The Week That Was: 2019-03-16 (March 16, 2019) Brought to You by SEPP (<u>www.SEPP.org</u>) The Science and Environmental Policy Project

Quote of the Week: *Why 100 authors? If I were wrong, then one would have been enough!"* – Albert Einstein, in response to a book "100 Authors against Einstein" [H/t Roy Spencer]

Number of the Week: 26%

THIS WEEK:

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

Changing Seas: Sea level specialists Nils-Axel Mörner, Thomas Wysmuller, and Albert Parker posted comments on ResearchGate stating TWTW's comments on sea level rise were too superficial to be useful. Fortunately, Tallbloke posted the section of TWTW and the comments, so they can be easily viewed by all. The objective of TWTW is to be understandable by the competent reader, not to appeal to specialists or to be a scientific journal. Above all, it is not the last word in anything.

Of particular concern have been the claims of multi-foot and multi-meter increases in sea levels endangering coastal cities of the US. These claims have been made by employees of NOAA and by lead authors of the latest full Assessment Report (AR-5, 2014) of the UN Intergovernmental Panel on Climate Change (IPCC). The recent effort by the cities of Oakland and San Francisco to sue ExxonMobil illustrates how these highly questionable claims are being used in litigation in hopes of collecting huge legal awards that are unjustified.

Further, for cities on the coastal plain of the Atlantic, or on the Gulf of Mexico, land subsidence is a major problem. False claims of sea level rise confuse the problem of land sinking due to groundwater extraction, and hinder or prevent a reasonable solution, such as desalination of ocean or brackish water. For these reasons, TWTW considers the cited August 8, 2018 report by NOAA Tides and Currents Section to be a welcome change. The estimate of average global sea level rise rate of about 7 inches per century is a welcome change from AR-5 and claims by NOAA employees. It is not the "final word" but it is a significant improvement. For more detailed explanations of sea level change, see the comments by the three authors with extensive note under Changing Seas.

William Happer, Climate Realist: SEPP board member Howard Hayden edits a monthly newsletter, *The Energy Advocate*, promoting energy and technology. This month he addressed the efforts of the climate establishment to discredit William Happer, who thus far is the only suggested appointee to a special President's Commission to provide an independent review of the claimed threat climate change poses to the security of the US. Sections of the newsletter merit quoting:

"The second paragraph of the Wikipedia hit piece on Happer reads: 'Happer rejects the scientific consensus on climate change. He has no formal training in climate science.' "Let us begin this discussion by referring to one of the cartoons in Al Gore's documendacity An Inconvenient Truth. The picture shows sunlight pouring in to the surface of the earth, with infrared leaving the surface, some of it blocked by the atmosphere (my yellow arrow). Of course, the horrid blocking molecules involved are CO2 molecules.

"The American Physical Society (APS) has sixteen divisions, such as astrophysics, nuclear physics, chemical physics, fluid dynamics, and laser science. Happer's field of expertise is Atomic, Molecular, and Optical Physics, AMO, for which the APS Division of Atomic, Molecular and Optical Physics (DAMOP) is the most appropriate. Its members deal with experimental and theoretical aspects of atomic and molecular energy levels, "forbidden transitions," collisional dynamics, excited-state populations, interactions with electro–magnetic radiation (a.k.a., spectroscopy), and so forth.

"Let us be perfectly clear about this. The only aspect of science that links CO2 to putative global warming (a.k.a., climate change) is AMO: Atomic, Molecular and Optical physics. Now, we quote one of the apolitical paragraphs in the Wikipedia article:

'William Happer (born July 27, 1939) is an American physicist who has specialized in the study of atomic physics, optics and spectroscopy. He is the Cyrus Fogg Brackett Professor of Physics, Emeritus, at Princeton University and a long-term member of the JASON advisory group where he pioneered the development of adaptive optics.'

"In other words, what passes for 'no formal training in climate science' is Happer's long career in AMO, the field that is not part of any traditional course in climatology, and the only one that has any relationship to the greenhouse effect.

Interesting Aside: Adaptive Optics

"The art and science of astrophotography have long been beset by atmospheric phenomena (moving air, varying density, varying temperature) resulting in images wandering a bit on the photographic plate during long exposures. In the old days, a photographer would sit in a seat for hours making minor adjustments to keep a bright star centered on some cross-hairs in order to get a fairly sharp image.

"The first step in automation is to insert a small tilt mirror into the light path of the telescope so that the adjustment can be done quickly. A major problem is that there aren't enough bright stars to use for all parts of the sky.

"Beyond that is the field of adaptive optics. Happer pioneered the field with the notion that a properly tuned yellow laser could excite sodium atoms in the mesosphere. The sodium would reradiate, and appear to the telescope as a star, whose light has to travel through exactly the same atmosphere as any star's would. That returning yellow light would serve as a "guide star." Therefore, all parts of the sky can now have their own guide star.

"For a large telescope, the light reaching one part of the main mirror has traveled through somewhat different atmospheric disturbances than another part of the mirror. What ought to be a plane wave that hits the mirror is more like the shape of a potato chip. Some exotic techniques involving a guide star, an array of small lenses, small detectors, and a deformable mirror turn the reflected "potato chip" back into a plane wave, greatly enhancing the quality of the image.

"Climatology

"Al Gore, Michael Bloomberg, Scott Waldman, Juliet Eilperin, Josh Dawsey, Brady Dennis, Carol Davenport, Jennifer A. Dlouhy, Ari Natter, Carla Herreria, Bill Nye, [and] Aaron Rupar, the know-nothing who wrote the Wikipedia hit piece, and the rest of enforcers of the climate consensus complain that Happer is not a climate scientist. They can't even figure out what atomic and molecular physics might have to with the atmosphere. Enough said."

