ENVIRONMENTAL ENGINEERING NEWSLETTER

7 OCT. 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. IPCC ACTIVITIES

One of the main IPCC activities is the preparation of comprehensive Assessment Reports about the state of scientific, technical and socio-economic knowledge on climate change, its causes, potential impacts and response strategies. The IPCC also produces Special Reports, which are an assessment on a specific issue and Methodology Reports, which provide practical guidelines for the preparation of greenhouse gas inventories.

Since its inception in 1988 the IPCC has prepared four multivolume assessment reports. They can be viewed under Publications and Data.
http://www.ipcc.ch/activities/activities.shtml#.UkWknD_waJs

B. DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORMWATER DISCHARGES FROM INDUSTRIAL ACTIVITIES -

FRIDAY, SEPT. 27 2013
NOTICES

78 FR 60099-60135

SUMMARY: EPA's Regions 1, 2, 3, 5, 6, 7, 8, 9, and 10 are today proposing for public comment the draft 2013 National Pollutant Discharge Elimination System (NPDES) general permit for stormwater discharges from industrial activity, also referred to as the Multi-Sector General Permit (MSGP). This draft permit, once finalized, will replace the existing permit covering stormwater discharges from

industrial facilities in EPA's Regions 1, 2, 3, 5, 6, 9, and 10 that will expire September 29, 2013, and will provide coverage for industrial facilities in areas where EPA is the NPDES permitting authority in EPA's Regions 7 and 8. This draft permit is similar to the existing permit and will authorize the discharge of stormwater in accordance with the terms and conditions described therein. EPA proposes to issue this permit for five (5) years. EPA seeks comment on the draft permit and on the accompanying fact sheet.

http://www.gpo.gov/fdsys/pkg/FR-2013-09-27/pdf/2013-23660.pdf

C. CARBON MANAGEMENT TECHNOLOGY CONFERENCE 2013

October 21-23, 2013
Hilton Alexandria Old Town Alexandria, VA

This foundational conference , sponsored by the eight major engineering societies (ASME, AIChE, IEEE, ASCE, TMS, SME, SPE and AIST), draws practiced professionals from all engineering disciplines to share their expertise and provide perspective on the reduction of greenhouse gas emissions and adaptation to changing climate. The conference will focus on engineering perspectives regarding technologies, strategies, policies, management systems, uncertainties, and metrics for evaluating alternatives. Gain engineering expertise, experience and perspectives on technologies, strategies, policies, management systems, metrics, and other key issues. Discover novel approaches and new technologies that are instrumental to technical, economic and social advancements in carbon management.
Through robust scheduled sessions, well-known speakers from leading companies and academic institutions, co-located workshops, and networking opportunities, this year's program will address 20+ topics under these four themes:

- Carbon Capture, Utilization and Storage
- Carbon Management Pathways from Electricity Generation to End User
- Potentially Game-Changing Technology and Evaluation
- Engineering Challenges and Solutions for Adaptation to Climate Change

To view the technical program, visit http://fscarbonmanagement.org/content/technical-program
Register today and be part of the one conference focused on the engineering perspectives critical to meeting the challenge of greenhouse gas emissions.
For more information or to register, please visit us at
http://fscarbonmanagement.org/content/cmtc-2013
Arnold Feldman

D. ASME IS DEVELOPING AN ASME ENERGY FORUM – Oil and Gas 2014 entitled Shale Development and Hydraulic Fracturing –Challenges and Opportunities, Exploring Unconventional Resources. It is being planned for March 17–19, 2014 in San Diego and will focus on fracking.

Arnold Feldman

E. EED MEETING ANNOUNCEMENT

The Environmental Engineering Division (EED) is planning two meetings for all its 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 (CMTC), which will take place at the Hilton Alexandria Old Town in Alexandria, VA, October 21-23. The EED meeting will be held the afternoon of **Tuesday, October 22, from 1PM -4PM.**

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 will 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 conferences if you are able.

The call-in information for the East Coast meeting in conjunction with CMTC is:

Phone: 1-866-359-4571
Code: 811 047 1915

For more information on the EED meetings contact:

- East Coast: Arnie Feldman, EED ViceChair, 267-880-2325, jjdsenv@att.net
- West Coast: Andy Miller, EED Chair, 213-244-1809, Miller.Andy@epa.gov

F. WORKSHOP AT CMTC 2013

You are invited to participate in a workshop titled *CCS/CCUS Overview: What It Is and What Are Its Implications?* The workshop is sponsored by the Global CCS Institute in collaboration with the 2013 Carbon Management Technology Conference. It will be held at the Hilton Alexandria Old Town in Alexandria, VA on Sunday, October 20, 2013, and is geared to individuals who are involved in carbon dioxide management but who may not be an expert in all aspects.
Registration for this workshop is free: https://chenected.wufoo.com/forms/registration-ccsccus-overview-workshop/ and a networking reception will be held for all attendees after the completion of the workshop. For those who wish to further enhance their knowledge of carbon management we encourage you to also attend the Carbon Management Technology Conference (CMTC 2013), sponsored by AIChE, ASME, ASCE, IEEE, AIST, SPE, TMS, and SME which begins on Monday October 21. For more information visit the website: http://www.fscarbonmanagement.org/content/cmtc-2013

G. MONDAY, SEPT. 30 2013

COAST GUARD
RULES
NONTANK VESSEL RESPONSE PLANS AND OTHER RESPONSE PLAN REQUIREMENTS

78 FR 60099-60135

SUMMARY: The Department of Homeland Security, U.S. Coast Guard, is promulgating this nontank vessel response plan final rule to further protect the Nation from the threat of oil spills in U.S. waters. This final rule requires owners or operators of nontank vessels to prepare and submit oil spill response plans. The Federal Water Pollution Control Act defines nontank vessels as self-propelled vessels of 400 gross tons or greater that operate on the navigable waters of the United States, carry oil of any kind as fuel for main propulsion, and are not tank vessels. This final rule specifies the content of a response plan and addresses, among other issues, the requirement to plan for responding to a worst case discharge and a substantial threat of such a discharge. Additionally, this final rule updates the international Shipboard Oil Pollution Emergency Plan requirements that apply to certain nontank vessels and tank vessels. Finally, this final rule requires vessel owners or operators to submit their vessel response plan control number as part of already required notice of arrival information. This rulemaking supports the Coast Guard's strategic goals of protection of natural resources and maritime mobility.

http://www.gpo.gov/fdsys/pkg/FR-2013-09-30/html/2013-23716.htm

2) HEALTH – A. PLAGUE, ANIMAL - USA (05): (CALIFORNIA) SQUIRREL

[San Diego] County public health officials warned campers Tuesday [17 Sep 2013] to stay away from common California ground squirrels after 3 of the rodents trapped at a Palomar Mountain campground tested positive for plague.
http://www.eandp-environment.net/Health/Health020701.pdf

3) SAFETY – A. SAFETY MOMENT: FATALITY- DOZER/PIPE

Dozer pulling a trailer with unsecured load. Not sure if he stopped abruptly or if the terrain was a contributing
factor but the dozer operator was killed when the pipe came through the back of the dozer cab. Make sure your contractors are securing their loads while on the ROW.

