

# **The Week That Was: 2018-05-26 (May26, 2018)**

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### **The Science and Environmental Policy Project**

**Quote of the Week.** *““In rejecting their view [Spinoza, Leibniz and Hegel], as I shall contend that we must, we are committing ourselves to the opinion that “truth” in empirical material has a meaning different from that which it bears in logic and mathematics.” – Bertrand Russell, “An Inquiry Into Meaning & Truth” (1940)*

**Number of the Week: 721 authors**

#### **THIS WEEK:**

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

**Hollow Models?** The long writing career of British logician and philosopher Bertrand Russell covered a period of marked change in science. The term natural philosophy was giving way to the term physical science and extensive divisions were occurring into branches such as physics, chemistry, etc. Already, it had been shown that long-held beliefs needed continuing empirical verification. For example, European philosophers long held the view that knowledge can be logically deduced from generally held beliefs, or propositions, such as: all swans are white; if it is a swan, it is white. This logical view was broken when the premise was falsified with the discovery of black swans in Australia in 1697. The occurrence has been used to demonstrate that logic alone is not sufficient to demonstrate a proposition has meaning in the physical world (truth). [Stock market investor Nassim Nicholas Taleb developed an investment (speculation) strategy based on unlikely events, which has different meaning.]

Previously, it was held that mathematics, the language of science, conveys empirical meaning. Euclidian geometry fit well with Newtonian Mechanics. However, Brownian Motion, discovered in 1827, did not. Further, Quantum Mechanics, advanced at the beginning of the 20th century by Max Planck, Einstein, and others, does not fit into a Euclidian scheme. Mathematics alone is not sufficient to advance knowledge, meaning, of the physical world. Empirical verification is necessary.

Recently, we have seen significant work that contradicts the claims of the UN Intergovernmental Panel on Climate Change (IPCC), and others, that carbon dioxide is causing dangerous global warming. As John Christy, Roy Spencer, and others with the Earth System Science Center at the University of Alabama in Huntsville have published, the bulk atmosphere is not warming as projected by a multitude of models used by the IPCC. Using the Canadian Climate Model Run 3, as an example, they show that the incorrectly termed “distinct human fingerprint”, the tropical “hot spot” between about 20°N and 20°S, does not exist in 38 years of atmospheric temperature data.

In its latest Assessment Report (AR5, 2013 & 2014), the IPCC no longer claims a tropical hot spot, but such a condition is necessary if water vapor is to amplify the slight warming produced by an increase in carbon dioxide (CO<sub>2</sub>) shown in laboratory experiments, as speculated in the 1979 Charney Report, published by the National Academy of Sciences. Thus, the IPCC and its followers such as the US Global Change Research Program (USGCRP), with 13 US government

participating agencies, are in a difficult situation. They have no empirical basis for declaring that greenhouse gases, particularly CO<sub>2</sub>, are causing dangerous global warming.

Over one hundred years ago, it was shown that mathematics and logic, alone, are not sufficient for establishing meaningful knowledge about the physical world. Reliance on mathematical models, without empirical verification, is an empty science. The global climate models being used are hollow. See links under Challenging the Orthodoxy and Questioning the Orthodoxy.

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**Dangerous Sea Level Rise:** Last week's TWTW carried the corrected version of Fred Singer's essay on sea level rise. The printed version contained the erroneous statement: "good data showing sea levels are in fact rising at **an accelerating** rate." This was corrected in the electronic version to at **a constant** rate [Singer is chairman emeritus of SEPP.] He stated:

*"I chose to assess the sea-level trend from 1915-45, when a genuine, independently confirmed warming of approximately 0.5 degree Celsius occurred. I note particularly that sea-level rise is not affected by the warming; it continues at the same rate, 1.8 millimeters a year, according to a 1990 review by Andrew S. Trupin and John Wahr. I therefore conclude—contrary to the general wisdom—that the temperature of sea water has no direct effect on sea-level rise. That means neither does the atmospheric content of carbon dioxide.*

Singer chose the earlier period because he questions the claimed late 20<sup>th</sup> century and early 21<sup>st</sup> century surface warming, believing it is more a product of instrument variation and data manipulation than a result from general warming of the globe.

There was no acceleration to sea level rise for 30 years 1915-45, although it is generally recognized that the global surface temperature warmed by about 0.5 degree Celsius. Among others, Mr. Mann and Senator Whitehouse responded to the essay, but ignored the period being discussed. Perhaps they found it a bit difficult explaining why warming in one period does not cause an acceleration in sea level rise but a similar warming in a later period does.

The issue of sea level rise is important, because it was used by the Supreme Court in 2007 to give Massachusetts standing to sue the EPA over greenhouse gas emissions, CO<sub>2</sub>, from motor vehicles. That decision created the opportunity for government advocates to claim that CO<sub>2</sub> endangers human health and welfare, as the EPA declared on December 7, 2009.

It should be noted that the IPCC AR5 contained an assertion of accelerating sea level rise endangering human lives. This was a change from the Fourth Assessment Report (AR4, 2007) which did not have an accelerating rise, but was the only report that had the lower estimate of global warming at 2°C rather than the 1.5 °C that is in the Charney Report. Could this be a sign that the IPCC is recognizing that its temperature predictions are highly questionable, and it needs to create new fears to keep the money flowing? Will the thirteen US government agencies follow? See Article # 1 and links under Changing Seas.

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**EPA Comments on Transparency Extended:** According to a report in The Hill newspaper:

*"The Environmental Protection Agency (EPA) is extending the public comment period for a controversial science 'transparency' rule that environmentalists have criticized as a rule that would limit facts from being involved in the agency's rulemaking process."*

The report states that the public comment period is extended to August 17. The quote is an indication that something is wrong in Washington when, in matters of public health, requiring transparency is controversial. It is as if there are two different sets of facts relating to public health – secret facts and public facts. See link under Change in US Administrations.

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**Censorship:** Australian Don Aitkin, former Chairman of Australia’s National Capital Authority and former Vice-Chancellor and President of the University of Canberra, comments on “The unfolding saga of Peter Ridd.” Professor Ridd is a “well-published academic whose fields of research include coastal oceanography, reef systems and peer review, has been for ten years the Head of the School of Physics at James Cook University (JCU).” He was disciplined for drawing attention to what he considered “exaggerations in the way fellow academics at his university were describing the condition of the Great Barrier Reef.”

