

## ESSAY REVIEW

### **Climate-Change Science or Climate-Change Propaganda?**

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**Climate Change: Evidence & Causes<sup>1</sup>—An Overview from the Royal Society and the U.S. National Academy of Sciences.** Washington, D.C.: National Academies Press for The National Academy of Sciences and The Royal Society, 2014. 36 pp. \$5 (paperback). Free at Amazon Kindle and at [http://www.nap.edu/catalog.php?record\\_id=18730](http://www.nap.edu/catalog.php?record_id=18730). ISBN 978-0-309-30199-2.

#### **Preamble**

Those who take an interest in topics ignored by mainstream science (e.g., reports of UFOs, of apparently psychic phenomena, of creatures thought not to be extant) are quite accustomed to having even tangible evidence dismissed out of hand, dogmatically, sneeringly, by official representatives of mainstream science or by their camp followers.

It is not yet widely recognized that the same dismissive dogmatism is in play on some matters that are squarely within concerns of mainstream science. Even competent, highly informed experts who present evidence and interpretations that run counter to the prevailing consensus are dismissed dogmatically as “deniers” or “denialists”, notably regarding human-caused climate change or about whether HIV causes AIDS (Bauer 2012).

Science is popularly seen as open-minded and evidence-respecting, so it may well seem incredible that competent minority views on such issues of considerable public importance should be suppressed and their proponents vilified. It must seem unbelievable that the most respected scientific institutions could distort and misrepresent evidence with the aim of entrenching a mainstream consensus. Yet that is demonstrably the case over climate change in the booklet under review here.

#### **Introduction**

Governments and international as well as national scientific authorities project certainty that human activity, in particular the generation of carbon dioxide (CO<sub>2</sub>) is primarily responsible for warming of the Earth and for such perceptible changes in climate as rising sea-levels and increasing frequency of

extreme weather events—heat waves, droughts, floods, tsunamis, hurricanes.

On the basis of this certainty, unprecedented changes in modes of production, involving huge expenditures, are being planned and introduced with the aim of decreasing the present rate of generating CO<sub>2</sub>.

The scientific claims of such human-caused climate change (HCCC) or human-caused (anthropogenic) global warming (AGW) are presented in periodic reports from the Intergovernmental Panel on Climate Change (IPCC).<sup>2</sup> These reports are available free as PDF downloads. The 5<sup>th</sup> (and latest) Assessment Report (AR5) comes in 4 parts, in PDF files with sizes listed as 375 MB, 176 Mb, 51.4 MB, and 10 MB, respectively (however, the last one, the “Synthesis Report”, shows up as 14.2 MB on my computer).

Among that mass of material, one might hope to find somewhere a clear statement of the proof that global warming and associated climate change is owing primarily to increasing levels of CO<sub>2</sub>. Any such hope would be dashed despite >600 MB-worth of PDFs, 7,000-plus pages.

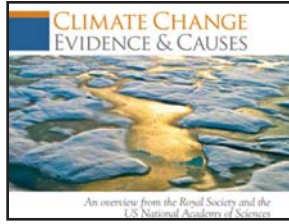
The present mainstream position rests chiefly on two unproven points:

1. Because CO<sub>2</sub> absorbs infrared radiation, which manifests as heat, any heat absorbed in the atmosphere by CO<sub>2</sub> must go into heating the atmosphere and the earth and oceans. Further, computer models based on that view also assume that a feedback mechanism amplifies the heat absorbed by atmospheric CO<sub>2</sub> (e.g., Singer 2014).
2. Misconstruing as evidence of causation the gross overall correlation from about 1850 to the present between CO<sub>2</sub> levels and global temperature. But correlation never proves causation.

The case for CO<sub>2</sub>-caused warming and climate change consists of these and other assumptions built into elaborate computer models. That the models must be exceedingly complex is obvious, given all the variables and interactions among land, sea, and atmosphere, each of those being a combination of different characteristics at different heights or depths, all of that changing dynamically in short-term as well as long-term ways; with local differences to be taken into account; variations in solar radiation striking the Earth; variations in amounts of all the greenhouse gases—water vapor, methane, nitrous oxide (N<sub>2</sub>O), and ozone as well as CO<sub>2</sub>: Water vapor exercises a greenhouse effect several times stronger than that exerted by CO<sub>2</sub>, and methane and other gases together are calculated to be about as important currently as is CO<sub>2</sub>.

It would be rather miraculous if any model were capable of doing this job, since there are innumerable heat-exchange processes occurring all the time in Nature. How well a model performs can only be judged by comparing its output to actual observations. In that respect, all the models

have failed quite dramatically, even though that is not officially acknowledged. It is undisputed that CO<sub>2</sub> levels have increased relentlessly since at least the middle of the 19<sup>th</sup> century. At the same time, from the 1940s into the 1970s global temperatures were going down rather than increasing; and since about 2000 there has been no appreciable warming globally. The Nature-given fact is that there have been 4 or 5 decades out of the last 160 years or so during which temperature did not rise while CO<sub>2</sub> levels did. No model accounts for that, showing that natural influences missing from the models can outweigh any greenhouse warming by CO<sub>2</sub>. It follows that no projections from these models into the future should be taken seriously.