4. TRANSPORTATION – A. MOST AMERICANS BACK KEYSTONE XL PROJECT, SURVEY FINDS

The U.S. should approve the construction of TransCanada's Keystone XL pipeline, 65% of

Americans said in a Pew Research Center survey. More than 50% of respondents also favor expanded offshore oil and natural gas drilling
http://fuelfix.com/blog/2013/09/26/americans-support-for-keystone-oppose-fracking/

COMMENTS:

A. THE WEEK THAT WAS: 2013-09-28(SEPT. 28, 2013)

By Ken Haapala, Executive Vice President, Science and Environmental Policy Project (SEPP)
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NIPCC: The Nongovernmental International Panel on Climate Change (NIPCC) was established to analyze peer reviewed research on climate change, and report the findings as objectively as possible. The latest reports, **Climate Change Reconsidered II: Physical Science** and the **Summary for Policymakers** are available on the web and the full Physical Science report being printed. They are formatted to match as closely as possible the formatting of the reports of the Intergovernmental Panel on Climate Change (IPCC) to allow policymakers to make side-by-side comparisons of the reports.
One of the great shortcomings of the IPCC is that it was not set-up to evaluate all the influences on climate, both natural and human. Instead, it was set-up to evaluate only the human influences. This shortcoming should be emphasized in the IPCC reports. However, it is often glossed over. Often, when exploring business opportunities or new products, private corporations will form two research teams to pursue alternative approaches, say the green team and the red team. The corporations will staff both teams with highly qualified people and give both equal levels of funding. One can think of the IPCC as the green team and the NIPCC as the red team. However, funding levels are vastly different. According to published reports by the US government, the total Federal funding of climate change activities is greater than $150 Billion since Fiscal Year 1993. The small funding of NIPCC is from private contributors who have no influence on the product. The NIPCC reports can be found at: http://climatechangereconsidered.org/
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IPCC: On Friday, the IPCC released its Summary for Policymakers. The report was not yet complete, it referenced graphs that were not presented and will have to be inserted. Therefore, a side-by-side comparison of the NIPCC and the IPCC reports is premature. However, there are some disturbing omissions. As Roy Spencer points out, estimates of the sensitivity of the climate to increases in atmospheric carbon dioxide (CO2) are missing. Yet, this is the entire political issue. Is the climate sensitive to human emissions of CO2 or not? Does an increase in the molecules of CO2 from 3 to 4 per 10,000 parts of air make a difference in climate?
Further, the report glosses over the fact that there has been no statistically significant rise in surface temperatures for over 16 years. Instead, it asserts a greater certainty in its work than prior reports. It reduced the uncertainty from 10% to 5%, with no empirical basis.
Richard Lindzen writes “The latest IPCC report has truly sunk to level of hilarious incoherence —It is quite amazing to see the contortions the IPCC has to go through in order to keep the international climate agenda going.”
Prior to issuance of the approved report, Steve McIntyre presented an overview on how the IPCC put itself in a mess, rather than properly addressing the hiatus in warming and the associated discrepancy between model projections and observations. He writes: “One cannot help but

wonder whether WG1 [the physical science section] Chair Thomas Stocker might not have served the policy community better by spending more time ensuring that the discrepancy between models and observations was properly addressed in the IPCC draft reports, perhaps even highlighting research problems while there was time in the process, than figuring out how IPCC could evade FOI [Freedom of Information] requests.
The purpose of a physical science is to describe nature, and to understand how it works. It is becoming increasingly evident that IPCC science does not describe nature. Yet, the IPCC intensifies its certainty in its work? For these and other comments see Climategate Continued, IPCC Report, and http://www.climatechange2013.org/images/uploads/WGIAR5-SPM_Approved27Sep2013.pdf
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Support EPA? Although a side-by-side comparison of the two summaries will be presented later, one can examine how the two reports support the EPA's finding that human greenhouse gas emissions, principally CO2, endanger public health and welfare. When announcing its finding on December 7, 2009, the EPA stated that the finding was based on three lines of scientific evidence, which followed the 2007 IPCC report and US government reports:

1. There is a distinct human fingerprint; "hot spot," of a pronounced warming trend centered about 10 km (33,000 feet) above the tropics. EPA claims this to be the physical evidence that supports the theory than CO2 emissions are causing significant global warming.

2. Indirect evidence –the late 20th century warming was unusual –unprecedented and dangerous.

3. Climate models are reliable for policy analysis. All these models forecast significant future warming.

Based on the EPA's finding, government agencies have undertaken calculating the future social costs of carbon dioxide emissions, are attempting to control land use by claiming future floods and dramatic sea level rise, and the EPA announced drastic measures for controlling construction of new power plants, which will effectively prohibit the construction of coal-fired power plants without very expensive, untested technology. Thus, it is important to investigate how solid is the EPA science in light of new, comprehensive, scientific reports on climate change.

1. Hot Spot:

IPCC: The IPCC summary does not discuss the "hot spot", though it discusses atmospheric temperatures. This is a sharp departure from the 2007 report that discussed the hot spot.
NIPCC: The NIPCC summary specifically rejects the "hot spot" because no one can find it. "Observations from both weather balloon radiosonders and satellite MSU sensors show the opposite, with either flat or decreasing warming trends with increasing height in the atmosphere." (p.7)

2. 20thCentury Warming Was Unusual:

IPCC: The last 30 years is "likely to be the warmest 30-year period in Northern Hemisphere in 1400 years (medium confidence) (SPM-3). However, it also states: "Continental-scale surface temperature reconstructions show, with high confidence, multidecadal periods during the Medieval Climate Anomaly (year 950 to 1250) that were in some regions as warm as in the late 20th century. These regional warm periods did not occur as coherently across regions as the warming in the late 20th century (high confidence). {5.5} (SPM-4)" [The late 20th century global warming was not that unusual and largely confined to the Northern Hemisphere.]

NIPCC: “The glaciological and recent geological records contain numerous examples of ancient temperatures up to 3ºC [about 6ºF], or more, warmer than the peak reported at the end of the twentieth century.” (p.8)

3. Climate Models Are Reliable:

IPCC: “The long-term climate model simulations show a trend in global-mean surface temperature from 1951 to 2012 that agrees with the observed trend (very high confidence). There are, however, differences between simulated and observed trends over periods as short as 10 to 15 years (e.g., 1998 to 2012). {9.4, Box 9.2}” (SPM-10)

NIPCC: “Climate models project an atmospheric warming of at least 0.3ºC over the past 15 years; in fact, temperature stasis or slight cooling has occurred.” (p.9)

“**We conclude that current generation of GCMs [**Global Climate Models] **are unable to make accurate projections of climate even 10 years ahead, let alone the 100 year period that has been adopted by policy planners. The output of such models should therefore not be used to guide public policy formulation until they have been validated and shown to have predictive value.”** (p.7) [boldface in original]

Conclusion:

The IPCC Summary fails to support the critical physical evidence the EPA claimed. It weakly supports the other two lines of evidence, ignoring the fact that surface temperatures have not increased in 16 years. The NIPCC Summary rejects all three lines of evidence the EPA offered. It is sufficient to say that the EPA endangerment finding was premature, at best. At worst, it is completely wrong. The links to the two reports are provided above.

