

# The Week That Was: 2019-12-21 (December 21, 2019)

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### The Science and Environmental Policy Project

**Quote of the Week:** “Collective fear stimulates herd instinct, and tends to produce ferocity toward those who are not regarded as members of the herd.” — Bertrand Russell, Unpopular Essays

**Number of the Week:** 1/1,000,000,000,000 (One part per Trillion)

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#### **THIS WEEK:**

**By Ken Haapala, President, Science and Environmental Policy Project (SEPP)**

**The Greenhouse Effect – With Clouds:** The CO<sub>2</sub> Coalition has published a paper by Richard Lindzen addressing climate sensitivity trying to explain why US climate models do so poorly when tested against observations from nature. Until climate models can describe what is occurring in the atmosphere today, there is no reason to accept projections / predictions from such models about the future. Lindzen’s approach to the problem is different from those by Wijngaarden & Happer, and Roy Spencer discussed in the previous two TWTWs.

Among other things, Lindzen includes the influence of high-level cirrus clouds, which form above the tropopause, where water vapor freezes out. As Lindzen states:

*Most discussions of the greenhouse effect restrict themselves to clear air where only the greenhouse gases are relevant. However, the infrared opacity of upper-level cirrus clouds is often large enough that when such clouds are above the emission level for the greenhouse gases, they block the infrared radiation from the gases, and the new emission level is near the top of these clouds. This is very important because in the presence of such clouds, the presence of the greenhouse gases below these clouds becomes relatively irrelevant to the greenhouse effect. It should also be noted that when such clouds are absent, water vapor is far and away the most important greenhouse gas. (pp 5 & 6)*

However, Lindzen recognizes the generally accepted calculations of the earth’s average temperatures and the reflection of sunlight by clouds:

*“The common claim that the earth would be 33°C less than today’s temperature comes from including the reflectivity of clouds, which brings the reflectivity to about 0.3. This reduces the incoming radiation to 240 Watts per square meter and leads to a temperature of 255 K.” (p 5)*

Recognizing that about 30 percent of the solar energy arriving at upper atmosphere of the globe is reflected back to space is important for later calculations. Lindzen tries to write for the general scientifically educated audience stating:

*“By now, the reader may well suspect that a full discussion will be tantamount to covering almost the totality of atmospheric and oceanic physics, and that this will be well beyond what is possible in a research review for even a knowledgeable lay audience. I will, however, try to cover enough to make evident the silliness of former Secretary of State John Kerry’s peculiar claim that*

*although physics and chemistry may be hard, climate is simple enough for a child to understand. (Warning: Some mathematics will be necessary.)” (pp 4 & 5)*

He relies on the traditional one-dimensional picture to illustrate feedbacks and how they determine climate sensitivity. Then he goes into more difficult concepts:

*“Exploration of explicit feedbacks will immediately require going to three dimensions, and this will be described in Section 4. Section 4 will examine dynamic heat transport and how it affects mean temperature. This will illustrate some profound difficulties with the simple picture of climate sensitivity.*

*“Section 5 will discuss various approaches to determining climate sensitivity, and Section 6 will summarize the situation. The reader should be warned that this is a difficult subject, and that understanding it requires genuine effort. (p 5)*

The discussion in TWTW will be restricted to some of the more important concepts Lindzen presents and leaves to the curious reader to explore further. Although his approach is different from those taken by Wijngaarden & Happer and Spencer, Lindzen’s conclusions are similar. Based on direct calculations from established theory (not speculation as found in the Charney Report and Reports of the UN Intergovernmental Panel for Climate Change (IPCC)) a doubling of carbon dioxide (CO<sub>2</sub>) from 400 parts per million (ppm) to 800 ppm will result in an increase in temperatures of about 1°C, and may be as low as 0.75°C

This finding is far different than 3 °C plus or minus 1.5 °C found in the Charney and IPCC reports. Those findings are based on speculation made about 40 years ago and rely on significant increases in atmospheric water vapor amplifying or magnifying the influence of CO<sub>2</sub>. The amplification or magnification is not being found in modern measurements of the atmosphere.

Further, since the 1979 Charney report, it has been assumed that the feedbacks from warming will be additional warming, a positive feedback. But there has been no physical evidence presented supporting this assumption. There may be a negative feedback reducing the CO<sub>2</sub> influence. There is no logical reason for dismissing the possibility.

In his discussion of the real climate system, Lindzen brings up that the focus on average global temperature may be misguided. The focus should be on the temperature differences between the equator and the poles, say the Arctic. This is what Arrhenius (1896) focused on in attempting to evaluate whether greenhouse gas warming could protect civilization from another ice age.

Today, the difference in temperatures is about 40°C; at the maximum of the last ice age (18,000 years ago) it was about 60°C; while during the hot Eocene (about 50 million years ago) it was about 20°C. The temperatures in the tropics changed little. It is the temperature differences between the lower latitudes and the higher latitudes that drive heat transport, thus extreme storms. Those claiming that mid- and higher-latitude warming will intensify storms seem not to remember the 2<sup>nd</sup> Law of Thermodynamics.

Lindzen also discusses the tight fit between glaciation cycles and changes in Sun-Earth orbital geometry as presented in the Milankovitch theory. One must recognize that correlation is not causation, particularly if the relationship is noisy. However, the tight fit between exposure to the

sun at latitudes about 65 °N and glaciation is remarkable, particularly since they both move in the same direction almost simultaneously. As Lindzen states:

*“We see that insolation in the summer Arctic varies by about 100 Watts per square meter, a very large value compared to the global average of 240 Watts per square meter, and as Edvardsson et al. note, this is consistent with energy needed to freeze and melt the glaciers. As we have also seen, the temperature difference between the tropics and the pole during the glacial maxima was about 60°C, leading to about a 5°C change in global mean temperature [based on stated assumptions]. However, the annually and globally averaged insolation changed by only about 1 Watts per square meter. If we were to absurdly assume that it was this mean rather than the Milankovitch parameter that forced the glaciation cycles, we could falsely conclude that the climate sensitivity was huge (Genthon et al., 1987)” (p 11)*

After presenting graphs showing that the climate models make unrealistically high estimates of the sensitivity of the globe to CO<sub>2</sub>, Lindzen presents graphs showing that the warming from 1957 to 2008 was not unlike that of 1895 to 1946. There is nothing unprecedented about the current warming.

Lindzen uses the temperature responses of the globe to volcanic activity, to show that a favorite trick of the climate modelers lacks supporting physical evidence. The aerosols, fine particles emitted by volcanos, cool the globe for a short period. The modelers use aerosols to claim that the “real” effects of CO<sub>2</sub> are not being experienced due to aerosol cooling. Lindzen calculates a chart showing the extent of aerosol cooling needed to force agreement with observations. The greater the assumed sensitivity of the earth to CO<sub>2</sub> warming, the greater the assumed aerosol cooling needed. At a CO<sub>2</sub> sensitivity of 0.75 °C for a doubling of CO<sub>2</sub>, no aerosol cooling is needed.

In discussing several other explanations for the erroneous estimates of climate sensitivity in climate models, Lindzen states:

*“Mention should also be made of a novel approach to climate sensitivity by Shaviv (2008). Shaviv used solar cycle variations in ocean heat content to show that the solar cycle forcing was about 5-7 times greater than one would obtain from measurements of solar output. This is consistent with the suggestion that cosmic ray variations associated with the solar cycle induce changes in clouds. Comparison with solar cycle variations in surface temperature then leads immediately to estimates of climate sensitivity which is found to be less than 1°C.” [SEPP Chairman emeritus Fred Singer heartily endorsed the work on the influence of cosmic ray variations associated with changing solar wind.]*

In the summary Lindzen states:

*“The situation with respect to climate sensitivity is that we basically see no reason to expect high sensitivity. The original basis for considering that high sensitivity is possible (namely, the hypothetical water vapor feedback of Manabe and Wetherald, 1975) is clearly contradicted by the measurements of TOA radiative fluxes which show that the total long-wave feedback, including cirrus cloud variations, may even be negative. Analysis of the temperature data leads to the conclusion that if anthropogenic contributions are the cause of warming since the end of the Little Ice Age, and if aerosols are limited to a contribution of 1 Watts per square meter, then climate sensitivity in excess 1.5°C is precluded.”*

Lindzen recognizes his work may be erroneous. There may be natural variation or an amplification that is not considered. He states:

*“...Our simple calculation suggesting that sensitivities in excess of 1.5°C were precluded depends upon the assumption that models are correct in producing negligible natural internal variability. It is, however, remotely conceivable that there was in reality (as opposed to in models) natural internal variability that was exactly what was needed to cancel the effect of high sensitivity, but that this internal variability would eventually be overwhelmed, and allow the high sensitivity to reveal itself.*

*“This remote possibility is far from “settled science,” and the thought that multi-trillion-dollar policies would be implemented to putatively prevent this, seems far from rational. This is especially so when one considers that for about 95 percent of the time since complex life systems appeared (about 600 million years ago), levels of CO<sub>2</sub> were much higher than they are anticipated to become (as much as 10-20 times today’s levels) without evidence of a relationship to global mean temperature.” (p 21)*

See links under Challenging the Orthodoxy and the previous two TWTWs.