Perhaps the real problem is that the climate establishment believes that nothing regarding climate can exist, unless it appears in climate models. *The Energy Advocate* is not linked below but see links under Challenging the Orthodoxy, Change in US Administrations and https://www.albany.edu/faculty/rgk/atm101/sodium.htm

The Greenhouse Effect – **Emissivity:** No doubt many physicists lose the audience when they speak of Blackbody radiation. Yet all objects above absolute zero, (zero degrees Kelvin, 0°K, minus 273 degrees C, or minus 459.7 degrees F) emit electromagnetic energy. A web site at Humboldt State University has a solid discussion on how the blackbody curve (intensity versus wavelength) can vary from one type of emitter to another.

"In reality, objects in the real world are not perfect blackbodies. Not all of the incident energy upon them is absorbed, therefore they are not perfect emitters of radiation. The emissivity (ε) of a material is the relative ability of its surface to emit heat by radiation. Emissivity is defined as the ratio of the energy radiated from an object's surface to the energy radiated from a blackbody at the same temperature."

The higher the emissivity, the more readily the body, or substance emits electromagnetic radiation. The higher the temperature of a given substance, the more total energy is emitted from the surface, proportional to the temperature in K raised to the fourth power. So, the emission of electromagnetic energy increases dramatically with increasing temperature.

The web site at Humboldt State gives table of the emissivity of some common materials at a fixed temperature. Polished aluminum emits a tiny fraction of the energy emitted by anodized aluminum. The same with polished copper as compared with oxidized copper. Ice emits energy more readily than water or snow.

The web site has an experiment designed in the early 1800s by John Leslie demonstrating that different materials or different colors of the same material emit energy at different levels even though they are at the same temperature – Leslie's Cube. For example, the white surface on the cube absorbs visible light very poorly, but emits very efficiently in the infrared. See links under Seeking a Common Ground

The Greenhouse Effect – Molecular Motion: In explaining the greenhouse effect of certain atmospheric molecules, called greenhouse gases, one needs to consider what happens to these gases when infrared radiation, emitted by the earth, in the form of photons hits one of these molecules. The dominant greenhouse gas is water vapor (H2O) followed by carbon dioxide (CO2). At the surface, or near surface, these molecules are in equilibrium with local temperature.

When a photon with the proper wavelength of hits CO2 it is absorbed by the molecule and causes the molecule to vibrate and rotate.

There are many more nitrogen (N2) and oxygen (O2) molecules in the atmosphere than CO2. If the excited CO2 molecule hits nitrogen or oxygen it will usually lose its energy in that collision. If not, the CO2 may emit (radiate) a photon, which can go in any direction. Near the surface, the atmosphere is dense, so the photon will soon hit another CO2 molecule, and the process continues. In the atmosphere, particularly the lower atmosphere, molecules are colliding constantly, photons being consistently emitted and absorbed. The process continues with increasing elevation, until the atmosphere thins to the point that upward-directed photons escape into space. Photons escaping into space cool the planet.

Escaping photons from CO2 molecules originate mostly in the stratosphere; at lower altitudes, a CO2-emitted photon would get re-absorbed by a CO2 molecule further up. H2O, on the other hand, "freezes out" by the top of the troposphere, called the tropopause, and the amount of H2O in the stratosphere above the tropopause is only about 4 ppm (parts per million). CO2 is about 400 ppm throughout the atmosphere. Consequently, if a photon emitted by H2O at say 9 or 11 km is headed upward, it might well escape because there are hardly any more H2O molecules above to re-capture that photon.

There is a characteristic, parameter, called "optical depth" that expresses the distance a photon can travel without being absorbed. Generally, radiation-to-space is discussed as coming from the top of the troposphere. At that altitude, the ambient temperature is about 240 or 250 K, and across the broad region of the infrared, the spectrum of outgoing photons looks fairly close to the idealized black-body. But not exactly; there is a "window" in the atmosphere right around 10 microns where black-body radiation emitted by the surface of the earth can escape to space, because no gas in the atmosphere absorbs in exactly that frequency.

The phenomenon of it getting very cold out in the desert at night is related to that. If there is very low humidity (desert conditions), it will be possible for a considerably higher percentage of the photons emitted by the ground to escape unimpeded; so that "window" around 10 microns gets a whole lot wider. Those camping in the desert at night find that it's much than a more non-desert place of comparable altitude and latitude, because water vapor (clouds, humidity) absorbs infrared photons and gives off some photons in a downward direction

For some reason, the climate establishment does not recognize that understanding the molecular action of greenhouse gases is important to understanding "climate science," and whether CO2-caused warming is a danger to humanity.

Hurricanes: Judith Curry finished her 7-part series on hurricanes, which TWTW will try to summarize next week.

Number of the Week: 26%. On WUWT, Larry Hamlin estimates that the industrialized nations of the EU and US account for about 26% of world-wide human carbon dioxide emissions (2018 projections). Will plants protest?

