

Contrarian views on Climate Change

by Dana Sacchetti

Daring to Zig

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Anthropogenic global warming (AGW), or human-caused warming of the Earth’s atmosphere, is seen by many as the foremost threat facing our world today. The UN has convened scientific experts from around the world to research, measure and gauge possible responses to what many warn as significant global changes due to warming of the planet’s atmosphere and oceans. Citing emissions of greenhouse gases (GHG) by human activity, the UN’s Intergovernmental Panel on Climate Change (IPCC) has issued an authoritative set of reports dating back to 1990 on the causes and risks associated with AGW.

The strongest and most commonly cited conclusion that the IPCC has issued to date is that most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations. The panel stands behind this statement, citing a 90% probability of accuracy.

Yet amid mounting scientific concern regarding global warming and increased blame pinned upon anthropomorphic factors, there is a small yet significant cadre of scientists and topical experts who question many of the leading arguments regarding the causes of global warming. For them, the view that the ‘science is settled’ on AGW is very much open to debate. In a global dialogue that is currently assessing the possible social, environmental, and economic decisions that surround climate change research, they are the few who dare to zig while the rest zag.

It’s Not So Hot After All

By far the most controversial point among climate change sceptics, there are those who call research that points to the earth’s warming as dubious. This particular brand of scepticism cites recent and historical temperature records to argue that:

→ mean global temperature measurements are flawed and demonstrate no increase in the world’s temperature; or that

→ taken in a wider historical context, the global temperature trend exhibits enough variance over time to indicate that the current level of concern over global warming is unwarranted.

“Climate is always changing — change is what climate does,” explains Professor Bob Carter, geologist and environmental scientist at James Cook University in Queensland, Australia. “The rates and magnitude of warming during the late 20th century fell within the limits of earlier natural climate change.”

In recorded temperature records dating back to the 1850s, the 1990s were the warmest decade ever recorded, with 1998 the singular hottest year yet measured. But in the years since 1998, even as levels of carbon dioxide (CO₂) have intensified, the warming trend hasn’t continued. For sceptics, this break in the temperature trend validates their argument.

“The average global temperature has not increased during the years since 1998, despite an increase in atmospheric CO₂ of 15 ppm (4%) over the same period,” Carter points out.

Historical Precedence

Other sceptics look to patterns of historical climate variation and point to two significant periods of climatic change over the past millennia as indication that climate change is little more than a natural phenomenon. The Medieval Warm Period (MWP), which occurred from roughly 800-850 A.D. to 1300 A.D., represented a mild few centuries. The MWP was then followed by a cooling period known as the Little Ice Age (LIA), from 1300 A.D. to 1900 A.D. Though there is debate as to the extent of temperature variance and whether these eras of climatic abnormalities were global in nature, climatologists and other researchers do not quibble that these periods demonstrated patterns of ‘natural’ climate change.

Arguments against AGW point out that these historical shifts in average temperature occurred in the absence of any industrially-produced increase

in CO₂ levels or any other human-induced factor. If the earth warmed during the MWP and cooled during the LIA without any industrial human interference, why can't current climate trends also reflect a natural trend?

One report issued by the Harvard-Smithsonian Center for Astrophysics in 2003 backs this thinking. In the study, scientists looked at more than 200 climate studies and concluded that the 20th century is neither the warmest century nor the century with the most extreme weather of the past 1000 years. Willie Soon, a Smithsonian astronomer and one of the lead authors of the study, concluded that, Regions worldwide experienced the highs of the MWP and lows of the LIA, and that 20th century temperatures are generally cooler than during the medieval warmth.

Finding Common Ground

There is one truism which all sides of the global warming debate find agreement on: the notion that the earth's climate has always seen change. Through examination of historical accounts and scientific evidence, we know that the Earth's climate has never stayed constant.

"For small changes in climate associated with tenths of a degree, there is no need for any external cause," stated Richard Lindzen, Alfred P. Sloan Professor of Atmospheric Sciences at the Massachusetts Institute of Technology. "The earth is never exactly in equilibrium."

So, Who's to Blame?

So if AGW isn't the cause, then what exactly is upsetting the balance of Earth's climate? Some scientists have looked to the heavens for answers.

Some say that a recent uptick in the Sun's energy is responsible for a warming of the Earth. Since the Sun's energy is primarily responsible for heating the Earth, why can't an alteration in solar activity also influence a change in climate? The theory of solar-influenced climate change traces the causal relationship from the concept of a 'variable Sun.' The thinking goes that as radiant energy from the Sun fluctuates, so too does the heating and cooling of Earth's atmosphere.

These fluctuations in solar activity are measured as sunspots, giant solar storms that have the ability to have some effect upon Earth's climate. If the Sun was found to be particularly active over a given

time period, perhaps a causal relationship to planetary warming could result. In 2004, researchers at the Max Planck Institute for Solar System Research in Germany found that the Sun had been more active over the past 60 years than any other similar time period over the past 8000 years.

But it's not simply recent solar phenomena that sceptics point to for proof of the variable sun theory. Recall the earlier mention of the LIA, a climatic episode of such significant cooling that Alpine glaciers advanced in Europe and New York Harbor once froze. The coldest episode of the LIA correlated directly with a thirty-year phase of the lowest solar activity ever recorded. If such a radical downturn in solar activity coincides with a time of historically bitter cold, why can't more sunspots lead to warmer temperatures?

"A sun with less radiant energy is certainly a good possible explanation for some of the cooler episodes in climate history," Soon argues.

But it may be more than sunspots to blame. Another concept faults radiation from the far reaches of space that enter Earth's atmosphere, causing electrically charged ions to spur cloud formation. Dr. Henrik Svensmark, a weather scientist from the Danish National Space Center, proposes that these cosmic particles may play a role in climate change. Svensmark hypothesizes that a hyperactive Sun may divert this interstellar radiation, diminishing cloud formation, which could then spur global warming.

Proving by Disproving

Taking a different tack, some scientists seek other explanations for climate change, others punch holes in the research methodology of conventional climate change thinking. The bedrock of much of the IPCC's analysis depends on computer models to forecast future climate conditions.

Various other hypotheses for global warming involve factors such as oceanic trends, water vapour, celestial phenomena, and even levels of methane produced by livestock. For the sceptic willing to go against the grain on climate change, there's a seemingly endless array of factors to hold up as reason for warming.

Dana Sacchetti is staff writer at the IAEA's Division of Public Information. E-mail: D.Sacchetti@iaea.org