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**The Gore Myth:** Lindzen’s presentation of the Milankovitch cycles and the tight correlation between solar insolation (solar radiation reaching a given area) at 65 °N and Arctic ice volume prompts a discussion on the Gore Myth that CO<sub>2</sub> change causes ice ages and the emergence from ice ages. This was speculated by Svante Arrhenius who tried to calculate what the sensitivity of the climate must be to changing CO<sub>2</sub> for CO<sub>2</sub> to cause ice ages to begin and end, as shown by geological research.

According to a recently translated paper by Friends of Science, later (in 1906) Arrhenius backed down from his 1896 sensitivity estimates of 5 to 6 °C for a doubling of CO<sub>2</sub> when subsequent experiments showed his calculations were probably erroneous. In his later calculations Arrhenius eliminated the influence of water vapor. He calculated that a doubling of CO<sub>2</sub> would cause a temperature change of 1.6 °C. The main point is that Arrhenius realized that as observations and data change, calculations have to change.

However, recent efforts to resurrect the idea that CO<sub>2</sub> is the major cause of climate change create a big hole in knowledge of climate change. According to the Milankovitch theory, the changing orbital relationship between the sun and the earth warms and cools the Arctic and the oceans. Since cold water more readily absorb gases than warm water, particularly CO<sub>2</sub>, the warming oceans release CO<sub>2</sub> into the atmosphere, raising its concentration in the atmosphere. According to Lindzen’s calculations, this would be a minor positive feedback.

If we follow the Gore Myth that increasing CO<sub>2</sub> is the primary cause of the Arctic to warm, what causes the increasing CO<sub>2</sub>? It certainly cannot be the Milankovitch cycles! See links under Challenging the Orthodoxy.

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**COP-25 – What Went Wrong?** Carbon Brief, which promotes international control of CO<sub>2</sub> emissions has a discussion, written by multiple authors, from their perspective on what went wrong with in the 25<sup>th</sup> Conference of Parties to the UN Framework Convention on Climate Change (UNFCCC). The essay states:

*“Nearly 27,000 delegates arrived in the Spanish capital in early December aiming to finalize the “rulebook” of the Paris Agreement – the operating manual needed when it takes effect in 2020 – by settling on rules for carbon markets and other forms of international cooperation under “Article 6” of the deal.*

*“They also hoped to send a message of intent, signaling to the wider world that the UN climate process remains relevant – and that it recognizes the yawning gap between current progress and global goals to limit warming.”*

Despite protests for the rulebook, and the appearance of climate “stars”:

*“Ultimately, however, the talks were unable to reach consensus in many areas, pushing decisions into next year under “Rule 16” of the UN climate process. Matters including Article 6, reporting requirements for transparency and “common timeframes” for climate pledges were all punted into 2020, when countries are also due to raise the ambition of their efforts.”*

From the perspective of TWTW, it appears that at least two significant strategic errors weakened the UN’s efforts:

1. The decision of the Obama Administration to ensure that Paris Agreement would not be a treaty requiring Senate approval, thus allowing Mr Trump to withdraw from it, and
2. The decision of The UN Environment Programme (UNEP), a parent of the IPCC, to release its emissions gap report just prior to the COP.

The US has already announced it will not pay the remaining \$2 billion of the \$3 billion Mr. Obama pledged to the UN’s Green Climate Fund.

The second error gave reason for countries emitting large amounts of CO<sub>2</sub>, particularly China, India, Japan, Brazil, and Australia, to delay and sabotage any agreement. The report gave the latest speculative estimates of how much fossil fuel use would have to be cut to meet the 2030 goals for the 1.5°C and 2°C temperature targets of the Paris Agreement.

Political leaders in these countries realized their citizens will be furious with dramatic increases in energy costs that eliminating fossil fuels will entail. It is one thing for politicians to pledge to do something in the future when they are gone, it is another thing to require meeting those pledges immediately, while they are in office. See links under After Paris! and Problems in the Orthodoxy.  
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**No Modern Famines?** Writing on his web site, Jim Steele has an explanation of why modern famine predictions fail. This should be mandatory reading for those in the Pentagon who claimed climate change is leading to war and the authors of the US National Climate Assessment by the US Global Change Research Program (USGCRP). Steele begins:

*“When I graduated high school in 1968 there were rampant predictions of environmental collapse and eco-catastrophe theories flourished. The highly influential Stanford scientist Dr Paul Ehrlich dominated the doomsday media stating, ‘Most of the people who are going to die in the greatest cataclysm in the history of man have already been born.’ Predicting global famine in 1970 this PhD wrote, ‘The death rate will increase until at least 100-200 million people per year will be starving to death during the next ten years.’*

*“Why was Ehrlich’s apocalyptic predictions so wrong? Ehrlich believed the promise of the ‘green revolution’ via high yield crops and better cultivation practices would never offset the needs of a growing human population. Indeed, the early distribution of high yield ‘miracle seeds’ had failed to stave off famines during the cooler 1960s. But then the earth began to warm, there was a CO2 fertilization effect and the growing season increased in concert with great leaps forward in genetics, biotechnology and agricultural innovations.”*

The world has changed, but the thinking of those who will to suppress humanity has not. See links under Challenging the Orthodoxy

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**Water, Clear Cool Water:** Andrew Montford, whose excellent book exposed the problems with Mr. Mann’s “hockey-stick,” has an essay on the needs of those in Sub-Sahara Africa. Very simply, communities need adequate supplies of drinkable water and sewer sanitation. These are often best provided by the use of fossil fuels, which many “humanitarians” deplore. See links under Challenging the Orthodoxy

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**Dear Reader of The Week That Was,**

**The Science & Environmental Policy Project (SEPP)** is a 501-c-3 organization, incorporated in Virginia. Its Federal I.D. Number is 54-1645372 and donations are US tax deductible. Established in 1990 by S. Fred Singer to challenge government environmental policies based on poor science, SEPP stands for objective science, based on physical evidence and rigorous adherence to the scientific method.

No matter how elaborate, results from numerical models that are not thoroughly tested against physical evidence are speculative and cannot be relied upon. Testing the results from using parts of a model against the results from the entire model is a ruse used by the UN Intergovernmental Panel on Climate Change (IPCC). Major government policies based on speculation and misleading “modeling” are a waste of resources.

Our founder, Dr. Singer, is Chairman emeritus. Physicist Dr. Thomas Sheahan is Chairman. Other distinguished scientists serve on the board of directors. Ken Haapala continues as president and oversees general operations. We continue to be very productive.

Two prevalent myths are damaging our economy and hurting the less fortunate: 1) greenhouse gases, chiefly carbon dioxide, are causing dangerous global warming; and 2) wind and solar can easily replace fossil fuels, nuclear, and hydro in electricity generation. Both are false, yet widely accepted. We continue to contest these myths, and others, with hard evidence.

In collaboration with like-minded groups, we produce hard-hitting comments for the public record and provide scientific testimony on Federal government climate and energy policy. We are actively attempting to eliminate or change the EPA's endangerment finding, despite a lack of physical evidence, that carbon dioxide, CO<sub>2</sub>, poses a danger to public health.

In 2007, SEPP established NIPCC (Non-governmental International Panel on Climate Change) to respond to the false claims of the UN-IPCC, and its followers, who claim, without hard evidence, that the use of fossil fuels and CO<sub>2</sub> emissions, will lead to climate disasters. The Heartland Institute continues the NIPCC efforts with well-attended sessions of the International Conference on Climate Change and the NIPCC reports at [www.NIPCCreport.org](http://www.NIPCCreport.org).

Contrary to frequent attacks, SEPP does not receive support from oil, tobacco, or chemical companies – or government organizations. SEPP accepts donations from private individuals and small contributions from foundations. The appropriate IRS tax filings are made by an independent CPA and are “Open to Public Inspection.”

SEPP is frugal, beholden to no one, and our writings are clear from any outside influence, except physical evidence and logic.

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**Number of the Week: 1/1,000,000,000,000 (One part per Trillion).** Writing on the website of the American Council on Science and Health, Alex Berezow and Josh Bloom discuss how modern instruments can detect almost any chemical in your body or in the environment at levels as minute as ‘one part per trillion,’ which is roughly equivalent to a drop in an Olympic-sized swimming pool.”

They emphasize that the comments by Paracelsus, in the 16th Century that “the dose makes the poison” still apply. “Yet, the activist-legal complex promotes an alternate theory, namely that the mere presence of a chemical is an indicator of its potential harm. It is not.”

The same applies to modern yellow (green) journalism. Imagine the chemicals that one is exposed to by taking a dip in the ocean! See links under Litigation Issues.