New Paper: Solar Impact on Climate Greater than Thought

Press Release, GWPF, Mar 11, 2019 https://www.thegwpf.com/new-paper-solar-impact-on-climate-greater-than-thought/ Force Majeure – The Sun's Role In Climate Change By Henrik Svensmark, GWPF, 2019 https://www.thegwpf.org/content/uploads/2019/03/SvensmarkSolar2019.pdf

Censorship

Peter Ridd versus James Cook Uni — Free Speech on trial in two weeks By Jo Nova, Her Blog, Mar 12, 2019 http://joannenova.com.au/2019/03/peter-ridd-free-speech/

Greenpeace lies to save the planet — erasing Patrick Moore again By Jo Nova, Her Blog, Mar 15, 2019 <u>http://joannenova.com.au/2019/03/greenpeace-lies-to-save-the-planet-erasing-patrick-moore-again/</u>

[SEPP Comment: Shades of George Orwell's "1984"?]

Challenging the Orthodoxy -- NIPCC

Climate Change Reconsidered II: Physical Science Idso, Carter, and Singer, Lead Authors/Editors, 2013 <u>https://www.heartland.org/media-library/pdfs/CCR-II/CCR-II-Full.pdf</u> *Summary*: <u>http://www.nipccreport.org/reports/ccr2a/pdf/Summary-for-Policymakers.pdf</u>

Climate Change Reconsidered II: Biological Impacts

Idso, Idso, Carter, and Singer, Lead Authors/Editors, 2014 <u>http://climatechangereconsidered.org/climate-change-reconsidered-ii-biological-impacts/</u> *Summary*: <u>https://www.heartland.org/media-library/pdfs/CCR-IIb/Summary-for-Policymakers.pdf</u>

Climate Change Reconsidered II: Fossil Fuels

By Multiple Authors, Bezdek, Idso, Legates, and Singer eds., Nongovernmental International Panel on Climate Change, Draft Summary for Policymakers, NIPCC, 2019 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, NIPCC, Nov 23, 2015 <u>http://climatechangereconsidered.org/</u> Download with no charge <u>https://www.heartland.org/policy-documents/why-scientists-disagree-about-global-warming</u>

Nature, Not Human Activity, Rules the Climate

S. Fred Singer, Editor, NIPCC, 2008 http://www.sepp.org/publications/nipcc_final.pdf

Challenging the Orthodoxy

The science of climate change is anything but settled By Roy Spencer, Washington Times, Mar 13, 2019 https://www.washingtontimes.com/news/2019/mar/13/what-are-the-opponents-of-donald-trumpsclimate-re/

Climate Crisis? Four Major Metrics That Say Otherwise

By Joe Bastardi, The Patriot Post, Mar 13, 2019

https://patriotpost.us/opinion/61742-climate-crisis-four-major-metrics-that-say-otherwise

"I have long advocated that climatologists take a course on long-range forecasting so they can better understand the inherent errors in trying to predict the weather or climate. In the debate over the fate of the planet, where one side is always pushing hysteria, the weather is plainly not cooperating with the missive."

Dr. Roy Spencer: "The science of climate change is anything but settled"

By David Middleton, WUWT, Mar 16, 2019 https://wattsupwiththat.com/2019/03/16/dr-roy-spencer-the-science-of-climate-change-isanything-but-settled/

How sensitive is the climate to greenhouse gases?

By Anthony Watts, WUWT, Mar14, 2019 <u>https://wattsupwiththat.com/2019/03/14/how-sensitive-is-the-climate-to-greenhouse-gases/</u> Video of speech by Nic Lewis.

Hurricanes & climate change: 21st century projections

By Judith Curry, Climate Etc. Mar 11, 2019 https://judithcurry.com/2019/03/11/hurricanes-climate-change-21st-century-projections/

Defending the Orthodoxy

U.N. calls for 'urgent action at an unprecedented scale'

By Jean Chemnick, E&E News reporter, Greenwire, Mar 13, 2019 <u>https://www.eenews.net/greenwire/2019/03/13/stories/1060127193</u> Global Environment Outlook, SPM By Staff Writers, UN Environment Programme, 2019 <u>https://wedocs.unep.org/bitstream/handle/20.500.11822/27652/GEO6SPM_EN.pdf</u>

Quizzing our Queen of Catastrophism

By Tony Thomas, Quadrant, Mar 7, 2019

https://quadrant.org.au/opinion/doomed-planet/2019/03/quizzing-our-queen-of-catastrophism/ "I paid \$15 to hear Melbourne University climate scientist Dr Joelle Gergis at Writers' Week at the WA University last month, where I learnt she had been appointed one of the 17 IPCC 'lead authors" on the water cycle chapter for the IPCC's 2021 report on the Physical Science." "Fresh from an IPCC confab in Vancouver and not long into her talk, Gergis announced, 'Climate change is with us right now. **Climate change is not a scientific issue, it is a moral and ethical challenge.'** And when wrapping up, she repeated, 'It's important to understand that this is an ethical and moral issue, no longer a scientific issue."" [Boldface added]

Questioning the Orthodoxy

New Study: North America Has Been Cooling Since 1998 – With No Significant Overall Warming Since 1982 By Kenneth Richard, No Tricks Zone, Mar 14, 2019 http://notrickszone.com/2019/03/14/new-study-north-america-has-been-cooling-since-1998-withno-significant-overall-warming-since-1982/

Link to paper: The Key Role of Atlantic Multidecadal Oscillation in Minimum Temperature Over North America During Global Warming Slowdown

By Zewen Gan, et al. Earth and Space Science, Jan 28, 2019

https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2018EA000443

"• In North America, minimum temperature experienced an obvious decline during 1998–2014

"• The decadal components of minimum temperature have a strong relationship (r = 0.71) with the Atlantic Multidecadal Oscillation during 1950–2014

