

**The Week That Was: 2016-05-21 (May 21, 2016)**  
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**The Science and Environmental Policy Project**

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**Quote of the Week:** *“In general we look for a new law by the following process. First we guess it. Then we compute the consequences of the guess to see what would be implied if this law that we guessed is right. Then we compare the result of the computation to nature, with experiment or experience, compare it directly with observation, to see if it works. If it disagrees with experiment it is wrong. In that simple statement is the key to science.”* – Richard Feynman (bears repeating)  
[H/t John Hinderaker]

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**Number of the Week:** 5 in 2005; more than 600 in 2015

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**No TWTW Next Week:** SEPP Chairman Fred Singer and President Ken Haapala will be in Moscow and Vienna giving talks on space exploration (Singer) and climate science plus energy policy (both). Responses to emails will be very slow.

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**THIS WEEK:**

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

**Observation and Experiment:** Last week’s TWTW discussed a climate model that may work, the Russian Institute of Numerical Mathematics Coupled Model, version 4.0 (INM-CM4). The model tracks historic atmospheric temperature data very well. Virtually, all the other models do not. If a model cannot track historic data well, there is no logical reason to assume it can be successful in predicting the future.

In presenting this discussion, John Hinderaker of Power Line used the full quote of Richard Feynman, found in the Quote of the Week. Feynman was a Nobel laureate in theoretical physics and a famed lecturer. Unfortunately, the first part of the quote is frequently dropped, in favor of the sentence: *“...if it disagrees with experiment it is wrong.”* But, the earlier part of comparing the computations with nature is also vital: *“Then we compare the result of the computation to nature, with experiment or experience, compare it directly with observation, to see if it works.”*

This is where the procedures used by the UN Intergovernmental Panel on Climate Change (IPCC) and its followers such as the US Global Change Research Program (USGCRP) fail to produce empirical science. The models they emphasize do not work when compared to nature, and nature is the only expert judge whose opinion matters. All the statistical trickery used by the IPCC to disguise the failure of the atmosphere to warm as predicted is of no value when compared with rigorous observations of nature.

By ignoring the only comprehensive temperature data existing, taken where the greenhouse gas effect occurs, the IPCC and USGCRP have not progressed in understanding the natural causes of climate change beyond the guessing phase mentioned by Feynman in the 35 plus years since the Charney report in 1979, which relied on “expert opinions” of climate modelers.

John Christy’s February 2 written testimony to the US House Committee on Science, Space & Technology cuts through thousands of pages of clutter. See links under Challenging the

Orthodoxy, Modeling Issues and

[http://www.atmos.ucla.edu/~brianpm/download/charney\\_report.pdf](http://www.atmos.ucla.edu/~brianpm/download/charney_report.pdf)

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**Climate Modeling:** According to research by Patrick J. Michaels and David E. Wojick, climate modeling not only dominates climate science, climate modeling also dominates modeling in science as a whole. In a Google Scholar search (always open to question) using the terms model, modeled, or modeling, about 55% of the 900,000 peer reviewed journal articles using the terms also used the term climate change. Yet, they estimate that only about 4% of Federal government funding of science goes climate science.

Further, Michaels and Wojick also found that of the articles with the term climate change, about 97% also included one of the terms related to modeling. [Perhaps this is where the frequently cited phrase that “97% of climate scientists...” originates.]

The research shows that journal articles on climate are dominated by modeling issues. Yet, as discussed above, all but one of the 32 tested models, the Russian one, are failing to describe what is occurring in nature.

If the climate modeling establishment continues to ignore the need to be able to describe nature, then its work is little more than very expensive, sophisticated speculation. See link under Questioning the Orthodoxy.

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**Booming OA:** In addition to climate modeling, another topic in which journal articles have boomed is what is called, poorly, Ocean Acidification (OA). Howard Browman states: “Ocean acidification” (OA), a change in seawater chemistry driven by increased uptake of atmospheric CO<sub>2</sub> by the oceans, has probably been the most-studied single topic in marine science in recent times” and he offers the numbers of articles produced by journal searches as evidence.

Far too frequently, published reports involved “shocking” a tank of marine life with a strong acid, such as hydrochloric acid to “mimic” what a very gradual increase in a weak acid, carbonic acid, would have on marine life. Anyone who has raised tropical fish, fresh water or salt water, would be stunned by the practices used by many researchers and accepted by the journals.

As fish fanciers and those with some chemical background realize, most sea water is alkaline with a pH above 7 (7 is neutral). Lowering the pH of an alkaline solution makes it less alkaline, makes it more neutral, but does not necessarily acidify it. A great deal of fresh water, such as bogs in the Southeastern US, and parts of the Amazon Basin is acidic, with a pH below 7.

With the flurry of poorly conceived journal articles, the ICES Journal of Marine Science has issued a special edition titled *Applying organized scepticism to ocean acidification research*, with Howard Browman as lead editor. ICES is the International Council for Exploration of the Seas. Browman states that studies reporting no effect of OA are more difficult to publish than studies reporting such an effect [even though many of the studies reporting an effect are poorly designed or executed.]. Just as importantly, Browman states: “*Further, the mechanisms underlying the biological and ecological effects of OA have received little attention in most organismal groups, and some of the key mechanisms (e.g. calcification) are still incompletely understood.*”

Largely, the reports of the Nongovernmental International Panel on Climate Change (NIPCC), particularly the one on Biological Impacts, have brought out similar concerns. See links under Challenging the Orthodoxy and Challenging the Orthodoxy – NIPCC.

