

ENVIRONMENTAL ENGINEERING NEWSLETTER

12 AUG. 2013

Please be aware any Newsletter URL ending in **020701.pdf** and **020610.pdf** are available for downloading only during the six days following the date of the edition. If you need older URLs contact George at ghh@att.net.

Please Note: This newsletter contains articles that offer differing points of view regarding climate change, energy and other environmental issues. Any opinions expressed in this publication are the responses of the readers alone and do not represent the positions of the Environmental Engineering Division or the ASME.

George Holliday

This week's edition includes:

1) ENVIRONMENT – A. CHAIRMAN MESSAGE

It is always alarming to me how quickly the summer passes these days. As we approach the fall, I want to let you know of a couple of opportunities to connect with EED.

We are planning two EED meetings for all members who are able to attend, one on the East Coast and one on the West Coast. The East Coast meeting will be held in conjunction with the Carbon Management Technology Conference, which will take place at the Hilton Alexandria Old Town in Alexandria, VA, October 21-23. We are planning an EED meeting for the afternoon of Tuesday, October 22, from 1-3 in the afternoon. The West Coast meeting will be held during IMECE 2013 in San Diego, CA, November 15-21. The specific date and time have not yet been set.

At both meetings, we expect to discuss the recent EED member survey, the revised Division By-Laws, and interest in forming and participating in new technical committees identified as being of interest in the survey. EED members who wish to attend the Division meeting will not be required to register for either conference, although there are certainly benefits to attending these meetings if you are able. I will provide more information on the Division meetings as we get nearer to the meeting dates, and I hope you will be able to join our discussions.

EED is co-sponsoring (with ASME's Nuclear Engineering Division) the 15th International Conference on Environmental Remediation and Radioactive Waste Management (ICEM 2013) this September in Brussels, Belgium. As part of our sponsorship, the Division is providing travel support for students who will present papers at the conference. For more information on the conference, see the conference website at <http://www.asmeconferences.org/icem2013/>.

As always, feel free to contact me at andymiller@asme.org.

Andy miller

B. LOUISIANA LAW WILL PHASE OUT SOLAR TAX CREDIT

Louisiana Gov. Bobby Jindal has signed legislation phasing out the state's tax credit for solar energy. The credit will expire at the end of 2017.

<http://news.heartland.org/newspaper-article/2013/07/05/louisiana-law-will-phase-out-solar-tax-credit>

C. NORDEX USA CLOSURES WIND TURBINE PLANT DESPITE MILLIONS IN SUBSIDIES

Wind turbine manufacturer Nordex USA announced it will close its Arkansas production facility after accepting millions of dollars in subsidies and promising to create 750 jobs. Nordex employed only 50 workers at its Jonesboro, Arkansas facility on June 28 when the company announced it would be shutting down turbine production in the state.

The wind turbine manufacturer never came close to creating the 750 jobs it promised when receiving taxpayer subsidies. The company reports its Arkansas facility employed approximately 100 workers at its peak.

<http://news.heartland.org/newspaper-article/2013/07/18/nordex-usa-closes-wind-turbine-plant-despite-millions-subsidies>

D. IPCC LEAD AUTHOR SAYS CLIMATE MODELS ARE FAILING

United Nations Intergovernmental Panel on Climate Change lead author Hans von Storch told *Der Spiegel* that climate models are having a difficult time replicating the lack of global warming during the past 15 years.

"So far, no one has been able to provide a compelling answer to why climate change seems to be taking a break," said Storch.

Storch said the models say the planet should be warming much more than it has.

<http://news.heartland.org/newspaper-article/2013/07/13/ipcc-lead-author-says-climate-models-are-failing>

E. ASME is planning to develop an annual large scale Energy Conference. Its first one is being planned for March 17–19, 2014 in San Diego and will focus on fracking.

Arnold Feldman

F. EPA RELEASES REVISED OIL, GAS STORAGE TANK EMISSION STANDARDS

The Environmental Protection Agency has released updated oil and natural gas storage tank standards. Under the updates, ample time will be provided to boost installation and production, and control deadlines will be phased in. The agency obtained information that more storage tanks will be going into service, prompting it to make revisions.

<http://www.epa.gov/airquality/oilandgas/pdfs/20130805fr.pdf>

2) HEALTH – A. RABIES - USA (15): UPDATE, AUGUST 2013

In this update:

[1] Massachusetts: skunk, possible human exposure [2] Wisconsin: bat, canine exposure [3] Virginia: bat, human exposure [4] North Dakota: feline, human exposure [5] Texas: bat, human exposure [6] Florida: bat, human exposure

<http://www.eandp-environment.net/Health/Health020701.pdf>

3) SAFETY – A. FEDS MEET WITH HOUSTON OIL EXECS ABOUT GULF ACCIDENTS

Posted on August 1, 2013 at 11:19 am by [Emily Pickrell](#) in [Accidents, Politics/Policy](#)

<http://fuelfix.com/blog/2013/08/01/regulators-discuss-gulf-incidents-with-oil-execs/>

B. PEMEX PIPE EXPLODES IN CENTRAL MEXICO, 7 INJURED

July 22, 2013

TOLUCA, Mexico (AP) -- A pipeline explosion Sunday that injured seven people and sent flames and smoke shooting hundreds of feet into the air in central Mexico was caused by illegal tapping, Mexico's state-owned oil company said.

The pre-dawn explosion in a farm field injured four police officers and three firefighters among those called to the scene by a report of an oil leak, the state prosecutor's office said.