"• Minimum temperature decline is induced by the synchronous phase shift of the Atlantic Multidecadal Oscillation"

Tokyo Warming Due To Urbanization, Leading Japanese Biologist Tells National TV Audience...Almost No Rural Warming

By P Gosselin and Kirye (in Tokyo), No Tricks Zone, Mar 15, 2019 http://notrickszone.com/2019/03/15/tokyo-warming-due-to-urbanization-leading-japanesebiologist-tells-national-tv-audience-almost-no-rural-warming/

New Paper: From Green Revolution to Green Evolution: A Critique of the Political Myth of Averted Famine

By Roger Pielke, Jr. His Blog, Mar 12, 2019

https://rogerpielkejr.com/2019/03/12/new-paper-from-green-revolution-to-green-evolution-acritique-of-the-political-myth-of-averted-famine/

From Green Revolution to Green Evolution: A Critique of the Political Myth of Averted Famine Pielke, Jr., R. and Björn-Ola Linnér, 2019, in press no link yet *[SEPP Comment: No doubt, it will be controversial.]*

After Paris!

U.S., EU energy & emissions now insignificant to global energy & emissions growth Guest essay by Larry Hamlin, WUWT, Mar 16, 2019

https://wattsupwiththat.com/2019/03/16/u-s-eu-energy-emissions-now-insignificant-to-globalenergy-emissions-growth/

"The U.S. and EU represent combined only about 29% of global energy use and 26% of global emissions."

Isle of Wight Refuses To Save The Planet

By Paul Homewood, Not a Lot of People Know That, Mar 13, 2019 <u>https://notalotofpeopleknowthat.wordpress.com/2019/03/13/isle-of-wight-refuses-to-save-the-planet/</u>

Impoverished Island Nation Embraces Coal, Rejects Climate Change Narratives

Guest essay by Eric Worrall, WUWT, Mar 13, 2019 https://wattsupwiththat.com/2019/03/13/impoverished-island-nation-embraces-coal-rejectsclimate-change-development-narratives/

Change in US Administrations

Happer is Right Person to Lead Objective Federal Climate Commission By Sterling Burnett, The Epoch Times, Mar 12, 2019 https://www.theepochtimes.com/dr-happer-is-the-right-person-to-lead-an-objective-federalclimate-commission_2835067.html

Perry's "New Energy Realism" (freedom and fossil fuels are essential, moral, unstoppable) By Robert Bradley Jr. Master Resource, Mar 14, 2019 <u>https://www.masterresource.org/u-s-department-of-energy/perry-new-energy-realism-cera/</u>

Problems in the Orthodoxy

More Climate Change Skeptics in Netherlands; Especially Men and Elderly By Janene Pieters, NL Times, Mar 7, 2019 https://nltimes.nl/2019/03/07/climate-change-skeptics-netherlands-especially-men-elderly

Climate a Main topic in First Election Debate

By Janene Pieters, NL Times, Mar 8, 2019 https://nltimes.nl/2019/03/08/climate-main-topic-first-election-debate "The plans for the draft climate agreement are currently being calculated for feasibility [including shutting down coal-fired power plants] by the Netherlands' planning offices."

Dutch Govt Election Panic Prompts Sudden U-turn on Climate Plan

By Alexander Bakker, De Telegraaf, Mar 14, 2019 https://www.thegwpf.com/dutch-govt-panics-sudden-u-turn-on-climate-plan/

EPP [European People's Party] dismiss higher climate target as 'propaganda

By Peter Teffer, EUObserver, Mar 14, 2019 [H/t GWPF] https://euobserver.com/environment/144410

Seeking a Common Ground

Emissivity, Introduction to Remote Sensing By Staff, Humboldt State University Accessed Mar 15, 2019 [H/t Howard Hayden] <u>http://gsp.humboldt.edu/OLM_2015/Courses/GSP_216_Online/lesson8-1/emissivity.html</u> [SEPP Comment: Demonstrating Leslie's Cube]

The Climate Debate Twenty Years Later (recalling Houston's 1999 conference) By Robert Bradley Jr., Master Resource, Mar 7, 2019 <u>https://www.masterresource.org/debate-issues/houston-1999-climate-debate/</u> *[SEPP Comment: "In ten years we will know" has not come true, according to many.]*

Review of Recent Scientific Articles by CO2 Science

Declining Drought in the USA Over the Past Half-century

Mo, K.C. and Lettenmaier, D.P. 2018. Drought variability and trends over the central United States in the instrumental record. *Journal of Hydrometeorology* 19: 1149-1166. Mar 14, 2019 http://www.co2science.org/articles/V22/mar/a8.php

Combined Impacts of Ocean Acidification and Warming on Yellowfin Bream

Coleman, M.A., Butcherine, P., Kelaher, B.P., Broadhurst, M.K., March, D.T., Provost, E.J., David, J. and Benkendorff. 2019. Climate change does not affect the seafood quality of a commonly targeted fish. *Global Change Biology* 25: 699-707. March 13, 2019 http://www.co2science.org/articles/V22/mar/a7.php

Four Decades of Species Range Change of Sinai's High-Mountain Flora

Coals, P., Shmida, A., Vasl, A., Duguny, N.M. and Gilbert, F. 2018. Elevation patterns of plant diversity and recent altitudinal range shifts in Sinai's high-mountain flora. *Journal of Vegetation Science* 29: 255-264., March 11, 2019 http://www.co2science.org/articles/V22/mar/a6.php