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MET Model: Independent scientist Nicolas Lewis and Andrew Montford are questioning a possible strong bias in the global climate model use by the UK MET Office. As described by the IPCC, in the climate models the warming influence of CO2 is off-set, in part, by aerosols, minute particles in the atmosphere, such as sulfur dioxide. Among other things, aerosols promote the formation of clouds. Climate alarmists claim that the failure of the atmosphere to warm with increasing CO2 is due to increases in aerosols. Thus, high climate sensitivity to CO2 is offset by high climate sensitivity to aerosols.

Nicolas Lewis examined the procedures used in running the MET models and concluded that the process does not permit the possibility of a low climate sensitivity to both CO2 and aerosols. The MET office has been alerted about the issue and is under review. If correct, then MET model and procedure have a significant built-in warming bias, which may apply to other climate models as well. Certainly, when comparing runs to observations for the tropics, the climate models greatly overestimate the warming. Please see links under Model Issues

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EPA: In *Forbes,* Larry Bell discusses the recent testimony of EPA Administrator Gina McCarthy before the US House Energy Committee. Repeatedly, she was asked about the 26 objective indicators EPA has on its web site for tracking climate change and how the new regulations on new coal-fired will affect these indicators. She evaded the questions and did not identify any discernible health and welfare benefits from the new regulations. Bell concludes: “the apparent goal of the EPA’s current and proposed greenhouse gas regulations is to persuade the international community, particularly China, India, and other developing nations, to follow the Obama administration’s U.S. leadership over an economic precipice.” See link under EPA and other Regulators on the March

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Secret Science: In *Forbes*, Geoffrey Kabat discusses EPA's evasion of a House committee subpoena to produce data justifying EPA regulation of minute air particles (PM2.5, 2.5 micrometers). These regulations are based on two studies, the Harvard Six Cities Study (HSCS) and the American Cancer Society's Cancer Prevention Study II (CPS II). **Citing confidentiality, and other reasons, the EPA has refused to publish or allow public review of these studies.** A separate study by Stanley Young and Jesse Xia of the National Institute for Statistical Sciences calls into question the validity of the two secret studies. There is no justification for basing regulations on secret studies, but such is science at the EPA. See links under EPA and other Regulators on the March

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Fred Singer: Although he is traveling in Europe promoting the new NIPCC report, two articles appeared featuring SEPP Chairman S. Fred Singer. One is by him on Washington's war on coal and the absurdity it involves. The second is an interview of him by Larry Bell on simplistic notions behind the claims of unprecedented sea level rise. See Articles # 1 and #2.

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Heat Engine: Five-time IPCC expert reviewer has a basic tutorial on the climate system as a heat engine. Energy input is mainly short wave radiation from the sun. Energy output is mainly long wave radiation from every surface on the earth and from every level in the atmosphere, including clouds and aerosols. See link under Challenging the Orthodoxy.

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Number of the Week: 0.065ºC. In an amusing display of mathematics, Luboš Motl calculates that if the atmospheric warming is hiding in the ocean in the layer between 0 to 2000 meters (0-6560 feet), then it would have increased temperatures by 0.065ºC (0.12 ºF) since the 1960s. He reports that the Argo web site has an estimate of 0.06ºC since the 1960s, assuming the instruments can measure that precisely.

Commenting on the calculations, Judith Curry asks: "So, can anyone figure out why 0.06C is a big deal for the climate? Or how all that heat that is apparently well mixed in the ocean could somehow get into the atmosphere and influence weather/temperatures/rainfall on the land? Or is sequestering heat in the ocean a fortuitous 'solution' to the global (surface) warming problem?" See links under Changing Seas.

http://www.sepp.org/twtwfiles/2013/TWTW%209-28-13.pdf

B. SIX MYTHS ABOUT RENEWABLE ENERGY

The impact on jobs and other assumptions that don't hold up anymore

Yet many of the things we think we know about renewable energy go back to the earliest arguments. Many of the debating points we hear today are based on outdated facts and assumptions that don't hold up anymore.

So, we set out to look at a few persistent myths or beliefs held by both supporters and critics of renewable energy. We've focused largely on wind and solar power, in part because they've shown explosive growth in recent years but also because they are at the center of political debates over energy.

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

C. WONDERFULLY WASTEFUL (NOT ENGINEERING, BUT WELL SAID, GHH)

By The Editors

The Environmental Protection Agency's recently announced decision to, in effect, ban the construction of traditional coal-fired power plants in the United States is a non-solution to a hypothetical problem, enacted upon a legal basis that is shaky and an economic basis that is nonexistent. The cost-benefit analysis is almost entirely one-sided: The costs will be very high, and the benefits the EPA hopes to secure will remain out of reach.

The EPA is demanding that new U.S. plants that will use coal to generate electricity must meet standards that today are met by no commercial coal-fired plant operating anywhere in the world. There are, however, two plants coming on line — one in Saskatchewan, one in Mississippi — that incorporate new technology designed to capture enough carbon dioxide to satisfy the EPA demands. Whether that new technology will be effective in practice remains to be seen; whether it will be both effective and cost-effective is a much more important and complex question, one that the EPA has no genuine interest in contemplating.

That is a problem, inasmuch as the Clean Air Act requires that the EPA perform a cost-benefit analysis of new rules. EPA administrator Gina McCarthy not only says that the agency has conducted such an analysis but goes on to characterize it as "wonderful," and we are indeed filled with a sense of wonder at her proclamation, though perhaps not in the way she intended.

The costs remain a mystery. The industry expects them to be high, but how high is anybody's guess: The CO_2-capture technology that the EPA expects to become standard as a result of its new mandate is, as noted, not currently in commercial use. There is no demand in the market for it, and its costs can therefore be estimated on a wild-guess basis at best.

It is easier to estimate the benefits: They will be nonexistent. Even if we assume that the general thrust of the case for anthropogenic global warming is accurate (an assumption that requires setting aside the recent failure of climate-change models and the less confident scientific consensus as to the meaning of recent data), the fact remains that global warming is, if it is anything at all, global. Local controls on U.S. power plants, even if they are draconian, will have little impact on the overall atmospheric composition of the planet and its effect on global temperatures.