The Great Barrier Reef is a cultural icon in Australia and fear of any threat to the icon is a “hot button” to obtain government funding, which may cause significant issues for those who question such threats. Aitkin writes:

*“...But it is a problem, and a rapidly growing one, in areas of research where what is actually the case is contested vigorously by others. An eye has to be kept on the source of the money going to higher education research, which in our country is overwhelmingly the Australian Government. In 2014, not quite four billion dollars was available within the higher education system for research, all of it from the Commonwealth. In addition universities made another billion or thereabouts from consultancy and research for other funders. That is a lot of money. As the last Chairman of the Australian Research Grants Committee in 1987 I had a little over \$30 million to parcel out. The engine has been most effective.*

*“In the last forty years governments have become interested in universities’ finding academic support for what they are proposing or have in place. We are in an era of ‘policy-based evidence’. We are also in an era of a particular political correctness, where it is very difficult indeed to get funds for research if the purpose of the research seems antithetical to current government policy. ‘Curiosity-directed research’ now comes with some serious barriers. Nowhere is this situation clearer than in the case of research on the Great Barrier Reef, in which Professor Ridd has been involved. A bucket-load of money has been devoted to ‘the Reef’, and another half-billion was forecast in the recent Budget, some of which will doubtless go the James Cook University, the Australian Institute of Marine Science and the Great Barrier Reef Marine Park Authority. The Reef, as is frequently said, is an Australian ‘icon’. An icon is a religious object. Professor Ridd is a scientist, not a priest.”*

NIPCC editor the late Bob Carter was “disciplined” by James Cook University. It seems that distasteful litigation is the only path for those who question scientific rigor and are willing to disagree with the academic bureaucracy. See links under Censorship.

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**San Francisco Bay Cities Litigation:** According to reports: “The U.S. Department of Justice (DOJ) last Thursday filed an amicus brief in the cases filed by San Francisco and Oakland against energy producers, slamming the lawsuits and asking the court for dismissal.”

*“The DOJ responded with several compelling reasons why the cities’ grievances should not be afforded relief by this case: 1) it is logistically impossible to fix a problem of the magnitude the cities describe in court; 2) other parts of the government already regulate greenhouse gas*

*emissions and the U.S. Supreme Court has already ruled that it is not appropriate for the Court to intervene; and 3) the cities may not even have the right to bring this type of claim to federal court.”*

The last is an issue of standing, which was important in the Mass. v. EPA litigation mentioned above. See links under Litigation Issues.

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**Asking the Right Questions:** According to P. Gosselin who translates reports in German, after 20 years, some in Germany are asking the right questions regarding the problem of storing and transporting solar and wind energy. When the systems produce, there is an excess of electricity, but when they don't, there is a shortage. According to Gosselin: Dr. Björn Peters wrote a summary of a meeting attended by political and industry leaders on Germany's energy future that featured surprising realism.

*“It is only now, after the construction of over 100 gigawatts of power generation capacity, that the realization is beginning to take hold that the expansion of ambient energies is not getting us closer to the purpose of replacing chemical energy sources.”*

*The technological components of an energy supply system based on sun and wind first need to be developed. **Just the development of suitable power storage cells for bridging windless and sunless periods still requires many decades.**”*

*“the sticking point is that it is only the weather-dependent ambient energies that can be expanded greatly, but they have neither the quantity nor the consistency to meet the requirements for a steady and affordable power supply.”*

*“Peters summarized:*

*“In total there was the impression that the numerous unanswered questions of the ‘Energiewende’ have finally dawned on the energy sector. While only a few years ago hope for rapid solutions to the technical challenges was high at the industry conferences, the degree of realism that has since spread is hard to surpass today. Not only are solution[s] to the know[n] problems being sought, but the **industry representatives and policymakers are finally beginning to ask the right questions regarding technical concepts, costs and economic impacts.**”*

[Boldface in original]

Until a suitable technology is commercial available to store electricity, making the problem EU-wide, does not solve the problem, but only expands it. See links under Questioning European Green.

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### **Additions and Corrections:**

The April 21 TWTW contained an essay by Fred Singer published in the American Thinker “Does the Greenhouse Gas CO2 cool the climate?” However, TWTW left off the concluding paragraph which is below:

*“Conclusion*

*“A greenhouse gas produces cooling of the climate when its molecular transitions are in a region of positive lapse rate. One example is CO2 and the stratosphere, where temperature increases*

with altitude. Another example is temperature over the winter poles [Happer – private communication; Flanner et al. GRL 2018].

“While the climate cooling is not obvious, it counters [conventional] GH warming. This at-least-partial cancelation might explain the puzzling absence of CO2-based GH warming in the 20th century.[viii] It could also help explain the cause of the [hotly] contested climate ‘pause.’[ix]

“Much further work awaits!

“Acknowledgements:

“I am grateful to colleagues for helpful discussions of the assumptions.

“This work was supported by SEPP, which accepts private charitable donations.

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**Number of the Week: 721 authors**, “A Chosen Few?” According to Carbon Brief, the IPCC has chosen 721 people from 90 countries to be an author in the Sixth Assessment Report (AR6), to be published in 2022. Of the chosen few, how many really understand what is needed to make a mathematical climate model yield meaningful results? See links under Defending the Orthodoxy.

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### SEPP’S APRIL FOOLS AWARD THE JACKSON

SEPP is conducting its annual vote for the recipient of the coveted trophy, The Jackson, a lump of coal. Readers are asked to nominate and vote for who they think is most deserving, following these criteria:

- The nominee has advanced, or proposes to advance, significant expansion of governmental power, regulation, or control over the public or significant sections of the general economy.
- The nominee does so by declaring such measures are necessary to protect public health, welfare, or the environment.
- The nominee declares that physical science supports such measures.
- The physical science supporting the measures is flimsy at best, and possibly non-existent.

The six past recipients, Lisa Jackson, Barack Obama, John Kerry, Ernest Moniz, John Holdren and Christiana Figueres aka Cruella de Ville are not eligible. Generally, the committee that makes the selection prefers a candidate with a national or international presence. The voting will close on July 30. Please send your nominee and a brief reason why the person is qualified for the honor to Ken@SEPP.org. Thank you. The award will be presented at the annual meeting of the Doctors for Disaster Preparedness in August.