An elephant in the room is the historical record of temperature changes. Direct measurements are available from only about the middle of the 19<sup>th</sup> century, and even these encompass many uncertainties because of different methods of measurement and the fact that each measurement is local or at best regional; and temperatures also vary with height in the atmosphere as well as depth in the earth and oceans. Significant changes over geological time can be estimated with good reliability, but not decade-by-decade<sup>3</sup>; the record for earlier times is not fine-grained enough and nowhere complete enough to compare reliably with what has happened in the last few decades. Ice cores sometimes yield reasonable estimates nearly a million years into the past, but only in one locality. The mainstream claim that rates of temperature rises in the last century-and-a-half are somehow unprecedented cannot be proven because the precedents, the historical records, are neither sufficiently fine-grained nor sufficiently reliable.

The voluminous IPCC reports offer detailed discussions of how the innumerable variables function in the computer models. Different degrees of certainty are assigned to various points; for example, “The period from 1983 to 2012 was *very likely* the warmest 30-year period of the last 800 years in the Northern Hemisphere, where such assessment is possible (*high confidence*)” (italics in the original, p. 56 of *Synthesis Report, AR5, 2014*). Such statements of probabilities and levels of confidence about the probabilities are everywhere. They are described on p. 37:

virtually certain, 99–100% probability; extremely likely, 95–100%; very likely, 90–100%; likely, 66–100%; more likely than not, >50–100%; about as likely as not, 33–66%; unlikely, 0–33%; very unlikely, 0–10%; extremely unlikely, 0–5%; and exceptionally unlikely, 0–1%. . . . Unless otherwise indicated, findings assigned a likelihood term are associated with *high* or *very high* confidence.

Probabilists and statisticians might ask what possible grounds there could be for assigning numbers to these subjective human judgments, let alone including the extreme—and invalid—possibility of 100%; perhaps particularly since these judgments are made with various degrees of confidence, in other words again subjectively.

This internal evidence demonstrates in itself that there is no definitive proof that the models faithfully represent reality. In other words, there is no tangible objective evidence to support the AGW and HCCC scenarios.

That must seem incredible. There is no historical precedent for such a lack of hard evidence for a scientific consensus that has been proclaimed for several decades as trustworthy, as certainly true, by all national and international institutions of government and science, on an issue so pertinent to national and international policies and budgets. Admittedly, minority views in science have always been resisted as a matter of course (Barber 1961, Hook 2003), and sometimes correct minority views had to wait for decades before being accepted (Stent 1972); but never before when huge public expenditures were at stake. The only comparable situation is the contemporary claim that HIV causes AIDS (Bauer 2007, 2012).

National and international institutions do not readily admit error; and large numbers of researchers are vested in the AGW/HCCC scenario. All have staked their credibility and authority and reputations and careers on being right. It follows that every conceivable effort will be made to maintain public belief in AGW/HCCC.

If there were clear, tangible evidence for AGW/HCCC, it would only be necessary to present it. Resorting to computer models that need thousands of pages of justification already reveals the fact that such evidence does not exist.

That is the context in which the Royal Society of London and the National Academy of Sciences of the USA have issued this publication asserting the truth of AGW/HCCC. The pamphlet commits sins of omission and commission in relying on rhetorical trickery and in misrepresenting facts.

*Climate Change: Evidence & Causes* poses and answers 20 questions about climate change, followed by a section on “Basics of Climate Change.” Had it been published by an activist environmentalist organization, it could safely be ignored as a self-confessed piece of propaganda. But it can hardly be ignored when it comes from the top scientific institutions in the United States and Britain and might therefore be presumed to provide the most judicious available assessment of its chosen subject. Nevertheless, it is propaganda, not a scientific assessment. It argues from authority and distorts evidence in doing so.

The very term “climate change” in this context is rhetorical sleight of words. Until a few years ago, “global warming” was the universally used shorthand for human-caused global warming. But since there has been no appreciable warming globally for the last 15 years or so, the critics of carbon emissions have been using the term “climate change,” which cannot be contradicted or falsified: Climate has always changed and always will; global cooling also is climate change.

### **Arguing from Authority with Just-So Stories**

A common tactic when arguing from authority is the Just-So Story, supporting a dogmatic assertion with apparently reasonable statements which, however, have no basis in reality. Rudyard Kipling’s *Just So Stories* are the eponymous icons for this genre, imaginatively whimsical “explanations” for how the leopard got its spots, the giraffe its long neck, the camel its hump, and so on.