<http://news.yahoo.com/pemex-pipe-explodes-central-mexico-123518990.html>

4) TRANSPORTATION: A. CANADA'S HARPER INSISTS KEYSTONE XL IS IMPORTANT FOR JOBS

Fri Aug 2, 2013 3:17pm EDT

OTTAWA (Reuters) - Canadian Prime Minister Stephen Harper contradicted on Friday U.S. President Barack Obama's dismissal of the job-creation potential of the proposed Keystone XL pipeline, saying the project is important both for jobs and for energy security.

Asked about remarks made by Obama in an interview with the New York Times last Saturday and then repeated this week in a speech, Harper told reporters in Quebec City that Canada's perspective was well-known by everyone in Washington.

"That is that first of all our No. 1 priority in Canada is the creation of jobs, and clearly this is a project that will create jobs on both sides of the border," Harper said. "And it is in our judgment an important project, not just for our economy and for job creation but for the long-term energy security of North America."

Obama said in the interview that the evidence was that TransCanada Corp's Keystone XL pipeline, which would carry 830,000 barrels per day of crude from Canada's oil sands and the Bakken shale in North Dakota and Montana to refineries on the U.S. Gulf Coast, would not be a big jobs generator.

He said it might create 2,000 jobs during the construction for a year or two and then 50 or 100 jobs thereafter. The U.S. State Department's analysis in March was that Keystone would support 42,100 direct and indirect jobs.

Harper's Conservative government has been a big booster of Keystone XL and other pipelines to tidewater because it wants export markets for increasing crude oil production in the land-locked oil sands of northern Alberta.

Green groups have put heavy pressure on Obama to reject Keystone XL, warning of spills and higher emissions from the carbon-intensive oil sands.

The U.S. administration's final decision on whether to approve Keystone XL is expected later this year or early in 2014.

(Reporting by Randall Palmer; Editing by Peter Galloway)

B. STATE DEPT. WATCHDOG LAUNCHES INQUIRY INTO KEYSTONE ENVIRONMENTAL REPORT

The State Department's internal watchdog has "initiated an inquiry" into whether the contractor Foggy Bottom used for a draft environmental analysis on the proposed Keystone XL pipeline had a conflict of interest.

The move is a response to [allegations](#) from several outside groups, Doug Welty, a spokesman with the State Department Office of Inspector General, told The Hill on Friday.

<http://thehill.com/blogs/e2-wire/e2-wire/315351-state-dept-watchdog-launches-inquiry-into-keystone-environmental-report>

COMMENTS:

A. THE WEEK THAT WAS: 2013-08-03 (AUG. 3, 2013)

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

Sea Level Rise: As nature refuses to obey global climate models and the earth is not warming as projected by the models with increasing carbon dioxide (CO₂) emissions, it is becoming increasingly clear that those who insisted that CO₂ emissions would cause catastrophic Anthropogenic (human caused) Global Warming (AGW) are becoming more desperate. One of the fears being promoted is catastrophic sea level rise of multiple feet or meters by the end of the century.

In Article # 1, SEPP Chairman Fred Singer discusses some of the issues regarding sea level rise and why it is difficult to be precise. In summary, unless solid observational evidence is offered otherwise, there is no reason to assume that 21st century sea level rise will be greater than 20th century sea level rise – namely about 7 inches (18 cm).

There is an irony in US government agencies, and other climate researchers, declaring that possible sea level rise may range from 7 inches to up to 33 times that (Hansen – 600 cm, or 236 inches). In its Fourth Assessment Report (AR4), 2007, the Intergovernmental Panel on Climate Change expressed great certainty in the climate science. The US EPA made this certainty an important finding in US Federal Courts. Now government agencies are expressing great uncertainty in climate science. Please see Article #1 and links under Communicating Better to the Public – Make things Up and Changing Seas.

EPA Science: In the *Wall Street Journal*, Lamar Smith, Chairman of the US House Science, Space and Technology Committee expresses concern about the EPA scientific studies that are

being used to justify a massive new array of air quality regulations. The EPA refuses to make the studies public, in spite of declaring it would.

“We know this much: Virtually every major EPA air-quality regulation under President Obama has been justified by citing two sets of decades-old data from the Harvard Six Cities Study and the American Cancer Society's Cancer Prevention Study II. The EPA uses the data to establish an association between fine-particulate emissions and mortality.

“For two years, the House Science, Space and Technology Committee, of which I am the chairman, has sought to make this information available to the public. But the EPA has obstructed the committee's request at every step. To date, the committee has sent six letters to the EPA and other top administration officials seeking the data's release.” As long as the EPA continues to keep the research secret, there is every reason to be suspicious about the quality of the research.

One can assess the quality and clarity of EPA science from the oral arguments used by Angeline Purdy, who was introduced as the scientific and technical expert, before the 3 judge panel of the US Circuit of Appeals for the DC Circuit hearing the challenge to the EPA finding that greenhouse gases endanger human health and welfare (Endangerment Finding).

The most disturbing part is the argument on model validation which is on page 90 of the transcript. She states:

“What reanalysis is, is it's [sic] one method by which some models are validated, and that is a process by which, you know, again, a model is validated by looking whether its projections match real world data, there may be some things that are incomplete in that data set, inevitably, because maybe it covers 100 locations but doesn't have a data point at the 101st. So, you take that data set, you run it through a model that has already been valid and that can use principles of physics, what it knows about the climate system to fill in any interstices in that data set, then take the model you're trying to validate and you compare its projections against that augmented data set.