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#### **NEWS YOU CAN USE:**

***Commentary: Is the Sun Rising?***

**It's official: we are in a “deep” solar minimum,**

By Anthony Watts, WUWT, Dec 16, 2019

<https://wattsupwiththat.com/2019/12/16/its-official-we-are-in-a-deep-solar-minimum/>

### ***Challenging the Orthodoxy -- NIPCC***

#### **Climate Change Reconsidered II: Physical Science**

Idso, Carter, and Singer, Lead Authors/Editors, Nongovernmental International Panel on Climate Change (NIPCC), 2013

<https://www.heartland.org/media-library/pdfs/CCR-II/CCR-II-Full.pdf>

Summary: <http://www.nipccreport.org/reports/ccr2a/pdf/Summary-for-Policymakers.pdf>

#### **Climate Change Reconsidered II: Biological Impacts**

Idso, Idso, Carter, and Singer, Lead Authors/Editors, Nongovernmental International Panel on Climate Change (NIPCC), 2014

<http://climatechangereconsidered.org/climate-change-reconsidered-ii-biological-impacts/>

Summary: <https://www.heartland.org/media-library/pdfs/CCR-IIb/Summary-for-Policymakers.pdf>

#### **Climate Change Reconsidered II: Fossil Fuels**

By Multiple Authors, Bezdek, Idso, Legates, and Singer eds., Nongovernmental International Panel on Climate Change, April 2019

<http://store.heartland.org/shop/ccr-ii-fossil-fuels/>

Download with no charge:

<http://climatechangereconsidered.org/wp-content/uploads/2019/01/Climate-Change-Reconsidered-II-Fossil-Fuels-FULL-Volume-with-covers.pdf>

#### **Why Scientists Disagree About Global Warming**

The NIPCC Report on the Scientific Consensus

By Craig D. Idso, Robert M. Carter, and S. Fred Singer, Nongovernmental International Panel on Climate Change (NIPCC), Nov 23, 2015

<http://climatechangereconsidered.org/>

Download with no charge:

<https://www.heartland.org/policy-documents/why-scientists-disagree-about-global-warming>

#### **Nature, Not Human Activity, Rules the Climate**

S. Fred Singer, Editor, NIPCC, 2008

[http://www.sepp.org/publications/nipcc\\_final.pdf](http://www.sepp.org/publications/nipcc_final.pdf)

#### **Global Sea-Level Rise: An Evaluation of the Data**

By Craig D. Idso, David Legates, and S. Fred Singer, Heartland Policy Brief, May 20, 2019

<https://www.heartland.org/template-assets/documents/publications/SeaLevelRiseCCRII.pdf>

### ***Challenging the Orthodoxy***

#### **On Climate Sensitivity**

By Richard Lindzen, with Review Assistance from Roy Spencer, CO2 Coalition, 2019

[http://co2coalition.org/wp-content/uploads/2019/12/Lindzen\\_On-Climate-Sensitivity.pdf](http://co2coalition.org/wp-content/uploads/2019/12/Lindzen_On-Climate-Sensitivity.pdf)

#### **Why Modern Famine Predictions Failed!**

By Jim Steele, Landscapes and Cycles, Dec 19, 2019

<http://landscapesandcycles.net/why-modern-famine-predictions-failed.html>

#### **African Needs and Anti-Human Greens**

By Andrew Montford, GWPF, Dec 16, 2019

<https://www.thegwpf.com/anti-human-greens/>

*[SEPP Comment: Communities need adequate supplies of drinkable water.]*

### **Who Is Winning The Climate Wars? (2)**

By Francis Menton, Manhattan Contrarian, Dec 17, 2019

<https://www.manhattancontrarian.com/blog/2019-12-17-who-is-winning-the-climate-wars-2>

*[SEPP Comment: Searching for a real “tipping point.”]*

### **The Probable Cause of Climate Fluctuations – Svante Arrhenius**

A Translation of his 1906 Amended View of “Global Warming”

By Svante Arrhenius, Translated from German by Friends of Science (Canada), 2014

<https://www.friendsofscience.org/assets/documents/Arrhenius%201906,%20final.pdf>

### ***Defending the Orthodoxy***

#### **Barbican Estate's Beech Street to become Britain's first 24-hour zero-emissions road under 'radical' new plans**

By Sean Morrison, Evening Standard, Dec 17, 2019

<https://www.standard.co.uk/news/transport/barbican-estates-beech-street-to-become-britains-first-24hour-zeroemissions-road-a4315221.html>

“Petrol and diesel cars are set to be completely banned from a busy London street under plans for Britain’s first 24-hour zero-emissions road.”

### ***Questioning the Orthodoxy***

#### **Balanced, Static Nature: The Grand Illusion**

Change is natural and normal. Let us eat, drink, and be merry.

By Donna Laframboise, Big Picture News, Dec 18, 2019

<https://nofrackingconsensus.com/2019/12/18/balanced-static-nature-the-grand-illusion/>

### **One-third of recent global methane increase comes from tropical Africa**

By Staff, European Geosciences Union, Dec 11, 2019 [H/t Toshio Fujita]

<https://www.sciencedaily.com/releases/2019/12/191211082702.htm>

Link to paper: An increase in methane emissions from tropical Africa between 2010 and 2016 inferred from satellite data

By Mark Lunt, et al., Atmospheric Chemistry and Physics, Dec 11, 2019

<https://www.atmos-chem-phys.net/19/14721/2019/>

### **8000 Years Of Zero Correlation Between CO2 And Temperature, GISP 2 Ice Core Shows – Opposite Is True!**

By P Gosselin, No Tricks Zone, Dec 20, 2019

<https://notrickszone.com/2019/12/20/8000-years-of-zero-correlation-between-co2-and-temperature-gisp-2-ice-core-shows-opposite-is-true/>

### **Empty Gestures on Climate Change**

By Bjørn Lomborg, Project Syndicate, Dec 20, 2019

<https://www.project-syndicate.org/commentary/climate-change-activists-empty-gestures-by-bjorn-lomborg-2019-12>

### ***After Paris!***

#### **Climate Zealots, Firing Squads, And A Load Of Manure**

By J, Frank Bullitt, I & I, Dec 16, 2019

<https://issuesinsights.com/2019/12/16/climate-zealots-firing-squads-and-a-load-of-manure/>

### **COP25: Key outcomes agreed at the UN climate talks in Madrid**

By Multiple Authors, Carbon Brief, Dec 15, 2019

[https://www.carbonbrief.org/cop25-key-outcomes-agreed-at-the-un-climate-talks-in-madrid?utm\\_campaign=RevueCBWeeklyBriefing&utm\\_medium=email&utm\\_source=Revue%20newsletter](https://www.carbonbrief.org/cop25-key-outcomes-agreed-at-the-un-climate-talks-in-madrid?utm_campaign=RevueCBWeeklyBriefing&utm_medium=email&utm_source=Revue%20newsletter)

Link to: Emissions Gap Report 2019

By Staff, UN Environment Programme, Nov 26, 2019

<https://www.unenvironment.org/resources/emissions-gap-report-2019>

### **COP 25: Paris Accord destroyed**

By David Wojick, CFACT, Dec 19, 2019

<https://www.cfact.org/2019/12/19/cop-25-paris-accord-destroyed/>

### **Madrid Climate Conference Ends in Failure**

By Rupert Darwell, Real Clear Energy, Dec 16, 2019

[https://www.realclearenergy.org/articles/2019/12/16/madrid\\_climate\\_conference\\_ends\\_in\\_failure\\_110499.html](https://www.realclearenergy.org/articles/2019/12/16/madrid_climate_conference_ends_in_failure_110499.html)

### ***Change in US Administrations***

#### **Trump weighs executive order on scientific research**

By Kelsey Brugger and Sean Reilly, E&E News reporters Greenwire, December 17, 2019

<https://www.eenews.net/stories/1061836761>

#### **White House Blocks Most Green Energy Tax Credits in Final Spending Bill**

By Myron Ebell, CEI, Dec 20, 2019

<https://cei.org/blog/white-house-blocks-most-green-energy-tax-credits-final-spending-bill>

#### **Where climate cash is flowing and why it's not enough**

Investments need to ramp up to keep global warming within safe thresholds.