Carbon dioxide is only one greenhouse gas among many, and the United States is not the world's largest producer of it. The United States, in fact, produces about 15 percent of the world's carbon-dioxide emissions, and U.S. power plants are responsible only for about 33 percent of that 15 percent. And the new rule applies only to newly constructed plants, though the EPA has signaled that it intends to demand the retrofitting of existing plants in the future.

What all this means is that even if the EPA were wildly successful in its implementation of the new standards, it still would not achieve any substantial reduction in global greenhouse-gas emissions. It is equally likely, if not more, that it will achieve an increase instead: Being a fungible commodity, the coal not consumed by U.S. generators will find its way to China, India,

and the rest of the developing world, where it will be consumed in high-pollution plants that make those in the United States look as pure as vestal virgins by comparison.

So: Costs unknown, benefits negligible. “Wonderful,” indeed.

No doubt surviving members of the 88th Congress, which passed the Clean Air Act, are filled with a similar sense of wonder that their law is being used to police carbon dioxide emissions, an outcome the legislators did not intend. The legal basis for declaring carbon dioxide a “pollutant” under the act is questionable at best, as is the EPA’s rationale for picking and choosing what sorts of emitters will be subject to its new rules. If you would like a preview of what medicine is going to look like under Obamacare, consider the high-handed, letter-of-the-law-be-damned approach of the EPA and the courts that have enabled it.

The new rule may prove wonderful for the manufacturers of the capture technology that will effectively be mandated. As with the case of Solyndra et al., this maneuver is not about producing environmental benefits but about creating markets for politically favored firms and industries. But even those cronies may fare less well than they expect to.

The Obama administration, despite its obvious desire, has not yet been successful in strangling the natural-gas renaissance that is changing the face of the American energy industry. Though coal remains the largest single source of electricity, it already has been falling out of favor with those building new generating capacity, because natural gas is cheaper and plentiful. It is also less damaging to the environment, contra the ill-informed hysteria about the gas-extraction technique known as fracking. But the United States has a complex economy, and there is no single “right” source for fuel. Left to its own devices, the industry probably will move toward natural gas and away from coal, but coal will remain an important part of the picture for the foreseeable future.

In 2012, Barack Obama became the first major-party presidential candidate since statehood to fail to win in a single county of West Virginia. He lost the statewide vote by a substantial margin, with two out of three against him . The people of West Virginia rightly appreciated that their best-known commodity is the target of a regulatory jihad by the White House that has no environmental or economic justification.

The real motive here is the administration’s messianic pretentions, its belief that its bureaucrats and managers are more humane and more intelligent than the producers and consumers over whom they reign, and that they have been chosen to lead the United States into a future that is relatively free of such relics of the Industrial Revolution as coal-fired power plants and petroleum products. Unhappily for them, there is a wide gulf between social engineering and real engineering, and the most impressive products the green-energy revolution has delivered so far are a couple of nifty electric motorcycles — which are recharged by a power grid that gets 40 percent of its juice from coal.

A functioning modern society requires reliable electricity. A modern industrial economy requires affordable electricity. To impose incalculable costs on electricity generation in exchange for ideological satisfaction with no real-world environmental benefit is the sign of an agency that has

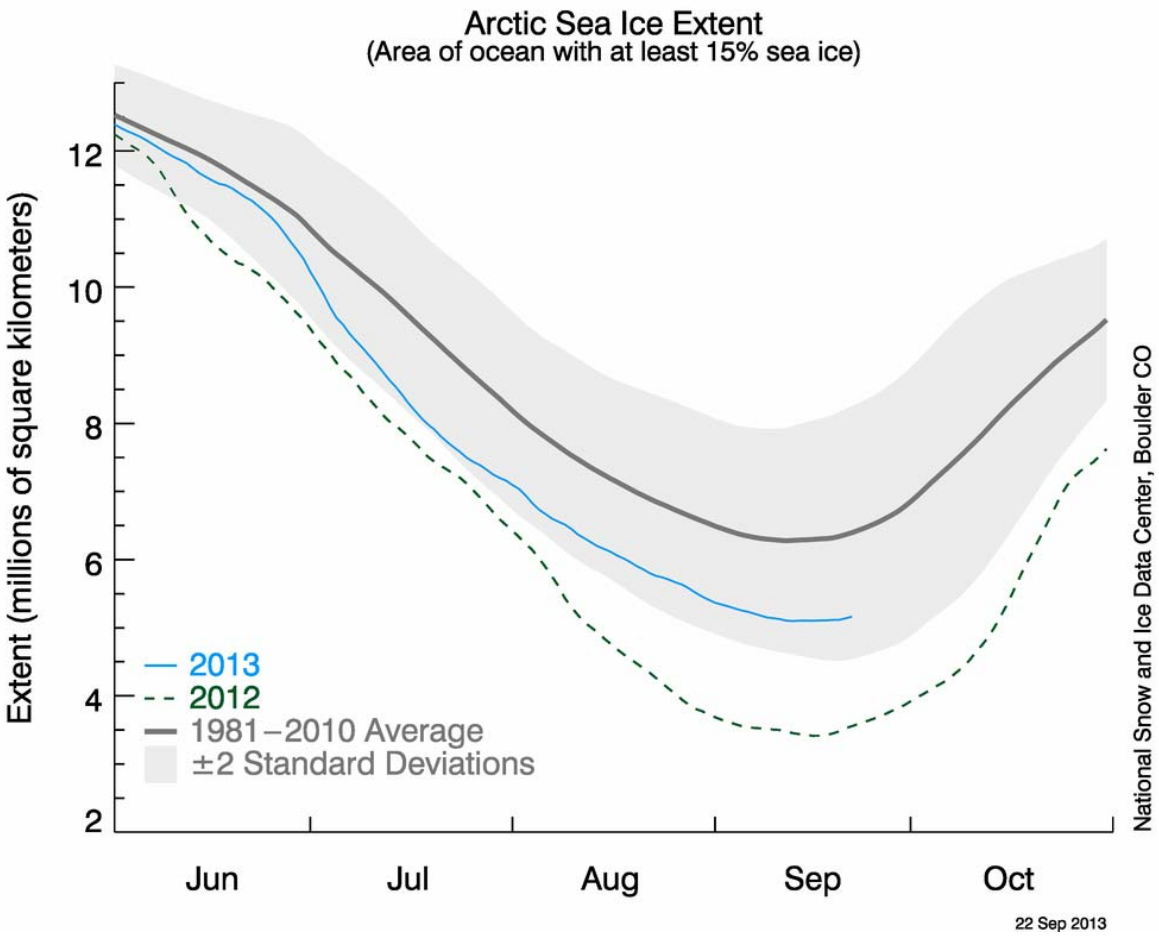
put its own political agenda ahead of the national interest, playing fast and loose with the law in the process. The EPA is a menace, and Congress should put it on a leash.

Paul Olivett, Associate Publisher
National Review, Inc.