“But, Mr. Kipling, how do you know that’s so?”  
“It’s just so . . . Just So.” (Hillerich 1966)

The absolute conviction that human activities are causing global warming and more generally climate change spawns any number of such Just-So tales. Presuming that AGW is “bad,” it follows that its consequences will be bad, for example that it will bring about such catastrophic weather events as hurricanes or tsunamis. But if one thinks about the probability of extreme weather events on first principles, one might equally argue that higher temperatures would bring *fewer* unusual events. After all, heat seeks to even itself out in every possible way, by radiating away and causing material to move (convection) and by transmitting itself to neighboring material (conduction). We have to use elaborate means of insulation like vacuum bottles to discourage heat from averaging itself out. So as the whole globe gets on average warmer, heat should even itself out ever more efficiently: Radiation gets more intense, material moves more quickly, heat transmits itself faster, so that there would be fewer idiosyncratic places or movements to spur extreme events. (Just So!) During much of the ages of the dinosaurs, Earth was between  $\sim 8^{\circ}\text{C}$  ( $\sim 14^{\circ}\text{F}$ )<sup>4</sup> and  $\sim 12^{\circ}\text{C}$  ( $\sim 22^{\circ}\text{F}$ )<sup>5</sup> hotter than now. No evidence has been presented that “unusual” or “extreme” weather events then were more common than nowadays.

“Why is Arctic sea ice decreasing while Antarctic sea ice is not?” (Question 12). The pamphlet’s Just-So story (no sources or evidence cited) is that the Arctic Sea is sort of enclosed, whereas the Antarctic is open and subject to effects of winds and oceans. To the contrary: Those winds and

oceans would serve to bring heat more efficiently to the Antarctic. That's *my* Just-So story, equally (un)supported by evidence.

### **Is AGW Bad in the Short Term or Only the Long Term?**

There is no empirical evidence for an increase in extreme weather events in the last several decades. Indeed, there hardly could be, given an almost non-existent historical record against which to compare frequencies—not to speak of the problem of even defining what is “extreme.” Official data concerning hurricanes affecting the United States do exist, and those reveal that the total number of hurricanes as well as the number of major ones since about 1960 has been lower and not higher than the average for the period 1851–2000.<sup>6</sup>

Nevertheless, so successful has been the campaign for public acceptance of AGW and its undesirability that pundits and media are wont to ascribe anything undesirable and out of the ordinary to it—bigger tsunamis, more extreme heat waves and cold spells, fiercer and more frequent tornados and hurricanes. Perhaps the prize should be awarded to the chief executive of AirAsia, who commented on the unexplained crash of a plane by “suggesting that climate change was making weather worse and flying riskier, particularly in the tropics” (Bachelard 2015).

In places this booklet indicts human activities for only a long-term warming but not short-term changes: “A short-term slowdown in the warming of Earth’s surface does not invalidate our understanding of long-term changes in global temperature arising from human-induced changes in greenhouse gases” (Question 10); “shorter-term variations are mostly due to natural causes, and do not contradict our fundamental understanding that the long-term warming trend is primarily due to human-induced changes in the atmospheric levels of CO<sub>2</sub> and other greenhouse gases” (Question 9).

At other places the booklet cites recent—in other words short-term—events as resulting from carbon emissions. Thus Question 6 claims that the *current* rate of climate change is more rapid than in the past. Again, “over recent decades heatwaves have increased in frequency in large parts of Europe, Asia and Australia” (Question 11); “Record heatwaves have occurred in Australia (January 2013), USA (July 2012), Russia (summer 2010), and Europe (summer 2003)” (Question 10); “heavy rainfall and snowfall events (which increase the risk of flooding) and heatwaves . . . generally becoming more frequent”(Question 13). In lieu of actual data or logic, graphics serve to spin the message home: p. 13 (Question 11) shows a forlorn, wintry landscape and p. 15 (Question 13) depicts cars on a flooded street.

But data from the past are not fine-grained enough to compare with

what has happened in a period as short as the last hundred years, let alone with the “current rate.” In any case, there are a whole host of natural temperature cycles (Dilley 2012) superposed on the large variations (range of 5–6 °C) owing to the periodic (7 or 8) major Ice Ages of the last million years (Folland et al. 1990:202, figure 7.1); for example, since 800 A.D. there have been 6 warming cycles and cold intervals with durations of roughly a century cycling over a range of about 0.9 °C (about 1.5 °; Dilley 2012:5, figure 2).

Question 14 again asserts a short-term effect: “increased frequency and intensity of occasional storm surges” owing to rising sea levels. It is not often pointed out that glaciers and ice sheets began to melt at the conclusion of the last Ice Age when sea levels were about 400 feet lower than at present; and they were about 15 feet higher during the last interglacial. *On average*, sea level changed by about 5 inches per century from these natural causes, but with pronounced pulses and lulls, for instance “10–15 m in less than 500 years” (Gornitz 2007): 2–3 meters (say 100 inches) in a single century; a whole inch per year. When natural causes can produce so great an effect, how can one be sure that AGW is to be blamed for “0.12 inches per year” (p. 16) in the last few decades, as Question 14 insinuates?

### Unwarranted Claims of Certainty

A copyeditor presented with this pamphlet in draft would read on page 2, “climate change over many decades *will* depend mainly on the total amount of CO<sub>2</sub> and other greenhouse gases emitted as a result of human activities”; and on page B9, “most of the recent change is *almost certainly* due to emissions of greenhouse gases caused by human activities” [emphasis added in both cases]. In the margins of both pages, the editor naturally places a query: “Au: Which is it? Certainly *will* or *almost certainly* will?”