By Sophie Yeo, Nature, Sep 17, 2019 [H/t No Tricks Zone]

<https://www.nature.com/articles/d41586-019-02712-3>

### ***Social Benefits of Carbon Dioxide***

#### **CO2-induced Benefits to Plant Water Use Efficiency: [Video]**

By Craig Idso, CO2 Science, Dec 19, 2019

[https://twitter.com/co2science/status/1207665819489980416?ref\\_src=twsrc%5Etfw%7Ctwcamp%5Eembeddedtimeline%7Ctwterm%5Eprofile%3Aco2science%7Ctwcon%5Etimelinechrome&ref\\_url=http%3A%2F%2Fco2science.org%2F](https://twitter.com/co2science/status/1207665819489980416?ref_src=twsrc%5Etfw%7Ctwcamp%5Eembeddedtimeline%7Ctwterm%5Eprofile%3Aco2science%7Ctwcon%5Etimelinechrome&ref_url=http%3A%2F%2Fco2science.org%2F)

*[SEPP Comment: Explains why most plants experience significant water use efficiency with increased CO2 with examples of what is already occurring.]*

#### **Siberian researchers contribute to global monitoring of the Earth's Green Lungs**

By Staff Writers, Krasnoyarsk, Russia (SPX), Dec 09, 2019

[http://www.terraily.com/reports/Siberian\\_researchers\\_contribute\\_to\\_global\\_monitoring\\_of\\_the\\_Earths\\_Green\\_Lungs\\_999.html](http://www.terraily.com/reports/Siberian_researchers_contribute_to_global_monitoring_of_the_Earths_Green_Lungs_999.html)

"We can already indicate some changes that Siberian forests will go through, according to the data of our system. Judging mainly by the recorded climatic changes, we can already observe

moist warming (that does not mean that droughts will end, though), lengthening of the vegetation season of trees, and an increase in carbon absorption of forests.

“To put it simpler, trees are getting taller and thicker, and the forest is thickening too. Some types of woody plants do not like such climate changes, i.e. larch forests spread in the northern taiga zone are gradually replaced by pine-spruce forests, and so dark coniferous Scandinavian-type forests are appearing in our country. Shortly, for example, linden may return to Siberia - it used to grow here until the last mass glaciations which reduced them to insignificant relic groves in Novosibirsk and Kemerovo regions,’ - continued Dr Verkhovets.”

### ***Problems in the Orthodoxy***

#### **Copenhagen–10 Years On**

By Paul Homewood, Not a Lot of People Know That, Dec 18, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/12/18/copenhagen-10-years-on/>

#### **Anger erupts at U.N. climate summit as major economies resist bold action**

By Matthew Green, Valerie Volcovici, Reuters, Dec 14, 2019

<https://www.reuters.com/article/us-climate-change-accord/anger-erupts-at-u-n-climate-summit-as-major-economies-resist-bold-action-idUSKBN1YI08R>

#### **China Burns Over Half Of The World’s Coal And Will Account For 50% Of Global CO2 Emissions By 2030**

By Kenneth Richard, No Tricks Zone, Dec 19, 2019

<https://notrickszone.com/2019/12/19/china-burns-over-half-of-the-worlds-coal-and-will-account-for-50-of-global-co2-emissions-by-2030/>

#### **The East is Green**

By John Robson, Climate Discussion Nexus, Dec 18, 2019

<https://climatediscussionnexus.com/2019/12/18/the-east-is-green/>

*[SEPP Comment: the Australian Strategic Policy Institute claims China is a green superpower?]*

### ***Seeking a Common Ground***

#### **A Science-Based Approach to Dealing with Climate Change in Washington State**

By Cliff Mass, Weather and Climate Blog, Dec 19, 2019

<https://cliffmass.blogspot.com/2019/12/a-science-based-approach-to-dealing.html>

“The optimistic bottom line. There are so many local politicians, media outlets, and activist groups that are painting a depressing, fearful picture of our future regarding global warming. They are simply wrong. There is so much that can be done to prepare and mitigate global warming, and the impacts will be more gradual than some are suggesting. This is a scientific/technological problem that can be solved in a rational way, together.”

#### **Why Climate Advocates Need To Stop Hying Extreme Weather**

By Paul Homewood, Not a Lot of People Know That, Dec 18, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/12/18/why-climate-advocates-need-to-stop-hying-extreme-weather/#more-42688>

### ***Science, Policy, and Evidence***

#### **We’ve just had the best decade in human history. Seriously**

Little of this made the news, because good news is no news

By Mat Ridley, The Spectator, UK, Dec 21, 2019

<https://www.spectator.co.uk/2019/12/weve-just-had-the-best-decade-in-human-history-seriously/>

### ***Review of Recent Scientific Articles by CO2 Science***

#### **The Combined Impacts of Elevated CO2 and Water Supply on Field Pea**

Parvin, S., Uddin, S., Fitzgerald, G.J., Tausz-Posch, S., Armstrong, R. and Tausz, M. 2019. Free air CO2 enrichment (FACE) improves water use efficiency and moderates drought effect on N2 fixation of *Pisum sativum* L. *Plant Soil* 436: 587-606. Dec 20, 2019

<http://www.co2science.org/articles/V22/dec/a7.php>

“Consequently, the researchers ultimately conclude that ‘growth under elevated CO2 can mitigate drought effects on N2 fixation and reduce dependency on soil N resources especially in water-limited agro-ecosystems.’”

#### **The Change in Global Gross Primary Production Between 2000 and 2014**

Sun, Z., Wang, X., Yamamoto, H., Tani, H., Zhong, G. and Yin, S. 2018. An attempt to introduce atmospheric CO2 concentration data to estimate the gross primary production by the terrestrial biosphere and analyze its effects. *Ecological Indicators* 84: 218-234. Dec 18, 2019

<http://www.co2science.org/articles/V22/dec/a6.php>

“Clearly, rising planetary temperatures have not reached dangerous levels and so the earth is not experiencing a fever. In contrast, the health of the terrestrial biosphere has likely never been better during the Human Age, thanks to rising levels of CO2 that are improving plant photosynthesis and growth. Additional studies supporting this conclusion can be found in our Subject Index under the heading of Biospheric Productivity.”

#### **The Adaptive Response of a Sea Urchin to Ocean Acidification**

Foo, S.A., Byrne, M. and Gambi, M.C. 2018. Residing at low pH matters, resilience of the egg jelly coat of sea urchins living at a CO2 vent site. *Marine Biology* 165: 97, Doi:10.1007/s00227-018-3359-2. Dec 16, 2019

<http://www.co2science.org/articles/V22/dec/a5.php>

“The resilience of the egg jelly coat to reduced pH is, of course, good news for those worrying about ocean acidification. Yet the results of this study demonstrate another important truth -- that organisms have the power to adapt and to do so over a relatively short time period, as Foo *et al.* additionally report the venting activity causing the reduced pH site has only been in occurrence for a maximum of *three* decades. Unfortunately, the ability to evaluate an organism's adaptive responses is almost never factored into laboratory experiments because of time or funding constraints. But when making projections of the future existence of species, this key phenotypic response must not be ignored, yet it almost always is.”

#### **Elevated CO2 Improves Phytoremediation of a Persistent Organic Pollutant**

Zhang, M., Liu, J., Wang, W. and Bao, Y. 2019. Responses of *Bougainvillea spectabilis* to elevated atmospheric CO2 under galaxolide (HHCB) pollution and the mechanisms of its rhizosphere metabolism. *Journal of Soils and Sediments* 19: 159-170. Dec 13, 2019

<http://www.co2science.org/articles/V22/dec/a4.php>

“In summing up their findings, Zhang et al. report that the presence of HHCB had a negative effect on *B. spectabilis*, reducing its chlorophyll content and/or altering photosynthetic pigments. Elevated CO2, not surprisingly, increased plant biomass improved the ability of the roots to absorb HHCB. Consequently, the authors conclude that ‘*B. spectabilis* may be well suited for use as a phytoremediation material to remove HHCB from contaminated soil under elevated CO2.’”

### ***Models v. Observations***

## **Comment by Cowtan & Jacobs on Lewis & Curry 2018 and Reply: Part 2**

By Nic Lewis, Climate Etc. Dec 20, 2019

<https://judithcurry.com/2019/12/20/comment-by-cowtan-jacobs-on-lewis-curry-2018-and-reply-part-2/>

## ***Measurement Issues -- Surface***

### **Hottest ever day in Australia — especially if you ignore history**

By Jo Nova, Her Blog, Dec 19, 2019

<http://joannenova.com.au/2019/12/hottest-ever-day-in-australia-especially-if-you-ignore-history/>

### **New Record Temperatures Need Justification**

By Jennifer Marohasy, Her Blog, Dec 20, 2019

<https://jennifermarohasy.com/2019/12/new-record-temperatures-need-justification/>

“I’ve since shown that this was helped along by the Bureau replacing a mercury thermometer with an electronic probe that can record a good 0.4 degrees hotter for the same weather.”