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**NO TWTW NEXT WEEK:** Seeking peace in the Balkans. Due to travel to Europe, there will be no TWTW next week. TWTW will resume on the weekend of Jun 9.

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### NEWS YOU CAN USE:

***Science: Is the Sun Rising?***

**Solar Activity Drought: Now Only 28% Of What Is Normal...Arctic Sea Ice Volume Greater Than 2014!**

The Sun in April 2018

By Frank Bosse and Fritz Vahrenholt (Translated, edited and summarized by P Gosselin), No Tricks Zone, May 28, 2018

<http://notrickszone.com/2018/05/25/solar-activity-drought-now-only-28-of-what-is-normal-arctic-sea-ice-volume-greater-than-2014/>

*[SEPP Comment: It may take several solar cycles before the importance of sunspot activity and the duration of the cycles are understood.]*

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

#### **Are We Headed Towards Another Deep Solar Minimum?**

By David Dickinson, Universe Today, May 22, 2018 [H/t GWPF]

<https://www.universetoday.com/139189/are-we-headed-towards-another-deep-solar-minimum/>

#### **Scientists Have Found The ‘Missing Link’ From Sunspot Activity To Cosmic Rays-Clouds To Climate Change**

By Kenneth Richard, No Tricks Zone, May 21, 2018

<http://notrickszone.com/2018/05/21/scientists-have-found-the-missing-link-from-sunspot-activity-to-cosmic-rays-clouds-to-climate-change/>

*[SEPP Comment: The December 2017 Svensmark et al. paper with some additional papers.]*

### ***Censorship***

#### **The unfolding saga of Peter Ridd**

By Don Aitkin, Reflections of Australian Society, May 23, 2018 [H/t GWPF]

<http://donaitkin.com/the-unfolding-saga-of-peter-ridd/>

“We are in an era of ‘policy-based evidence’.”

*[SEPP Comment: Rather than evidence-based policy.]*

#### **Marine Science Rebel Peter Ridd Sacked by James Cook University**

By Graham Lloyd, The Australian, Via GWPF, May 18, 2018

<https://www.thegwpf.com/marine-science-rebel-peter-ridd-sacked-by-james-cook-university/>

“Professor Ridd claims he had been censured because he had ‘questioned the reliability of science coming from some of our most prestigious organisations who are claiming that the GBR is badly damaged’”.

#### **Don Aitken: Peter Ridd was sacked because he threatened the Money Making Engine at Uni**

By Jo Nova, Her Blog, May 24, 2018

<http://joannenova.com.au/2018/05/don-aitken-peter-ridd-was-sacked-because-he-threatened-the-money-making-engine-at-uni/>

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

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

Idso, Carter, and Singer, Lead Authors/Editors, 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, 2014

<http://www.nipccreport.org/reports/ccr2b/pdf/Full-Report.pdf>

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

## ***Challenging the Orthodoxy***

### **Examination of space-based bulk atmospheric temperatures used in climate research**

By Christy, Spencer, Braswell & Junod, International Journal of Remote Sensing, Mar 8, 2018

<https://www.tandfonline.com/doi/full/10.1080/01431161.2018.1444293>

## **Is 100 Percent Renewable Energy Possible?**

By Norman Rogers, American Thinker, May 25, 2018

[https://www.americanthinker.com/articles/2018/05/is\\_100\\_percent\\_renewable\\_energy\\_possible.html](https://www.americanthinker.com/articles/2018/05/is_100_percent_renewable_energy_possible.html)

## **Putting the Clean Air Act on Ice**

Guest post by David Middleton, WUWT, May 17, 2018

<https://wattsupwiththat.com/2018/05/17/putting-the-clean-air-act-on-ice/>

*[SEPP Comment: Analyzing some of the benefits and costs in studies produced by the EPA in an historical context.]*

## ***Defending the Orthodoxy***

### **Analysis: The gender, nationality and institution of IPCC AR6 scientists**

By Robert McSweeney, Carbon Brief, May 15, 2018

[https://www.carbonbrief.org/analysis-gender-nationality-institution-ipcc-ar6-authors?utm\\_source=Weekly+Carbon+Briefing&utm\\_campaign=c81657a7ea-Carbon\\_Brief\\_Weekly\\_18\\_05\\_2018&utm\\_medium=email&utm\\_term=0\\_3ff5ea836a-c81657a7ea-215218249&ct=t\(Carbon\\_Brief\\_Weekly\\_18\\_05\\_2018\)&goal=0\\_3ff5ea836a-c81657a7ea-215218249](https://www.carbonbrief.org/analysis-gender-nationality-institution-ipcc-ar6-authors?utm_source=Weekly+Carbon+Briefing&utm_campaign=c81657a7ea-Carbon_Brief_Weekly_18_05_2018&utm_medium=email&utm_term=0_3ff5ea836a-c81657a7ea-215218249&ct=t(Carbon_Brief_Weekly_18_05_2018)&goal=0_3ff5ea836a-c81657a7ea-215218249)

## **IEA: Clean Energy Tech Falling Short Of Climate Goals**

By Tsvetana Paraskova, Oil Price.com, May 23, 2018 [H/t GWPF]

<https://oilprice.com/Latest-Energy-News/World-News/IEA-Clean-Energy-Tech-Falling-Short-Of-Climate-Goals.html>

“The world doesn’t have an energy problem but an emissions problem, and this is where we should focus our efforts.” IEA Executive Director Fatih Birol

## **NASA head: ‘No reason to doubt’ climate change science**

By Timothy Cama, The Hill, May 24, 2018

<http://thehill.com/policy/energy-environment/389168-nasa-head-no-reason-to-doubt-climate-change-science>

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

#### **Climate scientist: air pollution cleanup may be major driver of global warming**

By Anthony Watts from Richard Keen, WUWT, May 25, 2018

<https://wattsupwiththat.com/2018/05/25/climate-scientist-air-pollution-cleanup-may-be-major-driver-of-global-warming/>

#### **Did the Church of Scotland just dodge a climate change bullet?**

By Andrew Montford, Think Scotland, May 24, 2018

[http://www.thinkscotland.org/thinkpolitics/articles.html?read\\_full=13553](http://www.thinkscotland.org/thinkpolitics/articles.html?read_full=13553)

“The harms that the motion’s proposers were seeking to avert are hypothetical, and pencilled in for a timeslot that is far in the future – but lack of access to fossil fuels causes harms that are immediate, and very, very ugly.”