There are innumerable other places where the same query is appropriate. Question 2 asserts certainty in asking how scientists “*know* that recent climate change is largely caused by human activities” [emphasis added].

That “natural causes alone are inadequate to explain the recent observed changes in climate” is quite strikingly misleading: They are inadequate only according to the assumptions fed into the computer models. The problem for AGW is that there has been no significant warming for the last 15–18 years while carbon emissions have continued to increase significantly. Moreover, the speculations by mainstream experts about why their models have failed to account for this admitted “slowdown” invoke precisely such natural causes as oceans acting as heat traps;<sup>7,8,9</sup> and this pamphlet itself in another place (p. 12) seeks to explain away the slowdown as owing to such natural causes as lower solar activity and volcanic eruptions.



Question 8 makes no bones about it: “Is there a point at which adding more CO<sub>2</sub> will not cause further warming?”

No. Adding more CO<sub>2</sub> to the atmosphere will cause surface temperatures to continue to increase. As the atmospheric concentrations of CO<sub>2</sub> increase, the addition of extra CO<sub>2</sub> becomes progressively less effective at trapping Earth’s energy, but surface temperature will still rise.

Just So.

“Global warming of just a few degrees *will* be associated with . . . increases in some types of extreme weather events” (Question 17; emphasis added). A graphic of the Earth (Question 16, p. 19) in light orange (acceptable warmth) for 1986–2005 is side-by-side with a frighteningly hot, dark-red Earth in 2081–2100, offered as an accurate projection. Just So.

Under “Basics of Climate Change,” the pamphlet is again unequivocal: “Greenhouse gases emitted by human activities alter Earth’s energy balance and thus its climate. . . . Scientists have determined that, when all human and natural factors are considered, Earth’s climate balance has been altered towards warming, with the biggest contributor being increases in CO<sub>2</sub>.”

Just So—“Scientists” have spoken.

Even as it exudes such certainty, *Climate Change* attempts to appear scientifically objective by acknowledging uncertainty: “Science is a continual process of observation, understanding, modelling, testing, and prediction. The prediction of a long-term trend in global warming from increasing greenhouse gases is robust and has been confirmed by a growing body of evidence. Nevertheless, understanding (for example, of cloud dynamics, and of climate variations on centennial and decadal timescales and on regional-to-local spatial scales) remains incomplete. All of these are areas of active research” (Question 18). But with those uncertainties, predictions cannot be “robust”; and when “a growing body of evidence” has to be cited as confirmation, evidently certainty has not been attained. Acknowledged uncertainty on “centennial . . . timescales” means uncertainty over the last century or so, which is precisely the timescale for which AGW is being claimed as certain.

This pervasive self-contradicting intermingling of assertions of certainty with admissions of uncertainty, a form of double-speak, recalls attempts to describe anomalous claims as pseudo-science (Bauer 2014). A related rhetorical ploy is to arouse emotion and stimulate fear by innuendo and speculation: “the best available climate models do not predict abrupt changes . . . (often referred to as tipping points) in the near future. However, as warming increases, the possibilities of major abrupt change cannot be ruled out” (p. 21).



Indeed. Given that the future is so hard to predict,<sup>10</sup> there are very few things, if any, that *can* be ruled out, including that carbon emissions have no effect at all on climate.

### Misdirection and Misrepresented Facts

Another tactic of attempted persuasion is misdirection. An example comes already in the introductory Summary: “slowdowns and accelerations in warming lasting a decade or more will continue to occur. However, long-term climate change over many decades will depend *mainly* on the total amount of CO<sub>2</sub> and other greenhouse gases emitted as a result of human activities” (p. 2, emphasis added).

This reads so reasonably—Just So! But the prediction of long-term change resulting *primarily* from steadily increasing atmospheric carbon dioxide comes from computer models that account for neither the “slowdown” of the last decade-and-a-half<sup>11</sup> nor the cooling from about 1940 into the 1970s<sup>12</sup> that had then caused climate scientists to warn about an impending Ice Age.<sup>13</sup> These failures demonstrate unequivocally that the computer models are flawed; since they are wrong even in the short term and for the recent past, they certainly cannot be given credence for the longer term.<sup>14</sup>

Moreover, these data disprove the notion that climate change is “mainly” owing to greenhouse gas: Twice in less than a century, and in each case for some decades, there has been no warming even as atmospheric CO<sub>2</sub> steadily increased. Quite clearly, some natural processes outweigh whatever effect increasing levels of CO<sub>2</sub> might have.

Misdirection in Question 1, “Is the Climate Warming?”, is through rather blatant omission. Temperature data are cited in several graphs, since 1850 in one case and since 1955 in three others. Thereby the unwary reader is not informed about the Medieval Warm Period and the Little Ice Age, which indeed are mentioned nowhere in the whole pamphlet.

The Medieval Warm Period (MWP), about 900–1300 A.D., saw temperatures 1–2 °C (~2–4 °F) higher than at present. Contemporary sources such as *Encyclopedia Britannica* and *Wikipedia* strive mightily to acknowledge the MWP while pulling out all stops to suggest that it might not have been global or even real,<sup>15,16</sup> despite a large body of published peer-reviewed material that attests the MWP,<sup>17</sup> for instance Rosenthal, Linsley, and Oppo (2013). The reality of the MWP was never questioned before AGW became dogma.