No model has been validated. One cannot use an un-validated model to validate another model. If a valid model existed, that would be the one used – there would not be some 73 models. All 73 models project far too much warming of the atmosphere over the tropics. Please see Article #2 for the op-ed on EPA secret science. <http://www.eandp-environment.net/Transportation/Transportation020610.pdf>

Thought, Belief, and Scientific Knowledge: Two weeks ago, a low point in the Senate hearing on climate change was reached when Senator Whitehouse questioned Roy Spence about his religious beliefs. Spencer clearly outclassed the Senator, but the issue remains – some of those skeptical of the claim of catastrophic carbon based AGW are being classified as religious zealots. During the development of modern empirical science, in the 17th, 18th, and 19th centuries, many pioneers were religiously devout. They believed that Natural Philosophy (an earlier term for science) was the method to unlock the secrets of nature and fulfill their religious duty. They were able to separate thought from belief, and belief from scientific knowledge.

Spencer and John Christy have undergone bitter criticism for their willingness to publically report atmospheric temperatures from satellite measurements, the most comprehensive measurements available. When RSS discovered an error in the calculations, failure to account for orbital drift, Spencer and Christy promptly admitted the error and corrected it. This is the way science advances.

If religious beliefs give some scientists the strength to stand up to bitter criticism and to conduct their scientific pursuits scrumptiously, so be it. Those critics who question these beliefs are engaged in nothing more than *ad hominem* attacks. For a link to the hearing with Spencer's interrogation beginning about 3 hours and 23 minutes into it please see:

http://www.epw.senate.gov/public/index.cfm?FuseAction=Hearings.Choose&Hearing_id=cfe32378-96a4-81ed-9d0e-2618e6ddff46

Collapse of Global Civilization: In March, the Proceedings of the Royal Society, B, published an opinion piece by Paul Ehrlich and Anne Ehrlich claiming that over-population, over-consumption, and climate change will lead to the collapse of global civilization. In the 1970s Paul Ehrlich is famous for prophesying that within a few decades over population would result in massive death, destruction, and disease, which did not happen.

To its credit, the Proceedings of the Royal Society, B, published a rebuttal to claims by the Ehrlichs written by a Michael Kelly, a professor of engineering at Oxford University. Kelly stresses the resilience of human nature and that strong economies will continue to develop the engineering and technological advances to offset environmental and other threats.

The authors offer two different world views, one Malthusian, the other along the lines of Julian Simon. Perhaps if there is a collapse of civilization, it will come from believing prophets such as Paul Ehrlich and believing that authoritarian governments of philosopher kings are needed to save civilization. Please see links under To Its Credit.

Heated Wars: *Science* magazine published another highly questionable study based on un-validated computer models. The study claimed that slight increases in temperature, or changes in perception, will cause a great increase in violence in the form of riots, civil wars, ethnic conflicts, etc. The study is inconsistent with studies of climate history which show, in general, that cold periods are periods of violence, disease, famine, and death, and warm periods, in general, are beneficial to humanity. The combination of warming and increased atmospheric CO2 are increasing harvests, helping to assure plentiful food supply. There are food riots in countries that heavily subsidize food. But these are due to price increases because Western countries are driving up world grain prices by misallocating resources to grow crops for biofuels rather than for human consumption. Please see links under Lowering Standards.

IPCC Personalities: Judith Curry discusses an article in the *Financial Times* that profiles various personalities associated with the IPCC and its reports. In the article, the head of the scientific section (Working Group I) brings up the current pause in temperature increases and says it will be included in the section. But this is not the major issue. The primary issue is the enormous disconnect between the politically negotiated *Summary for Policymakers* and the scientific section. Unless the pause is thoroughly discussed in the *Summary*, we can expect little more than another report that ignores critical science. Please see link under Seeking a Common Ground.

Rating the Blogs: The Society of Environmental Journalists published a rating of the various climate blogs. A dead give-away for its rating system was the repeated use of the word "denier." According to the authors of the report, Anthony Watts's blog "is not reliable as a source of factual information." The statement applies to the society. Please see link under Communicating Better to the Public – Go Personal.

Congress: Just before it went on its August recess, the House of Representatives passed a series of bills to restrict future regulations by the EPA and other agencies. This was symbolic, because it is doubtful the Senate will take up the bills. However, it does show that the House recognizes that the administration's expansion of regulations are an authoritarian expansion of power. Please see links under The Political Games Continue.

Shale Games: Royal Dutch Shell announced it took a pre-tax \$3 Billion write off on its US shale holdings. The company refused to identify the specific shale holdings. It may have been on its holdings in shale formations that produce oil and natural gas by smart drilling. Or it may have been its heavy investments in the Green River Formation, in Wyoming, Utah, and Colorado, in which Shell invested significantly to produce kerogen, which must be heated in order to extract fuel from the shale.

No doubt, opponents of development of shale resources will use this loss to claim that shale oil, or gas, is a temporary boom, which it is not. However, each formation is different and must be explored carefully. One thing does stand out. In the US, independent oil and gas companies have far outperformed the majors in the development of oil and gas from shale. Please see Article # 3.

Amplifications and Corrections: Last week TWTW carried an article "Refuting the myths of climate change." The comments failed to note that the article demonstrates that Australia's Bureau of Meteorology has miscalculated average temperatures in Australia. This type of error may also apply in other countries, leading to a distortion of the surface land record. See: <http://www.quadrant.org.au/blogs/doomed-planet/2013/07/refuting-the-myths-of-climate-change> Also last week, TWTW linked to Steve McIntyre's simple model of temperatures, which outperforms the global climate models in temperature forecasts. Christopher Essex correctly noted that the global climate models can be scientifically useful because they include a number of other variables. As always, TWTW appreciates such amplifications and corrections.