#### **Developing Nations Can’t Afford to Go Cold Turkey on #Coal**

By Colin Stevens, EU Reporter, May 25, 2018

<https://www.eureporter.co/frontpage/2018/05/25/developing-nations-cant-afford-to-go-cold-turkey-on-coal/>

#### **Water Shortages? Blame Them On Climate Change!**

By Paul Homewood, Not a Lot of People Know That, May 23, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/05/23/water-shortages-blame-them-on-climate-change/>

#### **Is Puffin Population Drop Due To Wetter Summers?**

By Paul Homewood, Not a Lot of People Know That, May 25, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/05/25/is-puffin-population-drop-due-to-wetter-summers/>

#### **Black swan: the impossible bird**

Swans were never meant to be black; in medieval Europe unicorns had more credibility.

By Tim Low, Australian Geographic, July 11, 2016

<http://www.australiangeographic.com.au/blogs/wild-journey/2016/07/black-swan-the-impossible-bird>

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

#### **Paleoclimatological Context and Reference Level of the 2°C and 1.5°C Paris Agreement Long-Term Temperature Limits**

By Sebastian Lüning and Fritz Vahrenholt, *Frontiers in Earth Science*, Dec 12, 2017 [H/t Climate Etc.]

<https://www.frontiersin.org/articles/10.3389/feart.2017.00104/full>

[SEPP Comment: *Questioning the baseline of the Paris Agreement.*]

#### **Restoring the EPA's Scientific Integrity**

By E. Calvin Beisner, *American Thinker*, May 24, 2018

[https://www.americanthinker.com/articles/2018/05/restoring\\_the\\_epas\\_scientific\\_integrity.html](https://www.americanthinker.com/articles/2018/05/restoring_the_epas_scientific_integrity.html)

#### **How American Science Made Government Regulations On Emissions Unnecessary**

By Hank Campbell. ACSH, May 18, 2018

<https://www.acsh.org/news/2018/05/18/how-american-science-made-government-regulations-emissions-unnecessary-12979>

Link to study: Will We Always Have Paris? CO2 Reduction without the Clean Power Plan

By Jeffrey J. Anderson, David Rode, Haibo Zhai, and Paul Fischbeck, Environmental Science and Technology, Feb 15, 2018

<https://pubs.acs.org/doi/10.1021/acs.est.8b00407>

“Without onerous cost increases on the poor, built-in higher rates due to solar and wind programs aside, the free market has continued to cause CO2 emissions to plummet, so much so that in 2017 America reached the CPP’s desired 2025 target.”

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

#### **EPA extends comment period on controversial science transparency rule**

By Miranda Green, The Hill, May 24, 2018

<http://thehill.com/policy/energy-environment/389171-epa-extends-comment-period-on-controversial-science-transparency>

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

#### **Emissions of banned ozone-eating chemical somehow are rising**

By Seth Borenstein, AP, May 16, 2018

[https://www.washingtonpost.com/politics/federal\\_government/emissions-of-banned-ozone-eating-chemical-somehow-are-rising/2018/05/16/bb305bae-592b-11e8-9889-07bcc1327f4b\\_story.html?utm\\_term=.7539c6ab29c7](https://www.washingtonpost.com/politics/federal_government/emissions-of-banned-ozone-eating-chemical-somehow-are-rising/2018/05/16/bb305bae-592b-11e8-9889-07bcc1327f4b_story.html?utm_term=.7539c6ab29c7)

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

#### **Reforming the National Weather Service, Part 1: Changing the Role of Human Forecasters**

By Cliff Mass, Weather and Climate Blog, May 20, 2018

<http://cliffmass.blogspot.com/2018/05/reforming-national-weather-service-part.html>

“In a number of ways, the U.S. National Weather Service (NWS) needs to reform its practices.

“And let's be very clear, I don't mean that NWS forecasts are getting less skillful. They are getting better. But it is clear that the NWS has fallen behind the state-of-the-art and is not producing as skillful or useful products as it could or should.”

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

#### **A 431-Year Record of Sea Surface Temperatures off Japan**

Kawakubo, Y., Alibert, C. and Yokoyama, Y. 2017. A reconstruction of subtropical Western North Pacific SST variability back to 1578, based on a Porites coral Sr/Ca record from the Northern Ryukyus, Japan. *Paleoceanography* 32: 1352-1370. May 25, 2018

<http://www.co2science.org/articles/V21/may/a15.php>

“Perhaps the most striking feature of the reconstruction, however, is the fact that, in the words of the authors, it ‘does not show any significant long-term trend, only a slightly negative trend mainly driven by decreasing summer temperatures.’”

### ***Four Decades of Glacier Stability in East Antarctica***

Lovell, A.M., Stokes, C.R. and Jamieson, S.S.R. 2017. Sub-decadal variations in outlet glacier terminus positions in Victoria Land, Oates Land and George V Land, East Antarctica (1972-2013). *Antarctic Science* 29: 468-483. May 24, 2018

<http://www.co2science.org/articles/V21/may/a14.php>

“The findings, or perhaps more correctly stated the lack of findings, reported by Lovell *et al.* are significant in that, for a region of the globe that is supposed to be the poster child of global

warming alarmism, climate change has had no discernible impact on glacier terminus changes across 1000 km of the Antarctic coastline over the past four decades!”

### **A Brown Macroalgae that Benefits from Ocean Acidification and Warming**

Celis-Plá, P.S.M., Mariínez, B., Korbee, N., Hall-Spencer, J.M. and Figueroa, F.L. 2017. Photoprotective responses in a brown macroalgae *Cystoseira tamariscifolia* to increases in CO<sub>2</sub> and temperature. *Marine Environmental Research* 130: 157-165. May 23, 2018

<http://www.co2science.org/articles/V21/may/a13.php>

“Consequently, they conclude that ‘*C.tamariscifolia* is able to benefit from an increase in *pCO*<sub>2</sub> levels.’”

