

The Week That Was: 2019-11-16 (November 16, 2019)

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The Science and Environmental Policy Project

Quote of the Week: *"Theories, ideas are wonderful, but to me, they become established when passing tests," he continued.*

"Theories of course, any bright physicist can make up theories. They could have nothing to do with reality.

"You discover which theories are close to reality by comparing to experiments..." – Jim Peebles, 2019 Nobel co-Laureate in physics.

Number of the Week: \$143 billion over 10 years

THIS WEEK:

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

After Climategate: Ten years ago, a scandal in climate science broke. Hackers took over a thousand emails from Britain's University of East Anglia's Climate Research Unit and revealed them in a series of releases. These provided the first solid evidence that the climate establishment was trying to suppress physical evidence that nature was not responding to increasing carbon dioxide (CO₂) as the UN Intergovernmental Panel on Climate Change (IPCC) claimed and the climate modelers predicted / projected. Many of the lead authors of the IPCC Assessment Reports were involved in this suppression of physical evidence, which is contrary to the principles of the scientific method.

Some academic institutions conducted investigations of the affair. Generally, but not in every instance, these investigations were the reverse of "show trials" – they were "show exonerations" – avoiding difficult issues and critical questions. The academic community demonstrated a desire to protect sources of revenues rather than to protect scientific integrity. Writing in his particular style, journalist James Delingpole gives a good overview of Climategate and its importance.

Judith Curry discusses the importance of Climategate on her blog. She discusses the timely evaluation by Ross McKittrick, who along with Steve McIntyre, exposed the poor use of statistics that went into the creation of Mr. Mann's infamous "hockey-stick" used by the IPCC in its Third Assessment Report. [Versions of the hockey-stick appeared in the Summary for Policymakers, showing that human forcings are needed to explain increases in temperatures after 1950. (IPCC 2001, SPM-2). Note that TWTW questions both the accuracy of the reported sharp increase in surface temperatures after 1950 and that increases in CO₂ can explain them.] As McKittrick demonstrates, by no objective criteria did the inquiries "exonerate" the scientists involved in Climategate.

Curry also discusses the concerns brought by McIntyre and the use of the algorithm (process of calculations) that created the "hockey-stick" as well as the deletion of the temperature records that contradict the hockey-stick. The deletion of data is contrary to the scientific method.

According to Curry, climate science is in a morass and she tried to suggest ways out of the morass, only to be attacked by others as being a climate heretic. It is becoming quite clear that the climate establishment cannot tolerate criticism, no matter how well intended – similar to a cult.

Five years ago, Curry wrote:

“The net effect of all this is that my ‘academic career advancement’ in terms of professional recognition, climbing the administrative ladder, etc. has been pretty much halted. I’ve exchanged academic advancement that now seems to be of dubious advantage to me for a much more interesting and influential existence that feels right in terms of my personal and scientific integrity.

“Climategate was career changing for me; I’ll let history decide if this was for better or worse (if history even cares).”

She now writes:

“In the end, Climategate ended my academic career prematurely I realized how shallow the ‘academic game’ has become, and the games one needs to play to succeed. Throwing all that off has been personally and intellectually liberating for me.”

Curry brings up major issues, climate science as practiced is very shallow, superficial. It is built on assumptions about the atmosphere that physical evidence is demonstrating false. Increasingly, climate science is becoming more superficial. Yet, the findings of climate scientists, no matter how contrary to the scientific method, are popular among many political types who wish to exercise political control.

A purpose of the scientific method, developed over thousands of years but more intensely in Europe since about 1600, is to eliminate errors. Many examples from science and medicine demonstrate that established authorities do not wish to have their views challenged.

The scientific method provides a set of procedures to test concepts, ideas, to help determine if they are erroneous. Rigorous adherence to the scientific method requires repeated testing concepts or hypotheses against physical evidence when it is obtained. When the concepts or hypotheses fail such testing, they must be modified or discarded. This is an ongoing process that may take years or decades before a full understanding is established in complex issues such as climate.

Regardless of their academic qualifications, when scientists disregard the scientific method for political favors, they become political lackeys, not scientists.

Over the next several weeks TWTW will discuss several US and European climate models, and how well the modelers are adjusting their models to increasing observations on what is actually occurring in the atmosphere. See links under Climategate Continued and Model Issues.

Climate Models vs. Surface Observations: Last week, TWTW discussed how much global climate models overestimate increasing atmospheric temperatures, even under a low CO2 emissions scenario. Ross McKittrick posted an interesting analysis showing how close HadCRUT4 surface observations are to going below the lower bound of climate model projections under the same low CO2 emissions scenario. [Due to manipulation of the historic record by NOAA and NASA-GISS in lowering past record temperatures in the US, TWTW does not consider the surface record as reliable. That said, the HadCRUT4 is probably better than other surface datasets.] After explaining some of the variation due to El Nino / La Nina, McKittrick states:

“I have indicated 2030 on the graph. That’s the year we all die, or something. But I think it’s more likely that will be the year by which the HadCRUT4 line drops out below the bottom of the CMIP5 RCP4.5 [the models used for the last IPCC Assessment Report (AR5, 2013-14)] ensemble once and for all. The El Nino disguised the model-observational discrepancy for a few years, but it’s coming back.”

In concluding McKittrick quotes comments by Hans von Storch made in 2013:

“Unfortunately, some scientists behave like preachers, delivering sermons to people. What this approach ignores is the fact that there are many threats in our world that must be weighed against one another. If I’m driving my car and find myself speeding toward an obstacle, I can’t simply yank the wheel to the side without first checking to see if I’ll instead be driving straight into a crowd of people. Climate researchers cannot and should not take this process of weighing different factors out of the hands of politics and society.”

See links under Models v. Observations.

Hidden Costs of Renewables: Almost daily announcements are made about the great breakthroughs in wind and solar generation of electricity and how the costs are plummeting. Yet, when politicians suggest removing tax subsidies from these industries, the promoters scream. There have been Federal subsidies to wind and solar in one form or another for over 25 years. According to the American Wind Energy Association, the Production Tax Credit was initiated in the US in 1992. In Germany, where the wind power industry is developed further, a cut in subsidies is resulting in major layoffs in the industry. Wind industry leaders are calling the reduction in subsidies a “crisis.”

The justification that wind is an infant industry that needs to be protected no longer applies. Simply, wind and solar cannot stand on their own because modern civilization requires reliable electrical power, which wind and solar cannot deliver. Instead, wind and solar require other sources to provide reliable power when they cannot, yet wind and solar do not pay for the costs of these required sources of power.

