"Climate Change in Perspective".

By Viv Forbes*

Every time there is a flood, drought or cyclone, some politician or lobbyist immediately cites it as evidence of "Climate Change" and uses the occasion to promote the Emissions Trading religion.

People need to get a sense of history and a sense of perspective. Global climate is not a still life, it is a moving picture. Changing climate and "extreme" weather are permanent features of life on earth. Temperature, humidity and carbon dioxide content of the air, as well as winds and cloudiness, are all liable to rise or fall from hour to hour, day to day, season to season and from one climate era to the next.

Weather and climate are always changing, but mankind has little to do with it and can do nothing to change it. Life has always been threatened by natural disasters such as cyclones, droughts, floods, blizzards, hail storms, earthquakes, volcanoes and tsunamis. Sensible people accept that and try to be prepared for what seems most likely to occur. Right now, global cooling seems more likely to occur than global warming, but we should be prepared for either. Cooling will bring the greatest threats.

Let's look at some history.

The Ice Age and the Big Thaw.

This story starts just 20,000 years ago. Ice sheets covered much of the globe. Places like Chicago were under a vast slab of ice and polar bears roamed where London now lies. The frigid air contained little moisture or carbon dioxide – the moisture was locked up in ice, and the carbon dioxide was dissolved in the cold oceans. Sea levels were so low that there was land bridge between Alaska and Siberia, and nomads could walk from New Guinea to Tasmania. The level of carbon dioxide in the Ice Age atmosphere was less than 200 parts per million parts of air (ppm), the level at which plant growth almost ceases. The air was so dry, so cold and so carbon deficient that few plants grew. It was a cold, white, dry and carbon-starved world. Ancestors of today's humans eked out a survival as nomadic hunters and gatherers.

Then 18,000 years ago the world started warming. But suddenly, about 14,000 years ago, earth plunged into a severe cold snap known as the Younger Dryas. Temperatures fell steeply and the ice returned for about a thousand years. Some human populations perished, others were forced to migrate.

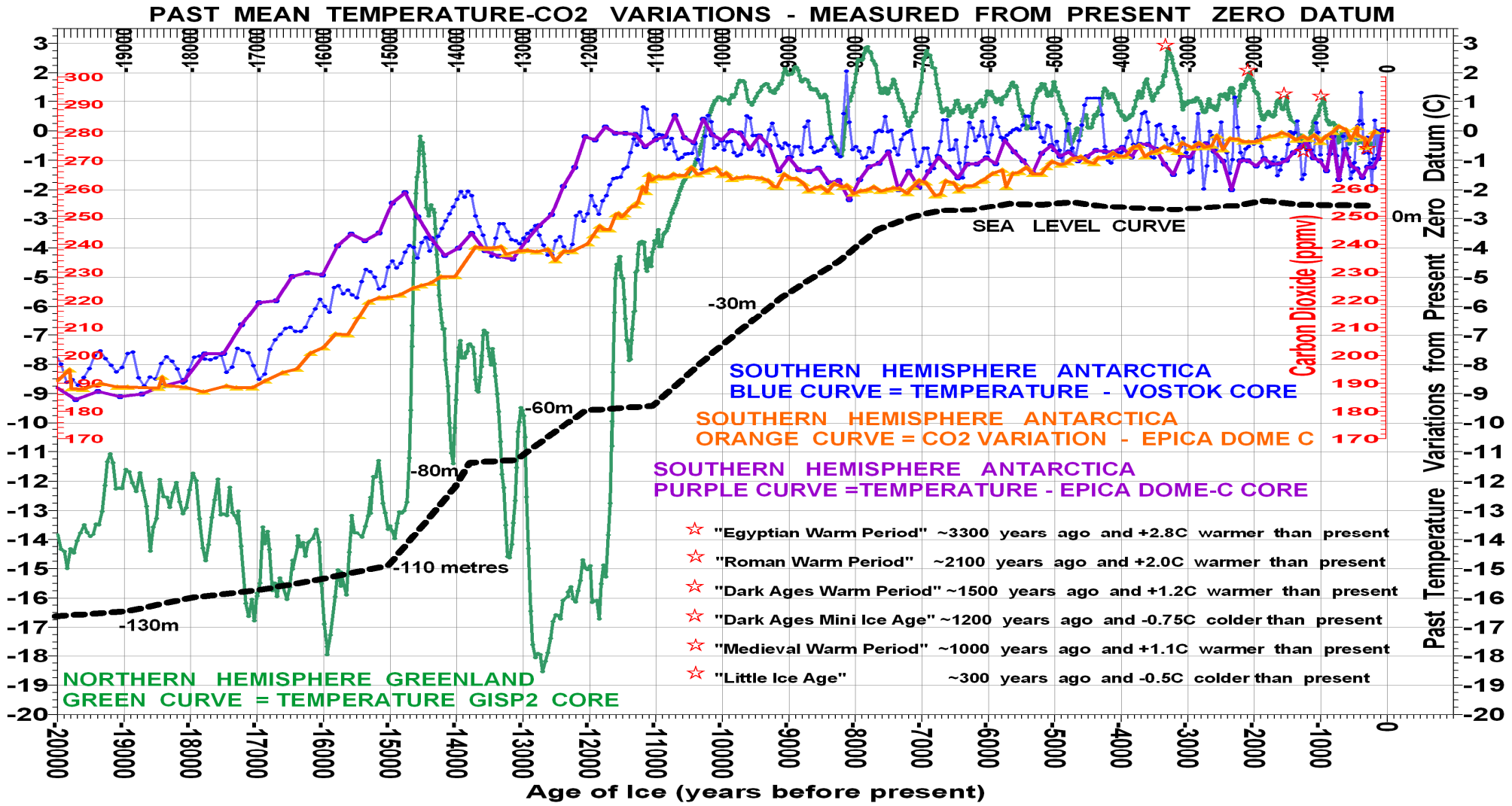
Then about 11,500 years ago, the deep freeze retreated abruptly. Not a bit of coal or oil was being burnt by our ancestors, but global temperature rose rapidly, ice melted, water evaporated and carbon dioxide was slowly expelled from the warming oceans. Carbon dioxide levels in the atmosphere rose to over 260 ppm. Temperatures rose not by fractions of a degree but by between five and fifteen degrees.