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**Genetically Engineered Crops:** The US National Academies of Sciences, Engineering, and Medicine have issued a new report on genetically engineered crops, commonly called Genetically Modified Organism (GMO). These plants have had their genetic material changed in controlled laboratories, and were first introduced commercially in the 1990s. GMO foods have been severely criticized by some special interest groups as having adverse effects on human health or the environment. Some go as far as calling them “unethical.”

As genetic engineering advances, the issues become more complex. Yet, after decades of plantings, there are no apparent negative impacts from these crops, and many hold great promise for improving the health of those who consume them, particularly those in less fortunate nations. The controversy will not disappear, but the fear raised by some remains unsubstantiated. See links under Agriculture Issues & Fear of Famine

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**Methane Regulations:** Last week the EPA announced methane regulations on new oil and gas wells. These regulations appear to be pure costly harassment of these industries with no apparent climate or other benefits. EPA cost-benefit accounting continues to be breathtaking.

Among other issues showing the lack of science in EPA accounting are the number of molecules involved. The limited warming effects of carbon dioxide (CO<sub>2</sub>) in the atmosphere are shown by the lack of warming, even as CO<sub>2</sub> increased. CO<sub>2</sub> is measured in parts per million (accounting for about 400 per million or 4 molecules per 10,000). Methane is measured in parts per billion, three decimal places over. Recent estimates at Mauna Loa, Hawaii, about 1850 ppb or about 0.5% that of CO<sub>2</sub> and 0.01% of water vapor. Further, much of the relevant bands of absorption are taken by water vapor, and the polar regions in which it may have an influence emit little energy. Finally, methane has a relatively short life-time in the atmosphere of about 10 years. It is removed by oxidation by OH radicals and ozone. See links under EPA and other Regulators on the March and [https://en.wikipedia.org/wiki/Atmospheric\\_methane#/media/File:Mlo\\_ch4\\_ts\\_obs\\_03437.png](https://en.wikipedia.org/wiki/Atmospheric_methane#/media/File:Mlo_ch4_ts_obs_03437.png)

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**Judicial Punt?** The US Court of Appeals for the District of Columbia Circuit, which was scheduled for June 2 to hear oral arguments on complaints filed against the Administration’s plan to effectively close down coal-fired power plants, has decided to delay the oral arguments until September 27. Further, it announced that a full panel of nine jurists will hear the arguments rather than a panel of three judges. Had a three judge panel heard the arguments, after a decision, most likely, the losing party would have appealed for a full panel to hear the case. The announcement effectively saves a step.

In any event, the losing party will likely appeal to the Supreme Court in this highly contested litigation.

Also, most likely, the announcement delays any decision announced by the Court until after the election on November 8. As usual, the Court announced no reason for its decision, and none is expected, though there is considerable speculation. See link under Litigation Issues.

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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 four past recipients, Lisa Jackson, Barrack Obama, John Kerry, and Ernest Moniz are not eligible. Generally, the committee that makes the selection prefers a candidate with a national or international presence. The voting will close on June 1. 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 on July 9 in Omaha.

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**Number of the Week: 5 in 2005; more than 600 in 2015** – an increase of 120 times. In “*Applying organized scepticism to ocean acidification research*” discussed above, Browman states that his search produced only 5 papers on ocean acidification in the journals searched in 2005 and over 600 papers in 2015. One can call it riding the wave of fear promotion. See links under Challenging the Orthodoxy.

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**ARTICLES:** The Articles section is now at the bottom of TWTW.

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**NEWS YOU CAN USE:**

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

**Current Solar Cycle Now 3rd Weakest Ever Observed – Least Active Since Dalton Minimum 200 Years Ago!**

The Sun in April 2016

By Frank Bosse and Fritz Vahrenholt, Translated, edited by P Gosselin, May 19, 2016

<http://notrickszone.com/2016/05/19/current-solar-cycle-now-3rd-weakest-ever-observed-least-active-since-dalton-minimum-200-years-ago/#sthash.iMRZPKXZ.dpbs>

[SEPP Comment: One interesting question is will the impact on the earth’s climate be delayed until the next solar cycle (about 11 years)?]

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

**The Solar Wind may be changing the surface temperature of the North Atlantic**

By Jo Nova, Her Blog, May 20, 2016

<http://joannenova.com.au/2016/05/the-solar-wind-may-be-changing-the-surface-temperature-of-the-north-atlantic/#more-48883>

[SEPP Comment: Or the change in temperature may indicate another cause with both related to solar wind.]

***Suppressing Scientific Inquiry – The Witch Hunt – Push-Back***

## **Full page ad in NYT today slams Attorneys General climate witch hunt**

By Anthony Watts, WUWT, May 18, 2016

<https://wattsupwiththat.com/2016/05/18/full-page-ad-in-nyt-today-slams-attorney-generals-climate-witch-hunt/>

## **Texas, Alabama back Exxon in climate change probe**

By Devin Henry, The Hill, May 16, 2016

<http://thehill.com/policy/energy-environment/280022-texas-alabama-back-exxon-in-climate-change-probe>

“General Walker’s [Attorney General of the Virgin Islands] investigation appears to be driven by ideology, and not law, as demonstrated not only by his collusion with [the law firm], but also by his request for almost four decades’ worth of material from a company with no business operations, employees, or assets in the Virgin Islands,” they wrote.