Texas provides another example of the deficiencies of wind and solar. The defunct energy company, Enron, convinced the legislators in Texas to favor wind power to the extent it is becoming an increasing burden to the Texas electricity consumers. According to the EIA, the major electricity generation sources in July were: 1) natural gas, about 27,500 MWh, 57%; 2) coal, about 9,000 MWh, 19%; 3) nonhydroelectric renewables, about 7,500 MWh, 16%; and 4) nuclear, about 3,700 MWh, 8%. The price of natural gas is going down, but the cost of electricity is going up, which makes little sense until one realizes that wind power has significant indirect costs paid by others.

In a video, attorney Mike Nasi, a member of the Texas Public Policy Foundation, addressed this issue before a group of Indiana legislators. He spoke of the electrical market in which those who generate electricity bid at what price they will deliver it the next day. The system operator, for most of Texas it is ERCOT, accepts the lowest bid prices for what it expects to be its needs. Nasi said:

“Even though natural gas prices were down this year by 15%, power prices in the Texas market went up 40%. How does that happen? When you underestimate what the cost of renewable penetration is going to be in your grid. [...]

“The biggest miss, other than transmission, the impact of subsidization. I think you all know this but when you get \$23 a megawatt hour for putting wind on the grid, in the form of a subsidy, and the price of electricity drops low, and you only get that subsidy if you generate, you bid the price of electricity negative.

“You literally, in the Texas market, see one out of every three bids negative. In other words, paying to stay on the grid. So, that has two effects. One, it destroys and distorts the marketplace and, two, it erodes the capital of existing thermal: nuclear, coal, and, I will tell you, new gas. We could spend another hour talking about the myth that new gas is getting built. Take a look at the Texas market. See how much new gas is getting built. Close to nothing, because people and banks are not going to invest in a marketplace where a subsidy is driving the price of electricity to below zero.”

See links under Challenging the Orthodoxy and <https://www.eia.gov/state/?sid=TX#tabs-4>

Number of the Week: \$143 billion over 10 years. According to the American Wind Energy Association in arguing for the wind Production Tax Credit (PTC): “Investing in U.S. wind farms has spurred over \$143 billion in private investment in our economy over the last 10 years.” It is doubtful if any industrial-scale wind power would have been built without the PTC.

To put the statement differently: Over 10 years, the Federal government has provided wealthy individuals and corporations with \$143 billion in tax breaks (tax forgiveness) which were used to subsidize an inferior, unreliable method of electricity generation at the expense of reliable methods of electricity generation. See above and <https://www.awea.org/policy-and-issues/tax-policy>.

NEWS YOU CAN USE:

Commentary: Is the Sun Rising?

Scientists: Climate Records ‘Correlate Well’ With Solar Modulation...A Grand Solar Minimum Expected By 2030

By Kenneth Richard, Not Tricks Zone, Nov 11, 2019

<https://notrickszone.com/2019/11/11/scientists-climate-records-correlate-well-with-solar-modulation-a-grand-solar-minimum-expected-by-2030/>

Climategate Continued

Legacy of Climategate – 10 years later

By Judith Curry, Climate Etc., Nov 12, 2019

<https://judithcurry.com/2019/11/12/legacy-of-climategate-10-years-later/>

Link to a timely analysis: Understanding the Climategate Inquiries

By Ross McKittrick, University of Guelph, Canada, September 2010

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.175.4664&rep=rep1&type=pdf>

Climate Science Proves Scams Don’t Die of Exposure

By Tony Thomas, Quadrant, Nov 14, 2019

<https://quadrant.org.au/opinion/doomed-planet/2019/11/ten-years-after-climategate/>

My finest hour

By James Delingpole, Spectator Australia, November 2019

<https://www.spectator.com.au/2019/11/my-finest-hour/>

“Climategate” Is a Decade Old. All It Exposed Is the Bad Faith of Climate Deniers

By Michael Mann, Newsweek, Nov 11, 2019

<https://www.newsweek.com/climate-gate-fake-news-climate-denialism-1471826>

[SEPP Comment: Mr. Mann claimed Fred Singer received money from Phillip Morris, tobacco; Monsanto, chemicals; and Texaco, oil and gas. But he produced no evidence and Dr. Singer denies it..]

Challenging the Orthodoxy -- NIPCC

Climate Change Reconsidered II: Physical Science

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

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

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

Climate Change Reconsidered II: Biological Impacts

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

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

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

Climate Change Reconsidered II: Fossil Fuels

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

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

Download with no charge:

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

Why Scientists Disagree About Global Warming

The NIPCC Report on the Scientific Consensus

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

<http://climatechangereconsidered.org/>

Download with no charge:

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

Nature, Not Human Activity, Rules the Climate

S. Fred Singer, Editor, NIPCC, 2008

http://www.sepp.org/publications/nipcc_final.pdf

Global Sea-Level Rise: An Evaluation of the Data

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

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

Challenging the Orthodoxy

New climate models – even more wrong

By Paul Mathews, Climate Scepticism, Nov 5, 2019 [H/t GWPF]

<https://cliscep.com/2019/11/05/new-climate-models-even-more-wrong/>

Ocean Temperature Changes Are Uneven And Uncertain

Press Release, Global Warming Policy Foundation, Nov 8, 2019

<https://www.thegwpf.com/ocean-temperature-changes-are-uneven-and-uncertain/>

Link to paper: COLD WATER? The Oceans and Climate Change

By David Whitehouse, Global Warming Policy Foundation, 2019

<https://www.thegwpf.org/content/uploads/2019/11/Cold-Water-Whitehouse.pdf>

Beige Reef - Presented By Dr Jennifer Marohasy

Video, Institute of Public Affairs, Accessed Nov 15, 2019 [H/t Howard Dewhurst]

<https://ipa.org.au/peterridd>

From the video: white tips on certain corals do not necessarily mean the corals are bleached, they may be entirely natural.

Professor Michael Kelly: Energy Utopias And Engineering Reality

By Prof Michael Kelly FRS, 2019 Annual GWPF Lecture, Nov 14, 2019

<https://www.thegwpf.com/professor-michael-kelly-frs-energy-utopias-and-engineering-reality/>

The Final Nail in the Coffin? Man-Made Global Warming Suffers another Severe Blow

By Gordon Fulks, The Northwest Connection, Feb 3, 2019

<http://www.nw-connection.com/?p=3760>

Assessing changes in US regional precipitation on multiple time scales

By Ross McKittrick, John Christy, Journal of Hydrology, November 2019

<https://www.sciencedirect.com/science/article/pii/S0022169419308091?via%3Dihub>

“We show that 2000-year proxy-based reconstructions of the Palmer Modified Drought Index for the US Southeast (SE) and Pacific Coast (PC) regions exhibit LTP and reveal post- 1900 changes to be within the range of longer-term natural fluctuations.

