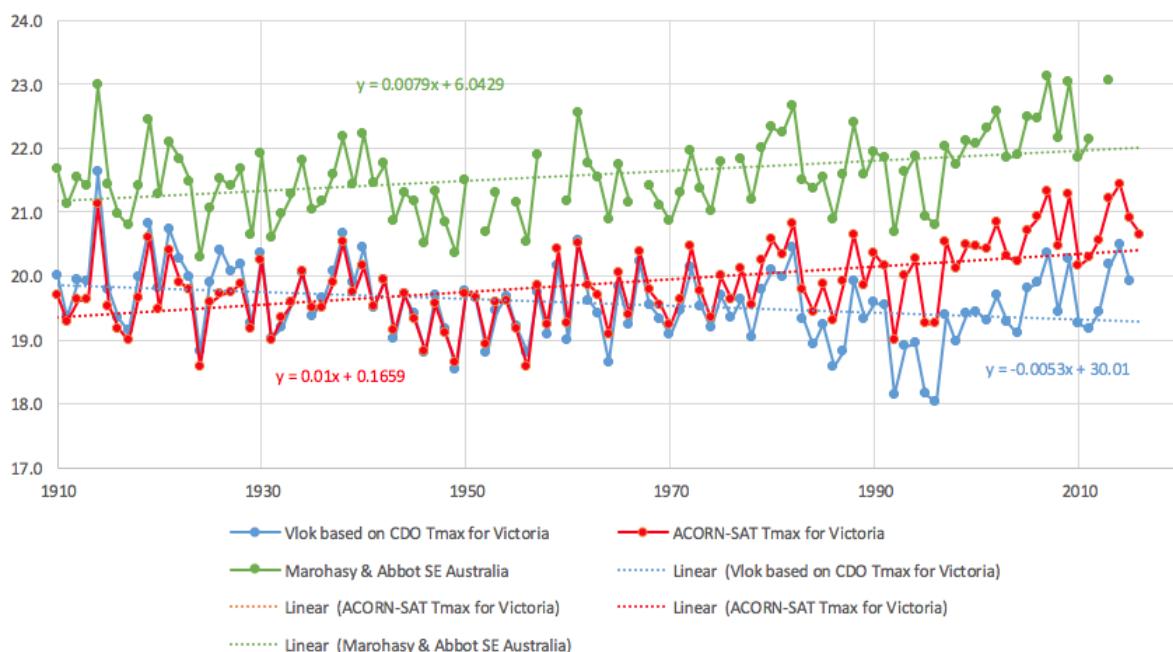


Illustration 10: Bureau of Meteorology reconstructed temperatures (red line) compared with raw temperatures (blue line)

<sup>3</sup> – Bureau of Meteorology's Australian Climate Observations Reference Network – Surface Air Temperature

## 11- A Brief Review of the Sun-Climate Connection with a New Insight Concerning Water Vapour

- Global climate is strongly connected to the Sun's activity.
- Total Solar Irradiance (TSI) is a measure of the sun's power (energy) over all of its wavelengths. It is calculated per unit area on the Earth's upper atmosphere.
- TSI varies from year to year.
- Global surface temperatures are strongly controlled by the TSI.
- The amount of water vapour in the atmosphere is strongly controlled by TSI.
- Variations in the annual water vapour content of the atmosphere is controlled by internal changes in the climate system, especially sea surface temperature – e.g. Southern Oscillation (El Niño) and North Atlantic Oscillation (NAO).
- The best explanation for all available observed climate records is TSI temperature changes and amplification due to atmospheric moisture.