## **Texas attorney general calling for end to Virgin Islands’ Exxon probe**

By Andrew Restuccia, WUWT, May 16, 2016

<https://wattsupwiththat.com/2016/05/16/texas-attorney-general-calling-for-end-to-virgin-islands-exxon-probe/>

## **Fighting back: CEI Asks Court To Fine AG Walker Based On Bad Faith And DC Anti-SLAPP Law**

By Anthony Watts, WUWT, May 16, 2016

<https://wattsupwiththat.com/2016/05/16/fighting-back-cei-asks-court-to-fine-ag-walker-based-on-bad-faith-and-dc-anti-slapp-law/>

## **Think Tank Seeks Damages Over ‘Unlawful’ Climate Subpoena**

Competitive Enterprise Institute alleges malicious use of frivolous legal claims by Virgin Islands AG

By Lachlan Markay, Washington Free Beacon, May 16, 2016

<http://freebeacon.com/issues/think-tank-seeks-damages-unlawful-climate-subpoena/>

## **Leader of Climate RICO Push Foresees Big Checks for Groups Like His**

GMU’s Ed Maibach draws parallels to tobacco settlement that funded his former PR client

By Lachlan Markay, Washington Free Beacon, May 17, 2016

<http://freebeacon.com/issues/maibach-foresees-big-checks-from-climate-rico/>

## **RICO 20 Ringleader's Implausible Denial of Intent to Silence Skeptics**

By Marlo Lewis, CEI, May 17, 2016

<https://cei.org/blog/rico-20-ringleaders-implausible-denial-intent-silence-skeptics>

*[SEPP Comment: Absurd excuse: they only wanted a RICO investigation – not of whom or for what?]*

## **Sons of Climategate: Dodgy Scientists Caught Red-Handed by FOIA Lawsuit**

By James Delingpole, Breitbart, May 15, 2016 [H/t William Raddy]

<http://www.breitbart.com/environment/2016/05/15/sons-climategate-dodgy-scientists-caught-red-handed-foia-lawsuit/>

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

**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>

### **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>

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

#### **Prepared Testimony to House Committee on Science, Space & Technology**

By John Christy, UAH, Feb 2, 2016

<https://science.house.gov/sites/republicans.science.house.gov/files/documents/HHRG-114-SY-WState-JChristy-20160202.pdf>

#### **Towards a Broader Perspective on Ocean Acidification Research**

By Geoff Brown, Australian Climate Sceptics, May 21, 2016

<http://theclimatescepticsparty.blogspot.com.au/2016/05/towards-broader-perspective-on-ocean.html>

Link to report: Towards a broader Perspective on Ocean Acidification Research

By Browman, et al. ICES Journal of Marine Science, Feb/March, 2016

<http://icesjms.oxfordjournals.org/content/73/3/529.2.full.pdf+html?sid=a92c4caa-90a5-427b-b7e4-39bb6218f18b>

“Further, the mechanisms underlying the biological and ecological effects of OA have received little attention in most organismal groups, and some of the key mechanisms (e.g. calcification) are still incompletely understood.”

#### **Thanks to Rep. Mike Nearman for challenging the Climate Cult**

By Gordon J. Fulks, Oregon Catalyst, May 19, 2016 [H/t ICECAP]

<http://oregoncatalyst.com/33621-rep-mike-nearman-challenging-climate-cult.html>

#### **Carry on milking**

By John Brignell, Number Watch, May 17, 2016

<http://www.numberwatch.co.uk/2016%20%20May.htm#milk>

“Let’s face it: we have lost the war against junk science. Not a day goes by without some grotesquely statistically insignificant claim appearing on the front pages.”

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

#### **March Temperature “Shocker”**

By David Whitehouse, GWPF, May 17, 2016

<http://www.thegwpf.com/march-temperature-shocker/>

## Climate Modeling Dominates Climate Science

By Patrick J. Michaels and David E. Wojick, Cato, May 13, 2016

<http://www.cato.org/blog/climate-modeling-dominates-climate-science>

## *After Paris!*

### Toward a Viable Climate Target

By Oliver Geden is head of the European Union research division at Stiftung Wissenschaft und Politik, the German Institute for International and Security Affairs., Project Syndicate, May 18, 2016

<https://www.project-syndicate.org/commentary/paris-agreement-viable-emissions-targets-by-oliver-geden-2016-05>

## *Social Benefits of Carbon*

### Arctic greenery likes warmer world and arctic bacteria eat more carbon for breakfast

By Jo Nova, Her Blog, May 19, 2016

<http://joannenova.com.au/2016/05/arctic-greenery-likes-warm-world-and-eats-carbon-for-breakfast/#more-48860>

## Old-growth Forests of Southern Chile Are Experiencing Large and Unexpected Increases in Growth and Water-Use Efficiency

By Craig Idso, Cato, May 19, 2016

<http://www.cato.org/blog/old-growth-forests-southern-chile-are-experiencing-large-unexpected-increases-growth-water-use>

## *Problems in the Orthodoxy*

### NASA Admits Substantial Climate Uncertainties

Guest essay by Eric Worrall, WUWT, May 13, 2016

<https://wattsupwiththat.com/2016/05/13/nasa-admits-substantial-climate-uncertainties/>

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

### Effects of Elevated CO2 on Aphids Feeding on Bell Pepper Plants

Dader, B., Fereres, A., Moreno, A. and Trebicki, P. 2016. Elevated CO2 impacts bell pepper growth with consequences to *Myzus persicae* life history, feeding behavior and virus transmission ability. *Scientific Reports* 6: 10.1038/srep19120. May 20, 2016

<http://www.co2science.org/articles/V19/may/a15.php>

## Yields of Crops and Pasture Grasses Due to Elevated CO2 and Drought

van der Kooi, C.J., Reich, M., Low, M., De Kok, L.J. and Tausz, M. 2016. Growth and yield stimulation under elevated CO2 and drought: A meta-analysis on crops. *Environmental and Experimental Botany* 122: 150-157., May 18, 2016

<http://www.co2science.org/articles/V19/may/a13.php>

“The five researchers report that *when experiencing drought conditions, both C3 and C4 crops responded very similarly to atmospheric CO2 enrichment*. And they thus concluded that ‘crops grown in areas with limited water availability will benefit from future elevated CO2, regardless of their metabolism,’ due to the *fact*, as they report, that ‘drought leads to stomatal limitation of photosynthesis in both C3 and C4 crops, which is alleviated [in both cases] when the plants are grown under elevated CO2.’” [Boldface added.]