D. ENERGY PRODUCERS WORK TO EXPLOIT RICHES OF CALIF. SHALE PLAY

Energy producers are finding it hard to tap the Monterey Shale formation in California, which is estimated to contain about 15.4 billion barrels of recoverable shale oil, observers say. Several techniques, including hydraulic fracturing and steam injection, have been applied, but there have been no breakthroughs in production. "My view is we do the easy oil first, like the Bakken," AllianceBernstein oil and natural gas analyst Bob Brackett said, adding that "time will bring us back to the Monterey."
http://online.wsj.com/article/SB10001424127887323932604579052933974060844.html?mod=dist_smartbrief

E. ARCTIC ICE MINIMUM INCREASED BY 60% IN 2013 OVER 2012



Don Shaw

F. GULF OIL SPILL

Study: Creatures on sea floor need years to recover

By Matthew Tresaugue

Tiny organisms living on the soft, sandy floor of the Gulf of Mexico near BP's ill-fated Macondo well will need decades to recover from harm caused by the 2010 oil spill, a new report concludes.

The study, published this week in the scientific journal PLoS One, found most damage to life on the sea floor within 11 square miles around the wellhead, with at least some injury to bottom-dwelling animals for about 57 square miles.

Researchers said the study represents the first attempt to show the spill's impact on the deepwater communities at the base of the Gulf's food chain. The study, funded in part by BP, will be used by the federal government to determine the ecological toll of the spill and how much the London-based company should pay to mitigate the damage.

"Early on there was a widespread expectation that there would be no effects in the deep sea, that the oil would float," said Paul Montagna, one of the study's authors and a marine biologist at

the Harte Research Institute for Gulf of Mexico Studies in Corpus Christi. “What we found were effects for many miles.”

BP questions findings

The research team, which included scientists from the University of Nevada and the National Oceanic and Atmospheric Administration, looked at sediment samples taken during two surveys in fall 2010 after 193 million gallons of oil had flowed from the well.

The analysis found a correlation between the abundance and diversity of crustaceans and tiny worms in the mud and hydrocarbons and heavy metals linked to the well. The scientists did not see a similar tie between marine life and natural seeps of oil.

Cynthia Cooksey, a scientist with the National Oceanic and Atmospheric Administration, said researchers currently are analyzing data collected from sites sampled in spring 2011. “This is not yet a complete picture,” she said.

More research ahead

BP questioned the initial findings, saying the researchers provided no data to support the claim that it could take decades for the species in the study to recover.

“In fact, the researchers acknowledge that little is known about recovery rates of these communities following an event such as this,” said Jason Ryan, a BP spokesman in Houston. The study “confirms that potential injury to the deep sea soft sediment ecosystem was limited to a small area in the immediate vicinity of the Macondo well-head” first identified in 2010.

Montagna, the study’s co-author, said he expects it will take a long time for the ecosystem to recover because the deep sea is as cold as a refrigerator. “It’s certainly reasonable to assume that the oil won’t degrade for awhile,” he said.

The research team hopes to take more samples this year and plans to follow the sea floor’s recovery over time, Montagna said.

The analysis is part of the Natural Resources Damage Assessment, the government’s primary tool to hold BP accountable. Federal law requires the offshore well’s primary leaseholder, BP, to cover the cleanup costs and a portion of the damage, but the company can challenge the scientific findings in court.

F. MODELING TEMPERATURE, SEA LEVEL PRESSURE AND PRECIPITATION: CMIP5 VS. CMIP3 (24 SEP 2013)

Reference

Bhend, J. and Whetton, P. 2013. Consistency of simulated and observed regional changes in temperature, sea level pressure and precipitation. *Climatic Change* 118: 799-810.

Introducing their study, Bhend and Whetton (2013) write that "over the past decade, demand for spatially explicit climate change information for impact and adaptation assessment has been steadily increasing." But they note that "a comprehensive assessment of climate model performance at the grid box scale in simulating recent change ... is not available at present." And, therefore, they set about to try to fill that void.

More specifically, the pair of researchers compared seasonal temperature, sea level pressure (SLP) and precipitation data for the most recent 50-year period common to both observations and simulations, with the temperature observations coming from the Goddard Institute for Space Studies (Hansen *et al*., 2010) with 1200-km smoothing, the SLP observations coming from the gridded HadSLP2 data set (Allan and Ansell, 2006)

aggregated to 5° x 5° blocks, and the precipitation observations coming from the Global Precipitation Climatology Centre (Beck *et al*., 2005) on a 2.5° x 2.5° grid basis.

In discussing their findings, the two Australian researchers report that with respect to *temperature*, "significant inconsistencies can be found in the majority of CMIP3 and CMIP5 models in the Indian Ocean and Indonesia, the Arctic, and north-western Africa and south-western Europe in boreal summer (JJA), and central Asia in DJF where models underestimate the observed warming." In addition, they say that the models "do not reproduce the regional cooling or lack of warming over parts of the southern Ocean and western Atlantic and the north-eastern and south-eastern Pacific."

With respect to *sea level pressure*, they report that "the majority of the models significantly underestimate the magnitude of the observed decrease in SLP in parts of the high latitudes in the respective winter months," and that "additionally, most of the models underestimate the magnitude of the observed increase over Africa and tropical South America in DJF, and a smaller fraction of models also in the tropical Atlantic and the eastern Indian Ocean."

Finally, with respect to *precipitation*, the real-world data indicate it to be "strongly variable in space and large in magnitude in some regions," while "the simulated changes are considerably weaker but generally consistent with the observed change, except in boreal spring," when there are "some coherent areas of inconsistencies shared across models."

Most importantly of all, however, Bhend and Whetton say they "find no improvement from CMIP3 to CMIP5 with respect to consistency of simulated local trends per degree warming in near-surface temperature, SLP, and precipitation with the observed change." Or as they also more bluntly put it, "recent model development has not significantly altered our understanding and description of long-term regional change in these variables."

Clearly, progress in climate modeling of this nature over the past several years has essentially been no progress at all.

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Archived 24 September 2013

G. THE OUTLOOK FOR MODELING CLOUDS (ADEQUATELY) ... IS STILL CLOUDY (24 SEP 2013

Reference

Lauer, A. and Hamilton, K. 2013. Simulating clouds with global climate models: A comparison of CMIP5 results with CMIP3 and satellite data. *Journal of Climate* 26: 3823-3845.

In a revealing paper published in the American Meteorological Society's *Journal of Climate*, Lauer and Hamilton (2013) report that numerous previous studies from the Coupled Model Intercomparison Project phase 3 (CMIP3) showed *quite large biases* in the simulated cloud

climatology affecting *all* GCMs (Global Climate Models), as well as "a remarkable degree of variation among the models that represented the state of the art circa 2005." So what's the case today? The two researchers provide an update by describing the progress that has been made in recent years by comparing mean cloud properties, interannual variability, and the climatological seasonal cycle from the CMIP5 models with results from comparable CMIP3 experiments, as well as with actual satellite observations.