Number of the Week: \$20 Billion. BP announced that it has allocated nearly all of the \$20 billion compensation fund it said aside for the 2010 Deepwater Horizon oil spill and that mounting costs will reduce future profits. The environmental disaster is a financial disaster for BP. Please see Article # 4.

<http://www.sepp.org/twtwfiles/2013/TWTW%208-3-13.pdf>

B. THE EPA'S GAME OF SECRET SCIENCE

The agency pursues rules that will cost billions but refuses to reveal its research. Maybe a subpoena will be needed.

As the Environmental Protection Agency moves forward with some of the most costly regulations in history, there needs to be greater transparency about the claimed benefits from these actions. Unfortunately, President Obama and the EPA have been unwilling to reveal to the American people the data they use to justify their multibillion-dollar regulatory agenda.

<http://www.eandp-environment.net/Environment/Env020701.pdf>

C. EUROPE'S RENEWABLE ROMANCE FADES

By DAVID GARMAN
AND SAMUEL THERNSTROM

Europe has bet big on wind and solar energy, and many environmental advocates would like America to follow. Wind and solar have a role in the U.S. energy economy, but we would be wise to see the cautionary tale in the European experience and adjust our plans accordingly. Wind and solar generate 3.5% of America's electricity today, but Denmark gets 30% of its electricity from wind and hopes to produce 50% by 2020. Germany, Europe's largest national economy, produces roughly 12% of its electricity from wind and solar today, and it wants renewable energy to account for 35% of electricity generation by 2020.

Clean energy powered by renewable resources is understandably attractive. But the honeymoon with renewables is ending for some Europeans as the practical challenges of the relationship become clear.

The first challenge is cost. Germany has reportedly invested more than \$250 billion in renewable energy deployment, and its households pay the highest power costs in Europe—except for the Danish. On average, Germans and Danes pay roughly 300% more for residential electricity than Americans do.

Another challenge of Europe's growing dependence on renewable energy is far more serious: the potential loss of reliable electrical supply. It's one thing to ask consumers to pay more for cleaner energy; it's another to force them to endure blackouts.

Since large amounts of electricity cannot be easily or inexpensively stored, it must be generated and delivered ("dispatched") to meet the constantly changing demand for power. As millions of consumers turn electric lights and appliances on and off, power generators and grid operators must match supply to demand to ensure that current is moving across wires at the proper frequency to avoid power failures, brownouts and other problems.

Normally, this is fairly straightforward. Grid operators generally rely on coal and nuclear plants to meet baseload demand while modifying gas and hydroelectric power output to meet shifting demand. But electricity from wind and solar is variable and intermittent. Nature determines when and how much power will be generated from available capacity, so it is not necessarily "dispatchable" when needed.

When intermittent renewables are small players in the grid, they can be easily absorbed. But as they reach European levels of penetration, the strain begins to show. There are increasing reports of management challenges resulting from wind and solar across the European grid, including frequency fluctuations, voltage support issues, and inadvertent power flows. Anxious operators are concerned about potential blackouts.

In an April 17, 2012, letter to EU Commissioner for Energy Gunter Oettinger, for example, Daniel Dobbeni, the European Network of Transmission System Operators president, said grid operators are "deeply concerned about the difference in speed between the connection of very large capacities of renewable energy resources and the realization in due time of the grid investments needed to support the massive increase of power flows these new resources bring." He also expressed great concern "about the potential destabilizing effect of outdated connection conditions for distributed generation that are not being retrofitted anywhere fast enough."

There are solutions for these problems—upgrades to electricity transmission and distribution and expansions of "dispatchable" generation capabilities, coupled with "demand-response" and other efficiency measures. But the additional cost will be significant. The International Energy Agency has warned that Germany will need to invest between €47.5 billion (\$62.9 billion) and €72.5 billion (\$96 billion) in transmission and distribution over the next 10 years.

For now, the American picture is different. Unlike Europe, the U.S. has excess generating capacity and generally adequate transmission and distribution systems, so variability in the small amount of electricity produced by wind and solar in most markets is not a significant problem. But renewables are growing quickly. As older nuclear plants are decommissioned and new Environmental Protection Agency regulations shut down coal-fired plants, states such as California that are increasing renewable requirements will start to look more like Europe, with its cost structure and grid-management challenges.

There is also an important lesson in the European experience with energy subsidies: Focus incentives so they reward the right behavior. Lavish subsidies for wind and solar have changed Europe's generation mix, but the costs have been high because the subsidy structure prioritized mass deployment rather than efficiency, reliability and innovation. Even in the U.S., the wind-production tax credit has occasionally produced "negative pricing"—that is, turbine operators pay grid operators to take their power even though it isn't needed, just so the wind generators can collect tax credits.

If Congress insists on subsidizing renewable energy (and to be fair, Washington subsidizes all forms of energy), it should reform subsidies to incentivize innovations that would improve the efficiency and reliability of wind and solar, as well as the development of improved energy-storage technologies.

It is not surprising that many Americans share the European passion for wind and solar. But, as with any relationship, once the initial infatuation fades and difficult issues start to emerge, thoughtful action is needed before the relationship sours. Careful reform of our policies, informed by lessons learned from Europe, could avoid an ugly divorce down the road and help renewables find their place in America's energy economy.

Mr. Garman, an assistant secretary and under secretary at the U.S. Department of Energy (2001-07), is on the board of directors of the Energy Innovation Reform Project. Mr. Thernstrom is executive director of EIRP.

A version of this article appeared July 30, 2013, on page A13 in the U.S. edition of The Wall Street Journal, with the headline: Europe's Renewables Romance Fades.