## How Atmospheric CO2 Enrichment Impacts Tropical Coffee Species

Rodrigues, W.P., Martins, M.Q., Fortunato, A.S., Rodrigues, A.P., Semedo, J., Simoes-Costa, M.C., Pais, I.P., Leitao, A.E., Colwell, F., Goulao, L., Maguas, C., Maia, R., Partelli, F.L. Campostrini, E., Scotti-Campos, P., Ribeiro-Barros, A.I., Lidon, F.C., Damatta, F.M. and Ramalho, J.C. 2016. Long-term elevated air [CO<sub>2</sub>] strengthens photosynthetic functioning and mitigates the impact of supra-optimal temperatures in tropical *Coffea arabica* and *C. canephora* species. *Global Change Biology* **22**: 415-431. May 16, 2016  
<http://www.co2science.org/articles/V19/may/all.php>  
[SEPP Comment: Coffee drinkers need not get desperate!]

### **Model Issues**

#### **Does an Accurate Climate Model Exist?**

By John Hinderaker, Power Line, May 16, 2016

<http://www.powerlineblog.com/archives/2016/05/does-an-accurate-climate-model-exist.php>

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

#### **Negative Climate Feedbacks are Real and Large**

Guest essay by Leland Park, WUWT, May 12, 2016

<https://wattsupwiththat.com/2016/05/12/negative-climate-feedbacks-are-real-and-large/>

### **Measurement Issues – Surface and Atmosphere**

#### **April 2016 Global Surface (Land+Ocean) and Lower Troposphere Temperature Anomaly Update**

Guest Post by Bob Tisdale, WUWT, May 15, 2016

<https://wattsupwiththat.com/2016/05/15/april-2016-global-surface-landocean-and-lower-troposphere-temperature-anomaly-update/>

[SEPP Comment: Lengthy post. “As a result of the slowdown in **global surface warming**, the model-data difference (approximately 0.22 Deg C, based on 61-month average) is near record high levels. [greatest differences] The difference now between models and data is worst-case, comparable to the difference at about 1910.” [Boldface added]

### **Changing Weather**

#### **Effects of ENSO in the Pacific**

By Staff Writers, National Weather Service, NOAA, No Date

[http://www.srh.noaa.gov/jetstream/tropics/enso\\_patterns.html](http://www.srh.noaa.gov/jetstream/tropics/enso_patterns.html)

### **Changing Seas**

#### **Atlantic City Sea Level, Diving Horses, and Modeling of Ice Sheet Changes**

By Willie Soon and Nils-Axel Mörner, WUWT, May 12, 2016

<https://wattsupwiththat.com/2016/05/12/atlantic-city-sea-level-diving-horses-and-modeling-of-ice-sheet-changes/>

#### **Global Sea-level Rise: Faster than Ever?**

By Charles Clough, WUWT, May 17, 2016

<https://wattsupwiththat.com/2016/05/17/global-sea-level-rise-faster-than-ever/>

#### **Busted claim: data shows that climate induced sea level rise didn't wipe out five Solomon Islands**

The sea levels of the Solomon Islands are rising of 7-10 mm yr<sup>-1</sup> only by cherry picking  
Guest essay by Albert Parker, WUWT, May 10, 2016

<https://wattsupwiththat.com/2016/05/10/busted-claim-data-shows-that-climate-induced-sea-level-rise-didnt-wipe-out-five-solomon-islands/>

### **Ocean bacteria are programmed to alter climate gases**

By Anthony Watts, WUWT, May 16, 2016

<https://wattsupwiththat.com/2016/05/16/ocean-bacteria-are-programmed-to-alter-climate-gases/>

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

#### **Retreat of the ice followed by millennia of methane release**

By Staff Writers, Science Daily, May 13, 2016

<https://www.sciencedaily.com/releases/2016/05/160513111837.htm>

Link to paper: Timescales of methane seepage on the Norwegian margin following collapse of the Scandinavian Ice Sheet

By Crémière. et al. Nature Communications, May 11, 2016

<http://www.nature.com/ncomms/2016/160511/ncomms11509/full/ncomms11509.html>

“It shows that the methane was indeed released as the ice sheets retreated. However the seepage did not occur in one major pulse, but over a period of 7000 to 10000 years following the initial release.”

#### **Antarctic Ice Melt May Be Worse Than Scientists Thought**

By Staff Writers, Time, May 18, 2016 [H/t Clyde Spencer]

<https://www.yahoo.com/news/antarctic-ice-melt-may-worse-195413352.html?nhp=1>

Repeated large-scale retreat and advance of Totten Glacier indicated by inland bed erosion

By Aitken, Nature, May 18, 2016

<http://www.nature.com/nature/journal/v533/n7603/full/nature17447.html>

Link to questionable research driving alarmism: Temperature-driven global sea-level variability in the Common Era

By Kopp et al, PNAS, May 15, 2016

<http://www.pnas.org/content/113/11/E1434>

*[SEPP Comment: The statistical assertions of probability equal to or greater than .95 in the PNAS study are highly doubtful.]*