After conducting their several analyses, Lauer and Hamilton concluded that "the simulated cloud climate feedbacks activated in global warming projections differ enormously among state-of-the-art models," informing us that "this large degree of disagreement has been a constant feature documented for successive generations of GCMs from the time of the first Intergovernmental Panel on Climate Change assessment through the CMIP3 generation models used in the fourth IPCC assessment." And they add that "even the model-simulated cloud climatologies for present-day conditions are known to depart significantly from observations and, once again, the variation among models is quite remarkable (e.g., We are, 2004; Zhang *et al*., 2005; Waliser *et al*., 2007, 2009; Lauer *et al*., 2010; Chen *et al*., 2011)."

As for some other specifics, the two researchers determined that (1) "long-term mean vertically integrated cloud fields have quite significant deficiencies in all the CMIP5 model simulations," that (2) "both the CMIP5 and CMIP3 models display a clear bias in simulating too high LWP [liquid water path] in mid-latitudes," that (3) "this bias is not reduced in the CMIP5 models," that (4) there have been "little to no changes in the skill of reproducing the observed LWP and CA [cloud amount]," that (5) "inter-model differences are still large in the CMIP5 simulations," and that (6) "there is very little to no improvement apparent in the tropical and subtropical regions in CMIP5."

In closing, Lauer and Hamilton indicate there is "only very modest improvement in the simulated cloud climatology in CMIP5 compared with CMIP3," and they sadly state that even this *slightest of improvements* "is mainly a result of careful model tuning rather than an accurate fundamental representation of cloud processes in the models."

So, the outlook for adequately modeling clouds and cloud processes, after all these years of trying, must still be characterized as *cloudy*.

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Weare, B.C. 2004. A comparison of AMIP II model cloud layer properties with ISCCP D2 estimates. *Climate Dynamics* 22: 281-292.
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Archived 24 September 2013

H. PLASTIC RESPONSES OF A MARINE PICOPLANKTON TO OCEAN ACIDIFICATION (25 SEP 2013)

Reference

Schaum, E., Rost, B., Millar, A.J. and Collins , S. 2013. Variation in plastic responses of a globally distributed picoplankton species to ocean acidification. *Nature Climate Change* **3**: 298-302.

According to Schaum *et al*. (2013), "marine phytoplankton are the foundation of ocean ecosystems," adding that (1) "these small but mighty microbes are responsible for roughly half of global carbon fixation," and that (2) they "form a fundamental part of the biological carbon pump that exports fixed carbon to the deep ocean." And in light of the *tremendous significance* of these minute but "mighty microbes," they further note the great concern that holds sway in many quarters of the scientific (and political) world with respect to the potential negative effects the projected future increase in the atmosphere's CO_2 concentration may have on them, as well as on the several trickle-down effects that would follow in their wake. But they *also* indicate that "empirical studies so far predict changes in phytoplankton communities using single or a few genotypes to represent functional groups," whereas the real-world variation in responses within functional groups "has not been quantified." Thus, they proceed to describe what they did to initiate the acquisition of that essential knowledge.

In the words of the four researchers, they used "16 ecotypes of *Ostreococcus tauri* from nine habitat types" - which "were obtained from the Roscoff Culture Collection and the Plymouth Marine Laboratory, grown in Keller medium and made clonal by dilution, so that each culture originated from single cells" that were "acclimated for 5-7 asexual generations to 380 ppm CO_2 or 1,000 ppm CO_2 in a closed-system and grown in semi-continuous batch cultures at low densities" - in order to quantify variations in plastic responses to elevated CO_2 for ecologically relevant traits such as photosynthesis," while also characterizing "changes in traits affecting food quality for five of these ecotypes" and noting as an aside that "*O. tauri* is [1] the smallest known free-living eukaryote, is [2] globally distributed, has [3] distinct ecotypes and is [4] an important primary producer, making it [5] ideal for eco-evolutionary studies."

In describing their findings Schaum *et al*. say they were able to "link plasticity in photosynthesis rates to changes in the relative fitness of ecotypes during asexual growth," and that they were further able to "use this link to predict which ecotypes are likely to rise in frequency in a high-CO_2 environment." More specifically, they report that the 2.63-fold increase in the air's CO_2 content of their experiment led to increases in *photosynthetic* rates among the 16 ecotypes they studied that ranged from 1.02- to 2.18-fold greater than the current mean, while CO_2-induced *size* differences among ecotypes were found to range from 1.3- to 1.9-fold greater than the current mean. Likewise, differences in plastic responses for C/N ratios, which partly determine

the *food quality* of phytoplankton, were found to range from 1.06- to 1.56-fold greater than the current mean.
The four scientists conclude their work by stating that "as CO_2 levels increase, *O. tauri* will grow and photosynthesize faster, and have larger cells with a higher C/N ratio than contemporary cells," with the result that "*Ostreococcus*, along with other green algae and cyanobacteria, are likely to increase in abundance in high-CO_2 conditions" with concomitant benefits for the biosphere.
Archived 25 September 2013