### **Record Heat In Three Australian Capitals**

By Tony Heller, Real Climate Science, Dec 19, 2019

<https://realclimatescience.com/2019/12/record-heat-in-three-australian-capitals/>

## ***Changing Weather***

### **Heat and Drought in Australia and Drought in South Africa tied to negative AAO**

By Joesph D’Aleo, CCM, ICECAP, Dec 19, 2019

[http://icecap.us/index.php/go/political-](http://icecap.us/index.php/go/political-climate/heat_and_drought_in_australia_and_drought_in_south_africa_tied_to_negative/)

[climate/heat\\_and\\_drought\\_in\\_australia\\_and\\_drought\\_in\\_south\\_africa\\_tied\\_to\\_negative/](http://icecap.us/index.php/go/political-climate/heat_and_drought_in_australia_and_drought_in_south_africa_tied_to_negative/)

[SEPP Comment: According to the Australian Bureau of Meteorology, “The Southern Annular Mode (SAM), also known as the Antarctic Oscillation (AAO), describes the north–south movement of the westerly wind belt that circles Antarctica, dominating the middle to higher latitudes of the southern hemisphere.” <http://www.bom.gov.au/climate/enso/history/In-2010-12/SAM-what.shtml>]

### **Mega-blazes run riot and witchdoctors rage against them in Australia**

By Jo Nova, Her Blog, Dec 17, 2019

<http://joannenova.com.au/2019/12/mega-blazes-run-riot-and-witchdoctors-rage-against-them-in-australia/>

“As he [a bushfire specialist] says: Fire need three things — oxygen, fuel and a spark. The only thing we can control is the fuel.”

### **There’s a 60,000-Year-Old Way to Help Stop Australia Burning**

By Jason Scott, Bloomberg, Dec 16, 2019 [H/t Bernie Kepshire]

<https://finance.yahoo.com/news/60-000-old-way-help-130000215.html>

### **Climate Emergency Tour: Disaster Fatality Edition**

By John Robson, Climate Discussion Nexus, Dec 18, 2019

<https://climatediscussionnexus.com/2019/12/18/climate-emergency-tour-disaster-fatality-edition/>

### **Judge finds US liable for damages incurred during Hurricane Harvey**

By Rachel Frazin, The Hill, Dec 18, 2019

<https://thehill.com/policy/energy-environment/475067-judge-finds-us-liable-for-damages-incurred-during-hurricane-harvey>

“Judge Charles Lettow determined Tuesday that the government must compensate people for flooding caused by the Army Corps of Engineers’ reservoir management following the storm.”  
[SEPP Comment: Not a simple case. A second case is from homeowners who were flooded out by the opening of the dam.]

### **Changing Climate**

#### **Canadian tundra formerly covered in rich forest: Ancient plant fossil record shows**

By Staff Writers, Saskatoon, Canada. (SPX) Dec 13, 2019

[http://www.terraily.com/reports/Canadian\\_tundra\\_formerly\\_covered\\_in\\_rich\\_forest\\_Ancient\\_plant\\_fossil\\_record\\_shows\\_999.html](http://www.terraily.com/reports/Canadian_tundra_formerly_covered_in_rich_forest_Ancient_plant_fossil_record_shows_999.html)

Link to paper: The late Paleocene to early Eocene Arctic megafloora of Ellesmere and Axel Heiberg islands, Nunavut, Canada

By West, Christopher K.; Greenwood, David R.; Basinger, James F., Palaeontographica Abteilung B, Dec 12, 2019

[https://www.schweizerbart.de/papers/palb/detail/300/91900/The\\_late\\_Paleocene\\_to\\_early\\_Eocene\\_Arctic\\_megaflor?af=crossref](https://www.schweizerbart.de/papers/palb/detail/300/91900/The_late_Paleocene_to_early_Eocene_Arctic_megaflor?af=crossref)

[SEPP Comment: Not only 56 million years ago, but also 8,000 to 10,000 years ago.]

### **Changing Seas**

#### **“History’s Greatest Sea is Dying”... Because Gratuitous Reference to Climate Change**

By David Middleton, WUWT, Dec 20, 2019

<https://wattsupwiththat.com/2019/12/20/historys-greatest-sea-is-dying-because-gratuitous-reference-to-climate-change/>

#### **Ocean Cycles At Work: Data From Japan Meteorological Agency Show Northern Coastal Europe November COOLING!**

By Kirye and P Gosselin, No Tricks Zone, Dec 15, 2019

<https://notrickszone.com/2019/12/15/ocean-cycles-at-work-data-from-japan-meteorology-agency-show-northern-coastal-europe-november-cooling/>

### **Changing Cryosphere – Land / Sea Ice**

#### **NASA's Operation IceBridge completes eleven years of polar surveys**

By Jessica Merzforf for GSFC News, Greenbelt MD (SPX) Dec 12, 2019

[http://www.spacedaily.com/reports/NASAs\\_Operation\\_IceBridge\\_completes\\_eleven\\_years\\_of\\_polar\\_surveys\\_999.html](http://www.spacedaily.com/reports/NASAs_Operation_IceBridge_completes_eleven_years_of_polar_surveys_999.html)

“For eleven years from 2009 through 2019, the planes of NASA's Operation IceBridge flew above the Arctic, Antarctic and Alaska, gathering data on the height, depth, thickness, flow and change of sea ice, glaciers and ice sheets.

“One of IceBridge's first important contributions was mapping hundreds of miles of grounding lines in both Antarctica and Greenland. Grounding lines are where a glacier's bottom loses contact with the bedrock and begins floating on seawater - a grounding line that is higher than rock that the ice behind it is resting on increases the possibility of future unstable retreat.”

### **A much warmer Arctic**

By John Robson, Climate Discussion Nexus, Dec 18, 2019

<https://climatediscussionnexus.com/2019/12/18/a-much-warmer-arctic/>

Link to paper: The Holocene Thermal Maximum around Svalbard, Arctic North Atlantic; molluscs show early and exceptional warmth

By Jan Mangerud, John Inge Svendsen, *The Holocene*, June 30, 2017

<https://journals.sagepub.com/doi/10.1177/0959683617715701>

### **Another New Study Finds The Canadian Arctic Was About 1-2°C Warmer During Medieval Times**

By Kenneth Richard, *No Tricks Zone*, Dec 16, 2019

<https://notrickszone.com/2019/12/16/another-new-study-finds-the-canadian-arctic-was-about-1-2c-warmer-during-medieval-times/>

### **GOCE reveals what's going on deep below Antarctica**

By Staff Writers, *Paris (ESA)*, Dec 10, 2019

[http://www.spacedaily.com/reports/GOCE\\_reveals\\_whats\\_going\\_on\\_deep\\_below\\_Antarctica\\_999.html](http://www.spacedaily.com/reports/GOCE_reveals_whats_going_on_deep_below_Antarctica_999.html)

Link to paper: Modeling Satellite Gravity Gradient Data to Derive Density, Temperature, and Viscosity Structure of the Antarctic Lithosphere

By Pappa, Ebbing, Ferraccioli, and van der Wal, *JGR Solid Earth*, Oct 25, 2019

<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2019JB017997>

### **Barrels of ancient Antarctic air aim to track history of rare gas**

By Staff Writers, *Seattle WA (SPX)*, Dec 16, 2019

[http://www.spacedaily.com/reports/Barrels\\_of\\_ancient\\_Antarctic\\_air\\_aim\\_to\\_track\\_history\\_of\\_rare\\_gas\\_999.html](http://www.spacedaily.com/reports/Barrels_of_ancient_Antarctic_air_aim_to_track_history_of_rare_gas_999.html)

### ***Acidic Waters***

#### **Tiny shells reveal waters off California are acidifying twice as fast as the global ocean**

Press Release, NOAA, Headquarters, *EurekAlert*, Dec 16, 2019 [H/t WUWT]

[https://www.eurekalert.org/pub\\_releases/2019-12/nh-tsr121119.php](https://www.eurekalert.org/pub_releases/2019-12/nh-tsr121119.php)

Link to paper: Decadal variability in twentieth-century ocean acidification in the California Current Ecosystem

By Emily B. Osborne, et al. *Nature, geoscience*, Dec 16, 2019

<https://www.nature.com/articles/s41561-019-0499-z>

From the abstract: “Assuming other aspects of the carbonate system, this represents a 0.21 decline in pH, exceeding the estimated global average decline by more than a factor of two.”

“Our proxy record also shows considerable variability that is significantly correlated with Pacific Decadal Oscillation and decadal-scale changes in upwelling strength, a relationship that until now has been obscured by the relatively short observational record. This modulation suggests that climatic variations will play an important role in amplifying or alleviating the anthropogenic signal and progression of ocean acidification in this region.”

*[SEPP Comment: Upwelling of deep waters along the coast reduces pH, but the water remains alkaline.]*

### **Marine biology: Acidified oceans may corrode shark scales**

By Staff, *EurekAlert*, AAAS, Dec 19, 2019 [H/t WUWT]

[https://www.eurekalert.org/pub\\_releases/2019-12/sr-mba121319.php](https://www.eurekalert.org/pub_releases/2019-12/sr-mba121319.php)

Link to paper: Acid-base adjustments and first evidence of denticle corrosion caused by ocean acidification conditions in a demersal shark species

By Jacqueline Dziergwa, et al, *Nature, Scientific Reports*, Dec 19, 2019

<https://www.nature.com/articles/s41598-019-54795-7>

From EurekAlert:” As ocean CO<sub>2</sub> concentrations increase due to human activity, oceans are becoming more acidic, with potential implications for marine wildlife.”

From abstract: “Global ocean acidification is expected to chronically lower the pH to 7.3 (>2200 µatm seawater pCO<sub>2</sub>) by the year 2300.”