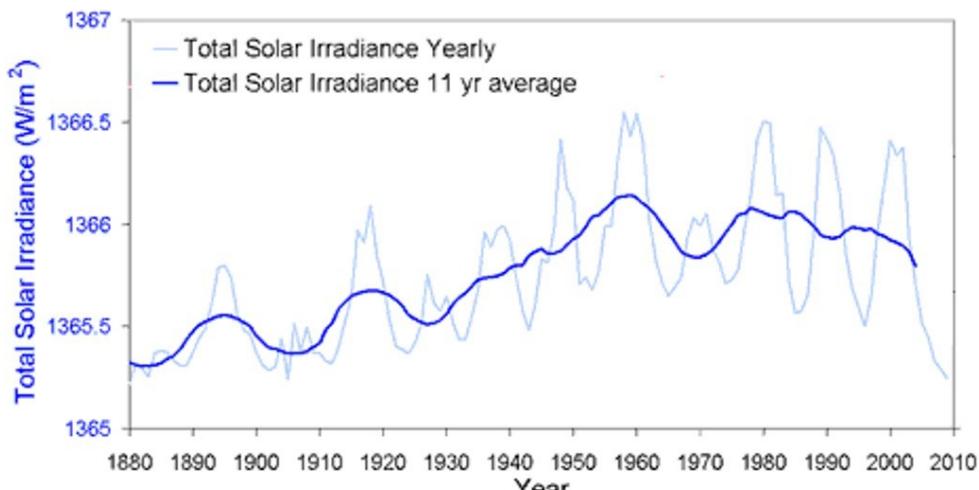


Illustration 11: Total Solar Irradiance (1880-2010)

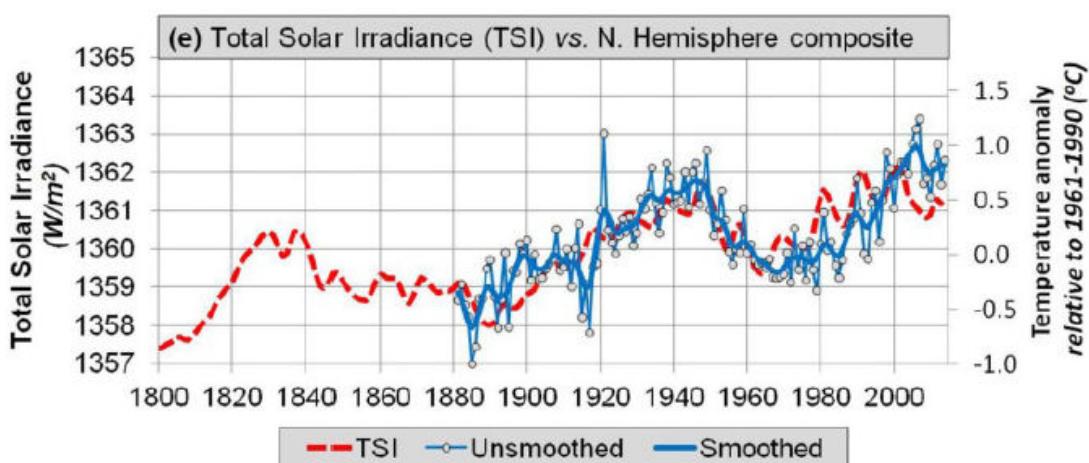


Illustration 12: Total Solar Irradiance controls Earth's temperatures. (This example is of northern hemisphere temperatures)

## 12- The Advantages of Satellite-Based Regional and Global Temperature Monitoring

- The advantages of satellite recording over weather station thermometers are:
  - Global coverage;
  - no UHI (Urban Heat Island) interference;
  - smaller corrections needed for the data.
- Satellites don't measure ground temperatures, they measure the lower atmosphere.
- The strongest global warming signal is expected to be in the lower atmosphere.
- Lower atmosphere warming measured since 1979 is half that of climate models for the same layer which is a significant discrepancy.
- The discrepancy is most likely the fault of the models because balloon readings (called 'radiosonde') agree with the satellites.
- Climate models may be too sensitive to carbon dioxide levels.
- This infers that carbon dioxide emissions may not be as serious a problem as many believe.

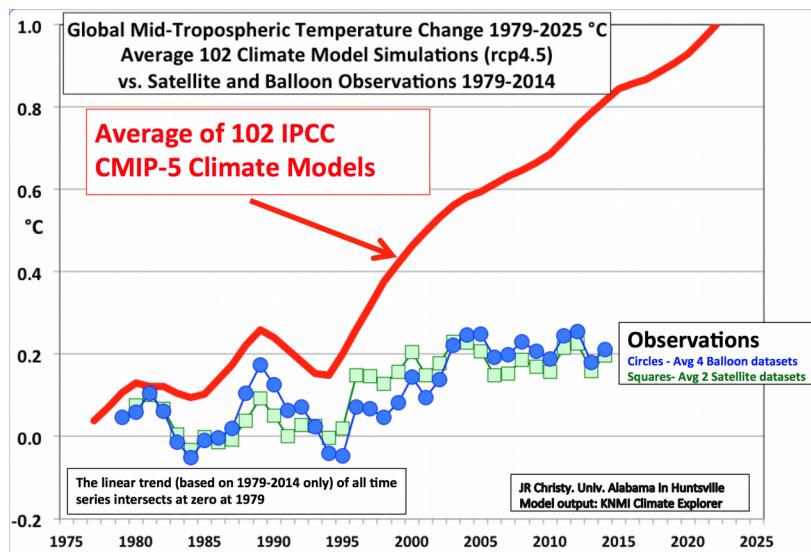


Illustration 13: Climate models (red) are way out when compared with satellite (green) and balloon (blue) temperature data