The Little Ice Age (LIA), roughly 1350–1850, followed the MWP. Once again, contemporary sources such as *Wikipedia*<sup>18</sup> try to minimize its significance. *Encyclopedia Britannica* weasel-words thus: “the Little Ice

Age, though synonymous with cold temperatures, can also be characterized broadly as a period when there was an increase in temperature and precipitation variability across many parts of the globe<sup>19</sup>—in other words, although it was indeed colder (“synonymous with cold temperatures”), please ignore the plain significance of that. For a less-biased discussion of LIA data, see the Environmental History Resources website.<sup>20</sup> And, again, no one questioned the reality of the LIA before AGW became a pervasive shibboleth of the conventional wisdom.

Question 4 reports that the Sun’s output has not increased appreciably “in recent decades” and therefore warming during this period proves that it is not the Sun that primarily determines global temperatures. This misdirection is nothing short of astonishing: Since there has not been any warming in the last decade-and-a-half at the same time as the Sun’s output has not increased, it seems entirely plausible that the Sun’s output is the primary controller of global temperature. In any case, the Sun is the initial source of energy trapped as heat by greenhouse gases, so variations in the Sun’s output of energy must be taken into account in any model of climate.

That the 11-year solar (sunspot) cycle “may have a *small* effect on surface climate” (p. 7; emphasis added) misleads yet further, for that is not the consensus view of pertinent experts (NASA): The

luminosity of our own sun varies a measly 0.1% over the course of the 11-year solar cycle. . . . [but] even these apparently tiny variations can have a significant effect on terrestrial climate. . . . [They] exceed all other energy sources (such as natural radioactivity in Earth’s core) combined. . . . Within the relatively narrow band of EUV wavelengths, the sun’s output varies not by a minuscule 0.1%, but by whopping factors of 10 or more. This can strongly affect the chemistry and thermal structure of the upper atmosphere.<sup>21</sup>

“Recent estimates” have the temperature “4 to 5 °C” higher than in the last Ice Age, and this increase since the Ice Age is said to have “occurred over a period of about 7,000 years, starting 18,000 years ago. . . . human alteration of the planet’s energy budget . . . has so far warmed Earth by about 0.8 °C” (question 6, p. 9). So between 3.2 °C and 4.2 °C of warming (4 to 5 °C minus 0.8 °C) since the last major Ice Age is *not* owing to human activities since the Industrial Age began. Why then had there been so much and so rapid warming *from natural causes* since the last Ice Age? According to these statements, nearly the whole usual change from an Ice Age to peak warmth, typically over a period of ~100,000 years, had taken place already in the last 10,000 years. Evidently, there is some unknown and very powerful natural cause of warming at work. Yet Question 9 (p. 11) asserts

again that “shorter-term variations are mostly due to natural causes, and do not contradict our fundamental understanding that the long-term warming trend is primarily due to human-induced changes in the atmospheric levels of CO<sub>2</sub> and other greenhouse gases.” Just So.

The present level of atmospheric CO<sub>2</sub> concentration is *almost* certainly unprecedented in the past million years, during which time modern humans evolved and societies developed. The atmospheric CO<sub>2</sub> concentration was however higher in Earth’s more distant past (many millions of years ago), at which time palaeoclimatic and geological data indicate that temperatures and sea levels were also higher than they are today. [emphasis added]

Note once again the insidious “almost,” and the insinuation that modern humans and their societies have not experienced—could not tolerate?—what the Earth experienced before modern humans appeared.

That CO<sub>2</sub>, temperature, and sea level appear to be correlated on very long time scales says nothing about what caused any one of them. In fact, it appears that CO<sub>2</sub> levels rose after temperature increased and not before: Increased temperature appears to cause increased CO<sub>2</sub>, not the other way around (Fischer et al. 1999, Monnin et al. 2001), at least in the Southern Hemisphere (Caillon et al. 2003); however, Parrenin et al. (2013) suggest that the data could be interpreted differently. In any case, there is certainly no clear evidence that increased CO<sub>2</sub> levels preceded increased temperature.

Question 15 introduces another charge against CO<sub>2</sub>: It acidifies the oceans and affects negatively the formation of sea shells. However, sea shells began to form about 500 million years ago<sup>22</sup> when CO<sub>2</sub> levels were >2,000 ppm (parts per million).<sup>4</sup> If sea shells could form in the oceans in those days, there is little to worry about nowadays. Moreover, taken over the whole lifetime of Earth, there is no correlation between CO<sub>2</sub> levels (as high as ~3,000 ppm) and temperature variations over ranges of about 10 °C.<sup>4</sup> That last fact in itself ought to raise strong doubts about current claims of climate change resulting from increased CO<sub>2</sub> levels.

### Scientific Dissent

A striking piece of misdirection and sinning by omission is the pervasive implication that science speaks with a single voice on all this.