### **Measurement Issues – Energy Flow**

#### **Energy budgets, climate system domains and internal variability**

By Dan Hughes, Climate Etc. May 22, 2018

<https://judithcurry.com/2018/05/22/energy-budgets-climate-system-domains-and-internal-variability/#more-24119>

### **Changing Weather**

#### **Twenty-one species adapted to disappear in the snow. Then, the snow disappeared**

Species’ plight offers new clues about how evolution could factor into better conservation efforts

By Rob Margetta, NSF, May 17, 2018

[https://www.nsf.gov/discoveries/disc\\_summ.jsp?cntn\\_id=245488&WT.mc\\_id=USNSF\\_1](https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=245488&WT.mc_id=USNSF_1)

Total Grants: \$8,301,104

### **Changing Seas**

#### **Sea Level Rise: Human Portion is Small**

By Roy Spencer, His Blog, May 25, 2018

<http://www.drroyspencer.com/2018/05/sea-level-rise-human-portion-is-small/>

[SEPP Comment: *Why did the early 20<sup>th</sup> century warming not produce an increase in rate?*]

### **The Climate of Gavin**

Guest Post by Willis Eschenbach, WUWT, May 24, 2018

<https://wattsupwiththat.com/2018/05/24/the-climate-of-gavin/>

### **Coherent Circulation Changes in the Deep North Atlantic from 16°N and 26°N Transport Arrays**

By E. Frajka-Williams, M. Lankhorst, J. Koelling and U. Send, *Journal of Geophysical Research*, Apr 19, 2018

<https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2018JC013949>

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

#### **IUCN polar bear specialists reject IPCC- supported forecasts of sea ice based on CO<sub>2</sub>**

By Susan Crockford, Polar Bear Science, May 20, 2018

<https://polarbearscience.com/2018/05/20/iucn-polar-bear-specialists-reject-ipcc-supported-forecasts-of-sea-ice-based-on-co2/>

### **Changing Earth**

#### **NASA satellite reveals extensive Hawaii SO<sub>2</sub> cloud**

By Roy Spencer, His Blog, May 22, 2018

<http://www.drroyspencer.com/2018/05/nasa-satellite-reveals-extensive-hawaii-so2-cloud/>

### ***Acidic Waters***

#### **The Myth of Dangerous Acid Rain (in light of Hawaii's Kilauea volcano)**

By Steve Goreham, Master Resource, May 23, 2018

<https://www.masterresource.org/acid-rain/myth-dangerous-acid-rain/>

*[SEPP Comment: Some researchers term rain with a pH below 5, not 4, as acid rain, with a pH of 5.6 considered pure (normal).]*

#### **3 More New Papers Expose The Folly Of 'Ocean Acidification' Claims**

By Kenneth Richard, No Tricks Zone, May 24, 2018

<http://notrickszone.com/2018/05/24/3-more-new-papers-expose-the-folly-of-ocean-acidification-claims/>

### ***Un-Science or Non-Science?***

#### **More Lies About Climate Change**

By Tim Worstall, Continental Telegraph, May 24, 2018

<http://www.continentaltelegraph.com/climate-change/more-lies-about-climate-change/>

### ***Lowering Standards***

#### **Woods Hole Climatologist Gives False Evidence To Congress**

By Paul Homewood, Not a Lot of People Know That, May 20, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/05/20/woods-hole-climatologist-gives-false-evidence-to-congress/>

“So let's look at those three specific claims:

- 1) The rate of global sea-level rise has accelerated and is now four times faster than it was 100 years ago
- 2) We have satellite records clearly documenting a shrinkage of the Antarctic ice sheet and an acceleration of that shrinkage
- 3) Rep. Bill Posey (R-FL) said scientists said in the 1970s that the Earth was cooling, a popular talking point of climate skeptics and the subject of a fake Time magazine cover that has become a meme. Duffy corrected him and said that was essentially an outlier position at the time and that scientists long ago determined that humans were warming the planet

*[SEPP Comment: Science Mag continues its highly biased reporting of Science.]*

#### **Park Service publishes climate report after charges of censorship**

By Timothy Cama, The Hill, May 21, 2018 [H/t WUWT]

<http://thehill.com/policy/energy-environment/388643-park-service-publishes-climate-report-after-charges-of-censorship>

Link to report: Sea Level Rise and Storm Surge Projections for the National Park Service Natural Resource Report Series NPS/NRSS/NRR— 2018

By Maria A. Caffrey, Rebecca L. Beavers, Cat Hawkins Hoffman, Fort Collins Colorado, may 2018

<https://www.nps.gov/subjects/climatechange/upload/2018-NPS-Sea-Level-Change-Storm-Surge-Report-508Compliant.pdf>

“Under future scenarios of increasing anthropogenic greenhouse gas emissions, models project increasing storm intensities (Mann and Emanuel 2006, Knutson et al. 2010, Lin et al. 2012, Ting

et al. 2015). When this change in storm intensity (and therefore, storm surge) is combined with sea level rise, we expect to see increased coastal flooding, the permanent loss of land across much of the United States coastline, and in some locations, a much shorter return interval of flooding. “[SEPP Comment: *Inflating the exaggerated: all based on the assumption that CO2 causes increasing sea level rise.*]

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

**Claim: Climate change will result in a “simplified ecological landscape” – contradicted by other research**

By Anthony Watts, WUWT, May 18, 2018

<https://wattsupwiththat.com/2018/05/18/claim-climate-change-will-result-in-a-simplified-ecological-landscape-contradicted-by-other-research/>

Link to media release: Biodiversity and Nature’s Contributions Continue Dangerous Decline, Scientists Warn

Human well-being at risk. Landmark reports highlight options to protect and restore nature and its vital contributions to people

By Staff Writers, IPBES, “an independent intergovernmental body comprising 129 member Governments.” Mar 26, 2018

<https://www.ipbes.net/news/media-release-updated-biodiversity-nature’s-contributions-continue-dangerous-decline-scientists>

“Biodiversity suffers as climate warms”

[SEPP Comment: *The tropics have no diversity? OR: Are the tropics less diverse than polar regions?*]

### **Telegraph’s Hysterical Scaremongering About Puffins**

By Paul Homewood, Not a Lot of People Know That, May 24, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/05/24/telegraphs-hysterical-scaremongering-about-puffins/>

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

**Town Planners To Save World From Global Warming!**

By Paul Homewood, Not a Lot of People Know That, May 24, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/05/24/town-planners-to-save-world-from-global-warming/#more-33860>

Link to report: Planning for Climate Change: A Guide for Local Authorities

By Staff Writers, Town and Country Planning Association & Royal Town Planning Institute, May 2018

[http://www.rtpi.org/media/2852781/TCPA%20RTPI%20planning%20for%20climate%20change%20guide\\_final.pdf](http://www.rtpi.org/media/2852781/TCPA%20RTPI%20planning%20for%20climate%20change%20guide_final.pdf)

From the front cover: “There is no task that is more urgent, more compelling or more sacred than that of protecting the climate of our planet for our children and grandchildren.” Christiana Figueres Executive Secretary of the United Nations Framework Convention on Climate Change, 2010-16”

**We can now see how humans have altered Earth’s water resources**

By Eric Holthaus, Grist, May 16, 2018 [H/t Climate Etc.]