D. UW ISSUES STATEMENT ON THE 'NORTH POLE LAKE'

Posted on July 31, 2013 by Anthony Watts

By [Hannah Hickey](#)

Santa's workshop at the North Pole is not under water, despite recent reports. A dramatic image captured by a University of Washington monitoring buoy reportedly shows a lake at the North Pole. But Santa doesn't yet need to buy a [snorkel](#).

"Every summer when the sun melts the surface the water has to go someplace, so it accumulates in these ponds," said [Jamie Morison](#), a polar scientist at the UW Applied Physics Laboratory and principal investigator since 2000 of the [North Pole Environmental Observatory](#). "This doesn't look particularly extreme."

After media coverage in [CBS News](#), [The Atlantic](#) and the U.K.'s [Daily Mail](#), Morison returned from overseas travel late last week to a pile of media inquiries. Over the weekend the team posted an [explanatory page](#) on the project website.

One of the issues in interpreting the image, researchers said, is that [the camera](#) uses a fisheye lens.

“The picture is slightly distorted,” said Axel Schweiger, who heads the Applied Physics Laboratory’s Polar Science Center. “In the background you see what looks like mountains, and that’s where the scale problem comes in – those are actually ridges where the ice was pushed together.”

Researchers estimate the melt pond in the picture was just over 2 feet deep and a few hundred feet wide, which is not unusual to find on an Arctic ice floe in late July.

<http://wattsupwiththat.com/2013/07/31/uw-issues-statement-on-the-north-pole-lake/#more-90809>

E. SHOCKER: GLOBAL WARMING KNEEJERKER ADMITS IT

Posted on [July 30, 2013 2:20 pm](#) by [Bill Quick](#)

[You can go wading in the lake at the North Pole – Boing Boing](#)

At Climate Central, Andrew Freedman provides some really fascinating context that [illustrates the changing nature of, well, nature](#) ... and draws a big, heavy underline on how difficult it can be to make assumptions about what is and what isn’t an effect of climate change. Arctic sea ice is melting in concert with rising global average temperatures, but (contrary to the knee-jerk assumption I made about this story) the lake at the North Pole may or may not have anything to do with that.

What? Global warming true believers making knee-jerk assumptions? Perish the thought.

Kudos for owning up, though. <http://www.dailypundit.com/?p=74441>

[Continue reading →](#)

<http://wattsupwiththat.com/2013/07/31/the-wuwt-hot-sheet-wednesday-july-31st-2013/#more-90731>

F. DUELING DESKTOPS: ANTHONY WATTS VERSUS AL GORE

Posted on [July 31, 2013](#) by [Anthony Watts](#)

Tom Nelson highlighted [a tweet](#) from an attendee at Gore’s [training](#) lecture in Chicago for junior climateers. I thought a comparison would be apt.

<http://wattsupwiththat.com/2013/07/31/dueling-desktops-anthony-watts-versus-al-gore/#more-90792>

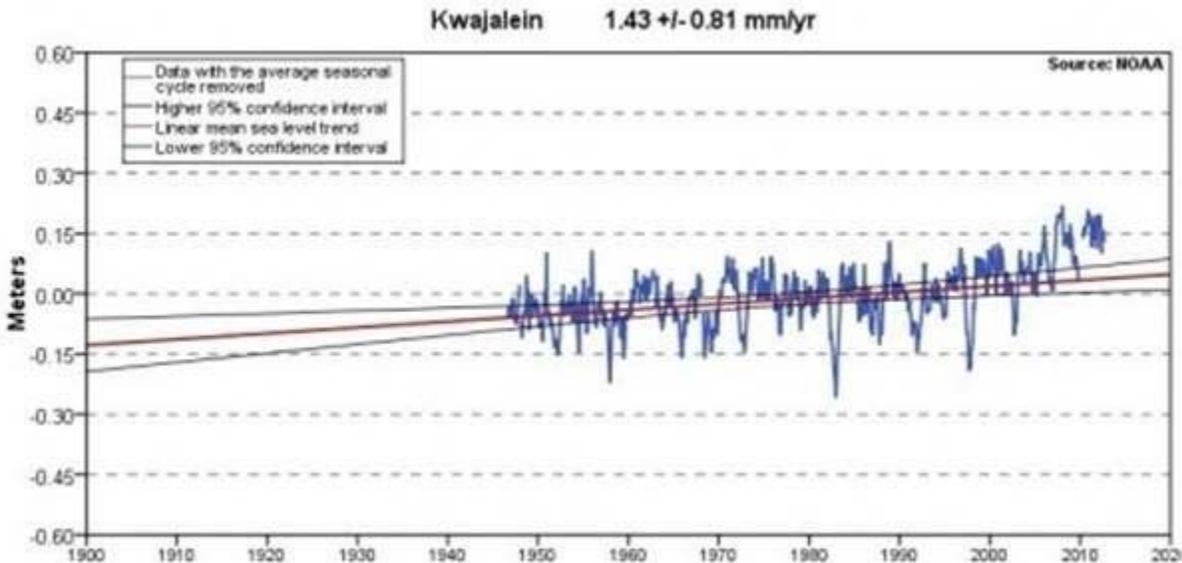
G. THE MARSHALL ISLANDS AND THEIR SEA LEVEL CHANGES

Posted on [July 31, 2013](#) by [Anthony Watts](#)

A short comment by Nils-Axel Mörner

This is the sea level graph (from Kwajalein) recently being circulated and claimed to show an alarming acceleration of a proposed general sea level rise.