### ***Changing Earth***

#### **Geology Is Breaking Apart Over When the Americas Came Together**

By Lizzie Ware, Wired, May 12, 2016

<http://www.wired.com/2016/05/geology-breaking-apart-americas-came-together/>

### ***Acidic Waters***

#### **The Coral Bleaching Debate: Is Bleaching the Legacy of a Marvelous Adaptation Mechanism or A Prelude to Extirpation?**

Guest essay by Jim Steele, WUWT, May 18, 2016

<https://wattsupwiththat.com/2016/05/18/the-coral-bleaching-debate-is-bleaching-the-legacy-of-a-marvelous-adaptation-mechanism-or-a-prelude-to-extirpation/>

“Although coral genomes may evolve slowly, their symbionts have extremely fast generation times, averaging every 7 days. Furthermore, the symbiont community consists of hundreds of symbionts that have already adapted to a wide variety of temperature, irradiance and salinity variables within different microclimates over the past million years. Symbiont shuffling and shifting is an evolutionary masterpiece that circumvents plodding evolutionary mechanisms of most organisms with long generation times, and enables immediate adaptation.”

## **The chemistry of ocean pH and “acidification”**

By Jo Nova, Her Blog, Nov 4, 2011

<http://joannenova.com.au/2011/11/the-chemistry-of-ocean-ph-and-acidification/>

## ***Agriculture Issues & Fear of Famine***

### **Claim: GMO Crops are good for Climate Change**

Guest essay by Eric Worrall, WUWT, May 18, 2016

<https://wattsupwiththat.com/2016/05/18/claim-gm-crops-are-good-for-climate-change/>

Link to paper: Genetically Engineered Crops:

By Committee on Genetically Engineered Crops, National Academies of Sciences, 2016

<http://www.nap.edu/catalog/23395/genetically-engineered-crops-experiences-and-prospects>

## **Science, safety and prejudice**

By Martin Livermore, The Scientific Alliance, May 20, 2016

<http://scientific-alliance.org/node/996>

## **Genetic modification of plants is safe and good for the planet**

By Matt Ridley, Rational Optimist, May 18, 2016

<http://www.rationaloptimist.com/blog/genetically-modified-crops/>

## ***Communicating Better to the Public – Exaggerate, or be Vague?***

### **“A Myth” ...Spiegel Journalist Douses Alarmist Claim Alberta Fires Caused By Climate Change**

By P Gosselin, No Tricks Zone, May 18, 2016

<http://notrickszone.com/2016/05/18/a-myth-spiegel-journalist-douses-alarmist-claim-alberta-fires-caused-by-climate-change/#sthash.tK0GwATW.dpbs>

“In fact the practice of blaming climate change for natural disasters has been so widespread that Bojanowski, a geologist, now terms it ‘a ritual.’”

## **German Scientists: Church Sacking Stems From**

### **“Unbearable”...”Intolerable”...”Unrestrained Climate Alarmism”**

Fear mongering no longer pays: Climate alarmist John Church sacked by Australian government

By Dr. Sebastian Lüning and Prof. Fritz Vahrenholt, Translated by P Gosselin No Tricks Aone, May 20, 2016

<http://notrickszone.com/2016/05/20/german-scientists-church-sacking-stems-from-unbearable-intolerable-unrestrained-climate-alarmism/#sthash.e6v289EY.dpbs>

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

### **Climate change doubters really aren’t going to like this study**

By Chelsea Harbey, Washington Post, May 18, 2016 [H/t Clyde Spencer]

<https://www.washingtonpost.com/news/energy-environment/wp/2016/05/18/climate-change-doubters-really-really-arent-going-to-like-this-study/>

Link to paper: A blind expert test of contrarian claims about climate data

By Lewandowsky, Ballard, Oberauer, and Benestade, Global Environmental Change, July 2016

<http://www.sciencedirect.com/science/article/pii/S0959378016300577>

[SEPP Comment: Challenge the beginning of the abstract and virtually everything following:

“Although virtually all experts agree that CO2 emissions are causing anthropogenic global warming, public discourse is replete with contrarian claims that either deny that global warming

*is happening or dispute a human influence. Although the rejection of climate science is known to be driven by ideological, psychological, and political factors rather than scientific disagreement, contrarian views have considerable prominence in the media.”*

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

#### **ABC attacks philanthropist for old skeptical email. UPDATE Is it a sackable offence?!**

By Jo Nova, Her Blog, May 17, 2016

<http://joannenova.com.au/2016/05/abc-attacks-philanthropist-for-old-skeptical-email-scores-flack-deletes-comments/>

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

#### **Children Are Most at Risk From Climate Change**

By Staff Writers, TakePart.com, May 9, 2016 [H/t Clyde Spencer]

Link to Study: The Future of Children, Princeton-Brookings, No date

[http://www.futureofchildren.org/publications/journals/journal\\_details/index.xml?journalid=86](http://www.futureofchildren.org/publications/journals/journal_details/index.xml?journalid=86)

Example: The Science of Climate Change

By Michael Oppenheimer and Jesse K. Anttila-Hughes

[http://www.futureofchildren.org/publications/journals/journal\\_details/index.xml?journalid=86](http://www.futureofchildren.org/publications/journals/journal_details/index.xml?journalid=86)

#### **Children win Climate Change legal case: lose future economy**

By Jo Nova, Her Blog, May 20, 2016

<http://joannenova.com.au/2016/05/children-win-climate-change-legal-case-lose-future-economy/>

All of these legal cases are supported by Our Children’s Trust, that seeks the legal right of our youth to a healthy atmosphere and stable climate in the future.