[SEPP Comment: A solution with pH of 7.3 is alkaline, not acidic.]

### ***Lowering Standards***

#### **The Lancet’s Duplicitous Climate Report**

By Paul Homewood, Not a Lot of People Know That, Dec 20, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/12/20/lancets-latest-climate-report-is-full-of-errors/>

Link to report: The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate

By Nick Watts, et al. The Lancet, Nov 13, 2019

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)32596-6/fulltext#seccesstitle70](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)32596-6/fulltext#seccesstitle70)

“The Executive Summary contains a number of questionable claims and statements, which seriously undermine the reports integrity and reliability:”

### ***Communicating Better to the Public – Use Yellow (Green) Journalism?***

#### **Coal consumption likely to rise as growing demand for electricity generation in developing countries**

By Staff, The Hindu, Dec 17, 2019

<https://www.thehindubusinessline.com/news/coal-consumption-likely-to-rise-as-growing-demand-for-electricity-generation-in-developing-countries/article30327363.ece>

“Under current policies, the world is set to warm almost 3 degrees Celsius (5.4 degrees Fahrenheit) by the end of the century. That’s double the rate scientists say is needed to constrain the worst impacts of climate change.”

[SEPP Comment: BS, Bad Science]

#### **Nature's shocking "top ten" scientists**

By Lubos Motl, The Reference Frame, Dec 18, 2019

<https://www.nature.com/immersive/d41586-019-03749-0/index.html>

Link to list: Nature’s 10: Ten people who mattered in science in 2019.

By Multiple authors, Nature, Accessed Dec 20, 2019

<https://www.nature.com/immersive/d41586-019-03749-0/index.html>

“At any rate, it's terribly disappointing to see that a journal that used to be good – although it has played no role in my interest in science whatsoever – chooses way over 50% of its ‘best scientists’ according to some extremist political or identity politics criteria. The individuals at Nature who are responsible for this outrageous page are harmful agents and should be treated as harmful agents.”

### ***Communicating Better to the Public – Make things up.***

#### **How the American Meteorological Society Justified Publishing Half-Truths**

Natural Populations Thrived, But They Published Global Warming via Extreme Weather Was Causing Extinctions

By Jim Steele, Landscapes and Cycles, Accessed Dec 20, 2019

[http://landscapesandcycles.net/American\\_Meteorological\\_Society\\_half-truth.html](http://landscapesandcycles.net/American_Meteorological_Society_half-truth.html)

“That the AMS would justify publishing half-truths based on technicalities and spurious precedents taints the rest of the scientific community who strive to uphold science’s highest standards. It undermines the public’s trust in environmental science, making it much more difficult for us to convince others about cases where we truly need better environmental stewardship. Good environmental stewardship demands unadulterated science to guide our policies, not the half-truths the AMS now condones.”

### **New Video : Climate Math**

By Tony Heller, Real Climate Science, Dec 16, 2019

<https://realclimatescience.com/2019/12/new-video-climate-math/>

*[SEPP Comment: Almost every place is warming twice as fast as the rest of the world? Sea level rise in New Jersey is twice as fast as the rest of the world?]*

### **New video shows Attenborough & Netflix falling walrus deception as revealed by BBC**

By Susan Crockford, Polar Bear Science, Dec 19, 2019

<https://polarbearsience.com/2019/12/19/new-video-shows-attenborough-netflix-falling-walrus-deception-as-revealed-by-bbc/>

### **More evidence that a cold climate kills – while trying to sell “stop Brexit”**

By Kevin Krajick, State of the Planet, Columbia University, Via UST, Dec 17, 2019

<https://wattsupwiththat.com/2019/12/17/more-evidence-that-a-cold-climate-kills-while-trying-to-sell-stop-brexit/>

<https://blogs.ei.columbia.edu/2019/12/17/a-cautionary-tale-on-climate-and-economics-within-ancient-scottish-tree-rings/>

Link to paper: Complexity in crisis: The volcanic cold pulse of the 1690s and the consequences of Scotland's failure to cope

By Rosanne D'Arrigo, et al. Journal of Volcanology and Geothermal Research, Jan 1, 2010 [H/t WUWT]

<https://www.sciencedirect.com/science/article/pii/S0377027319303087?via%3Dihub#!>

*[SEPP Comment: Brexit will produce similar weather?]*

### ***Communicating Better to the Public – Do a Poll?***

#### **Election Polls Should Report Confidence Intervals, Not Just Margins Of Error**

By Alex Berezow, ACSH, Dec 14, 2019

<https://www.acsh.org/news/2019/12/14/election-polls-should-report-confidence-intervals-not-just-margins-error-14452>

### **Guardian prophets six weeks ago: “Climate crisis affects how majority will vote in UK election – poll”**

Polls are like climate models. You can get any answer you want, but not the one you need.

By Jo Nova, Her Blog, Dec 17, 2019

<http://joannenova.com.au/2019/12/guardian-prophets-six-weeks-ago-climate-crisis-affects-how-majority-will-vote-in-uk-election-poll/>

### ***Communicating Better to the Public – Go Personal.***

#### **Comrade Rickford misspeaks**

By John Robson, Climate Discussion Nexus, Dec 18, 2019

<https://climatediscussionnexus.com/2019/12/18/comrade-rickford-misspeaks/>

“Ontario Energy minister Greg Rickford got in trouble recently for mentioning the familiar runaway costs and sorry performance of alternative energy in Germany. His apparent crime was not saying something false. It was letting slip that he read it on Climate Change Dispatch which publishes skeptical articles about global warming and climate policy.”

### ***Communicating Better to the Public – Use Propaganda***

#### **Aussie Government ABC Urges Workers to Join Student Climate Strikes**

By Eric Worrall, WUWT, Dec 19, 2019

<https://wattsupwiththat.com/2019/12/19/aussie-government-abc-urges-workers-to-join-student-climate-strikes/>

### ***Communicating Better to the Public – Use Propaganda on Children***

#### **They mix one-sided climate hype and six year olds. What did they think would happen?**

By Jo Nova, Her Blog, Dec 20, 2019

<http://joannenova.com.au/2019/12/they-mix-one-sided-climate-hype-and-six-year-olds-what-did-they-think-would-happen/>

#### **Young People Distressed About Climate Change**

Forget fear and pessimism. Step into the sunlight & soar.

By Donna Laframboise, Big Picture News, Dec 16, 2019

<https://nofrackingconsensus.com/2019/12/16/young-people-distressed-about-climate-change/>

### ***Communicating Better to the Public – Use Children for Propaganda***

#### **Prestigious Science Journal Names Greta Thunberg To Top 10 Most Influential List: ‘Channelled Her Generation’s Rage’**

By Hank Merrien, Daily Wire, Dec 17, 2019 [H/t Bernie Kepshire]

[https://www.dailywire.com/news/prestigious-science-journal-names-greta-thunberg-to-top-10-most-influential-list-channelled-her-generations-rage?itm\\_source=parsely-api?utm\\_source=cnemail&utm\\_medium=email&utm\\_content=121819-news&utm\\_campaign=position5](https://www.dailywire.com/news/prestigious-science-journal-names-greta-thunberg-to-top-10-most-influential-list-channelled-her-generations-rage?itm_source=parsely-api?utm_source=cnemail&utm_medium=email&utm_content=121819-news&utm_campaign=position5)

[SEPP Comment: Reflecting the mental maturity of “Nature?”]

### ***Communicating Better to the Public – Protest***

#### **Climate change fears propel scientists out of the lab and into the streets**

By Julia Rosen, LA Times, Dec 17, 2019 [H/t Bernie Kepshire]

[https://www.latimes.com/environment/story/2019-12-17/scientists-become-advocates-on-climate-change?utm\\_source=Today%27s+Headlines&utm\\_campaign=9aeda67e4a-EMAIL\\_CAMPAIGN\\_2016\\_12\\_12\\_COPY\\_01&utm\\_medium=email&utm\\_term=0\\_b04355194f-9aeda67e4a-80326865](https://www.latimes.com/environment/story/2019-12-17/scientists-become-advocates-on-climate-change?utm_source=Today%27s+Headlines&utm_campaign=9aeda67e4a-EMAIL_CAMPAIGN_2016_12_12_COPY_01&utm_medium=email&utm_term=0_b04355194f-9aeda67e4a-80326865)

[SEPP Comment: Have these “scientists” ever reviewed the results of laboratory tests on the greenhouse effect?]