The ice sheets retreated, forests returned, glaciers melted and sea levels rose, not by a few centimetres, but by about 130 metres in about 13,000 years (an average rate of about one metre per century). Coral reefs and coastal communities were totally submerged. (Even during this period of rapid thaw and rapid sea level rise, one meter per century would give most people enough warning to wake up and move to higher ground).

By 9000 BP (years before the present), conditions became more stable, but the earth became warmer than it is now and sea levels kept rising. Dense forests and forest dwelling animals displaced the ice age flora and fauna. Life moved towards the Poles, coral reefs moved back to the shallow waters and it became a warm, green, moist and carbon-rich world.

Geologists refer to this warm, life-friendly era as "The Holocene Climate Optimum". Note that this era is called an "optimum", not a global warming "crisis", but the cold centuries that followed it are called "The Dark Ages".

Figure 1.



Graphic Compilation: G. LeBlanc Smith, 2008, Rock Knowledge Services Pty Ltd, www.rockknowledge.com.au

DATA CITATION: Monnin, E., et al.. 2004. EPICA Dome C Ice Core High Resolution Holocene and Transition CO2 Data. IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series # 2004-055. NOAA/NGDC Paleoclimatology Program, Boulder CO, USA.

DATA CITATION: Alley, R.B.. 2004. GISP2 Ice Core Temperature and Accumulation Data. IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series #2004-013. NOAA/NGDC Paleoclimatology Program, Boulder CO, USA.

DATA CITATION: Fleming, K., Johnson, P., Zwartz, D., Yokoyama, Y., Lambeck, K., Chappell, J., 1998. Refining the eustatic sea-level curve since the Last Glacial Maximum using far- and intermediate-field sites. Earth and Planetary Science Letters 163, 327-342.

DATA CITATION: Jouzel, J., et al. 2004. EPICA Dome C Ice Cores Deuterium Data. IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series # 2004-038. NOAA/NGDC Paleoclimatology Program, Boulder CO, USA.

DATA CITATION: Petit, J.R., et al., 2001, Vostok Ice Core Data for 420,000 Years, IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series #2001-076. NOAA/NGDC Paleoclimatology Program, Boulder CO, USA.

Climate Change Continues for Thousands of Years.

Figure 1 shows some of what we know about climate changes on earth since the last big ice age. It was compiled by Guy LeBlanc Smith, a retired CSIRO Principal Research Scientist (geosciences - sedimentology). To read an article by Dr LeBlanc Smith see:
http://carbon-sense.com/wp-content/uploads/2008/09/dispelling-delusions.pdf

Information about ancient climate changes comes largely from geological studies of things such as ice cores, lake sediments, deep sea muds, stalagmite rings, pollen and fossil remains, studies of ancient shore lines, topography, erosion and deposition. In the more recent eras, written historical evidence also exists on tablets, monuments and writings.

Climate history shows that warm golden eras do not last forever. Since the end of the big ice age, about ten thousand years ago, earth has experienced a series of warm and cold eras. (See Fig 1). There were about 10 peaks in temperature where climate was considerably warmer than today's averages. Five of these peaks experienced temperatures at least 2^0C warmer than today. In each case, earth's natural climate governors (including clouds, evaporation, convection and precipitation) took control and temperature went down again. There was no "tipping point", no runaway global warming. More ominously, life was continually disrupted by returning ice, species disappeared and others took their place.

In the early warm eras, sea levels rose, rainfall improved, carbon dioxide became more abundant. The Sahara bloomed with plants, irrigation channels were built in Arabia, farming expanded, forests spread over Northern Europe and Canada, and there was sufficient water for irrigation in Arabia. But this era warm era ended quickly and blizzards and ice returned.

A more dramatic warming stated about 1500 BC (3500 BP) is usually called the Egyptian Warming. It was ended by another bout of cold dry weather that caused depopulation in Greece and Turkey and hardship everywhere. Rainfall diminished and deserts expanded.

The Roman Warming of 250 BC and the fall of Rome.

In the Roman Warm era, starting about 250 BC (2250 BP), the world smiled again and populations grew. Global temperature was again higher than present averages. But the warmth was cut short by the return of the snows which forced Vikings out of their frozen North to pillage and colonise warmer southern lands. German barbarians invaded Rome. Europe fell into the dark ages, with unfavourable climate, famines, decline of civilisation and a dearth of historical records. There was a mini-ice age starting about 500 AD which lasted for about 500 years. Sea levels fell and Roman harbours were left high and dry one km from the sea.