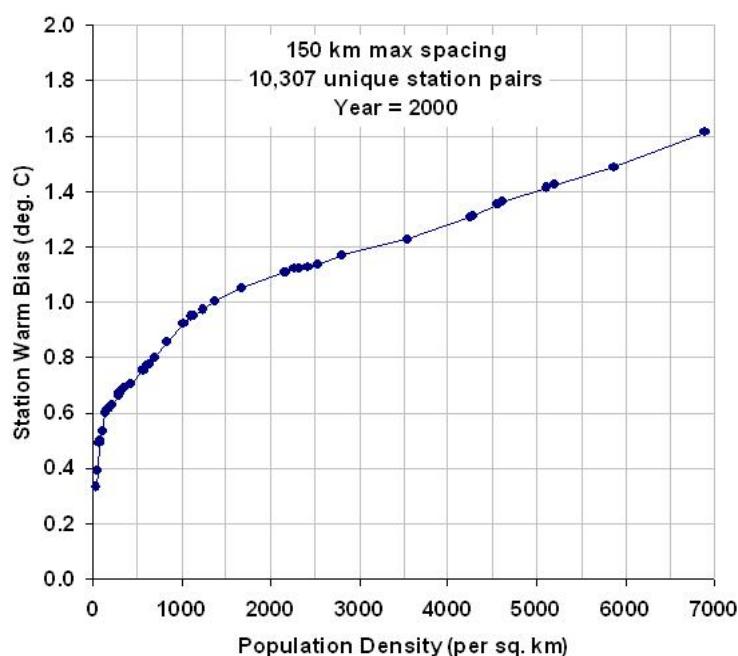


Illustration 14: Weather station temperatures increases with the population of a city (Urban Heat Island effect)

### 13- Carbon Dioxide and Plant Growth

- Climate alarmists' (Climate Change enthusiasts) computer models project that increasing global warming and carbon dioxide levels will have a devastating impact on terrestrial vegetation, including mass extinctions.
- Actually, these twin evils will cause a significant increase in the growth and productivity of plants wherever they are found.
- The facts are that increases in carbon dioxide benefits the biosphere.
- Increasing carbon dioxide helps plants overcome growth-retarding influences in their environment.
- Agricultural productivity is anticipated to increase by 33% for every 300-ppm increase in the atmosphere's carbon dioxide.
- The future of agriculture is bright because of this increase in carbon dioxide.
- Forests are expected to prosper.
- Increasing plant growth removes carbon dioxide from the air.
- Carbon dioxide is not a pollutant, it's the very elixir of life.