<https://grist.org/article/global-water-resources-in-jeopardy-according-to-groundbreaking-new-study/>

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

#### **Sobriety Returning To Germany...Leaders Finally Realizing Green Energies Are Fraught With Huge Obstacles**

By P Gosselin, No Tricks Zone, May 22, 2018

<http://notrickszone.com/2018/05/22/sobriety-returning-to-germany-leaders-finally-realizing-green-energies-are-fraught-with-huge-obstacles/>

#### **Power station boss warns against reliance on electricity imports**

By Paul Homewood, Not a Lot of People Know That, May 21, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/05/21/power-station-boss-warns-against-reliance-on-electricity-imports/>

“I do have to laugh though when he says:

“‘I am not a fan of sweetheart deals, the government sitting down with Hitachi and writing them a cheque. That’s not good economics,’ he said, referring to Hitachi’s chairman meeting with Theresa May earlier this month to discuss a financial support package to build a new nuclear plant.”

“Could this be the same Drax that has a sweetheart deal of £111.29/MWh?”

*[SEPP Comment: Drax is the large power plant in Yorkshire, designed for coal and partially converted for biomass – wood chips from Europe and the US. Wood chips do not bear a Climate Change Levy, a form of carbon dioxide tax.]*

### ***Funding Issues***

#### **REPORT: Climate Change ‘Philanthropy’ Efforts Included \$20 Million To Al Gore’s Group**

By Michael Bastasch, Daily Caller, May 22, 2018

<http://dailycaller.com/2018/05/22/climate-change-philanthropy-efforts-al-gore-group/>

Link to report: Strategic philanthropy in the post-Cap-and-Trade years: Reviewing U.S. climate and energy foundation funding

By Matthew Nisbet, WIREs, May 22, 2018

<https://onlinelibrary.wiley.com/doi/abs/10.1002/wcc.524>

“These liberal foundations spent nearly \$567 million on global warming-related funding between 2011 to 2015, according to a study published in the journal WIREs Climate Change on Tuesday.”

*[SEPP Comment: Selling fear is not cheap.]*

### ***Litigation Issues***

#### **Justice Department: Climate lawsuits ‘violate constitutional principles’**

By Spencer Walrath, Energy in Depth, May 17, 2018 [H/t WUWT]

<http://eidclimate.org/justice-department-climate-lawsuits-violate-constitutional-principles/>

#### **Climate Change Warriors’ Latest Weapon of Choice Is Litigation**

By Jeremy Hodges, Lauren Leatherby and Kartikay Mehrotra, Bloomberg, May 24, 2018 [H/t Toshio Fujita]

[https://www.bloomberg.com/graphics/2018-climate-change-lawsuits/?utm\\_medium=email&utm\\_source=newsletter&utm\\_term=180524&utm\\_campaign=climatechanged](https://www.bloomberg.com/graphics/2018-climate-change-lawsuits/?utm_medium=email&utm_source=newsletter&utm_term=180524&utm_campaign=climatechanged)

#### **Justice Department Asks Judge to Dismiss Climate Change Suits**

By Nicholas Iovino, Courthouse News, May 10, 2018

<https://www.courthousenews.com/justice-department-asks-judge-to-dismiss-climate-change-suits/>

A question of standing, among other issues

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

#### **Wind Power Faces a Post-PTC ‘Valley of Death’**

By Sonal Patel, Power Mag, May 17, 2018

[http://www.powermag.com/wind-power-faces-a-post-ptc-valley-of-death/?marketo\\_id=575841&mkt\\_tok=eyJpIjoiTWpaak1tUmhabVU0WW1KbSIsInQiOiJHOHJcL09oZVYzSURoV3ppVDVINk9xM2ZJbXdsZU90TzZ3cU84bzgwN1VOVmFQbU5ZYnBGcFlIcnlhM1g3VTZ2RjhtSHo2aEZOc2dibGZjV3JhK2lqNjNZOXpuYTI1QkpqQTdEeTIRVFhaVWZHQkRONnpcL0FIU2JRUGVCUVpnUG1XIn0%3D](http://www.powermag.com/wind-power-faces-a-post-ptc-valley-of-death/?marketo_id=575841&mkt_tok=eyJpIjoiTWpaak1tUmhabVU0WW1KbSIsInQiOiJHOHJcL09oZVYzSURoV3ppVDVINk9xM2ZJbXdsZU90TzZ3cU84bzgwN1VOVmFQbU5ZYnBGcFlIcnlhM1g3VTZ2RjhtSHo2aEZOc2dibGZjV3JhK2lqNjNZOXpuYTI1QkpqQTdEeTIRVFhaVWZHQkRONnpcL0FIU2JRUGVCUVpnUG1XIn0%3D)

### ***Energy Issues – Non-US***

#### **Gas supply crunch thwarts EU's plan to kill off coal power**

By Mathew Carr and Anna Shiyavskaya, World Oil, May 24, 2018 [H/t GWPF]

<http://www.worldoil.com/news/2018/5/24/gas-supply-crunch-thwarts-eus-plan-to-kill-off-coal-power>

#### **Plans to frack UK's first horizontal shale gas well submitted**

By Staff writers, BBC, May 21, 2018

<http://www.bbc.com/news/uk-england-lancashire-44202452>

### ***Energy Issues -- Australia***

#### **Snowy Hydro goes activist, lobbies for renewables to boost profits, beat enemy “Coal”**

By Jo Nova, Her Blog, May 24, 2018

<http://joannenova.com.au/2018/05/snowy-hydro-goes-activist-lobbies-for-renewables-to-boost-profits-beat-enemy-coal/>

“The cost of “storage” and frequency stability was zero in our old pre-renewables grid. The new hydro battery scheme costing \$5,000 million is entirely a renewable energy charge. Wind and solar drive up the price of everything around them. When will we start adding that cost to the estimates of adding new solar and wind power?”