“We conclude that natural variability is likely the dominant driver of historical changes in precipitation and hence drought dynamics in the US SE and PC.”

How Bad Science & Horrific Journalism Misrepresent Wildfires and Climate

By Jim Steele, WUWT, Nov 9, 2019

<https://wattsupwiththat.com/2019/11/09/how-bad-science-horrific-journalism-misrepresent-wildfires-and-climate/>

Alien Theories About Climate Change

By Larry Bell, Newsmax, Nov 11, 2019

<https://www.newsmax.com/larrybell/climate-change-alien-theories-global-temperatures-history/2019/11/11/id/941085/>

The True Cost of Renewables are Hidden Due to a Lack of Market Transparency

By Charles the Moderator, WUWT, Nov 14, 2019

<https://wattsupwiththat.com/2019/11/14/the-true-cost-of-renewables-are-hidden-due-to-a-lack-of-market-transparency/>

Defending the Orthodoxy

New Global Health and Climate Crisis Report Warns of Future 'Where a Child Has to Fight Simply to Survive'

"Without immediate action from all countries to cut greenhouse gas emissions, gains in well-being and life expectancy will be compromised."

By Jessica Corbett, staff writer, Common Dreams, Nov 14, 2019 [H/t Gene Hackemack]

<https://www.commondreams.org/news/2019/11/14/new-global-health-and-climate-crisis-report-warns-future-where-child-has-fight>

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

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

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

Questioning the Orthodoxy

Lettuce Pray: Climate Change, Neo-Paganism, and the End of the World

By Dion Pierre, National Association of Scholars, Nov 8, 2019

https://www.dailysignal.com/2019/11/08/lettuce-pray-climate-change-neo-paganism-and-the-end-of-the-world/?utm_source=rss&utm_medium=rss&utm_campaign=lettuce-pray-climate-change-neo-paganism-and-the-end-of-the-world?utm_source=TDS_Email&utm_medium=email&utm_campaign=MorningBell&mkt_tok=eyJpIjoiTURVMVkyTmNnbVF6WXprNSIsInQiOiJINDBwWFFCNTZpOUszd3JsQUY4R3BuOXkzRFowaGtdtGJaNENGNm9aR1M2VUVV3RG9OTjZOSUhtRFIUNUN2M1g1ZkdWelNzVnlwN0xBUzJXWXNQTnF4cjkyMIJTtKu4NHB2WlwwbWJkNE9Vc1ZJZ0V3YndcL0lzbjhLWjRWbGNqUHBBIn0%3D

Climate alarmists use junk science to promote their agenda

By Ed Berry, His Blog, Nov 7, 2019

<https://edberry.com/blog/climate-physics/agw-hypothesis/climate-alarmists-use-junk-science-to-promote-their-agenda/>

Scientists: CO2 Causes Cooling When Not Causing Warming And It's A 'Weak' To 'Negligible' Climate Factor

By Kenneth Richard, No Tricks Zone, Nov 14, 2019

<https://notrickszone.com/2019/11/14/scientists-co2-causes-cooling-when-not-causing-warming-and-its-a-weak-to-negligible-climate-factor/>

Global Warming Politics Are Dividing Us, Because That's The Way The Alarmists Want It

By I & I Editorial Board, Nov 15, 2019

<https://issuesinsights.com/2019/11/15/global-warming-politics-are-dividing-us-because-thats-the-way-the-alarmists-want-it/>

After Paris!

75 per cent countries may not meet their climate pledges: Report

By Staff, The Hindu Business Line, Nov 12, 2019 [H/t GWPF]

<https://www.thehindubusinessline.com/news/75-per-cent-countries-may-not-meet-their-climate-pledges-report/article29954134.ece#>

Paris climate fail: Populist revolts at energy hikes, yawns from rogue states

By Staff, World Tribune, Nov 6, 2019 [H/t GWPF]

<https://www.worldtribune.com/paris-climate-fail-populist-revolts-at-energy-hikes-yawns-from-rogue-states/>

Paris Climate Accord Withdrawal Underway (Trump, Dense Energy Winning)

By Robert Bradley, Master Resource, Nov 12, 2019

<https://www.masterresource.org/trump-on-climate-change/paris-climate-accord-withdrawal-underway-trump-right/>

Paris Won't Cut Emissions—Bob Watson

By Paul Homewood, Not a Lot of People Know That, Nov 10, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/11/10/paris-wont-cut-emissions-bob-watson/>

Trump's Former Science Advisor Will Happer Featured in Climate Forum at COP25 in Madrid

By Anthony Watts, WUWT, Nov 11, 2019

<https://wattsupwiththat.com/2019/11/11/trumps-former-science-advisor-will-happer-featured-in-climate-forum-at-cop25-in-madrid/>

Change in US Administrations

How the State Dept.'s Dissenters Incited a Revolt, Then a Rallying Cry

By Michael Crowley, Lara Jakes and David Sanger, NYT, Nov 9, 2019

Shock, anger and sadness are giving way to pride among career diplomats that they are defending American ideals and holding the Trump administration accountable.

https://www.nytimes.com/2019/11/09/us/politics/impeachment-state-department.html?nl=todaysheadlines&emc=edit_th_191110?campaign_id=2&instance_id=13708&segment_id=18674&user_id=600713400c5e414103c69dc935baaf47®i_id=598318591110

Problems in the Orthodoxy

Climate Fury: “They don't need the ravings of some pure, enlightened and woke capital city greenies”

By Eric Worrall, WUWT, Nov 12, 2019

<https://wattsupwiththat.com/2019/11/12/climate-fury-they-dont-need-the-ravings-of-some-pure-enlightened-and-woke-capital-city-greenies/>

Seeking a Common Ground

How To Combine Experts' Predictions? It Depends On Whether It's Numbers Or Words

By Chuck Dinerstein, ACSH, Nov 5, 2019

<https://www.acsh.org/news/2019/11/05/how-combine-experts-predictions-it-depends-whether-its-numbers-or-words-14379>

Can Autonomous Weather-Observation Sailboats Improve Forecasts over the U.S.?

By Cliff Mass, Weather and Climate Blog, Nov 10, 2019

<https://cliffmass.blogspot.com/search?updated-max=2019-11-13T07:00:00-08:00&max-results=1&start=1&by-date=false>

The Climate Leadership Council's Bipartisan Solution

By Greg Bertelsen, Real Clear Energy, Nov 13, 2019

https://www.realclearenergy.org/articles/2019/11/13/the_climate_leadership_councils_bipartisan_solution_110490.html

[SEPP Comment: And what assurances do the voters have that redistribution of the revenues from carbon taxes will not be diverted for other purposes? Examples of diversion of resources abound such as monies for the highway trust fund, tobacco settlements, etc.]