Model Issues

Claim: By design, Australia will have no winter by 2050

By Anthony Watts, WUWT, Mar 13, 2019 https://wattsupwiththat.com/2019/03/13/claim-by-design-australia-will-have-no-winter-by-2050/

Measurement Issues -- Surface

Australia's Hottest Summer? Maybe Not. By Paul Homewood, Not a Lot of People Know That, Mar 13, 2019 https://notalotofpeopleknowthat.wordpress.com/2019/03/13/australias-hottest-summer-maybenot/#more-38325

Measurement Issues -- Atmosphere

The JRA-55 Reanalysis: General Specifications and Basic Characteristics By Shinya KOBAYASHI, et al, Journal of the Meteorological Society of Japan, **2015** <u>https://www.jstage.jst.go.jp/article/jmsj/93/1/93_2015-001/_article</u>

Nitrogen dioxide pollution mapped

By Staff Writers, Paris (ESA), Mar 13, 2019 http://www.spacedaily.com/reports/Nitrogen_dioxide_pollution_mapped_999.html

Changing Weather

California is drought-free for the first time in nearly a decade

By Alejandra Reyes-Velarde, LA Times, Mar 14, 2019 https://www.latimes.com/local/lanow/la-me-ln-rain-california-drought-conditions-20190314story.html [SEPP Comment: Will flooding now be called permanent?]

California's 'permanent drought' now officially over after 376 straight weeks

By Anthony Watts, WUWT, Mar 16, 2019 https://wattsupwiththat.com/2019/03/16/californias-permanent-drought-now-officially-over-after-376-straight-weeks/

Hurricane Alarmists Take Blow As New Study Pours Cold Water On Human Impact

PIK takes a blow: stronger hurricanes cannot be explained by higher CO2 By Die kalte Sonne, (German text translated/edited by P Gosselin), No Tricks Zone, Mar 10, 2019 http://notrickszone.com/2019/03/10/hurricane-alarmists-take-blow-as-new-study-pours-coldwater-on-human-impact/

'Tornado drought' dampens Democrats' climate change narrative

Bernie Sanders pushes climate change narrative despite last year's 'tornado drought' By Valerie Richardson, The Washington Times, Mar 10, 2019 <u>https://www.washingtontimes.com/news/2019/mar/10/tornado-decline-dings-climate-change-narrative-ber/</u> "In terms of the severity of a year, if a tornado hits you,' said Mr. Marsh, 'it's probably going to be the worst year of your life."

Derry's "Climate Conference"

By Paul Homewood, Not a Lot of People Know That, Mar 14, 2019 https://notalotofpeopleknowthat.wordpress.com/2019/03/14/derrys-climate-conference/

Changing Climate

The day the world burned

By Staff Writers, Santa Barbara CA (SPX), Mar 14, 2019 <u>http://www.terradaily.com/reports/The_day_the_world_burned_999.html</u> Link to paper: Sedimentary record from Patagonia, southern Chile supports cosmic-impact triggering of biomass burning, climate change, and megafaunal extinctions at 12.8 ka By Mario Pino, et al, Scientific Reports, Mar 13, 2019 https://www.nature.com/articles/s41598-018-38089-y

[SEPP Comment: Discussing the Younger Dryas impact hypothesis that the sudden cooling was caused by fragments of a large, disintegrating asteroid/comet striking many parts of the globe about 12,800 years ago.]

Dinosaurs were thriving before asteroid strike that wiped them out

By Hayley Dunning, Imperial College, London, Mar 6, 2019 [H/t GWPF] https://www.imperial.ac.uk/news/190446/dinosaurs-were-thriving-before-asteroid-strike/ Link to paper: Ecological niche modelling does not support climatically-driven dinosaur diversity decline before the Cretaceous/Paleogene mass extinction By Alfio Alessandro Chiarenza, et al. Nature Communications, Mar 6, 2019 https://www.nature.com/articles/s41467-019-08997-2

Changing Seas

Sea Level Views from SEPP (190309) are far too superficial to be useful

Comments by N.-A. Mörner, T. Wysmuller & A. Parker, Posted by Tallbloke, Mar 14, 2019 https://tallbloke.files.wordpress.com/2019/03/sea-level-views-2.pdf

New Study Shows Sea Level Near Japan Was 0.4 Meters Higher 3600 Years Ago Than Today By P Gosselin, No Tricks Zone, Mar 9, 2019

http://notrickszone.com/2019/03/09/new-study-shows-sea-level-near-japan-was-0-4-metershigher-3600-years-ago-than-today/

Link to paper: Holocene sea-level change and evolution of a mixed coral reef and mangrove system at Iriomote Island, southwest Japan

By Yamano et al. Estuarine, Coastal and Shelf Science, May 1, 2019 https://www.sciencedirect.com/science/article/pii/S0272771418306152?dgcid=raven_sd_search_e

<u>mail</u>

[SEPP Comment: According to abstract, estimated height was after corrections for tectonics. It may be due to shifts in prevailing winds over the Pacific.]