### ***Expanding the Orthodoxy***

#### **Green Blob, Climate Alarmists & BBC Start Anti-Boris Johnson Campaign**

By Staff, GWPF, Dec 18, 2019

<https://www.thegwpf.com/green-blob-climate-alarmists-bbc-start-anti-boris-johnson-campaign/>

#### **The Atlantic: Investment Bankers Will Save Us from Climate Change**

By Eric Worrall, WUWT, Dec 17, 2019

<https://wattsupwiththat.com/2019/12/17/the-atlantic-investment-bankers-will-save-us-from-climate-change/>

### ***Questioning European Green***

#### **“Von der Leyen’s Green Madness”: Europe Aims To Divert One Trillion Euros...”Best Way To Torpedo Europe”**

By P Gosselin, No Tricks Zone, Dec 18, 2019

<https://notrickszone.com/2019/12/18/von-der-leyens-green-madness-europe-aims-to-divert-one-trillion-euros-best-way-to-torpedo-europe/>

#### **Eastern EU states opposed to 2050 zero-emissions goal**

By Staff, Agence France-Presse, Dec 12, 2019

<https://www.ednh.news/eastern-eu-states-opposed-to-2050-zero-emissions-goal/>

*[SEPP Comment: The Czech Republic and Hungary have joined Poland. Includes a graph of 2017 GHG emissions per capita in the EU. The biggest emitter, Luxembourg, emits almost 4 times the smallest, Switzerland.]*

#### **The climate change sceptics Boris Johnson has appointed to his new government**

Boris Johnson's new government has several members accused of denying climate change

By Will Hayward, Wales Online, Dec 19, 2019

<https://www.walesonline.co.uk/news/politics/climate-change-global-warming-denial-17448313>

### ***Questioning Green Elsewhere***

#### **A democrat fracking ban will cause household energy bills to “more than quadruple”**

By Joseph D’Aleo, CCM, ICECAP, Dec 20, 2019

[http://icecap.us/index.php/go/new-and-cool/a\\_democrat\\_fracking\\_ban\\_will\\_cause\\_household\\_energy\\_bills\\_to\\_more\\_than\\_quad/](http://icecap.us/index.php/go/new-and-cool/a_democrat_fracking_ban_will_cause_household_energy_bills_to_more_than_quad/)

#### **Green Energy Firm That Says It’s Saved Local Governments Billions Leaves Trail Of Questions**

By Luke Rosiak, Daily Caller, Dec 17, 2019 [H/t WUWT]

<https://dailycaller.com/2019/12/17/cenergistic-green-energy-enron/>

*[SEPP Comment: Promoters of green energy are always to be trusted?]*

### ***Green Jobs***

#### **Outrage as jobs at Scotland’s biggest offshore wind project go to China**

By Paul Homewood, Not a Lot of People Know That, Dec 19, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/12/19/outrage-as-jobs-at-scotlands-biggest-offshore-wind-project-go-to-china/>

“Skilled work on Seagreen in the Firth of Forth will be carried out overseas, fuelling criticism of the so-called ‘green jobs revolution’ in Scotland.

“Gary Smith, Scotland secretary of the GMB trade union, said: ‘This would be the death knell for any meaningful offshore wind manufacturing industry in Scotland – an utter scandal and a national disgrace.’

“In 2010, the Scottish Government estimated that the offshore wind sector could create 28,000 direct jobs and lead to £7.1 billion of investment.”

### ***Funding Issues***

#### **Final 2020 spending bill is kind to U.S. research**

By Jeffrey Mervis, David Malakoff, Science Mag, Dec 16, 2019 [H/t Toshio Fujita]  
<https://www.sciencemag.org/news/2019/12/final-2020-spending-bill-kind-us-research>

Link to details: Lowey Releases Appropriations Packages

Press Release, House Committee on Appropriations, Dec 16, 2019

<https://appropriations.house.gov/news/press-releases/lowey-releases-appropriations-packages>

“At the National Oceanic and Atmospheric Administration, climate research programs get a \$10.5 million boost to \$169.5 million, \$82 million above Trump’s request.”

### ***The Political Games Continue***

#### **Al Gore Says Democratic Candidates Should Absolutely Run On AOC’s Green New Deal: Report**

By Chris White, Daily Caller, Dec 13, 2019

<https://dailycaller.com/2019/12/13/democrats-green-new-deal-election/>

### ***Litigation Issues***

#### **Activist-Legal Complex Will Destroy American Science And Industry**

By Alex Berezow and Josh Bloom, ACSH, Dec 17, 2019

<https://www.acsh.org/news/2019/12/17/activist-legal-complex-will-destroy-american-science-and-industry-14463>

#### **Dutch Supreme Court Upholds Climate Lawsuit against Government**

By Marlo Lewis, CEI, Dec 20, 2019

<https://cei.org/blog/dutch-supreme-court-upholds-climate-lawsuit-against-government>

#### **Exxon Wins Against NY’s Hypocritical Legal Lunacy**

By Larry Bell, Newsmax, Dec 16, 2019

<https://www.newsmax.com/larrybell/sap-se-cap-and-trade-bp/2019/12/16/id/946077/>

#### **Rockefeller Director Disappointed Exxon Investigation Failed**

By Spencer Walrath, Energy in Depth, Dec 16, 2019

<https://eidclimate.org/rockefeller-director-disappointed-that-the-rockefeller-funded-exxon-investigation-failed/>

“After the trial, when the New York Times asked about the NYAG’s failure, Wasserman responded: ‘Regardless of how the company communicated its accounting practices to the public, Exxon’s multidecade climate deception has helped push humanity toward a desperate moment filled with suffering, death and grief. No court decision can change that reality.’”

*[SEPP Comment; Apparently his reality is computerized fantasy.]*

### ***Cap-and-Trade and Carbon Taxes***

#### **Are you all fools?**

By John Robson, Climate Discussion Nexus, Dec 18, 2019

<https://climatediscussionnexus.com/2019/12/18/are-you-all-fools/>

“Instead of paying the national levy locals will pay a provincial [for New Brunswick, Canada] one come April. But it’s not a new tax. The story adds that ‘the province is also cutting the gas tax to minimize the cost on consumers.’ So essentially they just renamed the old gas tax a ‘carbon tax’ without raising the price of gas.”

### ***Subsidies and Mandates Forever***

#### **Time To Abolish The Monstrous BBC Poll Tax**

By Charles Moore, The Telegraph, Via GWPF, Dec 17, 2019

<https://www.thegwpf.com/charles-moore-time-to-abolish-the-monstrous-bbc-poll-tax/>

“This would certainly strike a blow for the most vulnerable in our society. Roughly 10 per cent of all prosecutions in magistrates’ courts are for licence fee non-payment. That is about 200,000 cases a year, a truly astonishing waste of time and money.”

### ***EPA and other Regulators on the March***

**TOTAL VICTORY: EPA science advisers trash EPA staff assessment of PM2.5 ‘science’**

By Steve Milloy, Junk Science, Dec 17, 2019 [H/t Jim Karlock]

<https://junkscience.com/2019/12/total-victory-epa-science-advisers-trash-epa-staff-assessment-of-pm2-5-science/#more-101872>

*[SEPP Comment: It may not be a total victory, but it is a significant step.]*

### **DOE announces another lightbulb efficiency rollback**

By Rebecca Beitsch, The Hill, Dec 20, 2019

<https://thehill.com/policy/energy-environment/475541-doe-announces-another-rollback-of-efficiency-standards-for>

### ***Energy Issues -- US***

**NERC: Long-Term Reliability Uncertain Amid Rapid Changes to Bulk Power System**

By Sonal Patel, Power Mag, Dec 19, 2019

<https://www.powermag.com/nerc-long-term-reliability-uncertain-amid-rapid-changes-to-bulk-power-system/>

### **Will there be enough electricity after coal plants shut down?**

Coal plants are shutting down across the West. But will there be enough electricity once they are gone? The answer has industry leaders concerned.

By Pat Dooris, DGW8-TV, Oregon, Dec 18, 2019

<https://www.kgw.com/article/news/local/power-struggle-will-there-be-enough-electricity/283-a5d9a3b2-9e2e-4794-9d42-b76d7695dd0f>

### ***Alternative, Green (“Clean”) Energy -- Other***

**Biomass delivers ‘questionable carbon savings’, says new report**

Environmental thinktank Sandbag claims biomass does not allow ‘near-immediate carbon and cost reductions’

By Jonny Bairstow, Energy Live News, Dec 18, 2019 [H/t GWPF]

<https://www.energylivenews.com/2019/12/18/biomass-delivers-questionable-carbon-savings-says-new-report/>

### **EPA finalizes ethanol rule to chagrin of producers, oil industry**

By Rebecca Beitsch, The Hill, Dec 19, 2019

<https://thehill.com/policy/energy-environment/475361-epa-finalizes-ethanol-rule-to-chagrin-of-producers-oil-industry>

### **Transportation Climate Initiative Update**

Guest post by Roger Caiazza, WUWT, Dec 19, 2019

<https://wattsupwiththat.com/2019/12/19/transportation-climate-initiative-update/>

### ***Alternative, Green (“Clean”) Energy -- Storage***

## **Climate Friendly Lithium Battery Horror: Lawsuit Accuses Alphabet, Apple, Dell and Tesla of Complicity in Child Exploitation**