Yes, this curve rises fairly rapidly from 1990 to 2012. But for what reason and with what regional message?



This is a sea level graph (from Majuro) and it shows a general sea level stability from 1992 to 2010.

<http://wattsupwiththat.com/2013/07/31/the-marshall-islands-and-their-sea-level-changes/#more-90783>

H. 'SKEPTICAL SCIENCE' SAYS CONCERNS ABOUT DANGEROUS GLOBAL WARMING ARE UNIMPORTANT

Posted on [July 31, 2013](#) by [Guest Blogger](#)

Guest essay by Brandon Shollenberger

We can pack up our bags and go home. The global warming debate is, except maybe as an [academic](#) curiosity. I know this to be true because Skeptical Science says so. And if they say so, it must be true.

Don't believe me? I understand. It's hard to believe. But it's true. You may remember a [post I wrote a couple days ago](#). In it, I called Skeptical Science dishonest for repeatedly promoting a tweet from (not quite) Barack Obama that said:

Ninety-seven percent of scientists agree: #climate change is real, man-made and dangerous.

Read more: <http://OFA.BO/gJsdFp>

As Cook et al's study said absolutely nothing about whether or not climate change is dangerous.

Barry Woods followed up on this point at Skeptical Science in a few comments. That's when the Skeptical Science crowd said concerns about dangerous global warming are unimportant.

<http://wattsupwiththat.com/2013/07/31/skeptical-science-says-concerns-about-dangerous-global-warming-are-unimportant/#more-90741>

I. OCEAN ACIDIFICATION: SEPARATING THE WINNERS FROM THE LOSERS (31 JUL 2013)

Reference: Schlegel, P., Havenhand, J.N, Gillings, M.R. and Williamson, J.E. 2012.

Individual variability in reproductive success determines winners and losers under ocean acidification: A case study with sea urchins. *PLOS ONE* 7: e53118.

Schlegel *et al.* (2012) write that "environmental factors directly affect populations by selecting resilient individuals," noting that "selection at the gametic level, or during early life, has strong and immediate effects at the population level, carrying over into subsequent life stages," such that "heritability of this resilience leads to cascading adaptive effects in subsequent generations." And as an example of this process, they report that "in free-spawning marine organisms, sperm selection during fertilization plays a key role by determining the nature and diversity of genotypes in the subsequent generation (Levitan, 1996, 2008) and thus their resilience to environmental change."

Against this backdrop, Schlegel *et al.* investigated "the effects of CO₂-induced ocean acidification on the early life history stages in the Australasian sea urchin *Heliocidaris erythrogramma*, focusing on intra-specific variation in responses, which can be highly variable for this species (Evans and Marshall, 2005)." More specifically, and "following the A1FI-scenario from the IPCC's 4th assessment report," they "compared the effects of present day conditions for southeast Australia with the end-of-century scenario ($p\text{CO}_2=970$ ppm; pH=0.3 unit reduction) and a high-CO₂scenario ($p\text{CO}_2=1600$ ppm; pH=0.5 unit reduction)," after which the "observed effects on sperm swimming behavior were applied within an established fertilization kinetics modeling framework (Vogel *et al.*, 1982; Styan *et al.*, 2008) to predict fertilization outcomes of single urchin pairs at each $p\text{CO}_2$ level." Last of all, these results "were then compared to observed results from fertilization experiments conducted in the laboratory." Results of the analysis indicated that "acidification significantly decreased the proportion of motile sperm but had no effect on sperm swimming speed," and the four researchers go on to state that the subsequent fertilization experiments "showed strong inter-individual variation in responses to ocean acidification, ranging from a 44% decrease to a 14% increase in fertilization success."

In commenting on their findings, Schlegel *et al.* opine that their results suggest that (1) "some individuals will exhibit enhanced fertilization success in acidified oceans, supporting the concept of 'winners' and 'losers' of climate change at an individual level." And they say that if these differences are heritable, it is likely that (2) "ocean acidification will lead to selection against susceptible phenotypes as well as to rapid fixation of alleles that allow reproduction under more acidic conditions," which phenomena "may ameliorate the biotic effects of climate change if taxa have sufficient extant genetic variation upon which selection can act."

Additional References

Evans, J.P. and Marshall, D.J. 2005. Male-by-female interactions influence fertilization success and mediate the benefits of polyandry in the sea urchin *Heliocidaris erythrogramma*. *Evolution* **59**: 106-112.

Levitan, D.R. 1996. Effects of gamete traits on fertilization in the sea and the evolution of sexual dimorphism. *Nature* **382**: 153-155.

Levitan, D.R. 2008. Gamete traits influence the variance in reproductive success, the intensity of sexual selection, and the outcome of sexual conflict among congeneric sea urchins. *Evolution* **62**: 1305-1316.

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Archived 31 July 2013

J. RICE CULTIVAR RESPONSES TO ATMOSPHERIC CO₂ ENRICHMENT (31 Jul 2013)

Reference

Hasegawa, T., Sakai, H., Tokida, T., Nakamura, H., Zhu, C., Usui, Y., Yoshimoto, M., Fukuoka, M., Wakatsuki, H., Katayanagi, N., Matsunami, T., Kaneta, Y., Sato, T., Takakai, F., Sameshima, R., Okada, M., Mae, T. and Makino, A. 2013. Rice cultivar responses to elevated CO₂ at two free-air CO₂ enrichment (FACE) sites in Japan. *Functional Plant Biology* **40**: 148-159.