Question 16, “How confident are scientists that Earth will warm further over the coming century?: Very confident,” misleads on a central point by implying that all scientists agree. Instead, a large body of largely ignored scientists, meteorologists, and others continues to dispute AGW; see, for example, the Leipzig Declaration<sup>23</sup> and the websites of the Science and Environmental Policy Program,<sup>24</sup> Roger Pielke, Sr.,<sup>25</sup> and Anthony Watts<sup>26</sup>.

### Authorship and Motivation

This pamphlet is blatantly biased, yet published under the auspices of leading scientific institutions, from which one might have expected evenhanded, objective assessments. Is this a deliberate gambit to mislead the public and policymakers? A conspiracy?

I prefer Murphy's Law, which holds that one should never attribute to malice what could be explained by what is much more common, namely incompetence; in this case, the incompetence that accompanies bureaucracy.

Actual authorship is obscured.<sup>27</sup> Twelve individuals are named as "the primary writing team" for *Climate Change: Evidence & Causes*, one being a "UK lead" and another the "US lead." A further thirteen individuals reviewed at least one draft but did not see the final version. Four individuals are named for providing unspecified "staff assistance" (p. B10).

This is absurd. Some one person must have written at least an initial draft. At any rate, this underlines the fact that this is not a scientific publication, where authorship would be unambiguous and all authors would be expected to specify exactly what is attributable to them individually. Here, most or all of the actual writing was surely done by specialists in technical writing, presumably the "staff." Whatever the exact course of events, there is no reason to doubt that all the participants fully believe AGW to be an indisputable fact. Cherry-picking the evidence under the influence of unquestioned belief, together with cognitive dissonance (the inability to appreciate contradicting evidence), could be sufficient explanation for the pamphlet's bias and other flaws.

But what was the need for this publication? Two years earlier, the National Academies Press had published a similar 36-page pamphlet on the same topic: *Climate Change: Evidence, Impacts, and Choices*,<sup>28</sup> "authored" by the National Research Council of the National Academy of Sciences (NRC–NAS). (Perhaps that explains why *Climate Change: Evidence and Causes* [henceforth RS–NAS] is several times labeled *Climate Change: Evidence and Choices*<sup>1</sup>.)

How do these two publications differ?

In most ways, NRC–NAS predicts just as dire future possibilities as does RS–NAS, including similarly scary pictured comparisons (p. 22) of calm green-yellow-orange Earths for 2011–2030 with red-hot Earths for 2080–2099. However,

- NRC–NAS is much more accurate than *Climate Change: Evidence & Causes*, for example in explaining the strong influence of water vapor, which is responsible for *most* of Earth's greenhouse effect: 36–72%, compared to 9–26% for CO<sub>2</sub> and 4–9% for methane (Kiehl & Trenberth

1997). RS–NAS does not even mention water vapor, an extraordinary omission.

- Both booklets show the variations of CO<sub>2</sub> and temperature during the several Ice Age cycles of the last 800,000 years. RS–NAS comments, “changes in CO<sub>2</sub> concentrations . . . track closely with changes in temperature.” NRC–NAS, however, points out (p. 19) that “changes in carbon dioxide concentrations . . . track closely with changes in temperature . . . *with CO<sub>2</sub> lagging behind temperature changes*” (emphasis added). As already noted earlier, this suggests that temperature increase causes CO<sub>2</sub> increase and not the other way around. Admittedly, NRC–NAS then asserts that this might no longer apply under the “relatively rapid release of . . . greenhouse gases since the start of the Industrial Revolution,” but this Just-So story remains pure speculation in the absence of any evidence.
- NRC–NAS explicitly points out that science cannot determine what should be done, since that involves value judgments, including the question of “at what level of warming are risks acceptable given the cost of limiting them” (p. 31). And NRC–NAS also emphasizes irreducible uncertainty: “Further research will never completely eliminate uncertainties about climate change and its risks” (p. 35).

The main difference is that RS–NAS projects certainty where NRC–NAS does not, suggesting that this was the motivation for a new pamphlet two years later and covering the same ground. Another clue pointing in that direction is that RS–NAS spelling follows British rather than American usage, and that Sir Paul Nurse, president of the Royal Society of London, had earlier been the featured narrator of a BBC documentary entitled *Science under Attack* that was broadcast in the UK on January 24, 2011, and which also is AGW propaganda masquerading as science (Bauer 2013).

No matter the history or the motivation, *Climate Change: Evidence & Causes* is a piece of “propaganda science” (Bauer 2012: 64 ff.) to which leading scientific associations have, to their shame, lent their prestige and reputation.

### Notes

<sup>1</sup> Curiously enough, the cover page and last page of the PDF download from the National Academies Press website give the title as *Climate Change: Evidence & Choices* even as the PDF says *Causes* and not *Choices*.

<sup>2</sup> IPCC. [https://www.ipcc.ch/publications\\_and\\_data/publications\\_and\\_data\\_reports.shtml](https://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml)

<sup>3</sup> The most general method measures differences in the ratio of O<sup>16</sup> to O<sup>18</sup> in

water or ice and in sea-shells, because it is known how that ratio changes with temperature. These isotopes differ in weight and that affects rates of chemical reactions and physical changes like evaporation.