*[SEPP Comment: Never had a stable climate in the past, so why not start now!]*

#### **Portland school board bans climate change-denying materials**

Environmental groups say science is clear, so textbooks should be, too

By Shasta Kearns Moore, Portland Tribune (Oregon), May 19, 2016 [H/t Cooler Heads]

<http://portlandtribune.com/sl/307848-185832-portland-school-board-bans-climate-change-denying-materials>

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

#### **Government to drop coastal wind turbine plans**

Cutting PSO tax will reduce Denmark’s high energy bill

By Christian W. Copenhagen Post, May 13, 2016 [H/t GWPF]

<http://cphpost.dk/news/government-to-drop-coastal-wind-turbine-plans.html>

*[SEPP Comment: According to another report, up to 70 percent of the household consumer’s bill is in fees, largely to feed the grid with renewables.]*

#### **The Fifth Carbon Budget - the most insane Act passed by Parliament**

By Christopher Booker, Telegraph, UK, May 14, 2016

<http://www.telegraph.co.uk/news/2016/05/14/the-fifth-carbon-budget---the-most-insane-act-passed-by-parliame/>

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

#### **Committee Scrutinizes Motive of “Green 20”**

Press Release, Committee on Science, Space, & Technology, Lamar Smith, Chairman, May 18, 2016

<https://science.house.gov/news/press-releases/committee-scrutinizes-motive-green-20>

### ***Litigation Issues***

#### **Court showdown over Obama's climate rule delayed until the fall**

By Timothy Cama, The Hill, May 16, 2016

<http://thehill.com/policy/energy-environment/280080-climate-rule-case-postponed-3-months>

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

#### **James Hansen on Cap-and-Trade: One More Time (fee-and-dividend can be politicized too)**

By Robert Bradley Jr. Master Resource, May 19, 2016

<https://www.masterresource.org/hansen-james/hansen-cap-trade-tax-too/>

“In the real world, there is *government failure* in the quest to address *market failure*. James Hansen must realize that fee-and-dividend, with an array of tax rates and border adjustments, is cap-and-trade waiting to happen.”

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

#### **Energy Policy: Can Anybody Around Here Do Basic Arithmetic?**

Francis Menton, Manhattan Contrarian, May 9, 2016 [H/t ICECAP]

<http://manhattancontrarian.com/blog/2016/5/9/energy-policy-can-anybody-around-here-do-basic-arithmetic>

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

#### **Impact of Regulations on Growth**

By Donn Dears, Power For USA, May 17, 2016

<https://dddusmma.wordpress.com/2016/05/17/impact-of-regulations-on-growth/>

#### **Regulations Hurt GDP Growth**

By Donn Dears, Power For USA, May 20, 2016

<https://dddusmma.wordpress.com/2016/05/20/regulations-hurt-gdp-growth/>

#### **EPA seeks to boost ethanol in fuel supply**

By Timothy Cama, The Hill, May 18, 2016

<http://thehill.com/policy/energy-environment/280379-epa-seeks-boost-in-ethanol-volumes>

[SEPP Comment: Bureaucrats addressing a need no longer existing which a failed concept.]

#### **Flood of administration regulations will slow to trickle as deadline nears**

By Lydia Wheeler, The Hill May 15, 2016

<http://thehill.com/regulation/279869-flood-of-admin-regulations-will-slow-to-trickle-as-deadline-nears>

#### **EPA Is At It Again**

By Alan Carlin, Carlin Economics and Science, May 13, 2016

<http://www.carlineconomics.com/archives/2696>

#### **EPA finalizes stronger methane emission rules**

By Devin Henry, The Hill, May 12, 2016

<http://thehill.com/policy/energy-environment/279671-epa-finalizes-stronger-new-methane-leak-rules>

## ***Energy Issues – Non-US***

### **Twilight of the Petrostate**

The age of oil rents is over. A political and geopolitical revolution is on its way.  
Petr Aven, Vladimir Nazarov, Samvel Lazaryan, National Interest, May 17, 2016  
<http://nationalinterest.org/feature/twilight-the-petrostate-16235>

*[SEPP Comment: Though not stated, the article provides further argument that recent control of the oil industry and prices by private oil companies, such as Exxon-Mobil, was a myth. The role of renewables in reducing petrostates, as asserted by the authors, is largely another myth. What brought down oil prices was production from non-petrostates such as the US and Canada.]*

### **This Greek Industry Unscathed by Crisis Still Blowing Strong**

By Anna Hirtenstein, Bloomberg, May 19, 2016  
<http://www.bloomberg.com/news/articles/2016-05-20/this-greek-industry-unscathed-by-crisis-still-blowing-strong>

“Up to 50 wind projects with 1.3 gigawatts are contracted...Cash from recapitalization being directed to ‘safe’ renewables”

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

### **Culling the Shale Herd**

By Staff Writers, The American Interest, May 18, 2016  
<http://www.the-american-interest.com/2016/05/18/culling-the-shale-herd/>

Whatever happens, America’s energy security looks stronger than it has in decades, and that comes to us entirely courtesy of shale.

*[SEPP Comment: Unless the greens succeed in shutting down hydraulic fracturing.]*

## ***Return of King Coal?***

### **Could coal still be king?**

By Anthony J. Sadar, American Thinker, May 11, 2016  
[http://www.americanthinker.com/blog/2016/05/could\\_coal\\_still\\_be\\_king.html](http://www.americanthinker.com/blog/2016/05/could_coal_still_be_king.html)

“Try to make steel without it.”

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

### **Fukushima Accident**

By Staff Writers, World Nuclear Association, Apr 2016  
<http://www.world-nuclear.org/information-library/safety-and-security/safety-of-plants/fukushima-accident.aspx>

“• There have been no deaths or cases of radiation sickness from the nuclear accident, but over 100,000 people were evacuated from their homes to ensure this. Government nervousness delays the return of many.