The Medieval Warming, 550 – 1300 AD

Then we had the Medieval Warm Period, starting about 800 AD (1200 BP), a time of great achievement and prosperity. (See fig 2). Average global temperatures were about one degree above those of today. The warm seas expelled carbon dioxide, and the CO_2 content of the air rose above 280 ppm. Rainfall increased, but people were more healthy in the warmer atmosphere. Plant growth bloomed, and cold areas were re-populated. Farmers moved back into Scotland, Norway and Greenland. Food supplies increased and were more reliable. Vineyards produced wine near Manchester, in East Prussia and Norway.

Roman roads over the Alps re-appeared as the ice melted. Greenland was four to seven degrees warmer. Even Tasmania and New Zealand warmed up. Population increased, trade and industry flourished and people had surpluses for culture and education. Cambridge, Oxford and Bologna Universities were founded and great cathedrals and temples were built at Westminster Abbey, Notre Dame, Canterbury, Cologne, Florence, Castile and Angkor Wat.

The Little Ice Age, 1400 – 1900 AD

But Jack Frost returned with the Little Ice Age starting about 1400 AD. It was a cold, cloudy gloomy time. (See Fig 2).

Famine, food riots and disease again stalked Europe. Glaciers advanced, ice caps expanded, droughts and blizzards became more common and gales wracked Europe (and destroyed the Spanish Armada). Frosts killed orchards, North Sea cod moved south, food prices soared and farms were abandoned. In Scotland and Norway the capitals moved south and villages were abandoned. Passes through the Alps were closed again by snow and ice. The Greenland colony perished, and France had a major famine in 1693, when millions of people starved.

It was a terrible time for humans, animals and plants. Cattle were killed in the frigid Scottish Highlands and the starving highland clans took to raiding cattle from Lowlanders. Prices of wheat and rye soared because of poor harvests (causing food riots that led to the storming of the Bastille and the French Revolution). Wild birds and poultry died. Poultry that survived the cold were found with combs frozen and falling off. Trees split with the cold. Beech trees died and were replaced by oak and pine.

Temperatures for the last 2,000 years are shown below in Figure 2.

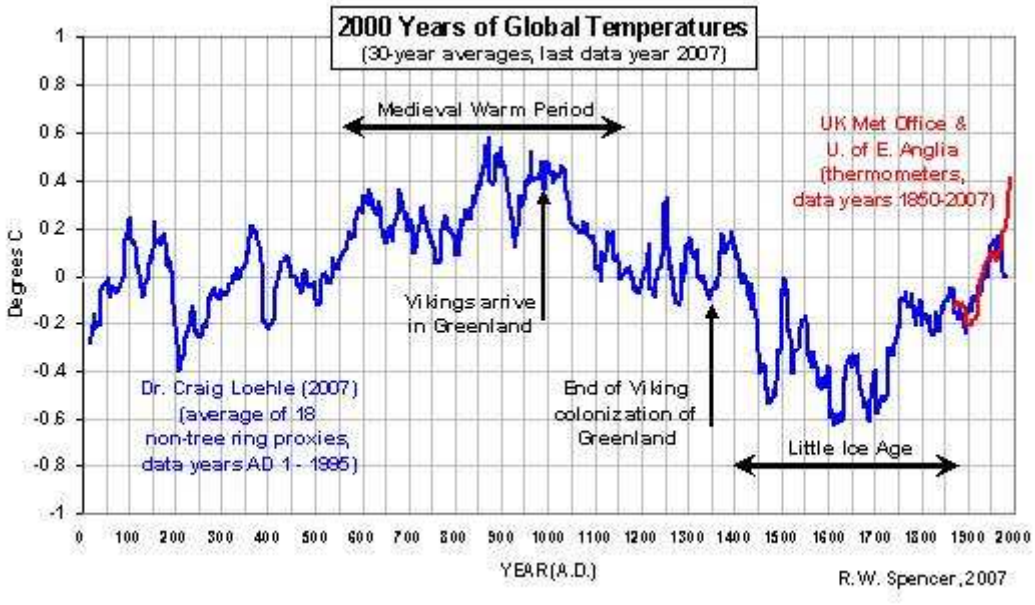


Fig.2. Global average temperature reconstruction based upon 18 temperature proxies for the period 1 A.D. to 1995, combined with the thermometer-based dataset from the UK Met Office and University of East Anglia, covering the period 1850 to 2007. Note that for both datasets each data point represents a 30-year average. This figure is taken with acknowledgement from Roy Spencer's very informative article entitled "Global Warming and Nature's Thermostat". Note also, as Roy Spencer says, this graph does not purport to be a forecast. For more reports by Dr Spencer see: www.drroyspencer.com

During the Little Ice Age, glaciers advanced in many valleys, destroying towns and fields, closing mines, damning rivers and causing floods.

Poor nutrition weakened populations and were a factor in the Bubonic Plague (Black Death) of 1347 – 1350, which killed one third of the population of Europe, and the influenza epidemic of 1557-8. Northern populations suffered a reduction in stature.

Witches were blamed for the cold and many witches were burnt at the stake. (Maybe witch hunts are returning. James Hansen, a high priest of the warmists, told a House committee in June 2008 that he thought top executives of coal and oil companies should be tried for "crimes against humanity and nature".)

