

# **On Global Climate Change**

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Global warming is a contentious issue. One cannot avoid reading any papers or watch any news media without finding the dire consequences of global warming these days. With the awarding of the Nobel Peace Prize to IPCC (2007), their view of CO<sub>2</sub> (or the green house gases) as the sole and dominant culprit, causing all the global warming, has become the main stream thoughts and accepted as a fact. In this brief presentation, the available records on global climate changes at all temporal scales will be examined critically. We found that there are various temporal scales for climate changes, each caused by different physical mechanisms, from geological scale (100 million years) related to continental drifts to the ocean dynamics scales (100 -1000 years) related to the thermohaline circulation. The recent climate warming over the last 150 years is due to the combination of a secular trend and a 65 year natural oscillation that is near the peak now. As a result, the warming rate appears artificially high with a temperature increase of around 0.6 °C over the last 150 years. The real global warming rate is only partially due to the green house gases and partially due to the natural climate variations.