In regard to the major crops of the world, Hasegawa *et al.* (2013) write that "the annual rate of yield increase has slowed over the past few decades (Bruinsma, 2009)," but they note that the *demand* for food is *rising*, "mainly due to the increasing population." As a result, they state that "the production of major crops will need to increase by 70% by 2050" - again citing Bruinsma (2009) - in order to "meet the growing demand for crops." And they add that "these production increases must be achieved under changing climate conditions," correctly concluding that "crop improvement programs must take these changing conditions into account."

Working in Japan with four cultivars of rice (*Oryza sativa*) at Shizukuishi in 2007 and 2008, and with eight cultivars at Tsukuba in 2010, Hasegawa *et al.* employed free-air CO₂ enrichment or FACE technology to assess the effects of atmospheric CO₂ enrichment to approximately 200 ppm above ambient - applied each day of the growing season from sunrise to sunset - on rice panicle density, spikelets per panicle, spikelet density, percent of ripened spikelets and single-grain mass, all under the real-world weather conditions that prevailed at these times and places. The eighteen researchers report that the range of final CO₂-induced yield enhancements of the several rice cultivars ranged from 3 to 36%; and they say that "all of the tested yield components contributed to this enhancement."

The fruits of Hasegawa *et al.*'s labors clearly indicate the extreme importance of concentrating rice breeding efforts on cultivars that have strong positive responses to rising atmospheric CO₂ concentrations, because without the help of this highly effective *aerial fertilizer*, we have little hope of being able to meet the *70% increase in crop yields* that will be needed to feed the people of the world a mere *37 years from now*. And for the same reason, breeders of all of the other major food crops of humanity should be pursuing the same course of action as well. In addition, it should be clear to all that we really *need* the extra CO₂ that is being pumped into the air by our burning of coal, gas and oil.

Additional References

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Archived 31 July 2013

K. CLIMATE SCIENTIST EASTERBROOK DEBUNKS SEA LEVEL CLAIMS

Geologist Dr. Don Easterbrook debunks ‘absurd’ new warmist study claiming 1,700 U.S. cities will be below sea level by 2100 — Easterbrook: ‘The rate used by [Lead Author] Strauss for his predictions is more than 10 times the rate over the past century!’

Easterbrook: 'The accelerated rise is based on postulated accelerated warming but there has been no warming in the past 15 years and, in fact, the climate has cooled during that time. So no climatic warming means no accelerated sea level rise as postulated by Strauss...the huge rise of sea level rates proposed by Strauss are absurd and that the maximum sea level rise by 2100 will be less than one foot'

<http://www.climatedepot.com/2013/07/30/geologist-dr-don-easterbrook-debunks-new-warmist-study-claiming-1700-u-s-cities-will-be-below-sea-level-by-2100-easterbrook-the-rate-used-by-lead-author-strauss-for-his-predictions-of/>

L. ANTARCTIC SEA ICE EXTENT SETS SEVERAL NEW RECORDS

Antarctic sea ice extent has been at record levels for nine of the past 10 days, according to NOAA satellite data. The Antarctic sea ice records extend a 34-year history of gradually expanding Antarctic sea ice since satellites first began measuring sea ice in 1979.

<http://sunshinehours.wordpress.com/2013/08/01/wow-9th-daily-record-in-10-days-smashes-record-for-antarctic-sea-ice-extent/>

M. INTERIOR SECRETARY FIRES SALVO AT ‘DENIERS’ UNDER HER SUPERVISION

Newly appointed U.S. Secretary of the Interior Sally Jewell delivered an intimidating message on August 1 to global warming skeptics under her supervision. Jewell told a meeting of Interior Department employees, “I hope there are no climate change deniers in the Department of the Interior.” She also told her underlings that agreeing with her global warming alarmism is “a moral imperative.”

<http://go.bloomberg.com/political-capital/2013-08-02/jewell-no-climate-change-deniers-at-interior/>

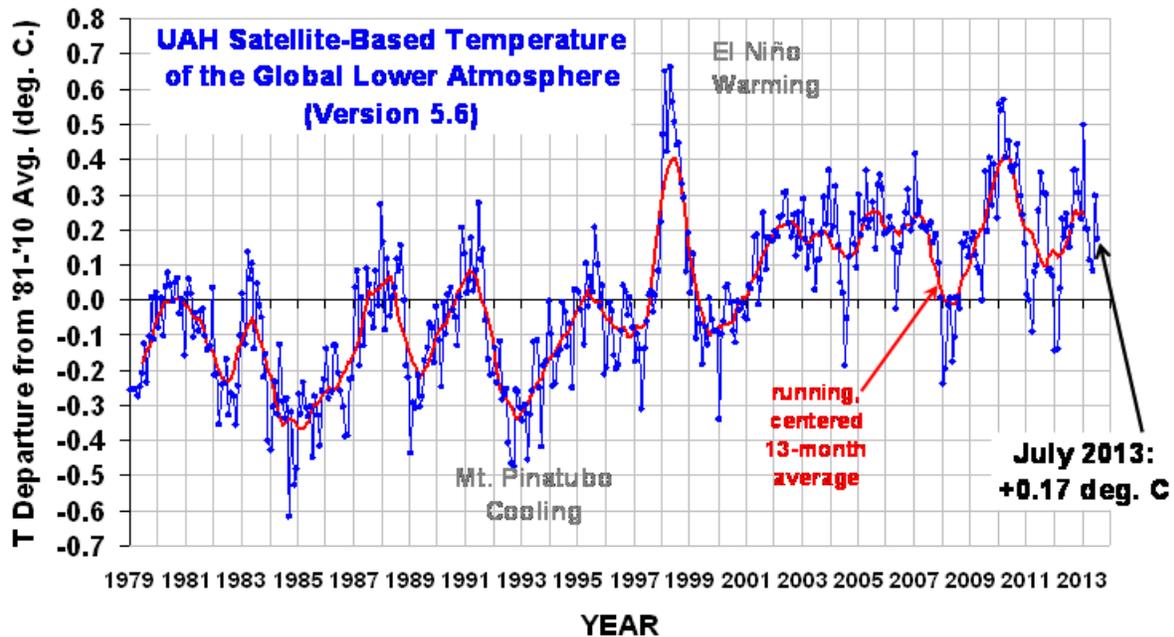
N. MOST OF U.S. COOLER THAN NORMAL IN 2013; STAY TUNED FOR ADJUSTMENTS