Later in the Little Ice Age, during the frigid Maunder Minimum (1600-1720) it is estimated that one third of the population of Europe died. Later still, during the cold years of the Dalton Minimum (1790 – 1820 AD) Napoleon's Grand Army perished in a bitter Russian winter.

There was a slight warming from 1850 to 1880 and then the last gasp of the Little Ice Age from 1880 to 1910. (See Fig 3.)

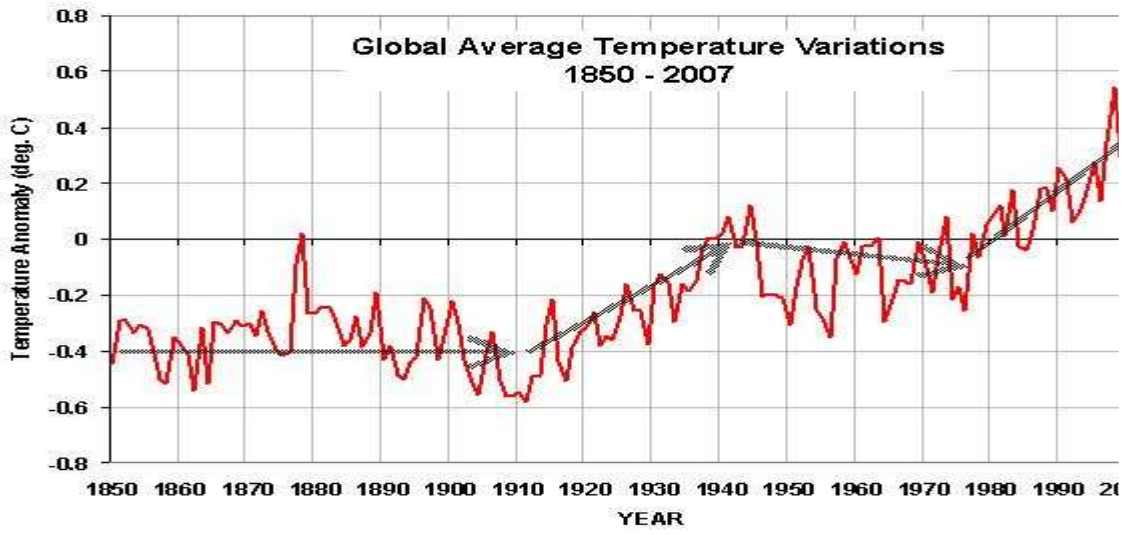
If we have anything to fear from Climate Change, it is a return of blizzards, snow and ice. Tourists from the green leafy suburbs may like to see glaciers, but advancing glaciers are feared by everyone living in their path. Local people celebrate the Spring Thaw, the first robin and the peach blossoms not the early winter snowstorm.

The Modern Warming 1910 – 2000?

The Little Ice age finally ended about 1910. With no help from men burning coal or oil, earth started to warm for another 30 year cycle to about 1940.

Dr Roy Spencer in an article entitled "Global Warming 101", June 2008, examines recent temperature history. (See Figure 3). This graph shows part of the earth's recovery from the bitter cold of the Little Ice Age. Current temperatures are not extreme, as can be seen from Fig 2. They have returned to the more liveable temperatures characteristic of the "Golden Eras" of the past.

Fig. 3 Globally averaged temperature variations between 1850 and 2007 show the emergence from the "Little Ice Age" in the early 1900's, slight cooling from the 1940's to the 1970's, and then warming again since the 1970's. (HadCRUT3 temperature dataset from the UK Met Office and Univ. of E. Anglia) Graph from Dr Spencer's article.



Over the last 100 years (since 1910 or so) globally-averaged surface temperature trends have exhibited three distinct phases, each about 30 years long as the earth recovers naturally from the Little Ice Age. (see Fig 3).

Be Prepared for "Cyclones, Drought and Flooding Rains".

People pushing the Alarmist barrow would have us believe that extreme weather events are a recent phenomenon, caused by recent man-made emissions of carbon dioxide.

The summary below is intended to illustrate that extreme weather has been with us for all of history, and can be expected in both cool eras and warm eras. Man did not cause them and cannot stop them. He can only follow the Boy Scouts motto and "Be Prepared".

Extreme Weather – with a focus on the Australian Experience

I love a sunburnt country,
A land of sweeping plains,
Of rugged mountain ranges,
Of drought and flooding rains.

Dorothea MacKellar, 1906.

Climate change and extreme weather are permanent features of the Australian experience. Only the foolish and the arrogant believe that man can cause climate change or reverse it. Every one of our ancestors, as far back as the great ice age, learned to cope with floods and fires and to adapt to ice and changing sea levels. Those who sat lamenting for the benign conditions of yesterday or making sacrifices to their gods, were wiped out.

In 1788, the first year of white settlement in Australia, a starving convict died in the extreme heat. The colony almost starved until HMS Sirius brought supplies from South Africa in 1789. Famine stalked the colony until 1790. Gales and a rain deluge destroyed the crops at Parramatta in 1792 and famine reappeared. By 1794 "fields full of ripening grain have at last brought the colony out of the miseries of deprivation". But in 1795 large floods on the Hawkesbury prompted some settlers to offer to return their land grants. Again in 1799, huge floods turned the Hawkesbury Valley into "an extensive sea, with here and there the top of a hillock or the ridge of a house appearing above the water". Storms destroyed Government House at Parramatta. Even bigger floods swept through the Hawkesbury in 1806. These floods caused rationing of food in Sydney and famine in Hobart when cereal supplies ran out.