By Eric Worrall, WUWT, Dec 18, 2019

<https://wattsupwiththat.com/2019/12/18/climate-friendly-lithium-battery-horror-lawsuit-accuses-alphabet-apple-dell-and-tesla-of-complicity-in-child-exploitation/>

### ***Alternative, Green (“Clean”) Vehicles***

#### **Attempts To Use Electric Buses In Germany Flop...”Many Disadvantages”, “Short Service Life”, “No Real Progress”**

By P Gosselin, No Tricks Zone, Dec 17, 2019

<https://notrickszone.com/2019/12/17/attempts-to-use-electric-buses-in-germany-flop-many-disadvantages-short-service-life-no-real-progress/>

*[SEPP Comment: Problems with batteries, hills, cold weather, too many passengers, etc.]*

### ***California Dreaming***

#### **Stein: Governor Newsom doubling down to dismantle the California economy**

By Stephen Frank and Ronald Stein, California Political Review, Dec 15, 2019 [H/t WUWT]

<http://www.capoliticalreview.com/capoliticalnewsandviews/stein-governor-newsom-doubling-down-to-dismantle-the-california-economy/>

### ***Health, Energy, and Climate***

#### **A Simple Solution To Separate Statistically Significant From Clinically Significant**

By Chuck Dinerstein, ACSH, Dec 9, 2019

<https://www.acsh.org/news/2019/12/09/simple-solution-separate-statistically-significant-clinically-significant-14444>

“One of the significant problems for physicians is in translating research and guidelines into the care of their patients. This problem is compounded because much of the research is couched in terms of statistical significance, not ‘clinically meaningful differences.’”

#### **Debunking the Myth of Who Funds Biomedical Innovation**

By Robert Poppovian, Morning Consult, Dec 6, 2019 [H/t ACSH]

<https://morningconsult.com/opinions/debunking-the-myth-of-who-funds-biomedical-innovation/>

### ***Other News that May Be of Interest***

#### **A Modern Story of Hope**

By Donn Dears, Power for USA, Dec 20, 2019

<https://ddears.com/2019/12/20/a-modern-story-of-hope-3/>

*[SEPP Comment: The White Cliffs of Dover became an icon during World War II. They were formed from chalk, a soft, white limestone, deposited some 70 million years ago when atmospheric concentrations of CO2 were two to three times that of today.]*

#### **China's Gaofen-7 mapping satellite sends back incredible 3D images of Earth**

By Staff Writers, Beijing (Sputnik), Dec 11, 2019 [H/t Toshio Fujita]

[http://www.spacedaily.com/reports/Chinas\\_Gaofen\\_7\\_mapping\\_satellite\\_sends\\_back\\_incredible\\_3D\\_images\\_of\\_Earth\\_999.html](http://www.spacedaily.com/reports/Chinas_Gaofen_7_mapping_satellite_sends_back_incredible_3D_images_of_Earth_999.html)

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**BELOW THE BOTTOM LINE:**

**Climate change legislation, media coverage drives oil companies' ad spending, study finds**  
Press Release, EurekAlert! Dec 17, 2019 [H/t WUWT]

[https://www.eurekalert.org/pub\\_releases/2019-12/bu-ccl121719.php](https://www.eurekalert.org/pub_releases/2019-12/bu-ccl121719.php)

“The findings also suggest, Brulle said, that oil executives are less concerned with public mood on climate change and with the release of major climate change reports, which invariably portray their companies in a negative light. Brulle said the latter finding was consistent with his own previous research, which indicates that climate change reports do little to sway public opinion, and are thus unlikely to spur media coverage and Congressional action.”

“The researchers' work was supported in part by a grant from the National Science Foundation (No. 1558264).”

**Forget cost and gigawatts — lets solve climate by turning toxic white men into soy boys**

Is fragile masculinity the biggest obstacle to climate action?

Megan MacKenzie, Professor of Gender and War at the University of Sydney, ABC

By Jo Nova, Her Blog, Dec 15, 2019

<http://joannenova.com.au/2019/12/forget-cost-and-gigawatts-lets-solve-climate-by-turning-toxic-white-men-into-soy-boys/>

[SEPP Comment: The following link supports Nova's statement that Megan MacKenzie is Professor of Gender and War at the University of Sydney. <https://meganhmackenzie.com/media/The-Swedish-Defence-University-has-a-Professor-of-Gender,-Peace-and-Security/>]

**Greta Expectations, Great Flop: UN Climate Ritual Ends According to Plan**

By Staff, GWPF, Dec 17, 2019

<https://www.thegwpf.com/as-predicted-un-climate-ritual-ends-according-to-plan/>

Link to report: cop-25: Greta Expectations

By Staff, GWPF, 2019

<https://www.thegwpf.com/content/uploads/2019/12/ClimateRitual2019-1.pdf>

Cartoons.

**Norwegian 'Ship of Fools' is still developing into a silly case of poor planning.**

By Charles Rotter, WUWT, Dec 18, 2019

<https://wattsupwiththat.com/2019/12/18/norwegian-ship-of-fools-is-still-developing-into-a-silly-case-of-poor-planning/>

**The Climate Agenda Off the Rails: Sarah Myhre at the American Geophysical Union**

By Robert Bradley Jr. Master Resource, Dec 18, 2019

<https://www.masterresource.org/climate-exaggeration/climate-feminism-agenda/>

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## ARTICLES

A Decade in Which Fracking Rocked the Oil World

Shale drillers made the U.S. the globe's top producer of oil and natural gas, but the boom is showing cracks as the decade ends

By Rebecca Elliott and Luis Santiago, WSJ, Dec 17, 2019

<https://www.wsj.com/articles/a-decade-in-which-fracking-rocked-the-oil-world-11576630807>

TWTW Summary: The reporter and graphics editor begin:

*“Ten years ago, the U.S. ranked third in global oil production, trailing Saudi Arabia and Russia.*

*“A decade later, it leads the world in oil as well as natural-gas output, having more than doubled the amount of crude it pumps while raising gas production by roughly two-thirds, according to federal data.*

*“There is a simple reason for the surge: fracking. Horizontal drilling and hydraulic fracturing techniques spurred a historic U.S. production boom during the decade that has driven down consumer prices, buoyed the national economy and reshaped geopolitics.*

*“Though some of these methods had existed for years, they were successfully applied to dense rock formations only about two decades ago as technologies improved, allowing companies to unlock vast amounts of oil and gas.*

*“Drillers first targeted natural gas in the Barnett Shale of North Texas, and later unleashed a trove of the fuel in Appalachia. Further advances allowed them to release heavier oil molecules from shale formations. That led to a renaissance of one of America’s most venerable oil fields, the Permian Basin of Texas and New Mexico.*

*“A decade ago, drilling and fracking in tight rock formations such as shale produced less than one million barrels of oil a day in the U.S., according to data from the Energy Information Administration. Today that figure is roughly eight million barrels a day.*

*“Before the surge in shale drilling, U.S. crude production had been steadily declining since the 1970s, leaving the country vulnerable to price shocks such as after the 1973 Arab oil embargo. Now, the country is more insulated, thanks in large part to the shale boom. After Saudi Arabia shut down more than half of its oil production following a September attack on its oil facilities, U.S. benchmark oil prices briefly shot up but declined to pre-attack levels in about two weeks. Fracking also has limited the domestic effects of sanctions on countries such as Venezuela, which had long been one of the top suppliers of crude to the U.S.*

*“The shale boom, meanwhile, has supported a surge in overseas crude sales, allowing the country to become a net exporter of oil and refined products such as gasoline for the first time in decades.*

*“‘At the beginning of the decade, energy independence was still a joke for late-night television comedians,’ says author Daniel Yergin, who is vice chairman at IHS Markit. ‘Turn around a decade later, and we’re here.’*

*“Soaring U.S. oil production also helped create a global glut of crude that has forced the Organization of the Petroleum Exporting Countries and Russia to curb output to prop up prices, a dynamic that continued through the end of the decade.*

*“Rapid U.S. natural-gas production, meanwhile, created a surplus of the cleaner-burning fuel and made it inexpensive. That led to a historic shift: Gas surpassed coal as the top source of U.S. electricity during the decade, the EIA says. The average price of gas for residential customers also has fallen by about 25%, adjusted for inflation, since 2009, EIA estimates show.*

*“The added oil production changed the relationship between crude prices and the U.S. economy. Whereas higher oil prices were once an unequivocal drag on the country’s economy, the impact is now more mixed. More-expensive crude still hurts consumers, but it is an economic boon to the country’s revived oil-producing regions, partially offsetting the impacts.”*

The article concludes with an all too typical discussion of reaction by investors. After boom-and-bust cycles, this part of the energy sector is maturing, thus great profits are no longer to be made, and speculative-type investors express concerns.

[TWTW Comment: Compared with the oil prices projected before hydraulic fracturing of oil became recognized, consumers have greatly benefited. The negative implications in the article are meaningless. An examination of the government budgets of Saudi Arabia and Russia demonstrates huge holes once filled by oil revenues, basically from consumers.]

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