- <sup>4</sup> Dr. Vincent Gray on historical carbon dioxide levels by Anthony Watts (2013). <http://wattsupwiththat.com/2013/06/04/dr-vincent-gray-on-historical-carbon-dioxide-levels>
- <sup>5</sup> Paleomap Project by Christopher R. Scotese. <http://www.scotese.com/climate.htm>
- <sup>6</sup> U.S. Hurricane Strikes by Decade. <http://www.nhc.noaa.gov/pastdec.shtml>
- <sup>7</sup> Davy Jones's Heat Locker (2014). <http://www.economist.com/news/science-and-technology/21613161-mystery-pause-global-warming-may-have-been-solved-answer-seems>
- <sup>8</sup> Solving the Myths of Hiatus in Global Warming by Rob Monroe (2013). <https://scripps.ucsd.edu/programs/keelingcurve/2013/08/28/solving-the-mysteries-of-hiatus-in-global-warming>
- <sup>9</sup> Has the Atlantic Ocean Stalled Global Warming? by Jane J. Lee (2014). <http://news.nationalgeographic.com/news/2014/08/140821-global-warming-hiatus-climate-change-ocean-science>
- <sup>10</sup> Quotes to this effect are often attributed to Yogi Berra, but others cite Niels Bohr and other Danish sources. <http://quoteinvestigator.com/2013/10/20/no-predict>
- <sup>11</sup> Some reports have it as a halt rather than a slowing, or even a decline in global average temperature. <http://isthereglobalcooling.com>  
<http://wattsupwiththat.com/2012/01/11/the-portland-state-university-study-of-shrinking-mt-adams-glaciers-a-good-example-of-bad-science>  
<http://notrickszone.com/2013/09/12/no-warming-left-to-deny-global-cooling-takes-over-cet-annual-mean-temperature-plunges-1c-since-2000/#sthash.mowZKMjF.dpbs>  
<http://www.forbes.com/sites/peterferrara/2013/05/26/to-the-horror-of-global-warming-alarmists-global-cooling-is-here>  
<http://www.globalresearch.ca/global-cooling-is-here/10783>
- <sup>12</sup> National Aeronautics and Space Administration, Goddard Institute for Space Studies. [http://data.giss.nasa.gov/gistemp/graphs\\_v3](http://data.giss.nasa.gov/gistemp/graphs_v3)  
 Global Surface Temperature Change by J. Hansen, R. Ruedy, M. Sato, & K. Lo, NASA Goddard Institute for Space Studies.  
[http://data.giss.nasa.gov/gistemp/paper/gistemp2010\\_draft0803.pdf](http://data.giss.nasa.gov/gistemp/paper/gistemp2010_draft0803.pdf)
- <sup>13</sup> For example, Another Ice Age? *Time*, 24 June 1974, pp. 106–107.
- <sup>14</sup> For a comprehensive discussion of why computer models are inevitably fallible on such complex matters as climate and environment, see Pilkey and Pilkey-Jarvis (2007).

- <sup>15</sup> Medieval Warm Period (MWP)—Climatology by John P. Rafferty.  
<http://www.britannica.com/EBchecked/topic/175842/medieval-warm-period-MWP>
- <sup>16</sup> Medieval Warm Period.  
[http://en.wikipedia.org/wiki/Medieval\\_Warm\\_Period](http://en.wikipedia.org/wiki/Medieval_Warm_Period)
- <sup>17</sup> See for instance links at <http://wattsupwiththat.com/tag/medieval-warm-period> and <http://www.co2science.org/articles/V16/N50/EDIT.php>
- <sup>18</sup> Little Ice Age. [http://en.wikipedia.org/wiki/Little\\_Ice\\_Age](http://en.wikipedia.org/wiki/Little_Ice_Age)
- <sup>19</sup> Little Ice Age (LIA) Geochronology by Stephen T. Jackson.  
<http://www.britannica.com/EBchecked/topic/344106/Little-Ice-Age-LIA>
- <sup>20</sup> The Little Ice Age circa 1300–1870.  
[http://www.eh-resources.org/timeline/timeline\\_lia.html](http://www.eh-resources.org/timeline/timeline_lia.html)
- <sup>21</sup> Solar Variability and Terrestrial Climate (2013). [http://science.nasa.gov/science-news/science-at-nasa/2013/08jan\\_sunclimate](http://science.nasa.gov/science-news/science-at-nasa/2013/08jan_sunclimate)
- <sup>22</sup> Geologic Time Scale.  
<http://www.enchantedlearning.com/subjects/GeologicTime.html>
- <sup>23</sup> Science & Environmental Policy Project, Climate Change White Paper, 22 June 2010; Appendix A, Leipzig Declaration.  
[http://henryhbauer.homestead.com/Leipzig\\_DeclarationPontius2005.pdf](http://henryhbauer.homestead.com/Leipzig_DeclarationPontius2005.pdf)
- <sup>24</sup> Science & Environmental Policy Project. <http://www.sepp.org>
- <sup>25</sup> Climate Science: Roger Pielke Sr. [pielkeclimatesci.wordpress.com](http://pielkeclimatesci.wordpress.com)
- <sup>26</sup> WUWT. <http://wattsupwiththat.com>
- <sup>27</sup> For other examples including reports from UNAIDS and the World Bank, see Chapter 8 in Bauer (2012).
- <sup>28</sup> Climate Change: Evidence, Impacts, and Choices (2012).  
[http://www.nap.edu/catalog.php?record\\_id=14673](http://www.nap.edu/catalog.php?record_id=14673)