The Rise of Liberal Fascism: UK Students Turn Against Free Speech Amid 'Culture Of Conformity'

By Staff, The Times, Via GWPF, Nov 11, 2019

<https://www.thegwpf.com/british-neo-fascism-students-turn-against-free-speech-amid-culture-of-conformity/>

What the University of Alabama's Football Stadium Tells Us about CO2

By John Eidson, American Thinker, Nov 10, 2019

https://www.americanthinker.com/articles/2019/11/what_the_university_of_alabamas_football_stadium_tells_us_about_co2.html

[SEPP Comment: The author forgot atmospheric water vapor.]

Review of Recent Scientific Articles by CO2 Science

No Significant Trend in U.S. Hurricanes Over the Period 1900-2017

Truchelut, R.E. and Staehling, E.M. 2017. An energetic perspective on United States tropical cyclone landfall droughts. *Geophysical Research Letters* 44: 12,013-12,019. Nov 14, 2019

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

Elevated CO2 Reduces Cadmium Toxicity in a Freshwater Macrophyte

Huang, W., Han, S., Zhou, Q., Li, W. and Xing, W. 2019. Assessing interactions between environmental factors and aquatic toxicity: Influences of dissolved CO2 and light on Cd toxicity in the aquatic macrophyte *Potamogeton crispus*. *Aquatic Toxicology* 212: 247-258. Nov 11, 2019

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

Models v. Observations

Climate Models vs Observations: 2019 Update

By Ross McKittrick, University of Guelph, Nov 11, 2019

https://www.rossmckittrick.com/uploads/4/8/0/8/4808045/model_obs_comp_nov_2019.pdf

Comments by Ross McKittrick on the Continuation of Climate Model Failure

By Roy Spencer, His Blog, Nov 12, 2019

<http://www.drroyspencer.com/2019/11/comments-by-ross-mckittrick-on-the-continuation-of-climate-model-failure/>

“Roy W. Spencer comment: With the new CMIP6 models coming out suggesting even more warming than the CMIP5 models did, I fear we will see continuing “adjustments” of the instrumental temperature record to produce even more warming. This is the only way that the models can retain credibility in the face of real-world evidence that warming has been modest, at best.”

Model Issues

Structure and Performance of GFDL's CM4.0 Climate Model

By I.M. Held, JAMES, Journal of Advances in Modeling Earth Systems, Oct 30, 2019
<https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2019MS001829?af=R>

CMIP Phase 6 (CMIP6)

Overview CMIP6 Experimental Design and Organization

By Staff, WCRP World Climate research Programme, Accessed Nov 12, 2019

<https://www.wcrp-climate.org/wgcm-cmip/wgcm-cmip6>

CMIP6 Terms of USE: “To enable modeling groups and others who support CMIP6 to demonstrate its impact (and secure ongoing funding), you are required to cite and acknowledge those who have made CMIP6 possible....”

New flagship climate models - UKESM1 and HadGEM3-GC3.1

By Staff, Met Office, Accessed Nov 12, 2019

<https://www.metoffice.gov.uk/research/approach/modelling-systems/new-flagship-climate-models>

UKESM1: Description and evaluation of the UK Earth System Model

By Alistair Sellar, Journal of Advances in Modeling Earth Systems, Oct 30, 2019

<https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2019MS001739>

Measurement Issues -- Surface

170 Years of Earth Surface Temperature Data Show No Evidence of Significant Warming

By Charles the moderator, WUWT, Nov 14, 2019

<https://wattsupwiththat.com/2019/11/14/170-years-of-earth-surface-temperature-data-show-no-evidence-of-significant-warming/>

Changing Weather

No, Hurricanes Are Not Bigger, Stronger and More Dangerous

By Roger Pielke, Forbes, Nov 15, 2019

<https://www.forbes.com/sites/rogerpielke/2019/11/15/no-hurricanes-are-not-bigger-stronger-and-more-dangerous/#7e254f764d9e>

Link to highly questionable paper: Normalized US hurricane damage estimates using area of total destruction, 1900–2018

By Aslak Grinsted, PNAS, Nov 11, 2019

<https://www.pnas.org/content/early/2019/11/05/1912277116>

Everything You Hear About Billion-Dollar Disasters Is Wrong

By Roger Pielke, Forbes, Nov 7, 2019

<https://www.forbes.com/sites/rogerpielke/2019/11/07/everything-you-hear-about-billion-dollar-disasters-is-wrong/#2d6e3b202fea>

“NOAA is an important agency – among its many functions it provides the weather data and forecasts that help keep all Americans safe. NOAA is too important an institution to get caught up in dodgy science related to climate change.”

Combining satellites, radar provides path for better forecasts

By Staff Writers, University Park PA (SPX), Nov 12, 2019

http://www.spacedaily.com/reports/Combining_satellites_radar_provides_path_for_better_forecasts_999.html

Link to paper: Simultaneous Assimilation of Radar and All-Sky Satellite Infrared Radiance Observations for Convection-Allowing Ensemble Analysis and Prediction of Severe Thunderstorms

By Yunji Zhang, David J. Stensrud, and Fuqing Zhang, Monthly Weather Review, Aug 5, 2019
<https://journals.ametsoc.org/doi/10.1175/MWR-D-19-0163.1>

Ruthless cold breaks dozens of long-lasting records in major cities throughout the East

By Mark Puleo, Accuweather, Nov 13, 2019

<https://www.accuweather.com/en/weather-news/ruthless-cold-breaks-dozens-of-long-lasting-records-in-major-cities-throughout-the-east/627067>

Unprecedented Arctic blast to break hundreds of records across the US

An early-season Arctic blast is poised to bring record cold temperatures as far south as the Gulf of Mexico.

By Grant Gilmore, WTSP.com Chanel 10, Tampa, FL, Nov 12, 2019 [H/t Ken Schlichte]

<https://www.wtsp.com/article/weather/arctic-blast-record-breaking/67-a4411b09-680e-4620-a937-a4c2b2f83e2f>

Is Extreme Daily Rainfall Getting Worse In England?

By Paul Homewood, Not a Lot of People Know That, Nov 10, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/11/10/is-extreme-daily-rainfall-getting-worse-in-england/>

In 1946 — 800 miles of fires “stretched from Brisbane to Townsville” [Australia]

By Jo Nova, Her Blog, Nov 13, 2019

<http://joannenova.com.au/2019/11/in-1946-800-miles-of-fires-stretched-from-brisbane-to-townsville/>

This Year’s Dry Europe Summer Nothing New, Happened More Often During Prosperous Medieval Period

Dry summers as a doomsday scenario – are they really something new?