#### **Extraordinary powers triggered: Blackout threat from rooftop solar panels in Western Australia**

By Jo Nova, Her Blog, May 22, 2018

<http://joannenova.com.au/2018/05/extraordinary-powers-triggered-blackout-threat-from-rooftop-solar-panels-in-western-australia/>

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

#### **The Validity of Grid Access Fees**

By Donn Dears, Power For USA, May 25, 2018

<http://ddears.com/2018/05/25/validity-of-grid-access-fees/>

[SEPP Comment: Should the grid access fee also includes fees for maintaining reliability and resilience?]

#### **Beware proposals that purport to improve electric grid reliability**

By John Hughes, The Hill, May 14, 2018

<http://thehill.com/opinion/energy-environment/387208-beware-proposals-that-purport-to-improve-electric-grid-reliability>

“The grid has been tested and proven to be reliable and resilient. During extreme weather — such as the so-called “bomb cyclone” earlier this year — the electricity grid responded with little disruption.”

*[SEPP Comment: Does the author believe his statement “proves” there will be no disruption in future weather events?]*

### ***Oil and Natural Gas – the Future or the Past?***

#### **Bad news for green energy lovers: US oil & gas are booming**

By Robert Bryce, New York Post, May 17, 2018

<https://nypost.com/2018/05/17/bad-news-for-green-energy-lovers-us-oil-gas-are-booming/>

#### **US shale-based LNG gushes into Asia**

Japan follows South Korea, China and India in signing long-term contracts

Yasuo Takeuchi and Ryosuke Hanafusa, Nikkei Asian Review, May 22, 2018 [H/t GWPF]

<https://asia.nikkei.com/Economy/US-shale-based-LNG-gushes-into-Asia>

### ***Oil Spills, Gas Leaks, Similar Issues & Consequences***

#### **Safety board: Standards too weak at Texas chemical plant that exploded during Harvey**

By Miranda Green, The Hill, May 24, 2018

<http://thehill.com/policy/energy-environment/389268-investigation-finds-safety-standards-too-weak-at-chemical-plant>

Link to News Release: CSB Releases Arkema Final Report

By Staff Writers, U.S. Chemical Safety Board (CSB), May 24, 2018

<https://www.csb.gov/csb-releases-arkema-final-report/>

From report: “Extensive flooding caused by heavy rainfall from Hurricane Harvey caused the plant to lose power and backup power to all of the low temperature warehouses. Workers at the Arkema facility moved the organic peroxides from the warehouses to the refrigerated trailers, which were then relocated to a high elevation area of the plant. Three of those trailers, however, were unable to be moved and eventually flooded and failed. With refrigeration on those trailers lost, there was nothing to stop the chemicals inside from heating up and catching fire.”

### ***Nuclear Energy and Fears***

#### **Eighth Reactor Restarts in Japan, Seven Years After Fukushima**

By Darrell Proctor, Power Mag, May 16, 2018

[http://www.powermag.com/eighth-reactor-restarts-in-japan-seven-years-after-fukushima/?marketo\\_id=575841&mkt\\_tok=eyJpIjoiTWpaak1tUmhabVU0WW1KbSIsInQiOiJHOHJcL09oZVYzSURoV3ppVDVINK9xM2ZJbXdsZU90TzZ3cU84bzgwN1VOVmFQbU5ZYnBGcFlIcnlhM1g3VTZ2RjhtSHo2aEZOc2dibGZjV3JhK2lqNjNZOXpuYTI1QkpqQTdEeTIRVFhaVWZHQkRONnpcL0FIU2JRUGVCUVpnUG1XIn0%3D](http://www.powermag.com/eighth-reactor-restarts-in-japan-seven-years-after-fukushima/?marketo_id=575841&mkt_tok=eyJpIjoiTWpaak1tUmhabVU0WW1KbSIsInQiOiJHOHJcL09oZVYzSURoV3ppVDVINK9xM2ZJbXdsZU90TzZ3cU84bzgwN1VOVmFQbU5ZYnBGcFlIcnlhM1g3VTZ2RjhtSHo2aEZOc2dibGZjV3JhK2lqNjNZOXpuYTI1QkpqQTdEeTIRVFhaVWZHQkRONnpcL0FIU2JRUGVCUVpnUG1XIn0%3D)

### ***Alternative, Green (“Clean”) Solar and Wind***

#### **Why Proposed Wind and Solar Power Projects Should Be Rejected Nationwide**

By Alan Carlin, Carlin Economics and Science, May 25, 2018

<http://www.carlineconomics.com/archives/4397>

#### **The Cook Islands go solar**

By Roger Andrews, Energy Matters, May 24, 2018

<http://euanmearns.com/the-cook-islands-go-solar/#more-22070>

“Once again, however, the planners have failed to recognize the prohibitive amounts of battery storage that will be required, and their plans are doomed to fail as a result. The only approach that has any chance of succeeding is to minimize storage requirements by installing far more solar capacity than is needed to meet demand (“overgeneration”), but this approach has problems of its own.”

### **Massachusetts announces historic offshore wind contract**

By Miranda Green, The Hill, May 23, 2018

<http://thehill.com/policy/energy-environment/389075-massachusetts-announces-historic-offshore-wind-contract>

“Massachusetts announced plans Wednesday to build a wind farm off the coast of Martha's Vineyard that will generate enough energy to power 400,000 homes.”  
[SEPP Comment: *What percentage of the time and time of day?*]

### **One Well-Placed Hurricane Will UTTERLY DESTROY Costly Offshore Wind Systems On The East Coast**

By Steve Goreham, Daily Caller, May 18, 2018

<http://dailycaller.com/2018/05/18/hurricane-will-destroy-costly-east-coast-wind-turbines/>

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

#### **CHRISTOPHER BOOKER: Scandal of 'killer' wood burning stoves and the question - is the political class's obsession with global warming rotting their brains?**

By Christopher Booker, Daily Mail, UK, May 23, 2018

<http://www.dailymail.co.uk/debate/article-5760051/CHRISTOPHER-BOOKER-political-class-obsession-global-warming-rotting-brains.html>

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

#### **The War On Diesel Cars Takes A Hit: German Ministry Of Environment Accused of Spreading “Bogus” Findings**

By P Gosselin, No Tricks Zone, May 20, 2018

<http://notrickszone.com/2018/05/20/the-war-on-diesel-cars-takes-a-hit-german-ministry-of-environment-accused-of-spreading-bogus-findings/>

### ***Carbon Schemes***

#### **Turning carbon dioxide into rock - forever**

By Valeria Perasso, BBC, May 18, 2018

<http://www.bbc.com/news/world-43789527>

### ***California Dreaming***

#### **Effects of Mandating PV Rooftop Solar**

By Donn Dears, Power For USA, May 22, 2018

<http://ddears.com/2018/05/22/effects-of-mandating-pv-rooftop-solar/>

“About all it does is throw a lifeline to the solar industry that's been on a downhill financial trajectory.”