Most of the United States was cooler than normal from January 1 through July 31 of this year, according to data compiled by the High Plains Regional Climate Center (HPRCC). Global warming activists who produce temperature reports for government agencies, however, typically add substantial warming to the temperatures recently measured by thermometers at U.S. and global temperature stations, so don’t expect government officials to acknowledge the cooling temperatures throughout the nation.

<http://www.hprcc.unl.edu/products/maps/acis/YearTDeptUS.png>

O. UAH V5.6 GLOBAL TEMPERATURE UPDATE FOR JULY, 2013: +0.17 DEG. C

August 2nd, 2013



The Version 5.6 global average lower tropospheric temperature (LT) anomaly for July, 2013 is +0.17 deg. C (click for large version):

The global, hemispheric, and tropical LT anomalies from the 30-year (1981-2010) average for the last 19 months are:

YR	MON	GLOBAL	NH	SH	TROPICS
2012	1	-0.145	-0.088	-0.203	-0.245
2012	2	-0.140	-0.016	-0.263	-0.326
2012	3	+0.033	+0.064	+0.002	-0.238
2012	4	+0.230	+0.346	+0.114	-0.251
2012	5	+0.178	+0.338	+0.018	-0.102
2012	6	+0.244	+0.378	+0.111	-0.016
2012	7	+0.149	+0.263	+0.035	+0.146
2012	8	+0.210	+0.195	+0.225	+0.069
2012	9	+0.369	+0.376	+0.361	+0.174
2012	10	+0.367	+0.326	+0.409	+0.155
2012	11	+0.305	+0.319	+0.292	+0.209
2012	12	+0.229	+0.153	+0.305	+0.199
2013	1	+0.497	+0.512	+0.481	+0.387
2013	2	+0.203	+0.372	+0.034	+0.195
2013	3	+0.200	+0.333	+0.068	+0.243
2013	4	+0.114	+0.128	+0.101	+0.165

2013 5 +0.083 +0.180 -0.015 +0.112
2013 6 +0.295 +0.334 +0.255 +0.219
2013 7 +0.174 +0.134 +0.215 +0.077

Note: In the previous version (v5.5, still provided due to contract with NCDC) the temps are slightly cooler, probably due to the uncorrected diurnal drift of NOAA-18. Recall in v5.6 we include METOP-A and NOAA-19, and since June they are the only two satellites in the v5.6 dataset whereas v5.5 does not include METOP-A and NOAA-19.

New names of popular files:

uahncdc_lt_5.6
uahncdc_mt_5.6
uahncdc_ls_5.6
Roy Spencer

P. NORMALLY THE HIGH ARCTIC HAS ABOUT 90 DAYS ABOVE FREEZING. THIS YEAR THERE WAS LESS THAN HALF THAT," SAYS STEVEN GODDARD WEBSITE.

Daily mean temperatures for the Arctic area north of the 80th northern parallel, plotted with daily climate values calculated from the period 1958-2002.

<http://ocean.dmi.dk/arctic/meant80n.uk.php>

Q. THE AMERICAN GEOPHYSICAL UNION HAS ISSUED ITS FORMAL STATEMENT ON GLOBAL CLIMATE CHANGE (WITHOUT DATA)

Human-induced climate change requires urgent action.

Humanity is the major influence on the global climate change observed over the past 50 years. Rapid societal responses can significantly lessen negative outcomes.

Extensive, independent observations confirm the reality of global warming. These observations show large-scale increases in air and sea temperatures, sea level, and atmospheric water vapor; they document decreases in the extent of mountain glaciers, snow cover, permafrost, and Arctic sea ice. These changes are broadly consistent with long understood physics and predictions of how the climate system is expected to respond to human-caused increases in greenhouse gases. The changes are inconsistent with explanations of climate change that rely on known natural influences.

Impacts harmful to society, including increased extremes of heat, precipitation, and coastal high water are currently being experienced, and are projected to increase. Other projected outcomes involve threats to public health, water availability, agricultural productivity particularly in low-latitude developing countries), and coastal infrastructure, though some benefits may be seen at

some times and places. Biodiversity loss is expected to accelerate due to both climate change and acidification of the oceans, which is a direct result of increasing carbon dioxide levels.

http://www.agu.org/sci_pol/pdf/position_statements/AGU_Climate_Statement_new.pdf

Jack Saame

R. CLIMATE CHANGE EXPLAINED IN 12 MINUTES

This is a very clear, factual presentation that explains the global warming issues quite well in 12 minutes.

For me this offers the best explanation of the feedback (multiplication) factor of 3 applied by the believers and their computer modelers which is highly disputed by the skeptics. Some skeptics offer a feedback factor of 0.5 which seems to better correlate with the temperature measurements.

https://www.youtube.com/watch?v=0gDErDwXqhc&feature=youtube_gdata_player

Don Shaw

Regards

George