I. ENSO AND PDO EXPLAIN TROPICAL AVERAGE SSTS DURING 1950-2013

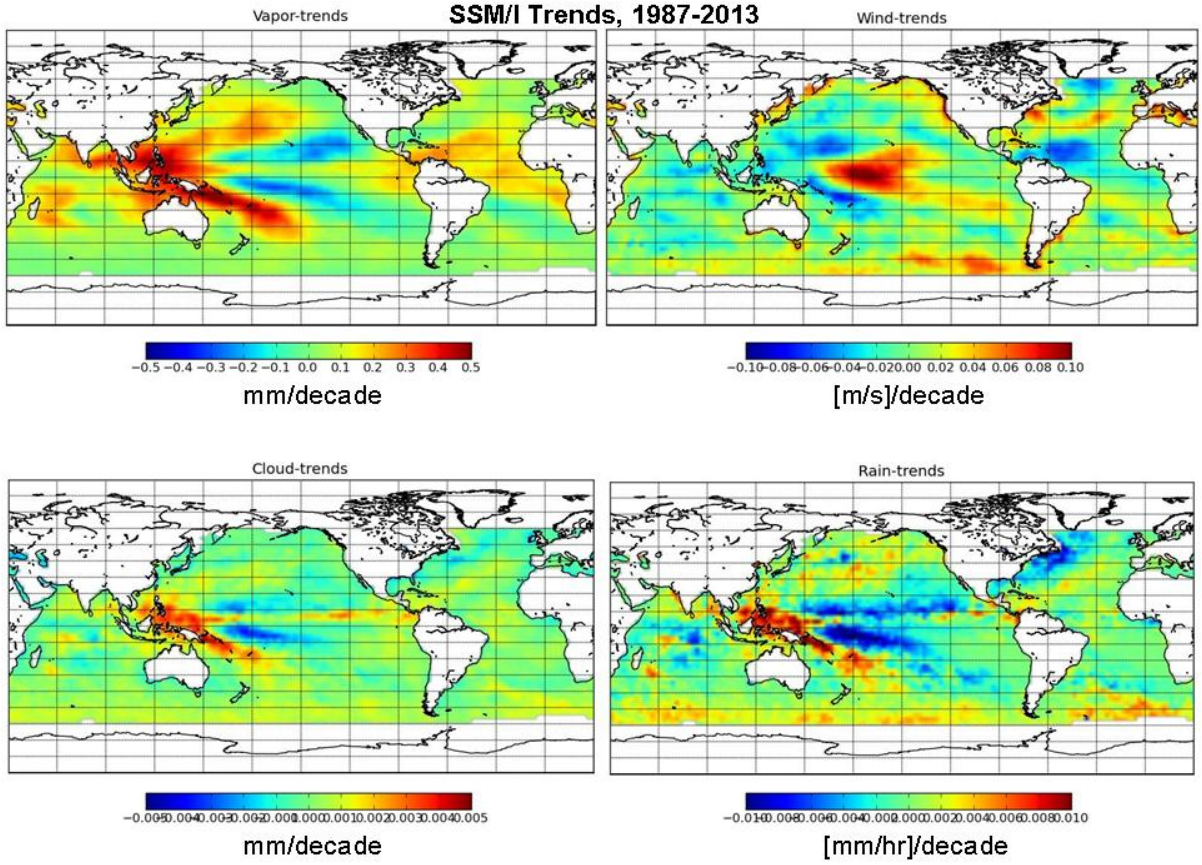
September 26th, 2013
As most of you are aware, the dominant mode of tropical climate variability is the El Nino Southern Oscillation (ENSO), comprised of El Nino (warm ENSO phase) and La Nina (cool ENSO phase) activity.
The IPCC has traditionally maintained that El Nino and La Nina activity effectively cancel each other out over time and so ENSO can't cause multi-decadal time scale warming or cooling. Some of us think this is nonsense, since we know that there are ~30 year periods when El Ninos are stronger, then ~30 year periods when La Nina is stronger.
So, what does 30 year natural climate change have to do with long-term anthropogenic global warming? Well, AGW is can only explain warming over the last 60 years or so, because there weren't appreciable greenhouse gas emissions before then. And it just so happens that the last 60 years was comprised of 30 years of stronger La Ninas (cool conditions) followed by 30 years of stronger El Ninos (warm conditions). So, it is only "natural" that some recent papers have (finally!) begun to explore the potential role of natural climate fluctuations in explaining at least some of recent warming (or lack thereof)
http://www.drroyspencer.com/
Roy Spencer

J. ON CHANGING ENSO CONDITIONS: THE VIEW FROM SSM/I

September 24th, 2013

Today I will show the gridpoint linear trends from those products for the period July 1987 through last Saturday (21 September 2013). The first one (upper left corner) is similar to the one Frank Wentz has at the Remote Sensing Systems website, and shows gridpoint trends in

vertically integrated vapor since July 1987 (click for large version):



http://www.drroyspencer.com/
Roy Spencer

L. REP. MURPHY URGES GAS INDUSTRY TO WORK HARDER TO ENGAGE PUBLIC ABOUT DRILLING

The U.S. natural gas industry must better engage the public about its story, instead of allowing others who may not have the facts to do so, said Rep. Tim Murphy, R-Pa. This comes after he held discussions with foreign government officials who expressed concern about the risks associated with gas drilling. "The field is filled with brilliant engineers and scientists and technicians" who can accurately explain the process, Murphy said
http://www.bizjournals.com/pittsburgh/blog/energy/2013/09/murphy-natural-gas-needs-to-tell-its.html

M. MODELS OF MISINFORMATION -- CLIMATE REPORTS MELT UNDER SCRUTINY

By Marlo Lewis
Published September 26, 2013

A last-ditch effort to refute climate "skeptics"—people unconvinced that we need to spend trillions to reshape our economies to halt or slow "climate change"-- has failed.

Last week, the National Academy of Sciences (NAS) published a study by 13 prestigious atmospheric scientists that supposedly provides "clear evidence for a discernible human influence on the thermal structure of the atmosphere."

The NAS researchers pointedly echo the famous declaration by the United Nation-sponsored Intergovernmental Panel on Climate Change, or IPCC, that the "balance of evidence suggests a discernible human influence on global climate." With this new study, the authors claim to clinch the case. The IPCC, we're supposed to believe, has been right all along.

With the IPCC now issuing the first segment of its latest mammoth study on the same topic, readers should take the NAS pronouncement with a large grain of salt—and the IPCC report too.

This is an attempt to change the subject and ignore the elephant in the room: the crisis in "consensus" climate science arising from the growing mismatch between model-predicted warming and observed warming.

Less warming means smaller climate impacts, and less ostensible need for radical changes in the way we live to deal with them.

The urgent issue in climate science today is not whether man-made global warming is real but whether the climate models that scientists use to predict it are realistic enough to assess future climate change and inform public policy. And scientists themselves are pointing this out.

The real, observable evidence increasingly shows that the models, which are no more than computer simulations based on the data and assumptions that scientists currently think are relevant, are way out of line with the changes that scientists are able to measure. And the gap is widening.

Consider some recent science on these matters.

John Christy, a distinguished climate scientist and director of the Earth System Science Center at the University of Alabama in Huntsville (UAH) found that all 73 computer model runs performed by the IPCC as of June 1, 2013 overshoot the observed warming of the tropical atmosphere during the previous 34 years.

And despite the fact that global carbon dioxide emissions are increasing more rapidly than most models assumed (due largely to industrial growth in India and China), the temperatures recorded by the NASA-supported Remote Sensing Systems shows no warming in the earth's middle atmosphere, or troposphere, over the past 16-plus years.

German climatologist Hans von Storch has found that IPCC climate models project warming trends as low as actual recorded observations only 2% of the time.

The monthly journal Nature Climate Change reports that over 20 years (1993-2012), the warming trend computed from 117 climate model simulations (0.3°C per decade) is more than twice the observed trend (0.14°C/decade). Over the most recent 15 years (1998-2012), the computer-simulated trend (0.21°C/decade) is more than four times the observed trend (0.05°C/decade)—a trend that is pretty close to a flat line.

These are huge inconsistencies, and they matter because less warming means smaller climate impacts, and less ostensible need for radical changes in the way we live to deal with them.

The NAS researchers briefly note the discrepancy between warming projections and observations but then ignore its implications.