Changing Cryosphere – Land / Sea Ice

New satellite keeps close watch on Antarctic [Arctic?] ice loss By Staff Writers, Lancaster UK (SPX), Mar 11, 2019 <u>http://www.spacedaily.com/reports/New_satellite_keeps_close_watch_on_Antarctic_ice_loss_999</u> .html Link to paper: Definition differences and internal variability affect the simulated Arctic sea ice melt season By Abigail Smith and Alexandra Jahn, The Cryosphere, Jan 2, 2019 <u>https://www.the-cryosphere.net/13/1/2019/</u>

Greenland's Glaciers Expanding Again

By Paul Homewood, Not a Lot of People Know That, Mar 11, 2019 https://notalotofpeopleknowthat.wordpress.com/2019/03/11/greenlands-glaciers-expanding-again/

Agriculture Issues & Fear of Famine

Houston, we're here to help the farmers

By Staff Writers, SPX, Mar 11, 2019

http://www.seeddaily.com/reports/Houston_were_here_to_help_the_farmers_999.html

"Using the temperature data from ECOSTRESS, scientists are able to calculate

evapotranspiration--the amount of water evaporating from the surface of the Earth and from plants. 'And for farmers, this information is the number one requirement for irrigation. It's useful for them to know how much to water plants. And it helps indicate future droughts and weather changes.'"

"It can also show which plants are being more efficient with their water and which are stressed because they don't have enough. It can do this on a surprisingly small scale: down to 230 square feet."

Lowering Standards

Fox Butterfield Returns To The New York Times With The February Jobs Report By Francis Menton, Manhattan Contrarian, Mar 11, 2019 <u>https://www.manhattancontrarian.com/blog/2019-3-11-fox-butterfield-returns-to-the-new-york-</u>

times-with-the-february-jobs-report

Communicating Better to the Public – Make things up.

Environment damage behind 1 in 4 global deaths, disease: UN By Patrick GALEY Nairobi (AFP) March 13, 2019 http://www.terradaily.com/reports/Environment_damage_behind_1_in_4_global_deaths_disease_ UN_999.html

"It said that poor environmental conditions "cause approximately 25 percent of global disease and mortality" -- around 9 million deaths in 2015 alone."

[SEPP Comment: In 1900, before widespread use of fossil fuels, world-wide life expectancy was about 31 years, today it is about 72 years, what is meant by "premature deaths"?]

Communicating Better to the Public – Use Propaganda on Children

Climate Control, Brainwashing in Schools

By Andrew Montford and John Shade, Global Warming Policy Foundation, Mar 15, 2019 https://www.thegwpf.com/climate-control-brainwashing-in-schools/ Link to report: Climate Control, Brainwashing in Schools

By Andrew Montford and John Shade, Global Warming Policy Foundation, March 2019

https://www.thegwpf.org/content/uploads/2014/04/Education-reducedportrait-5.pdf

A Carefully Miseducated Generation of Climate Warriors

By Dave Pellowe, Quadrant, Mar 14, 2019

https://quadrant.org.au/opinion/doomed-planet/2019/03/a-carefully-miseducated-generation-ofclimate-warriors/

Climate change student strike inspired by politically correct teaching, academic says By Malcolm Sutton, ABC, Adelaide, Au, Mar 15, 2019

https://www.abc.net.au/news/2019-03-14/politically-correct-teaching-to-blame-for-climatechange-strike/10897682

Genesis of a Shakedown: New Records Expose Children's Marches as Long-Planned Component of Litigation Campaign

By Staff Writers, Climate Litigation Watch, Mar 13, 2019 [H/t WUWT] <u>http://climatelitigationwatch.org/genesis-of-a-shakedown-new-records-expose-childrens-marches-as-long-planned-component-of-litigation-campaign/</u>

On Climate, the Kids Are All Wrong

And a band of ignorant brats shall lead them: Some things have hardly changed since 1212. By Paul H. Tice, WSJ, Via GWPF, Mar 12, 2019 https://www.wsj.com/articles/on-climate-the-kids-are-all-wrong-11552430379 https://www.thegwpf.com/on-climate-the-kids-are-all-wrong/

Questioning European Green

Climate Regulatory Madness Ratchets Up: "German Greens Aiming To Limit Citizens To 2 Flights A Year By P Gosselin, No Tricks Zone, Mar 12, 2019 <u>http://notrickszone.com/2019/03/12/climate-regulatory-madness-ratchets-up-german-greens-</u> aiming-to-limit-citizens-to-2-flights-a-year/

Fracking could cut Britain's gas imports to zero by early 2030s

By Susanna Twidale, Reuters, Mar 11, 2019 https://uk.reuters.com/article/uk-britain-fracking/fracking-could-cut-britains-gas-imports-to-zeroby-early-2030s-idUKKBN1QS1JC

But fracking companies say the industry is unlikely to take off in Britain under current regulations, which halt fracking activity if a seismic event of magnitude 0.5 or above is detected.

Questioning Green Elsewhere

How Much Do The Climate Crusaders Plan To Increase Your Cost Of Electricity? -- Part V By Francis Menton, Manhattan Contrarian, Mar 14, 2019 <u>https://www.manhattancontrarian.com/blog/2019-3-14-how-much-do-the-climate-crusaders-plan-</u> to-increase-your-costs-of-electricity-part-iv

The Political Games Continue

When Socialism Fails By Alan Carlin, Carlin Economics and Science, Mar 9, 2019 http://www.carlineconomics.com/archives/4896

Litigation Issues

NY Attorney General Defies Judge's Order in Exxon Case Guest post by David Middleton, WUWT, Mar 14, 2019 https://wattsupwiththat.com/2019/03/14/ny-attorney-general-defies-judges-order-in-exxon-case/

EPA and other Regulators on the March

Hearing Summary: "Wasted Energy: DOE's Inaction on Efficiency Standards & Its Impact on Consumers and the Climate" By Mark Krebs, Master Resource, Mar 12, 2019 https://www.masterresource.org/u-s-department-of-energy/hearing-summary/