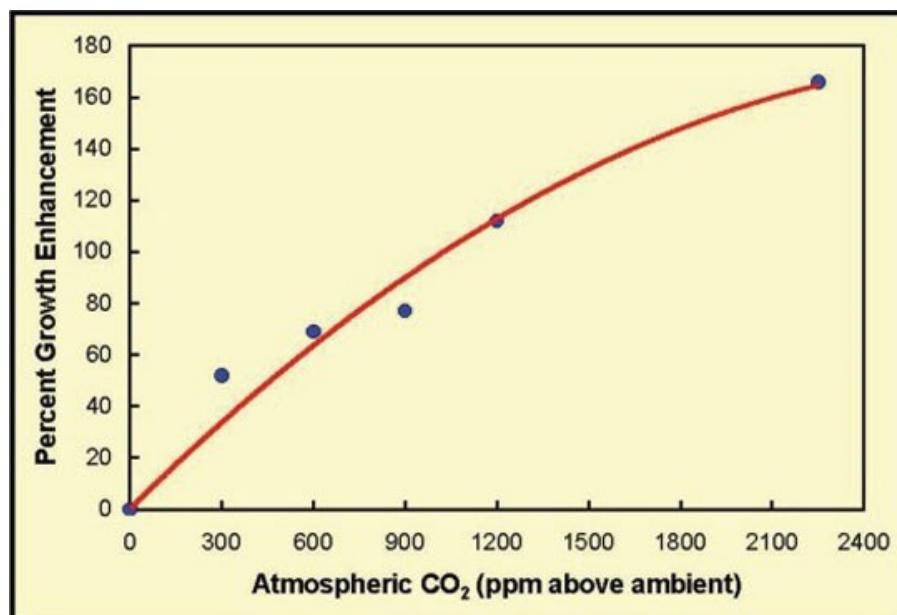


Illustration 15: The more carbon dioxide in the air the faster plants grow



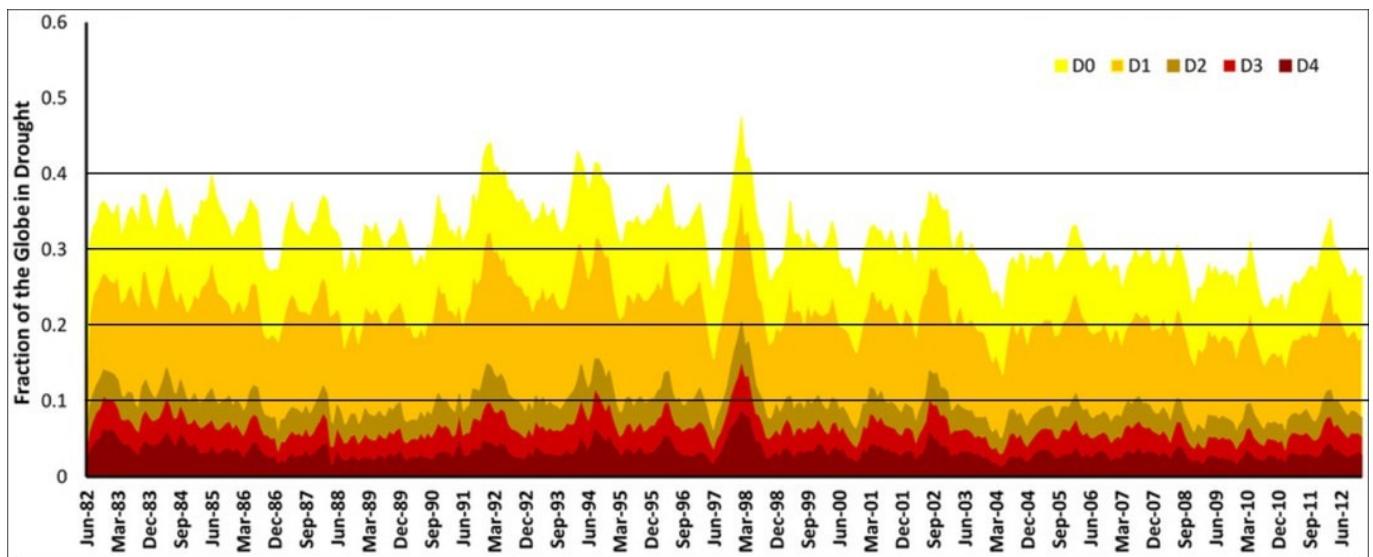
Illustration 16: Plants grow faster with more carbon dioxide