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#### References Cited

- Bachelard, M. (2015). AirAsia flight's behaviour 'on the edge of logic.' 1 January.  
<http://www.smh.com.au/world/airasia-flights-behaviour-on-the-edge-of-logic-20150101-12gk9a.html>
- Barber, B. (1961). Resistance by scientists to scientific discovery. *Science*, 134, 596–602.
- Bauer, H. H. (2007). *The Origin, Persistence and Failings of HIV/AIDS Theory*. Jefferson, NC: McFarland.
- Bauer, H. H. (2012). *Dogmatism in Science and Medicine: How Dominant Theories Monopolize Research and Stifle the Search for Truth*. Jefferson, NC: McFarland.
- Bauer, H. H. (2013). Mainstream propaganda by the BBC about denialism and global warming, 5 November. <http://wp.me/p2VG42-2K>



- Bauer, H. H. (2014). Shamans of Scientism: Conjuring certainty where there is none. *Journal of Scientific Exploration*, 28, 491–504.
- Caillon, N., Severinghaus, J. P., Jouzel, J., Barnola, J.-M., Kang, J., & Lipenkov, V. Y. (2003). Timing of atmospheric CO<sub>2</sub> and Antarctic temperature changes across Termination III. *Science*, 299, 1728–1731.
- Dilley, D. (2012). *Natural Climate Pulse: Global Warming—Global Cooling—Carbon Dioxide*. Global Weather Cycles by Global Weather Oscillations. <http://www.GlobalWeatherCycles.com> or [http://media.wix.com/ugd/857cde\\_4e48a92c95df433ba869069b1dbcee7d.pdf](http://media.wix.com/ugd/857cde_4e48a92c95df433ba869069b1dbcee7d.pdf)
- Fischer, H., Wahlen, M., Smith, J., Mastoianni, D., & Deck, B. (1999). Ice core records of atmospheric CO<sub>2</sub> around the last three glacial terminations. *Science*, 283, 1712–1714.
- Folland, C. K., Karl, T. R., & Vinnikov, K. Ya. (1990). Observed climate variations and change. Chapter 7 in *Climate Change: The IPCC Scientific Assessment*, Cambridge University Press. see <http://j.mp/9duhp8> or <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.396.1043&rep=rep1&type=pdf#page=243>
- Gornitz, V. (2007). Sea Level Rise, After the Ice Melted and Today. [http://www.giss.nasa.gov/research/briefs/gornitz\\_09](http://www.giss.nasa.gov/research/briefs/gornitz_09)
- Hillerich, R. L. (1966). *Just So Stories* by Rudyard Kipling. Introduction by R. L. Hillerich. New York: Airmont Publishing. p. 9.
- Hook, Ernest B. (Editor) (2002). *Prematurity in Scientific Discovery: On Resistance and Neglect*. Berkeley, CA: University of California Press.
- Kiehl, J. T., & Trenberth, K. E. (1997). Earth's annual global mean energy budget. *Bulletin of the American Meteorological Society*, 78, 197–208. summarized at [https://en.wikipedia.org/wiki/Greenhouse\\_gas#Greenhouse\\_gases](https://en.wikipedia.org/wiki/Greenhouse_gas#Greenhouse_gases)
- Monnin, E., Indermühle, A., Dällenbach, A., Flückiger, J., Stauffer, B., Stocker, T. F., Raynaud, D., & Barnola, J.-M. (2001). Atmospheric CO<sub>2</sub> concentrations over the last glacial termination. *Science*, 291, 112–114.
- Parrenin, F., Masson-Delmotte, V., Köhler, P., Raynaud, D., Paillard, D., Schwander, J., Barbante, C., Landais, A., Wegner, A., & Jouzel, J. (2013). Synchronous change of atmospheric CO<sub>2</sub> and Antarctic temperature during the last deglacial warming. *Science*, 339, 1060–1063.
- Pilkey, O. H., & Pilkey-Jarvis, L. (2007). *Useless Arithmetic: Why Environmental Scientists Can't Predict the Future*. New York: Columbia University Press.
- Rosenthal, Y., Linsley, B. K., & Oppo, D. W. (2013). Pacific ocean heat content during the past 10,000 years. *Science*, 342, 617–621.
- Singer, S. F. (2014). The Climate Sensitivity Controversy. *American Thinker*, 15 October. [http://www.americanthinker.com/articles/2014/10/the\\_climate\\_sensitivity\\_controversy.html](http://www.americanthinker.com/articles/2014/10/the_climate_sensitivity_controversy.html)
- Stent, G. (1972). Prematurity and uniqueness in scientific discovery. *Scientific American*, December, 84–93.