By Axel Robert Göhring, The European Institute for Climate and Energy (EIKE), (Text translated/edited by P. Gosselin), No Tricks Zone, Nov 12, 2019

<https://notrickszone.com/2019/11/12/this-years-dry-summer-europe-nothing-new-happened-more-often-during-prosperous-medieval-period/>

[SEPP Comment: After the Medieval Period, in cold, wet summers crops did not ripen, resulting in famine.]

This is the “old normal” — these fires are mid to late season fires for NSW

By Jo Nova, Her Blog, Nov 13, 2019

<http://joannenova.com.au/2019/11/this-is-the-old-normal-these-fires-are-mid-to-late-season-fires-for-nsw/>

Changing Seas

Venetians rage at flood-defence delay: 'They don't think of us'

By Angela Giuffrida, The Guardian, Nov 14, 2019

<https://www.theguardian.com/world/2019/nov/14/venetians-rage-at-flood-defence-delay-evidently-they-dont-think-of-us>

Link to GWPF showing flooding of Piazza San Marco in November 2019 is similar to flooding of Piazza San Marco in December 9, 1825

<https://www.thegwgf.com/venetians-rage-at-flood-defence-delay/>

Changing Cryosphere – Land / Sea Ice

Western Hudson Bay freeze-up earlier than average for 1980s for the third year in a row

By Susan Crockford, Polar Bear Science, Nov 11, 2019

<https://polarbearscience.com/2019/11/11/western-hudson-bay-freeze-up-earlier-than-average-for-1980s-for-the-third-year-in-a-row/>

Climate Crisis Is Causing a Deadly Virus to Spread Amongst Marine Mammals

By Jordan Davidson, EcoWatch, Nov 8, 2019

<https://www.ecowatch.com/climate-crisis-sea-ice-disease-2641265178.html>

Link to paper: Viral emergence in marine mammals in the North Pacific may be linked to Arctic sea ice reduction

By E. VanWormer, Nature, Science, Nov 7, 2019

<https://www.nature.com/articles/s41598-019-51699-4>

[SEPP Comment: According to the abstract, the study period was 2001-2016. The Arctic ice has never been reduced before then?]

Claim: Climate Change is Causing Arctic Blasts to Become Less Severe

By Eric Worrall, WUWT, Nov 15, 2019

<https://wattsupwiththat.com/2019/11/15/claim-climate-change-causing-arctic-blasts-to-become-less-severe/>

No, Global Warming is Not Causing More Frequent Arctic Outbreaks

By Chris Martz, Weather, Nov 10, 2019

<https://chrismartzweather.com/2019/11/10/no-global-warming-is-not-causing-more-frequent-arctic-outbreaks/>

Drizzle at sub-zero temps recorded in Antarctica

NSF-funded scientists study supercooled drizzle, with implications for climate model predictions
By Staff, NSF, Nov 13, 2019

https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=299562&WT.mc_id=USNSF_1

[SEPP Comment: Climate modelers ignore observations that contradict their models. Why would they include these observations?]

Changing Earth

Can Climate Affect Earthquakes, Or Are the Connections Shaky?

By Alan Buis, NASA's Jet Propulsion Laboratory, Oct 29, 2019 [H/t WUWT]

<https://climate.nasa.gov/news/2926/can-climate-affect-earthquakes-or-are-the-connections-shaky/>

Lowering Standards

2017 NOAA Study Recommended Fewer Controlled Burns, Because Climate Change

By Eric Worrall, WUWT, Nov 10, 2019

<https://wattsupwiththat.com/2019/11/10/2017-stanford-study-recommended-fewer-controlled-burns-because-climate-change/>

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

1 Meter of Sea Level Rise Now “Inevitable”... Eventually

By David Middleton, WUWT, Nov 12, 2019

<https://wattsupwiththat.com/2019/11/12/1-meter-of-sea-level-rise-now-inevitable-eventually/>

Ozone hole set to close [earlier than usual]

By Staff Writers, Paris (ESA), Nov 12, 2019

http://www.spacedaily.com/reports/Ozone_hole_set_to_close_999.html

Link to report: Scientific Assessment of Ozone Depletion: 2018

By Staff Writers: World Meteorological Organization, NOAA, NASA, European Commission, 2019

<https://ozone.unep.org/sites/default/files/2019-05/SAP-2018-Assessment-report.pdf>

What’s Driving Antarctica's Meltdown?

Antarctica's ice loss is on the rise. Along with warmer water eating away at ice shelves from below, atmospheric rivers are causing trouble from above.

By Bob Berwyn, Inside Climate News, Nov 12, 2019

<https://insideclimatenews.org/news/12112019/antarctica-ice-shelf-melt-atmospheric-river-thwaites-glacier-ocean-sea-level-rise>

[SEPP Comment: Fails to discuss accumulation of snow and ice in the East Antarctic, the bulk of the continent.]

Communicating Better to the Public – Make things up.

Naomi “no evidence” Oreskes – careful for what you wish for, Pt 2

By Russell Cook, GelbspanFiles.com, Nov 7, 2019

<http://gelbspanfiles.com/?p=9285>

Global pollution is rising again and won't peak before 2040

By Staff, Bloomberg, Via The Straits Times, Nov 13, 2019

<https://www.straitstimes.com/world/europe/global-pollution-is-rising-again-and-wont-peak-before-2040>

The Earth could be entering a planetary fire age

By Stephen Pyne, Quartz, Nov 10, 2019 [H/t Bob Zybach]

https://qz.com/1742990/climate-change-is-a-factor-in-wildfire-but-not-the-only-one/?utm_source=YPL&yptr=yahoo

“Welcome to the Pyrocene”

Communicating Better to the Public – Use Propaganda

Scarier than fiction: climate worry driving 'cli-fi' boom

By Riwan Marhic, Paris (AFP), Nov 15, 2019

http://www.spacedaily.com/reports/Scarier_than_fiction_climate_worry_driving_cli-fi_boom_999.html

Communicating Better to the Public – Use Children for Propaganda

Another Plastic Boat: Climate Messiah Greta Thunberg Hitches a Lift to COP25

By Eric Worrall, WUWT, Nov 13, 2019

<https://wattsupwiththat.com/2019/11/13/another-plastic-boat-climate-messiah-greta-thunberg-hitches-a-lift-to-cop25/>

Communicating Better to the Public – Protest

All hail the new CofE: The Church of Extinction

By Andy Shaw, The Spectator, Nov 13, 2019

<https://life.spectator.co.uk/articles/all-hail-the-new-cofe-the-church-of-extinction/>

Who are the 11,000 Scientists?