• Official figures show that there have been well over 1000 deaths from maintaining the evacuation, in contrast to little risk from radiation if early return had been allowed.”

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

### **Offshore Wind: A Problematic Future (AWEA’s hype falls short)**

By Allen Brooks, Master Resource, May 17, 2016  
<https://www.masterresource.org/offshore/awea-offshore-wind/>

## **The Energy Return of Solar PV – a response from Ferroni and Hopkirk**

By Euan Mearns, Energy Matters, May 20, 2016

<http://euanmearns.com/the-energy-return-of-solar-pv-a-response-from-ferroni-and-hopkirk/#more-13950>

[SEPP Comment: Graphs showing electricity production from solar PV in the UK in June and in December. Energy Return on Energy Invested (ERoEI) is an important concept.]

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

**US looks to go big on biofuels as it diversifies away from foreign oil**

By Anmar Frangout, CNBC, May 9, 2016 [H/t Clyde Spencer]

[https://www.yahoo.com/news/m/a0f45df3-38f3-3aad-af7c-48e0053adecc/ss\\_us-looks-to-go-big-on.html?nhp=1](https://www.yahoo.com/news/m/a0f45df3-38f3-3aad-af7c-48e0053adecc/ss_us-looks-to-go-big-on.html?nhp=1)

[SEPP Comment: Does the Department of Energy know who needs it and at what cost?]

**Other Scientific News**

**Doug Hoffman: Science Death Spiral?**

By Doug L Hoffman, The Resilient Earth, Via GWPF, May 20, 2016

<http://www.thegwpf.com/doug-hoffman-science-death-spiral/>

**Study explains how bacteria induce ice crystal formation**

Snow machines at ski resorts already use bacteria to encourage ice crystallization.

By Brooks Hays, UPI, Apr 25, 2016 [H/t Clyde Spencer]

[http://www.upi.com/Science\\_News/2016/04/25/Study-explains-how-bacteria-induce-ice-crystal-formation/4431461606911/?st\\_rec=7451463421998](http://www.upi.com/Science_News/2016/04/25/Study-explains-how-bacteria-induce-ice-crystal-formation/4431461606911/?st_rec=7451463421998)

**Other News that May Be of Interest**

**Compulsory Courses for Any Curriculum; The Science Dilemma**

Guest opinion: Dr. Tim Ball, WUWT, May 15, 2016

<https://wattsupwiththat.com/2016/05/15/compulsory-courses-for-any-curriculum-the-science-dilemma/>

**Our Long History Fighting Viruses**

By Peter Doherty, ACSH, Apr 27, 2016

<http://acsh.org/news/2016/04/27/our-long-history-fighting-viruses/>

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**BELOW THE BOTTOM LINE:**

**ClimateCam is watching you!**

By Staff Writers, Climate Change Predictions, May 18, 2016

<http://climatechangepredictions.org/uncategorized/6221>

*A huge electronic billboard in the city square telling residents exactly how much greenhouse gas they have produced in the past hour. Sounds a little futuristic? Not if you live in Newcastle.*

*ClimateCam, the world’s first greenhouse gas speedometer, displays electricity consumption information collected from the 15 substations that supply homes and businesses in the Newcastle local government area. The council now believes Newcastle has been established as an international testing ground for climate solutions.*

*“We realise that the climate change issue is just so big and we are so, in Australia, far behind the rest of the world that we need to move very, very quickly if we’re going to catch up and have access to the huge economic opportunity that we foresee is coming with the implementation of*

climate solutions,” city energy and resource manager of Newcastle City Council, Peter Dormand says. [Sydney Morning Herald, 24 Oct 2007](#)

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## ARTICLES:

Please note that articles not linked easily or summarized here are reproduced in the Articles Section of the full TWTW that can be found on the web site under the date of the TWTW.

### 1 Exxon Is Big Tobacco? Tell Me Another

The corrupt Medicaid deal propped up tobacco stocks and government revenue.

By Holman Jenkins, WSJ, May 17, 2016

<http://www.wsj.com/articles/exxon-is-big-tobacco-tell-me-another-1463526311>

“Transportation fuels account for less than 15% of global emissions, and Exxon’s production accounts for just 4% of transportation fuels.”

SUMMARY: Jenkins strongly criticizes the analogy by the proponents for RICO investigation of skeptics of drastic human-caused global warming/climate change with the actions of tobacco companies. He starts:

*“Before anyone collapses uncritically in front of the claim by activist groups and liberal politicians that they are doing to Exxon Mobil what they did to tobacco, readers might want to take a look at tobacco stock prices.*

*“Yup, all up strongly since the 1998 “master settlement agreement” that 46 states imposed on Big Tobacco ostensibly as punishment for its sins. How was the industry expected to pay \$246 billion in alleged Medicaid damages? By selling more cigarettes, of course, now helped by a government-orchestrated pricing cartel, with the profits equitably shared between the companies, the pols and the buccaneers of the trial bar.*

*“A decade later, the American Bar Association Journal would look back and conclude: “The only big winners in the litigation appear to be the tobacco companies, the state treasurers and the lawyers who represented both sides.”*

*“So obviously corrupt was the outcome that it had one salutary effect: It capped the careers of the ambitious state pols who promoted this travesty. Hubert Humphrey III, possessor of Minnesota’s most illustrious name, finished last in a three-man governor’s race. Texas AG Dan Morales went to jail for creating fake documents in an attempt to secure a slice of the state’s windfall for a law-school buddy.*