## 14- The Poor are Carrying the Cost of Today's Climate Policy

- Climate Change is doing more good than harm.
- Climate Change policy is doing more harm than good.
- Global greening from carbon dioxide is positively impacting Earth.
- Satellite data in 2012 showed 25-50% of the vegetated parts of the planet have grown greener, while just 4% have become browner.
- 70% of the increase in greening can be attributed to carbon dioxide.
- The overall increase in vegetation greening in all areas has been estimated to be 14% during the past 30 years.
- This is equivalent to adding a green continent about twice the size of mainland USA (18 million km<sup>2</sup>).
- More greening means more food production, richer biodiversity and less drought.
- There has been no significant ("catastrophic") increase in global droughts over the 30-year period between 1982-2012.
- Ethanol substitutes:
  - Has done very little to reduce emissions; consumes 5% of the world's grain crop; raises food prices; subsidies have caused deforestation for farming; has estimated to have killed 200,000 people a year through lack of food.
- Biodiesel:
  - Estimated to increase emissions from transport by 4% by 2020; subsidies have caused more deforestation.
- Diesel car promotion:
  - Lower carbon dioxide emissions, but higher nitrogen oxide and soot emissions which are more dangerous; estimated to have caused 5,000 deaths each year from these emissions.
- Biomass wood pellets:
  - It is produced primarily from forest timber in the US, not from wood residues; produces more carbon dioxide per tonne than coal does; has caused more natural forest to be cleared.
- Wind power:
  - Their 2-ton magnets are composed of 50% neodymium which has toxic and radioactive by-products when mined; electricity produced is expensive, unreliable and intermittent; are highly subsidised which favours the rich; 3 reports show that they do not reduce emissions<sup>4</sup>.
- Solar farms:
  - Not efficient in cloudy climates – UK, Europe; financially benefits wealthy land owners where the structures are located; produce very little energy; contribution is trivial, producing less than 1% of the global energy needs (close to zero in other words).
- Renewables only:
  - It disadvantages poor countries because IMF (International Monetary Fund), World Bank and Western governments won't give aid for the construction of fossil-fuel energy plants; renewable energy plants cost twice as much to set up; \$10US billion invested in gas-fired energy generation in sub-Saharan Africa would meet the needs of 90 million people, or only 27 million people with the same expenditure on renewable energy; currently 3 million people die each year from the effects of wood and dung fires they use to cook; millions miss out on education, refrigeration and other energy benefits from electricity supplied by cheaper coal sources.
- Fuel poverty:
  - Renewable energy drives poorer people into fuel poverty; many people die each year because they can't afford to heat their homes in winter; on average 65 British people die this way each day.
- High energy costs:
  - High energy costs from climate policies result in the closure of heavy-industrial plants which increases unemployment; emissions are not reduced by this as the manufacture is shifted to China and India who have less emission controls; Britain's 21<sup>st</sup> century expenditure in climate

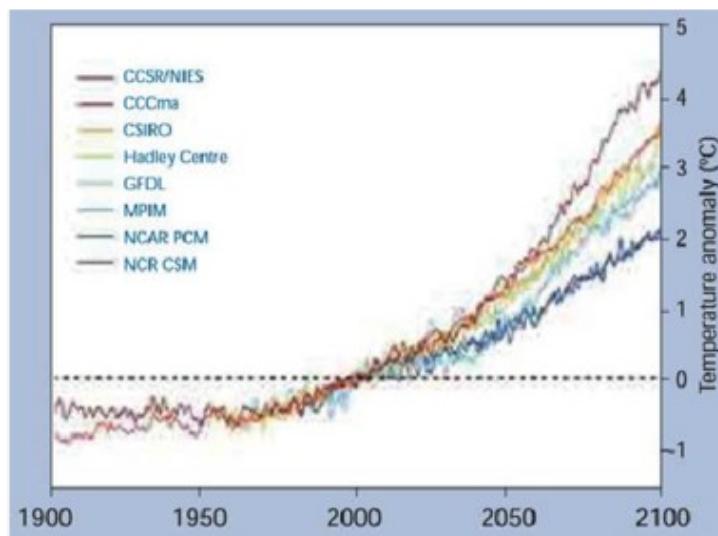
4 – Fisher & Fitzsimmons 2013 "Big Wind's Dirty Little Secret" ([instituteforenergyresearch.org/analysis/big-winds-dirty-little-secret-rare-earth-minerals](http://instituteforenergyresearch.org/analysis/big-winds-dirty-little-secret-rare-earth-minerals))  
Hughes 2012 "The Impact of Wind Power on Household Energy Bills" ([www.thegwpf.org/images/stories/gwpf-reports/hughes-evidence.pdf](http://www.thegwpf.org/images/stories/gwpf-reports/hughes-evidence.pdf))  
Ridley 2012 "The windfarm delusion" ([www.spectator.co.uk/2012/03/the-winds-of-change](http://www.spectator.co.uk/2012/03/the-winds-of-change))

policies is expected to be £1.8 trillion but this is expected to only lower temperatures by 0.005°C on average.