Bushfires are not newcomers to Australia. On Black Thursday, Feb 6th 1851, with temperature up to 47 deg, fires swept through much of the pastures and forests of Victoria, killing ten people and thousands of stock and threatening towns from Geelong to Mount Gambier. "Melbourne was filled with smoke and cinders, cinders fell on ships at sea, and by evening a heavy haze had settled over Launceston."

Then in 1852, 77 people were drowned in a raging flood at Gundagai which destroyed all except four houses. The flood of 1844 had warned residents that Gundagai was in danger from the Murrumbidgee River, but nothing was done. After the flood of 1852, the people decided they had better adapt to the climate, and the town was relocated.

The world suffered the last cooling phase of the Little Ice Age from 1880 to 1910. However, extreme weather events continued. In 1887, a cyclone hit the pearling fleet working off the Ninety Mile Beach in Western Australia and 140 pearlers died.

Then in 1888 a terrible drought affected all of Eastern Australia. Wheat production plummeted. This was followed in 1892-3 by a financial crisis, a banking crash and depression. The woes of this period were increased by the huge floods in 1893 when three cyclones hit Queensland and the Bathurst Bay Hurricane destroyed the Pearling Fleet with the loss of over 300 lives. “Porpoises were found as high as 50 feet above the shoreline, such was the force of the sea and wind.” Another pearling fleet was destroyed by two hurricanes which lashed the Broome area in 1894.

All of that was just a prelude to the main weather drama of this climate phase - the Great Federation Drought from 1895 to 1902. Sheep numbers were halved and cattle numbers fell by 40%. On many properties the only animals saved were the stock horses. “Carcasses of sheep, cattle, kangaroos and emus litter the parched countryside”. Many farmers just walked off their land. Even the Cattle King, Sidney Kidman lost 70,000 cattle in the Federation Drought. Southern Tasmania had a heatwave in 1897 and bushfires killed six people; a long heatwave stoked huge bushfires which ravaged Gippsland for weeks in 1898. The river boats on the Murray stopped in 1900 and a report of the time noted “Kangaroos were too weak to hop, and kookaburras could no longer fly”. Rivers in western Queensland and the Murray Darling ran dry. There was no wheat crop in 1902, and in 1903 the mines at Broken Hill closed and the city was kept alive by train loads of water from Adelaide. Then a rabbit plague threatened the pastoral industry.

Some rains came in 1903 and a cyclone devastated Townsville, where three steamers were sunk or blown aground. Then heavy rains in 1906 filled the Murray-Darling River system and many areas experienced record floods. Another cyclone struck Broome in 1908 sinking 40 pearling luggers and drowning at least 255 men.

No one blamed the heatwaves, the floods, the cyclones or the fires on the exhaust gases from the trams, trains and automobiles which had started to replace horse drawn transport. They learned from the experience to be better prepared next time. And there were no massed protests when brown coal was discovered at Morwell in Victoria in 1905.

The First Warm Phase, 1910 – 1940’s

“Extreme” weather continued in the Modern Warming Era. 1914-1915 were drought years in Australia. The Murray River stopped flowing in 1914. Then Clermont was destroyed by a flood in 1916, and was relocated. Then the 1918 cyclone caused huge damage to Mackay and central Queensland. This cyclone recorded the lowest central pressure of the century. Droughts returned in the 1920’s reaching a climax with the drought of 1923. The 1920’s drought nearly wiped out the sheep industry of the north and west of New South Wales and a number of stations were abandoned.

Eleven cyclones hit Queensland in the period 1920-1940. A huge flood inundated Central Queensland in 1928, and 75 people were killed in a cyclone that hit Thursday Island and Townsville in the same year.

World temperatures continued to rise even though man's emissions of carbon dioxide were greatly reduced by the Great Depression. In many places, twentieth century temperatures reached a peak in the 1930's. Adelaide had a heatwave in 1934 with five consecutive days above 100 deg F (38degC).

America was scarred by the Dust Bowl drought years in the 1930's. Drought affected the whole country. Dust storms swept the plains of Colorado, Kansas, Oklahama and Texas starting in 1931, and built to a crisis on Black Sunday April 14th 1933. Powerful winds blew seeds out of the ground, buried fences and farm implements and blew top soil away. Washington was shrouded in dust. Thousands of farmers became destitute wanderers, "restless as ants, scurrying to find work, food or new land". America recorded its hottest year of the century in 1934.

Even the Arctic warmed up. The Monthly Weather Review of November 1922 reported "warming and radical changes". A Norwegian expedition led by Dr Hoel sailed further north than ever before. He found that waters about Spitzbergen where temperatures were previously 3^0 C were 15^0C and great shoals of herrings were found further north than ever before. He reported that "at many points where glaciers formerly extended far into the sea, they have entirely disappeared".

The First Cooling Phase 1940's – 1970's.

Then suddenly, with no help from an Emissions Trading Scheme, earth had a 30 year cooling spell from the early 1940's to the late 1970's.

This time a German army perished in the Russian snow.