Energy Issues – Non-US

Venezuela's melt down: Blackout day six and the grid struggles to reboot By Jo Nova, Her Blog, Mar 14, 2019 <u>http://joannenova.com.au/2019/03/venezuelas-melt-down-blackout-day-six-and-the-grid-struggles-to-reboot/</u>

Yes, Chavez And Maduro Caused Venezuela's Power System Collapse

By Tim Worstall, Continental Telegraph, Mar 9, 2019 [H/t GWPF] https://www.continentaltelegraph.com/venezuela/yes-chavez-and-maduro-caused-venezuelaspower-system-collapse/

Market failures could see Britain suffering five-day power cuts

By Paul Homewood, Not a Lot of People Know That, Mar 14, 2019 <u>https://notalotofpeopleknowthat.wordpress.com/2019/03/14/market-failures-could-see-britain-suffering-five-day-power-cuts/#more-38363</u>

Russia's Pipe Dreams Are Europe's Nightmare

Putin's plans to run the TurkStream pipeline through the Balkans won't end well. By Dimitar Bechev, Foreign Policy, Mar 12, 2019 https://foreignpolicy.com/2019/03/12/russia-turkstream-oil-pipeline/

Energy Issues – Australia

Green Energy Wars May Bring Down Australian Government By Staff Writers, The Australian, Via GWPF, Mar 12, 2019 <u>https://www.thegwpf.com/green-energy-wars-may-bring-down-australian-government/</u>

The cost of one days electricity on the Australian grid is three times (or 50 times) more than it was in 2012

By Jo Nova, Her Blog, Mar 11, 2019 http://joannenova.com.au/2019/03/the-cost-of-one-days-electricity-on-the-australian-grid-is-threetimes-or-50-times-more-than-it-was-in-2012/

Energy Issues -- US

Second Wave of U.S. Shale Revolution Is Coming, Says IEA

The U.S. is set to become a net petroleum exporter in two years, according to the International Energy Agency By Christopher Alessi, WSJ, Via GWPF, Mar 11, 2019 <u>https://www.wsj.com/articles/second-wave-of-u-s-shale-revolution-is-coming-says-iea-11552291237</u> <u>https://www.thegwpf.com/second-wave-of-u-s-shale-revolution-is-coming-says-iea/</u>

Oil and Natural Gas – the Future or the Past?

America is set to surpass Saudi Arabia in a 'remarkable' oil milestone

By Matt Egan, CNN Business, Mar 8, 2019 https://edition.cnn.com/2019/03/08/business/us-oil-exports-saudi-arabia/index.html

Nuclear Energy and Fears

It Sounds Crazy, But Fukushima, Chernobyl, And Three Mile Island Show Why Nuclear Is Inherently Safe By Michael Shellenberger, Forbes, Mar 11, 2019 https://www.forbes.com/sites/michaelshellenberger/2019/03/11/it-sounds-crazy-but-fukushimachernobyl-and-three-mile-island-show-why-nuclear-is-inherently-safe/#9f5f6d16881b

Alternative, Green ("Clean") Solar and Wind

New Study: German Wind Turbines Kill 1,200 Tons of Insects Per Year By Michael Krueger, Science Sceptical blog, Via GWPF, Mar 12, 2019 https://www.thegwpf.com/new-study-german-wind-turbines-kill-1200-tons-of-insects-per-year/

Alternative, Green ("Clean") Energy -- Other

European lawsuit threatens Drax power plant By Paul Homewood, Not a Lot of People Know That, Mar 12, 2019 <u>https://notalotofpeopleknowthat.wordpress.com/2019/03/12/european-lawsuit-threatens-drax-power-plant/</u> *[SEPP Comment: New question on biomass rules.]*

Other Scientific News

NASA captures unprecedented images of supersonic shockwaves By Staff Writers, Washington (AFP) March 8, 2019 http://www.spacedaily.com/reports/NASA_captures_unprecedented_images_of_supersonic_shock waves_999.html /SEPP Comment: No doubt, colored for effect.]

Other News that May Be of Interest

Elizabeth I, Sir Francis Drake and the Canadian West Coast. By Tim Ball, Digital Management, Mar 13, 2019 <u>https://drtimball.ca/2019/elizabeth-i-sir-francis-drake-and-the-canadian-west-coast/</u> [SEPP Comment: Looking for the Northwest Passage from the West?]

South African man escapes jaws of whale

By Staff Writers, Port Elizabeth, South Africa (AFP) March 11, 2019 http://www.terradaily.com/reports/South_African_man_escapes_jaws_of_whale_999.html

Six Project Management Tips Every Engineer Needs

By Jean Thilmany, ASME, Mar 2019 [H/t Toshio Fujita] <u>https://www.asme.org/career-education/articles/career-and-education/six-project-management-tips-every-needs</u>

BELOW THE BOTTOM LINE:

By Staff Writers, Climate Change Predictions.org, Mar 14, 2019 http://climatechangepredictions.org/uncategorized/6964

"Considering that climate change represents a real threat to the existence of humanity, of living beings and our Mother Earth as we know it today,

"Confident that the peoples of the world, guided by the principles of solidarity, justice and respect for life, will be able to save humanity and Mother Earth, and Celebrating the International Day of Mother Earth,

"The Government of the Plurinational State of Bolivia calls on the peoples of the world, social movements and Mother Earth's defenders, and invites scientists, academics, lawyers and governments that want to work with their citizens to the Peoples' World Conference on Climate Change and Mother Earth's Rights to be held from 20th to 22nd April 2010 in Cochabamba, Bolivia.