By Donn Dears, Power For USA, Nov 12, 2019

<https://ddears.com/2019/11/12/who-are-the-11000-scientists/>

Doomsday Climate Petition Blocked Over Mickey Mouse Signatories

By Graham Lloyd, The Australian, Via GWPF, Nov 7, 2019

<https://www.thegwpf.com/scientists-climate-petition-blocked-over-mickey-mouse-signatories/>

Scientists and Their Petitions

Most of the Alliance of World Scientists 23,000 members DID NOT sign the climate emergency petition. But professional journalists didn't notice.

By Donna Laframboise, Big Picture News, Nov 11, 2019

<https://nofrackingconsensus.com/2019/11/11/scientists-and-their-petitions/>

Expanding the Orthodoxy

If the US military is facing up to the climate crisis, shouldn't we all?

Pentagon officials view climate breakdown as an existential threat to human society – and are already taking action

By Michael Klare, The Guardian, Nov 12, 2019

<https://www.theguardian.com/commentisfree/2019/nov/12/us-military-pentagon-climate-crisis-breakdown->

[SEPP Comment: Many consider the military an existential threat to human society!]

Opinion: We Must Confront ‘Climate Change’ with Reason Rather Than Emotion

By Joe Nalven, Times of San Diego, Nov 8, 2019

<https://timesofsandiego.com/opinion/2019/11/08/we-must-confront-climate-change-with-reason-rather-than-emotion/>

The Federal Reserve Acknowledged the Reality of Climate Change. That's Actually a Big Deal.

“They stopped pretending that this is someone else's problem.”

By Will Peischel, Mother Jones, Nov 9, 2019

<https://www.motherjones.com/environment/2019/11/the-federal-reserve-acknowledged-the-reality-of-climate-change-thats-actually-a-big-deal/>

Questioning European Green

GWPF TV: Europe's Green Fall

By Staff, GWPF, Nov 12, 2019

<https://www.thegwpf.com/gwpf-tv-europes-green-fall/>

The Environment Agency Shouldn't Use Climate Change As An Excuse For Its Own Incompetence

By Ross Clark, The Daily Telegraph, UK, Via GWPF, Nov 12, 2019

<https://www.thegwpf.com/the-environment-agency-shouldnt-use-climate-change-as-an-excuse-for-its-own-incompetence/>

The road to a carbon-lite future (watch out for unicorns)

By Andrew Montford, The Conservative Woman, Nov 13, 2019

<https://www.conservativewoman.co.uk/the-road-to-a-carbon-lite-future-watch-out-for-unicorns/>

EU Rules Expose Britain's Flood Defences

By Paul Homewood, Not a Lot of People Know That, Nov 14, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/11/14/eu-rules-expose-britains-flood-defences/>

Whaley Bridge Cover Up

By Paul Homewood, Not a Lot of People Know That, Nov 15, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/11/11/whaley-bridge-cover-up/>

“As for Sir James ‘It’s the climate emergency stupid’ Bevan , head of the Environment Agency, perhaps he should be spending more time making sure our dams and other infrastructure are safe and properly maintained, rather than waste his time making speeches about the climate.”

James Bevan's Speech Not Supported By Scientific Evidence—Environment Agency

By Paul Homewood, Not a Lot of People Know That, Nov 10, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/11/10/james-bevans-speech-not-supported-by-scientific-evidence-environment-agency/>

“You may recall a speech a few months ago by Sir James Bevan, head of the Environment Agency:”

Delingpole: Cambridge Prof – UK's Green Energy Targets Require 'Herds of Unicorns'

By Paul Homewood, Not a Lot of People Know That, Nov 13, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/11/13/delingpole-cambridge-prof-uks-green-energy-targets-require-herds-of-unicorns/>

Questioning Green Elsewhere

The Surprising Energy Math Behind U.S. Climate Policy Failure

By Roger Pielke, Forbes, Nov 10, 2019

<https://www.forbes.com/sites/rogerpielke/2019/11/10/the-surprising-energy-math-behind-us-climate-policy-failure/#d0f9e534b727>

“The U.S. has not yet begun its journey towards net-zero carbon dioxide, whether by 2050 or any other year. None of the proposals put forward by Democratic candidates for president are plausible. This battle has yet to be joined.”

'Deep Electrification' Means More Natural Gas

By Jude Clemente, Forbes, Nov 12, 2019

<https://www.forbes.com/sites/judeclemente/2019/11/12/deep-electrification-means-more-natural-gas/#73f844f9462e>

Opportunists and the backlash: Tree changers meet a megafire, and Greens meet some rage

By Jo Nova, Her Blog, Nov 12, 2019

<http://joannova.com.au/2019/11/opportunists-and-the-backlash-are-megafires-due-to-megatons-of-fuel-or-not-enough-carbon-taxes/>

No apologies: Africans say their need for oil cash outweighs climate concerns

By Libby George, Shadia Nasralla, Reuters, Nov 8, 2019

<https://www.reuters.com/article/us-africa-oil-climate/no-apologies-africans-say-their-need-for-oil-cash-outweighs-climate-concerns-idUSKBN1XI16X>

Funding Issues

African Development Bank decides not to fund Kenya coal project

By Alexander Winning, Reuters, Nov 13, 2019

<https://www.reuters.com/article/us-africa-investment-coal/african-development-bank-decides-not-to-fund-kenya-coal-project-idUSKBN1XN1A8>

EPA and other Regulators on the March

Trump's EPA Factchecks The NYT, Says Journos Botched Report On Agency's Move To Nix Secret Science

By Chris White, Daily Caller, Nov 12, 2019 [H/t WUWT]

<https://dailycaller.com/2019/11/12/epa-science-regulations-new-york-times/>

Energy Issues – Non-US

OPEC sees its market share shrinking for years as shale triumphs

By Grant Smith, Bloomberg, My San Antonio, Nov 5, 2019 [H/t GWPF]

<https://www.mysanantonio.com/business/article/OPEC-sees-its-market-share-shrinking-for-years-as-14810693.php>

UK Capacity Market “Back In Play”

By Paul Homewood, Not a Lot of People Know That, Nov 15, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/11/11/uk-capacity-market-back-in-play/>

Energy Issues -- US

A week without wind shows the value of hydro power and the Snake River dams | Guest Opinion

By Todd Myers, Tri-City Herald, Nov 11, 2019 [H/t Toshio Fujita]

<https://www.tri-cityherald.com/opinion/opn-columns-blogs/article237093649.html>

How the DOE Plans to Modernize the Grid in the Near Term

By Sonal Patel, Power Mag, Nov 14, 2019

<https://www.powermag.com/how-the-doe-plans-to-modernize-the-grid-in-the-near-term/>

Full list: 2019 Grid Modernization Lab Call Awards

By Staff, DOE, Accessed Nov 14, 2019

<https://www.energy.gov/2019-grid-modernization-lab-call-awards>

Includes “An experimental evaluation of physical security of large and localized power plants against electromagnetic threats and attacks.”