Australia had another drought from 1937-1945 and in the 1960's. In 1952, southern Australia suffered huge bushfires in January and February, then, in June-July, torrential rain and floods hit Victoria and NSW and a hurricane hit Sydney and the nearby coast (the Victorian Weather Bureau described the episode as "a Meteorological nightmare"); then there was a severe drought in NT near the end of the year.

However global warming was not blamed as the Alarmists of the time were too busy warning that another Ice Age was imminent.

Newsweek of 28 April 1975 warned: "There are ominous signs that the earth's weather patterns have begun to change dramatically . . . ", and "The central fact is that after three quarters of a century of extraordinarily mild conditions, the earth's climate seems to be cooling down." The same article notes a sudden large increase in Northern snow cover. More interesting and relevant was this comment: "A study released last month by two NOAA scientists notes that the amount of sunshine reaching the ground in the continental US diminished by 1.3% between 1964 and 1972". If this observation is correct, it may confirm what cycle correlations suggest "The sun rules earth's temperature". The article went on to warn about the effect of cooling on food production and speculated on proposals to melt the Arctic Ice cap.

Oblivious of the predictions, warming resumed from 1976 to 1998.

The Second Warming Phase 1970's to 2004.

"Extreme" weather continued in the second warming phase of the 20th century. Cyclone Ada hit the Whitsundays in 1970. Brisbane was inundated in the 1974 flood, Darwin was trashed by Cyclone Tracey and then much of Australia suffered drought in 1982-83. This culminated in the Ash Wednesday bushfires of 1983.

Then, just as the Little Ice age ended with the Federation Drought, it seems that the latest warming phase is ending with the terrible Millennium Drought which persisted through most of the 1990's and into the 21st century. Canberra and much surrounding country was swept by destructive fires in the dry 2003. In some areas, this drought was worse than the Federation Drought.

The Second Modern Cooling Phase 2004 – 2030's?

Since the end of the Little Ice Age in about 1910, the world has warmed in waves – warming from 1910 to the 1940's, cooling to the 1970's, and then warming to the late 1990's. A peak was seen in 1998, and temperatures started to level out. Despite the boom in man's emissions from coal and oil, temperatures have not exceeded the 1998 peak and have fallen significantly in 2008.

Many parts of the world experienced a harsh winter in 2008. For the first time in recorded history it snowed in Baghdad and Saudia Arabia. North America, Asia and Siberia had the most snow cover in over 60 years. China had its worst winter in 100 years.
The rate of Arctic ice growth in October 2008 was the fastest ever recorded. From Idaho & Las Vegas to New South Wales & New Zealand it was the cold and the snows that made the news or broke records. It even snowed in London during the debate on global warming by the House of Commons – the first October snow in London for 86 years. Fig 4 shows the temperatures topping.

The Sun Rules

There is no evidence whatsoever that the tiny amount of carbon dioxide in the atmosphere controls these cycles, but significant evidence that solar cycles play a dominant role. Rainfall periods are correlated with the 22 year double sunspot cycle and temperatures seem closely related to the length of the sunspot cycle. Solar analysts suggest we may see another cool or even cold era dead ahead. (*For a discussion on Global Temperatures and the effect of the sun, see the article by David Archibald:*
http://carbon-sense.com/wp-content/uploads/2008/04/solar-cycle-24-implications-for-the-united-states-archibald.pdf

COOLING ON GLOBAL WARMING

The Brussels summit symbolizes a turning point. The watered-down climate deal epitomizes the onset of a cooling period in Europe's hitherto overheated climate debate. It may lead eventually to the complete abandonment of the unilateral climate agenda that has shaped Europe's green philosophy for nearly 20 years.