## 15- The Impact and Cost of the 2015 Paris Climate Summit with a Focus on US Policies

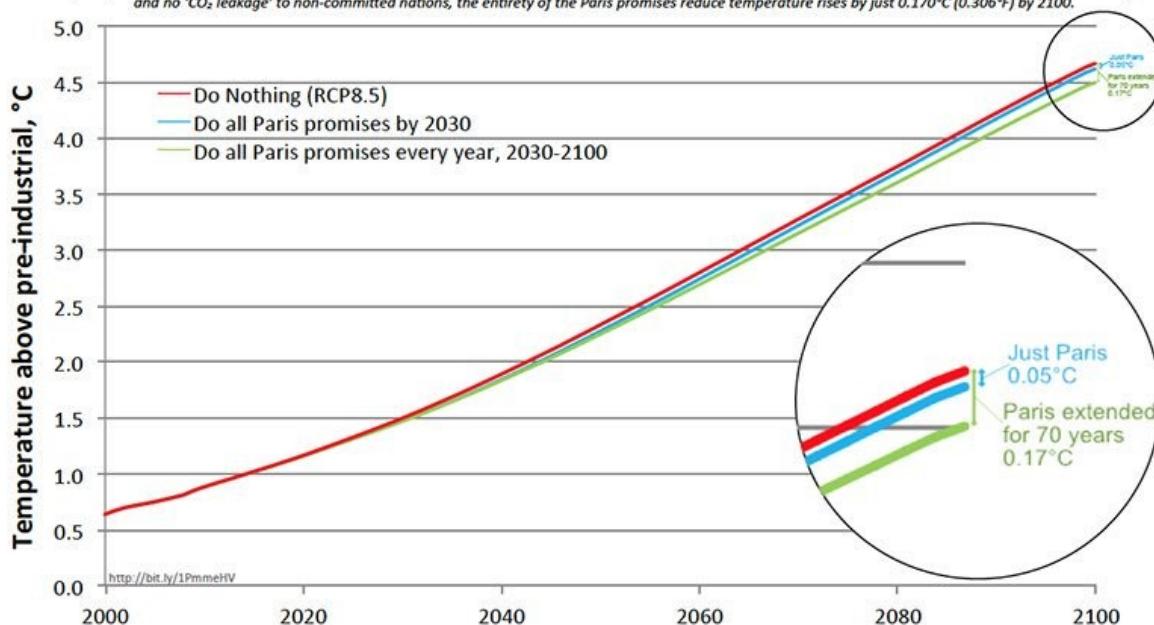
- Global Temperature Anomaly is the departure of temperatures from the long-term average.
- Optimistic and pessimistic emission reduction predictions for temperature change will do little to stabilize the climate.
- Adopting all the Paris Climate Summit's promises for 2016-2030 is predicted to only reduce the 2100 temperature rise by 0.05°C.
- The cost of this is millions of dollars in foregone economic output each year (e.g. \$924US billion per year by 2030).
- Inefficient implementation of the climate policies will double the costs.



*Illustration 18: Global Temperature Anomaly calculated by a number of models*

## Impact of the Paris Climate Conference: 0.05°C

*If every nation fulfills every promise by 2030, total temperature reduction will be 0.048°C (0.086°F) by 2100.  
If all promises extended for another 70 years: every nation fulfills every promise by 2030, continues to fulfill these promises faithfully until the end of the century, and no 'CO<sub>2</sub> leakage' to non-committed nations, the entirety of the Paris promises reduce temperature rises by just 0.170°C (0.306°F) by 2100.*



*Illustration 19: Global Temperature Anomaly produced for the Paris Summit*

Change in temperature			Change in temperature		
°C year 2100	Just Paris	Paris +70 years	°F year 2100	Just Paris	Paris +70 years
US INDC	0.008	0.031	US INDC	0.014	0.057
US CPP	0.004	0.013	US CPP	0.007	0.023
EU 2030 INDC	0.017	0.053	EU 2030 INDC	0.031	0.096
EU 2020	0.007	0.026	EU 2020	0.012	0.046
China	0.014	0.048	China	0.025	0.086
RoW INDC	0.009	0.036	RoW INDC	0.016	0.064
Global	0.048	0.170	Global	0.086	0.306

Illustration 20 The predicted impact of Paris Summit's climate policies on temperature

Billion \$ per year	Most effective policy	Most likely policy
USA	154	308
EU	305	610
China	200	400
Mexico	80	160
Rest of World	185	370
<b>Global cost</b>	<b>924</b>	<b>1848</b>

Illustration 21: The predicted cost for the world of Paris Summit climate policies (by Bjorn Lomborg, Copenhagen Consensus Center)