No more fire in the kitchen: Cities are banning natural gas in homes to save the planet

By Elizabeth Weise, USA Today, Nov 10, 2019

<https://www.usatoday.com/story/news/2019/11/10/climate-change-solutions-more-cities-banning-natural-gas-homes/4008346002/>

[SEPP Comment: In the 1970s new communities were banned from permitting natural gas because the nation was about to “run-out.”]

2.2-GW Coal-Fired Behemoth Could Permanently Close This Week

By Sonal Patel, Power Mag, Nov 12, 2019

<https://www.powermag.com/2-2-gw-coal-fired-behemoth-could-permanently-close-this-week/>

“It supplies more than 90% of the power needed to pump water through the Central Arizona Project (CAP), which is both the single largest end-user of power and the single source of renewable water supplies in Arizona.”

The Fossil Fuel Dilemma

Guest post by David L. Debertin, WUWT, Nov 9, 2019

<https://wattsupwiththat.com/2019/11/09/the-fossil-fuel-dilemma/>

Oil and Natural Gas – the Future or the Past?

IEA Sees U.S. Shale Squeezing OPEC Influence

U.S. shale-oil production will reshape global energy markets in the years to come, the International Energy Agency said

By David Hodari, WSJ, Nov 12, 2019

https://www.wsj.com/articles/iea-sees-u-s-shale-squeezing-opec-influence-11573603201?mod=lead_feature_below_a_pos1

The Brave New World of Ample Oil

Guest post by Tilak Doshi, WUWT, Nov 10, 2019

https://wattsupwiththat.com/2019/11/10/_trashed-11/

The EIA Is Grossly Overestimating U.S. Shale

By Nick Cunningham, Oil Pirce.com Nov 12, 2019

<https://oilprice.com/Energy/Crude-Oil/The-EIA-Is-Grossly-Overestimating-US-Shale.html>

Return of King Coal?

Is coal power winning the US-China trade war?

By Wu Yixiu, China Dialogue, Nov 12, 2019

<https://www.chinadialogue.net/article/show/single/en/11642-Is-coal-power-winning-the-US-China-trade-war->

Nuclear Energy and Fears

One Nuclear Power Project Delayed; Three Leap Forward

By Aaron Larson, Power Mag, Nov 14, 2019

<https://www.powermag.com/one-nuclear-power-project-delayed-three-leap-forward/>

Alternative, Green (“Clean”) Solar and Wind

Germany Pulls Plug On Wind Energy... Wind Industry In “Severe Crisis”... Wind Giant Enercon To Lay Off 3000

By P Gosselin, No Tricks Zone, Nov 10, 2019

<https://notrickszone.com/2019/11/10/germany-pulls-plug-on-wind-energy-wind-industry-in-severe-crisis-wind-giant-enercon-to-lay-off-3000/>

IEA World Energy Outlook: Solar Capacity Surges Past Coal and Gas by 2040

By Sonal Patel, Power Mag, Nov 14, 2019

<https://www.powermag.com/iea-world-energy-outlook-solar-capacity-surges-past-coal-and-gas-by-2040/>

Energy & Environmental Newsletter: November 11, 2019

By John Droz, Jr. Master Resource, Nov 11, 2019

<https://www.masterresource.org/uncategorized/energy-environmental-newsletter-11-11-2019/>

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

Using mountains for long-term energy storage

By Staff Writers, Vienna, Austria (SPX), Nov 12, 2019

http://www.energy-daily.com/reports/Using_mountains_for_long_term_energy_storage_999.html

Link to paper: Mountain Gravity Energy Storage: A new solution for closing the gap between existing short- and long-term storage technologies

By Julian David Hunt, et al., Energy, Nov 6, 2019

<https://www.sciencedirect.com/science/article/abs/pii/S0360544219321140?via%3Dihub>

Alternative, Green (“Clean”) Vehicles

Battery-Powered Vehicle Status

By Donn Dears, Power For USA, Nov 15, 2019

<https://ddears.com/2019/11/15/battery-powered-vehicle-status-2/>

Soaring Global Demand For SUVs Is Eliminating Electric Cars Benefits

By Staff, The Times, Via GWPF, Nov 14, 2019

<https://www.thegwpf.com/soaring-global-demand-for-suvs-is-eliminating-electric-cars-benefits/>

Electric SUV to lead China's charge into European market

ByCarolynn Look, Blomberg, Automotive News Europe, Nov 9, 2019 [H/t GWPF]

<https://europe.autonews.com/automakers/electric-suv-lead-chinas-charge-european-market>

Predictions are Hard, Especially About the Future

Gasoline vs Electric Vehicle Future Fuel Costs

By Les Johnson, WUWT, Nov 10, 2019

<https://wattsupwiththat.com/2019/11/10/predictions-are-hard-especially-about-the-future/>

Petrol vehicles top list for next car purchase

By Mark Salisbury, Fleet Point, Nov 7, 2019 [H/t GWPF]

<https://www.fleetpoint.org/carandvannews/car/car-purchase/petrol-vehicles-top-list-for-next-car-purchase/>

California Dreaming

Pathway 2045 (6)

By Rud Istvan, WUWT, Nov 14, 2019

<https://wattsupwiththat.com/2019/11/14/pathway-2045-6/>

[SEPP Comment: Concluding of comments in six parts on California's PG&E's dreams.]

CalEPA studying ways to sunset the California economy

By Ronald Stein, Fox & Hounds, Nov 12, 2019 [H/t WUWT]

<http://www.foxandhoundsdaily.com/2019/11/calepa-studying-ways-to-sunset-the-california-economy/>

Ready Fossil Fuel Solutions for California Wildfires and Blackouts (Part II)

By Wayne Lusvardi, Master Resource, Nov 14, 2019

<https://www.masterresource.org/california-wildfires-psps/spot-fossil-fuel-solutions-for-ca-wildfires-blackouts-part-ii/>

As California Burns; Valuable Lessons from Hurricane Katrina

By Caitlin Cain, Real Clear Energy, Nov 14, 2019

https://www.realclearenergy.org/articles/2019/11/14/as_california_burns_valuable_lessons_from_hurricane_katrina_110491.html

[SEPP Comment: Does not address the roles of environmental pressure groups in California and in Louisiana.]