--Benny Peiser, The Wall Street Journal, 16 December 2008

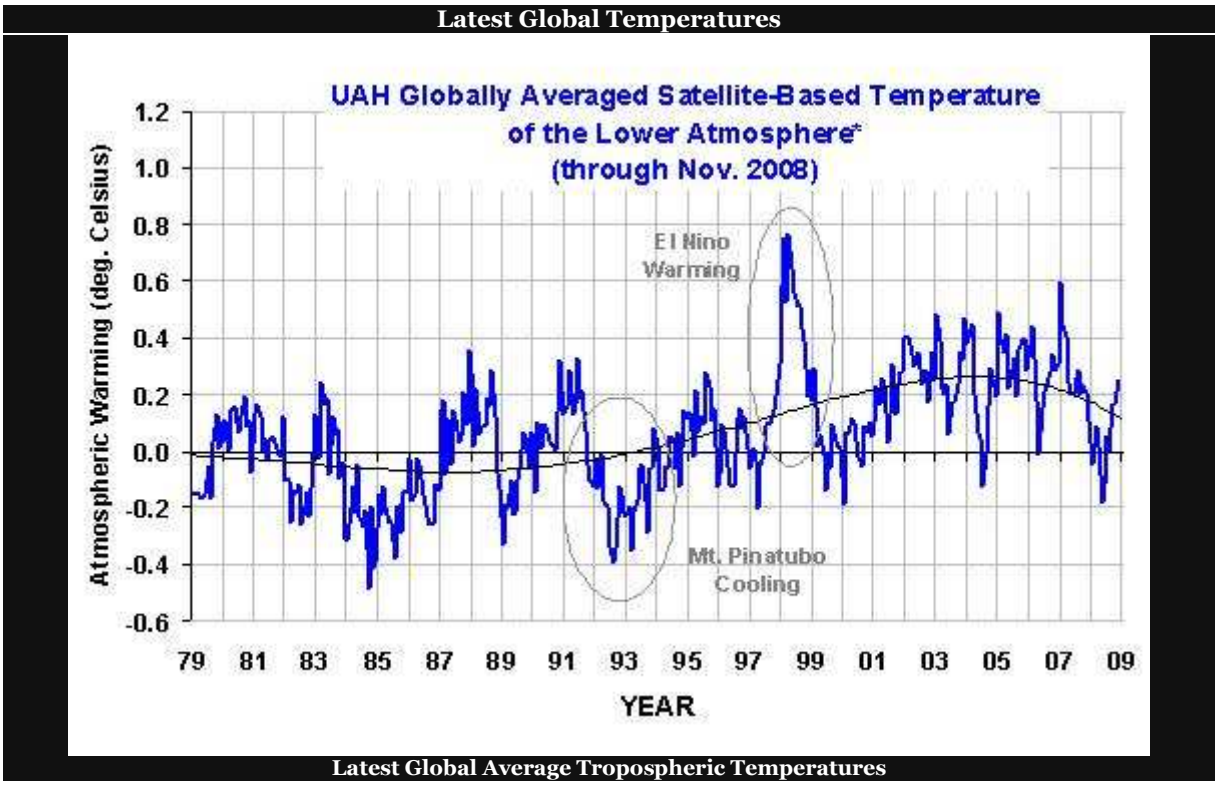


Figure 4. The above graph is produced and updated monthly by Dr Roy Spencer and John Christy. It is used with permission. The original can be found on Dr Spencer's web site at: *http://www.drroyspencer.com/latest-global-temperatures.php*

Fig 5. Atmospheric Temperature and Carbon Dioxide Content over the Ages.

Geological Era	*Million Years Ago*	*Carbon Dioxide ppm*	*Av Global Temperature ^0C*
Cambrian	***550***	***6,000***	***23***
Ordovician	***470***	***4,200***	***23 – 12***
Silurian	***430***	***3,500***	***17 - 23***
Devonian	***380***	***2,100***	***23 – 20***
Carboniferous	***320***	***1,000 - 200***	***20 – 12***
Permian	***270***	***200 – 1,900***	***12 - 23***
Triassic	***230***	***1,500***	***23 – 22***
Jurassic	***170***	***2,000***	***22 – 16***
Cretaceous	***110***	***1,500***	***16 – 22***
Tertiary	***40***	***500***	***22 – 12***
Present Time	***0***	***385***	***14 - 16****

Temperature after C.R. Scotese http://www.scotese.com/climate.htm

CO_2 after *R.A. Berner, 2001 (GEOCARB III)*

See also: www.geocraft.com/WVFossils/Carboniferous_climate.html

Figure 5. Note: * Quoting an average global temperature for the present is a tricky operation. Is it an average weighted by time and area of the globe, for a number of years? No one has such a figure, and figures from the past are probably more accurate, being determined geologically in ways that reflect the average better. A range is probably the best we can do, and this range looks reasonable, after taking into account other estimates and global averages. (Australia's average for 2008 was 21.8^{0}C.)

This table shows that only once in the past 550 million years, about 300 million years ago, were temperatures and CO_2 content as low as they are now. It could reasonably be said that today's atmosphere is CO_2 impoverished compared to some periods like the Triassic, Jurassic and Cretaceous when life was generally abundant and luxuriant. It also shows that CO_2 contents far higher than today did not cause global warming. Any reasonable person would surely conclude that the only unusual feature of today is that both temperature and CO_2 content of the atmosphere are relatively low. We need to maintain a sense of perspective.

Warm and Well Fed is Better than Cold and Hungry.

Even a casual glance at climate and human history will show that the relatively warm eras like today are far more beneficial for all life on earth than the cold dry times.

People prefer warm climates. They do not flock to Alaska, Archangel or Antarctica for winter – they head for Bermuda, the Black Sea or Bali. Most equatorial lands are highly populated eg Indonesia. All over the world, the human race is migrating towards the sun belts – Florida, the Riviera, and Capricornia – very few volunteer to live in Siberia, Patagonia or Dunedin. President Putin voiced what many Russians must think – "a bit of warmth would be welcome here".

Moreover, a bit of warmth would vastly increase the land suitable for growing food and fibres. On the other hand, a slight cooling would take much of the farmlands of Canada, Northern Eurasia and New Zealand out of production; parts of Tasmania and Victoria may have to convert from producing wheat and dairy products to farming caribou or reindeer. Queensland would be flooded with Kiwi migrants.

Warm eras also provide more total rainfall because of the additional evaporation from oceans, lakes, snow and ice, followed by additional precipitation via rain and snow. The warmth also expels carbon dioxide from the oceans into the atmosphere.

When warmth and moisture are combined with more carbon dioxide in the atmosphere, the beneficial effects on plant life are multiplied. Man's tiny emissions add to this beneficial plant food in the atmosphere and have helped trigger the modern Green Revolution.