### **Estimating Costs of Deep Decarbonization (California and beyond)**

By Mark Krebs, Master Resource, May 22, 2018

<https://www.masterresource.org/deep-decarbonization/cost-estimate-deep-decarbonization-electrification/>

## ***Environmental Industry***

### **Woods Hole Research Center**

By Paul Homewood, Not a Lot of People Know That, May 21, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/05/21/woods-hole-research-center/>

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### **BELOW THE BOTTOM LINE:**

#### **2006 to 2015: we're halfway there!**

By Staff Writers, Climate Change Predictions.org, May 25, 2018

<http://climatechangepredictions.org/uncategorized/3754>

“Already in the year 2025 the conditions for winter sports in the Fichtel Mountains will develop negatively, especially with regards to ‘natural’ snow conditions and for so-called snow-making potential. A financially viable ski business operation after about the year 2025 appears under these conditions to be extremely improbable”. Andreas Matzarakis, University of Freiburg Meteorological Institute, 26 July 2006

.....

“The Fichtel Mountains are not just a wonderful stomping ground for snow shoe tours; they are also a paradise for cross-country skiers. Around 100 kilometres of ski runs in both the classic and skating styles, and in all difficulty levels, are marked each day in the north Bavarian Central German Uplands.” Fichtel Mountains: Franconia’s snow paradise, Holidays in Bavaria website 2015

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### **ARTICLES:**

#### **1. Water’s Rising Because It’s Getting Warmer**

That research shows that sea levels are rising and human-caused climate change is the cause. Don’t just take our word for it; help yourself to the mountain of scientific literature showing as much.

By Michael Mann, Senator Whitehouse, et al. WSJ, May 22, 2018

[https://www.wsj.com/articles/waters-rising-because-its-getting-warmer-1527007433?mod=ITP\\_opinion\\_1&tesla=y](https://www.wsj.com/articles/waters-rising-because-its-getting-warmer-1527007433?mod=ITP_opinion_1&tesla=y)

*“Would the Journal run the op-ed “Objects Are Falling, but Not Because of Gravity”? That’s pretty similar to climate contrarian Fred Singer saying The Sea Is Rising, but Not Because of Climate Change” (op-ed, May 16).*

*“No, ice is not accumulating on Earth—it is melting. No, Antarctica isn’t too cold for melting—warming oceans are eroding the ice from beneath, destabilizing the ice sheet. And no, legitimate scientific conclusions are not reached in op-ed pieces, but through careful peer-reviewed research.*

*“That research shows that sea levels are rising and human-caused climate change is the cause. Don’t take our word for it; help yourself to the mountain of scientific literature showing as much. When water warms, it expands. When ice warms, it melts. To deny these facts is not just to deny climate change. It is to deny basic physics.*

*“New York City experienced an additional 25 square miles of flooding from the approximately one foot of sea-level rise that has occurred due to human-caused warming. Without concerted efforts to reduce carbon emissions, it could experience as much as eight feet by the end of the century—permanently inundating most of Wall Street.”*

Asst. Prof. Andrea L. Dutton; University of Florida; Gainesville, Fla. and  
Prof. Michael E. Mann; Penn State University’ University Park, Pa.

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*“Fred Singer leaves out any real evidence to refute research attributing the measured sea-level rise almost exactly to the measured thermal expansion of seawater and glacier melt.”*

Sen. Sheldon Whitehouse (D., R.I.); Newport, R.I.

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*“Our emissions will continue shaping how much seas rise in the coming decades. Taking this threat lightly endangers hundreds of communities in the U.S. and world-wide, and wastes the dwindling time we have to reduce our risk by cutting carbon emissions and investing in resilience. Since 1900, global sea level has risen by seven to eight inches. Sea-level rise has brought more frequent flooding to dozens of coastal communities, including Atlantic City, N.J. and Charleston, S.C., where the number of floods has quadrupled since 1970. The pace of sea-level rise has recently doubled.*

*“Mr. Singer acknowledges there’s ‘good data showing sea levels are in fact rising at an accelerating rate,’ yet makes the unscientific claim that this is disconnected from rising global-warming emissions and temperatures. The risks are clear. Sea-level rise projections for 2100 range from one foot to more than eight feet—far greater than the six inches Mr. Singer claims. Swiftly reducing our global-warming emissions would give us the best chance to minimize sea-level rise, but our current emissions trajectory makes achieving the range’s low end more unlikely each day.”*

Kristina Dahl, Ph.D.; Union of Concerned Scientists; Oakland, Calif.

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*“NASA disagrees with Prof. Singer. A Feb. 13 paper notes: “Rising concentrations of greenhouse gases in Earth’s atmosphere increase the temperature of air and water, which causes sea level to rise in two ways. First, warmer water expands, and this ‘thermal expansion’ of the ocean has contributed about half of the 2.8 inches (7 centimeters) of global mean sea-level rise we’ve seen over the last 25 years . . . Second, melting land ice flows into the ocean, also increasing sea level across the globe.”*

Wendy Fleischer; Brooklyn, N.Y.

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*“Melting ice is not the only thing that can raise the sea level. Note the eruption of hundreds of undersea volcanoes in the oceans and what they deposit. All of the rivers of the world flush millions of acre feet of mud and silt into the sea floor daily. During an undersea earthquake a tectonic plate could override another, affecting a thousand miles of sea floor, displacing a great deal of water and raising the sea level.”*

David Darlow; Spokane, Wash.

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