Health, Energy, and Climate

Academic Bias Against Industry Is Toxic Hypocrisy

By Alex Berezow, ACSH, Nov 5, 2019

<https://www.acsh.org/news/2019/11/05/academic-bias-against-industry-toxic-hypocrisy-14381>

Other Scientific News

Top cosmologist's lonely battle against 'Big Bang' theory

By Ivan Couronne and Issam Ahmed, Phys.org, Nov 14, 2019

<https://phys.org/news/2019-11-cosmologist-lonely-big-theory.html>

Warmer temperatures to boost CO2 emissions from bacteria

By Brooks Hays, Washington (UPI), Nov 12, 2019

http://www.spacedaily.com/reports/Warmer_temperatures_to_boost_CO2_emissions_from_bacteria_999.html

BELOW THE BOTTOM LINE:

Are they willing to go to these lengths?

By James Visentine, ICECAP, Nov 10, 2019

http://icecap.us/index.php/go/icing-the-hype/are_they_willing_to_go_to_these_lengths/

[SEPP Comment: Demanding children turn-off cell phones and electronic entertainment devices alone may be too hard for them.]

CO2 Is So Fickle

By Tony Heller, Real Climate Science, Nov 14, 2019

<https://realclimatescience.com/2019/11/co2-is-so-fickle/>

Claim: Making Fun of Climate Doomsday Helps Reach More People

By Eric Worrall, WUWT, Nov 11, 2019

<https://wattsupwiththat.com/2019/11/11/claim-making-fun-of-climate-doomsday-helps-reach-more-people/>

Experts – Venice To Sink By 1990

By Tony Heller, Real Climate Science, Nov 15, 2019

<https://realclimatescience.com/2019/11/experts-venice-to-sink-by-1990/>

Plants and fungi together could slow climate change

By Charles the moderator, WUWT, Nov 10, 2019

<https://wattsupwiththat.com/2019/11/10/plants-and-fungi-together-could-slow-climate-change/>

ARTICLES

‘Golden Rice’ Review: Against the Grain

An estimated one million people—mostly children—die annually from vitamin-A deficiency. Golden rice could reverse that.

By Hugo Restall, WSJ, Nov 13, 2019

<https://www.wsj.com/articles/golden-rice-review-against-the-grain-11573687556>

TWTW Summary: The reviewer of Golden Rice: “The Imperiled Birth of a GMO Superfood” writes:

“Why has it taken more than two decades to develop ‘golden rice,’ the genetically modified crop that promises to save millions of lives? The many delays have been costly. Every year an estimated one million people, mostly children, die, and another half a million more lose their eyesight, from vitamin-A deficiency. Golden rice—with its yellow grains rich in beta carotene, which the human body turns into vitamin A—could virtually eliminate this problem in countries where rice is the staple food.

“After scientists developed the first golden-rice prototype in 1999, it was predicted that the coalition of governments, universities and nonprofit foundations leading the effort would have seeds ready for farmers within three years. Twenty years later, Bangladesh is poised to be the first developing country where farmers can plant golden rice and sell it for human consumption. (The U.S., Canada, Australia and New Zealand have all approved the grain, but vitamin-A deficiency isn’t an issue in these countries.)

“Greenpeace and other opponents of genetically modified foods say the lengthy delays and false starts prove the project was ill-conceived from the beginning. Defenders of golden rice, meanwhile, hold environmentalists responsible for impeding the project. In 2013, for instance, vandals in the Philippines destroyed a site where an important test crop was ready to be harvested. Given the number of lives at stake, some have accused the activists of mass murder and sought to bring them to trial for crimes against humanity.

“As Ed Regis writes in ‘Golden Rice: The Imperiled Birth of a GMO Superfood,’ the truth is more nuanced. Other genetically modified crops, including those developed by companies with deep pockets, have taken a similarly long and expensive path to the dining table. And green activists didn’t slow down golden rice by much, at least not directly. The real villain, according to Mr. Regis, is the overly restrictive regulation of all genetically modified organisms world-wide, which delayed the progress of golden rice by more than 10 years.

“Most countries’ treatment of genetically modified organisms is based on the ‘precautionary principle,’ which requires that all hypothetical risks be addressed before development can proceed. The level of risk and the potential benefits are not weighed in the decision. Such an approach would stymie innovation in any field, but its effect on the breeding of new organisms is

particularly harmful. The insertion of individual, well-understood genes into an existing crop is safer than traditional methods of genetic manipulation such as cross-breeding. The definition of what constitutes genetic modification, moreover, is arbitrary and many of the restrictions imposed on it are perverse. Take, for instance, the Rio Red grapefruit, which, as Mr. Regis tells us, is ‘a genetically modified mutant fruit plant five times over; ‘including genetic manipulation via ‘repeated doses of thermal neutron radiation. ‘Yet the Rio Red ‘is nowhere regarded as a GMO, nor is it labeled, regulated, or sold as such. ‘

“Golden rice also suffered from scientific setbacks. In 2009 the Golden Rice Humanitarian Board, which is responsible for ‘the global development, introduction and free distribution of Golden Rice, ‘selected a prototype for testing and development. When that effort didn’t pan out, the process had to be restarted, setting the project back another three years. But that delay could have been avoided or minimized: One of the many rules regulating the development of golden rice stipulated that, once scientists chose a particular prototype to pursue, all previous research materials had to be destroyed ‘to minimize the risk that seeds of those strains previously experimented with but subsequently rejected for further development work would somehow make their way onto farmlands and contaminate crops. ‘This forced the team to start from scratch with each new prototype. The pursuit of a single prototype at a time, instead of several simultaneously, was itself also driven by regulatory restrictions. Assuming golden rice is a success—and there is every indication that it will be—its backstory will be a powerful argument in favor of scrapping the precautionary principle.

“Advocates of genetically modified food don’t want all the safeguards removed. They are quick to acknowledge that risks do exist. But these are the same risks inherent in the development of any new organism, genetically modified or otherwise. The goal should be to create rules based on science and cost-benefit analysis rather than irrational fear.

“It’s probably too optimistic to hope that environmentalists will reconsider their hatred of genetically modified foods. Mr. Regis notes that in 2001, after Greenpeace International’s genetic-engineering campaign coordinator, Benedikt Haerlin, admitted that golden rice ‘posed a moral dilemma ‘for his organization given the claims that the grain could save lives, he quickly recanted and closed ranks against the project. This is ironic considering that the environment also benefits from genetically modified crops, which can reduce the area of land under cultivation as well as the use of fertilizer and pesticide.

After discussing other questionable objections, the author concludes.

“Golden rice is the world’s first genetically modified crop intended to benefit the consumer rather than the farmer. The biggest obstacle to putting such environmentally friendly, affordable and nutritious food on the world’s table is no longer scientific but political. As golden rice becomes available, the next step should be to educate legislators and the public about its benefits and the reasons that millions of children had to die waiting for it. Mr. Regis’s book, which explains the complex science of golden rice in a manner that lay readers can understand, will be an important contribution to that effort.”