

Climate Change- Global Warming and Warming the Globe

There is no real supporting scientific evidence for the theory that human activity causes global warming . Those scientists who support the theory have assumed that carbon dioxide is responsible and have set out to prove this by studying very short term climate change.

Climate change is a long term natural phenomenon and to understand it requires input from many branches of science. All the scientific data required for this is readily available. Clever forensic research by geologists and palaeontologists has provided insight into past global climate changes and recorded history over the past 2000 years confirms that the current warm period is consistent with the pattern which has prevailed for the past 400,000 years at least.

The Effect of Ice Ages :

The Earth experiences an ice age about every 100,000 years. The accepted theory is that the ice ages result from cyclical changes in the tilt of the Earth's axis between plus 23.5 degrees and minus 23.5 degrees. During the centuries when the polar regions receive minimal direct warmth from the sun the Arctic ice cap grows southwards covering large areas of Europe, Asia and North America. The last ice age is thought to have started 90,000 years ago and ended 10,000 years ago.

During the past four interglacial periods the global temperature has ranged between 4 and 8 degrees below those being experienced today. In each case the temperature has risen to 2 degrees above today's temperatures during the first 10,000 years after the end of that ice age. In the three ice ages which preceded the last one the temperature fell to 6 degrees below today's temperature 20,000 years after it had begun to rise to its peak of 2 degrees above those obtaining today.

The Earth enjoys a brief warm period after each ice age while the Arctic ice cap is at or near a minimum. The current warmer period has occurred because the Earth has recently emerged from an ice age. Eighteen thousand years ago, towards the end of the ice age, when the amount of ice which melted each summer began to exceed the amount deposited during the preceding winter, the ice sheet which covered the northern parts of Europe, Asia and Northern America began to retreat. This continued for the next 10,000 years, during which the climate in those northern parts changed from ice cap to sub-arctic and the higher latitudes began to enjoy the warmer summer temperatures occurring today.

How the warming occurs:

The progressive melting of the northern ice sheet occurred as the gradual increase in the tilt of the Earth's axis allowed the sun to penetrate marginally further north each summer until it reached the maximum 23.5 degree tilt. As the ice sheet retreated the atmospheric temperatures rose steadily over the 10,000 years until it reached the temperatures being experienced today which have been sustained for most of the last 8,000 years. This is exactly what happens nowadays each spring after the thaw in areas covered by ice and snow during winter.

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The warmth which melts the ice is transmitted directly from the sun during the summer and is stored in the melted water thus raising the mean global temperature. Conversely, when the polar ice is accumulating the mean global temperature falls. The warming which has occurred at the end of the last four ice ages has caused a rise in global temperatures of between 6 and 8 degrees centigrade. A similar fall in global temperature has occurred while the ice sheet was building up in the three which preceded the last ice age and will occur again when the next one begins. These temperature changes only affect those areas subjected to the climate change from and to polar and sub-polar. In the vicinity of the equator temperatures remain reasonably constant while ever there is no significant variation in the radiant energy it emits.

Correlation with the rise in sea level

When the continental ice sheet melted, causing a rise in sea level of 120 metres, a substantial volume of carbon dioxide was released into the atmosphere. During the 8,000 years since then the ice caps have continued to melt releasing further carbon dioxide and this will continue until the amount of ice deposited during each winter begins to exceed the amount which melts during the following summer and the Arctic ice cap begins to grow southwards heralding the start of the next ice age. This is evidence that carbon dioxide does not cause climate change. If additional amounts of carbon dioxide in the atmosphere did cause the Earth's temperature to rise the global temperature would have continued to rise during the succeeding 8000 years.

The warming of the globe

The global warming and cooling caused by the growth and retreat of polar ice during ice ages is separate and distinct from the normal process of warming the higher latitudes by distributing heat from the tropics via ocean currents. This latter process, in which the "green house effect" plays an important role, continues to operate at all times and ensures that the planet remains habitable both between and during ice ages. It does not effect the mean global temperature but its effect on temperatures in the higher latitudes can vary both during the interglacial warm period and in the depths of the ice age.

The scientific theories relating to global warming are not in dispute. Carbon dioxide, besides being essential to support the plant life which forms the bottom of our food chain, is also a "green house" gas with a role in the warming process. The global warming theory, which postulates that to maintain a constant average temperature, the Earth must radiate into space as much energy as it receives from the sun, is equally valid but has to be properly applied.

All global warming is derived from the sun. The warming provided directly during the daytime is temporary and concentrated in the lower latitudes. This is augmented through the greenhouse effect induced by greenhouse gases, mostly water vapour, carbon dioxide and methane, in the lower atmosphere. Of these water vapour is acknowledged as the most powerful being estimated to account for between 75% and 95% of the total greenhouse effect.

The sun delivers its energy to only half the globe at any one time. The intensity is a maximum at the point immediately under the sun and diminishes radially to zero at the extremity.

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As all the energy received from the sun is ultimately radiated into space the mean global temperature remains constant.

The warming process:

The amount of heat retained each day in the ocean for distribution around the planet is constant, being inversely proportional to the water temperature which is moderated by the evaporation process acting as a thermostat. Any increase in lower atmospheric temperature increases the production of water vapour which has a cooling effect, stabilises the water temperature and thus the absorption of heat. This is the principle of a cooling tower.

It is this heat which sustains the equitable climate enjoyed throughout most of the globe. It ensures that night time temperatures are maintained at reasonable levels especially close by the oceans. The warming of the higher latitudes is at the expense of the warmth retained in the oceans in the lower latitudes, so, if the distribution of the heat from the lower latitudes to the higher latitudes adhered to a set pattern the mean global temperature and the global climate would both remain constant during both the warmer interglacial and cooler glacial periods. This is not the case as there is evidence that during both periods temperatures can rise and fall by up to four degrees within a 50 year period. These minor changes are most likely due to periodic natural variations in the transference of the heat from the tropical areas to the higher latitudes via the ocean currents and atmospheric weather systems.

Major temperature changes:

From 1645 to 1715 the upper northern latitudes experienced temperatures from four to six degrees cooler than those being experienced today. This corresponded with a period of extremely low sunspot activity. Sunspot activity has been much higher since and was exceptionally high during the 20th century and temperatures have returned to current levels.

The lower summer temperatures during the "little ice age," as that period has been titled, doubtless allowed the arctic ice cap to reverse shrinking and build up sufficiently during the colder winters to cause a fall in mean global temperature. It is the subsequent rise in temperatures since then that is causing concern and being subjected to intensive monitoring by IPCC. There is strong evidence that since the beginning of this century temperatures have resumed a downward trend commenced in 1050 AD.

Conclusions:

The evidence speaks for itself. Planet Earth is in the final stages of a warm interglacial period and within the next 2000 years the global temperature will fall by six to eight degrees centigrade. The descent may have begun already. During the ensuing glacial period the "green house" process will continue to provide the fresh water and warmth required to make the planet habitable although in some locations the climate will not be as amenable as it is today. Subject to the sun maintaining a constant energy stream the temperature at and near the equator will not vary. All the change will occur in the upper latitudes. There is no way that human activity can influence this outcome.

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Carbon dioxide and water vapour are both greenhouse gases but neither is a pollutant. In fact, extra CO₂ in the atmosphere promotes plant growth on land and the generation of water vapour at sea. Neither contributes to climate change and the generation of water vapour provides the thermostat which controls absorption of heat into the oceans. Any attempt to moderate climate change by reducing carbon dioxide emissions will not only be fruitless and costly but will be harmful. The adverse consequences of endeavours such as producing biofuels are painfully evident already.

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