*“Dickie Scruggs, most prominent of the anti-tobacco lawyers, would later go to jail for bribing a judge. One wonders if New York Attorney General Eric Schneiderman and California’s Kamala Harris, who keep trumpeting the tobacco precedent while attacking Exxon, really have given their analogy the due diligence it deserves.*

*“On the advice of their lawyers, tobacco executives pretended not to know what their own warning labels said, which became their main source of legal jeopardy. In allegedly parallel fashion, Exxon is accused of knowing about the science of climate change, and casting doubt on the science of climate change.*

*“The problem is, knowing and doubting are the same when it comes to the iffy claims of climate science at its current state of development.”*

After a discussion of the limited influence oil companies have on CO2 emissions compared with influence tobacco companies had, Jenkins concludes:

*“He now criticizes the 1998 tobacco settlement, but activist Matt Myers and his group Tobacco-Free Kids walked away with a healthy share of the proceeds. Meanwhile, the states quickly reneged on their own promise to spend the proceeds on anti-smoking programs. And, just this month, a Food and Drug Administration effort to shut down e-cigarettes was quietly applauded by state treasurers and conventional cigarette companies as a step to uphold their revenue from the traditional tobacco products covered in the settlement.*

*“As Donald Trump might say, nobody ever went broke emphasizing the dishonesty and opportunism of the U.S. political class, including the activist class. That’s your most reliable forecast for how an Exxon lawsuit might play out.”*

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## **2. Norway to Drill Untapped Arctic Seas**

Acreage awards allow exploration in Barents Sea area previously disputed with Russia

By Kjetil Malkenes Hovland, WSJ, May 18, 2016

<http://www.wsj.com/articles/norway-to-drill-untapped-arctic-seas-1463579457>

SUMMARY: *“‘Today, we are opening a new chapter in the history of the Norwegian petroleum industry,’ said Tord Lien, Norway’s minister of petroleum and energy. ‘For the first time in 20 years, we offer new acreage for exploration.’*

*“Announcing the country’s 23rd licensing round in five decades, the government offered 10 drilling licenses to 13 different companies, including ConocoPhillips, Chevron, Statoil, and DEA. Attractive acreage is key to ensure long-term drilling activity, it said.*

*“‘This is a cornerstone of the government’s petroleum policy and is particularly important in the current challenging times for the industry,’ the government said.*

*“Three out of the 10 new licenses were awarded in a previously disputed area with Russia in the southeast Barents Sea, in the wake of a 2010 delineation deal between the two countries, following four decades of disagreement.”*

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## **3. Shale Drillers’ Key to Survival: Efficiency**

Diversified players find ways to make Bakken formation pay even at low oil prices

By Chester Dawson, WSJ, May 17, 2016

<http://www.wsj.com/articles/shale-drillers-key-to-survival-efficiency-1463514347>

SUMMARY: After a discussion of the slow-down due to the large drop in oil prices, the article states:

*“This downturn marks the first bust since the rise of so-called unconventional shale-oil plays nearly a decade ago, fueled by new technologies, ready access to capital and a surge in crude prices to record highs. One of the world’s highest-cost oil fields, the Bakken is key test ground for the U.S. energy industry’s wherewithal.*

*“You can’t shut down the Bakken. The American oil industry is getting smarter and more efficient” in how and where it drills, said Kathy Neset, a veteran geologist who owns a consultancy in Tioga, N.D. “We’ve still got pins on the wall,” she said, pointing to a map with the location of active rigs.*

After a discussion of some of the well finance oil firms in the area the articles states:

*“Those highly productive new wells are partially offsetting the decline in output from older wells, including some that are being shut because their operating costs surpass the market value of their oil. While North Dakota’s production is expected to fall below the million-barrel-a-day mark by early 2017 unless prices recover to above \$50, it has held up better than many analysts expected.*

*“Just 27 drilling rigs are active in North Dakota, matching a low last seen in July 2005 and down from an all-time high of 218 in 2012, according to the state’s Department of Mineral Resources. But data from the Energy Information Administration show output per rig has increased by more than one-third over the past year in the Bakken.”*

After some statistics showing an increase in production per rig from a low of below 200 barrels per day to almost 800 barrels per day, the article states:

*“Average well drilling and completion costs have come down by nearly a third across all major U.S. shale plays from peak levels in 2012, but the EIA says Bakken Shale wells remain the most costly due mostly to their depth.*

*“Hess, which exported the first cargo of Bakken crude from the U.S. Gulf Coast last month, says it is implementing lean manufacturing techniques borrowed from Toyota Motor Corp. such as just-in-time supply chain logistics and greater use of standardized parts. It is operating three rigs, down from a high of 17 in 2014, but it has increased the number of wells drilled per rig to 22 a year, up from 16 wells a year 18 months ago.*

*“Standing near a quartet of pump jacks surrounded by farm land, David McKay, the vice president of what Hess calls its Bakken ‘Well Factory,’ credits the downturn for forcing producers to rethink their operations. ‘There was a time when we were all cheeks and heel’” in the rush to boost output, he said in an interview. ‘The slowdown actually has helped convince people of the need to do everything more efficiently,’ he said.*

*“Mr. McKay says those efforts have reduced completion costs by one-third over the past 12 months to around \$2 million per well, cut the time it takes to frack a well to one day from up to three days two years ago, and boosted average initial well production by up to 20%.*

*“Lynn Helms, North Dakota’s top energy regulator, expects the slump will thin the herd of operators. ‘That’s what’s coming,’ he said earlier this year. ‘We’ll see companies in financial distress be aggregated by some of the larger companies.’”*

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