"Evo Morales Ayma, President of the Plurinational State of Bolivia, Bolivia, January 5th, 2010 – CounterCurrents.org"

Out of the clouds

By Staff Writers, Climate Change Predictions.org, Mar 14, 2019 http://climatechangepredictions.org/uncategorized/10379

"The Great Smoky Mountains have the most annual rainfall in the southeastern U.S., which mostly falls as a light, misty rain, explains OurAmazingPlanet.

"A study by a team from NASA's Precipitation Measurement Missions found that "light rainfall is the dominant form of precipitation in the region, accounting for 50 to 60 percent of a year's total, governing the regional water cycle."

"OurAmazingPlanet notes: The results suggest the area may be more susceptible to climate change than thought; as temperatures rise, more of the fine droplets from light rain will evaporate in the air and fail to reach the ground.

"Lower elevations will have to contend with not only higher temperatures, but less cloud cover. "Huffington Post, 2001"

ARTICLES:

1. 'Extension Cord' to Carry Green Power From Midwest to East

Siemens, Copenhagen Infrastructure Partners to take over \$2.5 billion project to transmit wind and solar energy

By Russell Gold, WSJ, Mar 10, 2019

https://www.wsj.com/articles/extension-cord-to-carry-green-power-from-midwest-to-east-11552275900

[SEPP Comment: Bringing the high cost of electricity in Germany and Denmark to the US?]

SUMMARY: The journalist states

"Two European firms are backing an ambitious \$2.5 billion project to carry renewable electricity underground through the American heartland.

"Siemens AG SIEGY 0.89% is joining with a Danish investment fund to build and operate a 349mile-long, electrical-transmission line that would carry wind and solar energy from Iowa into the Chicago area, according to the project's developer. "The link would allow renewable energy from the Upper Midwest to travel all the way into the eastern U.S. by hooking up to the PJM Interconnection, the power grid that serves all or part of 13 states, including Illinois, Ohio and Pennsylvania.

The PJM Interconnection goes south through Virginia and includes a part of eastern North Carolina.

"Called the SOO Green Renewable Rail, the project is a giant extension cord designed to carry electricity on buried direct-current lines. The fund, called Copenhagen Infrastructure Partners, and Siemens are purchasing the project from its developers, a group that includes several private investors and the U.S. subsidiary of Canadian Pacific Railway Ltd. The terms of the deal weren't disclosed.

"The vast majority of the line will run in a Canadian Pacific railroad corridor. The project's developers expect that going underground on an existing railroad right of way will make it easier to obtain permits and local permission, a strategy that they say was used before in expanding high-speed internet networks. It is using direct-current technology, instead of the more widely deployed alternating current, because it doesn't interfere with railroad signals.

"'The fact is that going underground, you don't have wires rubbing up against trees. You are not going to have tornado impacts. It is safer and more resilient, 'said Joe DeVito, president of Direct Connect Development Co., which has developed the project."

2. When There's Too Much Sun and Wind

The biggest danger of renewable energy is overproduction. By Rupert Darwall, WSJ, Mar 10, 2019 https://www.wsj.com/articles/when-theres-too-much-sun-and-wind-11552245478

The author of "Green Tyranny: Exposing the Totalitarian Roots of the Climate Industrial Complex" claims most destructive consequence of wind and solar power result from periods of oversupply.

"Coal and gas generating plants have to be kept on standby and ramped up to cover the shortfall resulting from still air and darkness. That forces them to operate less efficiently and pushes their costs up. During periods of low demand, wind and solar can produce too much electricity, creating gluts and driving wholesale prices negative, meaning grid operators have to pay consumers to burn unwanted energy. That makes nuclear, coal and gas generators unprofitable, necessitating extra subsidies to save the power stations needed to keep the lights on.

"These costs fall on everyone sharing that grid, as Europe's experience shows. In 2016, Germany paid $\in 1$ billion (about \$1.13 billion) for discarded renewable output. Each year Germany dumps 50,000 of the 85,000 gigawatt-hours of wind power it produces on neighboring countries at low cost. "Poland and the Czech Republic see Germany as an aggressor, overproducing electricity and dumping it across the border," the Journal reported in 2017. Poland is installing phase shifters on its western border to repel current from the German side. A spokeswoman for the Czech national grid called the energy dumping "collateral damage of a purely political decision of the German government."

"Similar conflicts have arisen between U.S. states. Surplus California electricity plays havoc with wholesale prices in Arizona and is a factor behind the planned closure of the Grand Canyon State's Navajo Generating Station.

"One answer is for states to institute capacity markets, which pay power stations for merely remaining operational rather than for the electricity they supply. That is, consumers must pay for both unwanted renewable energy and underused gas and coal plants. In Germany, Europe's wealthiest country, 1 in 6 people is threatened with fuel poverty, defined as energy bills eating up more than 10% of household income.

"The Trump administration should instruct the Federal Energy Regulatory Commission to craft rules aimed at isolating the bad effects of states' renewable policies. One way for a state to comply would be to require all generators, including wind and solar, to meet minimum annual levels of capacity availability and to submit firm, unconditional time-of-day bids so that all generators are contractually obliged to deliver electricity whatever the weather. That would create incentives for wind and solar investors to fund innovation in grid storage to overcome the intermittency problem of the technologies for which they are handsomely subsidized.

"Doubtless that would provoke howls of anguish from Californian politicians. But they shouldn't be able to make a show of their virtue while burdening other states with the costs."