Science shows that a further doubling of the CO_2 content of the air would have an insignificant effect on global warming but would have marvellous effects on plant (and then animal) life – the growth rate of plants would increase by 30% to 50%, all plants would be more tolerant of drought and heat, and food production would need less land and less artificial fertiliser. If we do face a cooling era, we would have a far better chance of avoiding widespread starvation if the atmosphere contained 1000ppm of CO_2 – about 3 times current levels. Burning more fossil fuels for energy production may save us in more ways than one during the inevitable next Ice Age.

The whole animal kingdom, including mankind, relies totally on plants to survive. Without grasses and cereals on land and plankton in the sea, most of mankind would starve.

Warm & Well Fed (Warm Season, Canada, 2008)
Animals getting fat eating live plants which are extracting carbon from the CO_2 in the atmosphere.**

All plants need moisture, warmth, and carbon dioxide to grow and flourish. Why then are we having hysterics because the earth is currently blessed with more than average of these three magic life sustainers? And why are politicians taxing carbon dioxide and encouraging people to waste money on foolish schemes such as trying to bury this harmless, essential and rare plant food in artificial and expensive carbon cemeteries? The oceans are the best natural regulators of temperature and carbon dioxide.

Cold & Hungry, Canada, Cold Season, 2008, same property,
Hungry animals waiting to be fed on
round hay bales, (stored carbon energy).**

Be Thankful for the Warmth and for the Abundance of the aerial plant food, Carbon Dioxide.

All humans should be thankful for the modern warmth and for carbon foods and carbon energy - it is the cold, hungry, carbon-deficient Ice Ages we need to Fear. Even today, people in the northern latitudes who cannot afford to pay for energy, or whose power supplies fail, often die in their frozen homes.

Acknowledgment: Much information on the benefits of past global warming and world climate history was obtained from a well researched little booklet entitled:

"Global warming – a boon to Humans and Other Animals"
by Thomas Gale Moore, Hoover Institution, Stanford University, 1995.

"As a scientist and life-long liberal Democrat, I find the constant regurgitation of the anecdotal, fear-mongering clap-trap about human-caused global warming to be a disservice to science.

"From the El Niño year of 1998 until Jan., 2007, the average temperature of the Earth's atmosphere near its surface decreased some 0.25^0 C. From Jan., 2007 until the spring of 2008, it dropped a whopping 0.75^0 C."

Dr. Martin Hertzberg, a physical chemist and retired Navy meteorologist
USA Today September 26th 2008.

Even the dumbest sheep in Australia knows that being warm, watered and well fed is better than being cold, thirsty and starving.

"Even the dumbest sheep knows that warm and well fed is better than cold and starving.
Be Thankful for warmth, carbon foods and carbon energy
- it is the Cold, Hungry, Carbon-deficient Eras we need to Fear".**

Avoiding Pollution and Waste.

None of the above is intended to support the wasteful use of energy, or pollution of land, waters or air. Modern power generation units collect all the more noxious elements produced during combustion of carbon fuels, leaving just two so-called "greenhouse gases" to escape up the chimneys – water vapour, which is what you see every time a TV focuses on a power station, and carbon dioxide. The major pollution comes from open cooking fires, bush fires, old vehicles and obsolete dirty smelters and furnaces, not from modern coal power stations.

Water vapour is not a pollutant, neither is carbon dioxide. CO_2 is a colourless, non-toxic, natural gas that has always been an essential component of earth's atmosphere. There is no danger and considerable benefits for all life if the CO_2 content were even three times current levels. The whole global warming hysteria is not soundly based, and relies totally on using unrealistic assumptions and complex computer programs to generate scary forecasts. These are no better than astrological readings.

Conclusions.

This brief review of recent climate history lead to a few conclusions:

- There is no global warming crisis. The world is just emerging from the Little Ice Age – so naturally temperatures will be above those of last century.

- There is nothing unusual about today's temperature levels or their trends. There were several periods since the Big Ice Age ended that had temperatures above the present.

- Man's emissions of carbon dioxide are beneficial not dangerous. And current levels of CO2 are low by historical standards. All life would benefit from an increase in CO_2 content.

- Extreme weather events are a permanent feature of the world's climate. Weather extremes occur at any time and in all climate phases. All we can do is "Be Prepared".

- Humans cannot control the climate or the weather. They must learn to adapt to whatever the future holds, or, like the dinosaurs that ruled the world for far longer than humans have done, disappear and be listed among the long list of species extinguished by climate change.

- "Climate Change" is the natural condition on earth – climate and weather are never still. If we have anything to fear from "Climate Change" it is not warming, whose effects are almost wholly beneficial. What we need to fear is a return of the cold, dry, hungry ice ages.

- It is clear that the theory that carbon dioxide causes dangerous global warming is false. It predicted increasing warming as the CO_2 content rose. But temperatures fell, twice in the last 100 years. Now in another fraudulent about face they will try to say that man's CO_2 is now causing the cooling. In other words, no matter what happens, they will adjust the theory to claim it proves their failed thesis. This is pseudo science.

- An alternative theory that phases in climate are affected by solar cycles has been proved to largely agree with observations. Those forecasts came before the event suggesting that the theory may be correct.

- There is no need whatsoever for an economically dangerous and scientifically discredited Emissions Trading Scheme with its taxes, bureaucracy and disruptions.

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***** The three pictures were taken recently by our friend Helmut Lang who, with help from his family, and despite all odds, raises cattle, sheep and pigs in the Rockies of British Colombia.***