Rather than confront the failure of increasingly overstretched climate models, the NAS study emphasizes the agreement between satellite observations and the model-projected combination

of warming in the troposphere and cooling in the atmospheric layer above it, the lower stratosphere.
It's the match between the computer-projected "fingerprint" and the observed "thermal structure" that supposedly demonstrates a "discernible human influence" on global climate.
But there's less to this finding than meets the eye, because according to the study, the "human influence" cooling the lower stratosphere is predominantly the presence of man-made ozone depleting substances, not greenhouse gases.
In fact, a study cited by the NAS researchers, found that the "influence of greenhouse gases" on stratospheric temperatures "is not yet clearly identifiable." Contrary to appearances, they have not really found the smoking gun of man-made global warming.
But even if the NAS study did finally find the model-projected greenhouse "fingerprint" in the atmospheric data, it would not refute those who have long argued that the models are alarmist and project too much warming.
After all, few prominent skeptics of the sky-is-falling school of global warming actually deny that man-made climate change is real.
What they doubt is that climate change is a "planetary emergency" brought on by rapidly rising projected temperatures, that reducing carbon dioxide emissions would detectably benefit public health and welfare, and that mankind has nothing to fear from carbon taxes, cap-and-trade, renewable energy mandates, and other forms of centralized energy planning.
Those radical forms of social engineering, it turns out, are the real short-term threat of climate change. And the science-policy community that is pushing them is substituting heated rhetoric for real data that doesn't support their agenda.
Marlo Lewis, Ph.D. is a Senior Fellow at the Competitive Enterprise Institute.

N. REACTIONS TO IPCC AR5 SUMMARY FOR POLICY MAKERS

Posted on September 27, 2013 by Anthony Watts

Andrew Montford at Bishop Hill:
Ducking, diving, bobbing and weaving are the general themes of the Summary for Policymakers, just released this morning.
You would imagine that the document would review what was said last time round and how things have changed since that time, but you'd be wrong. This is, after all, the bureaucracy at work: difficulties have to be brushed under carpets and stones left unturned.
…The general theme of obscurantism runs across the document. Whereas in previous years the temperature records have been shown unadulterated, now we have presentation of a single figure for each decade; surely an attempt to mislead rather than inform. And the pause is only addressed with handwaving arguments and vague allusions to ocean heat.
http://www.bishop-hill.net/blog/2013/9/27/thoughts-on-the-spm.html

O. MODELS FAIL: LAND VERSUS SEA SURFACE WARMING RATES

POSTED ON SEPTEMBER 28, 2013 BY BOB TISDALE

In *Climate Models Fail*, using a number of different datasets, I illustrated how the climate models used by the IPCC for their 5th Assessment Report could not simulate climate variables

such as surface temperatures (land surface air, sea surface and combined land+sea surface), precipitation and sea ice area. There's another splendid way to present the model failings (that wasn't presented in the book): by comparing the warming rates of global land surface air temperatures with the warming rates of global sea surface temperatures. It's astounding that the models perform so poorly. See Table 1.

Table 1 - Global Land Surface Air & Sea Surface Temperature Warming Rates - Nov 1981 to Aug 2013 (Deg C/Decade)

Metric	Modeled	Observed	% Difference
Land Surface Air Temp	0.35	0.28	123%
Sea Surface Temp	0.17	0.08	197%
Ratio Land/Sea Surface Temp	2.10	3.36	63%

Observations:
Land Surface Air Temperature = GISS LOTI w/ Oceans Masked
Sea Surface Temprature = Reynolds OI.v2

Models (Multi-Model Ensemble Mean) Historic-RCP6.0:
Land Surface Air Temperature = CMIP5 TAS /w Oceans Masked
Sea Surface Temperature = CMIP5 TOS

Ratio Land/Sea Surface Temperature =
Land Surface Air Temperature Trend/Sea Surface Temperature Trend

% Difference =
(Modeled Trend/Observed Trend)*100

As shown, the models overestimated the warming of global land surface air temperatures since November 1981 by about 23% (which isn't too bad), but the models doubled the observed rate of warming of the surface temperatures of the global oceans (and that's horrendous). Now consider that most of the warming of global land surface air temperatures is in response to the warming of global sea surface temperatures. (See Compo and Sardeshmukh (2009) "Ocean Influences on Recent Continental Warming.") In the real world, the land surface temperatures warmed at a rate that was more than 3 times faster than the warming of global sea surface temperatures, but in the fantasy modeled world, land surface temperatures only warmed 2 times as fast.

http://wattsupwiththat.com/2013/09/28/models-fail-land-versus-sea-surface-warming-rates/#more-94828

P. U.N. AFFIRMS HUMAN ROLE IN GLOBAL WARMING

Major Report Reasserts Link Between Rising Temperatures, Fossil Fuels; Warns of a Tipping Point With Severe Effects

By GAUTAM NAIK
And JOHANNES LEDEL

STOCKHOLM—A landmark United Nations report issued Friday reaffirmed the growing belief that human activity is the dominant cause behind a rise in global temperatures and reiterated that a long-term planetary warming trend is expected to continue.

The report could have a significant impact on policy-making because it asserts that human activity is pushing atmospheric carbon-dioxide concentrations toward levels whereby the surface temperatures may increase by 2 degrees Celsius. Many governments have pledged to try to keep the temperature rise below that level, which many scientists contend is a threshold beyond which the consequences of climate change will be severe.

Between 1750 and 2011, human activity released 545 gigatons of carbon dioxide, the main greenhouse gas,according to the report. If a total of 1,000 gigatons is emitted, there is a one-in-three chance that the 2-degree limit will be breached, said Corinne Le Quere, a geophysicist at the University of East Anglia in the U.K. and a lead author of a chapter in the U.N. report.

"We're eating up our allocation very rapidly. At the current rate, we'll hit the 1,000-gigaton-level sometime between 2040 and 2050," she added.

Of all the carbon dioxide emitted so far, two-thirds comes from burning fossil fuels and one-third from land-use change and deforestation, says the report. However, in the last decade, 90% of the carbon dioxide released has come from burning fossil fuels, according to Dr. Le Quere.

A summary of the report, the work of more than 800 scientists working for the U.N.'s Intergovernmental Panel on Climate Change over several years, said there is a 95% likelihood that humans are behind global warming, up from the 90% level of certainty in a similar 2007 report.

The IPCC noted that air and oceans are getting warmer, ice and snow is less plentiful, and sea levels are rising.

"Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over the millennia," the report says.

The IPCC said the past three decades have been successively warmer at the Earth's surface that any preceding decade since 1850. That is "a robust signal of a changing planet," said IPCC co-chair Thomas Stocker at a news conference in Stockholm.

At the same time, the IPCC has moderated projections of rising temperatures for the end of this century. The latest report outlines four scenarios, with the worst scenario predicting a possible increase of 4.8 degrees Celsius toward the end of the century. The prior report had outlined six scenarios, with the worst scenario peaking above 6 degrees Celsius.

IPCC reports draw the attention of governments, environmentalists and key industries such as the oil, gas and coal sector because they provide the scientific backing for many policies on climate change. The narrower range of possible scenarios could help scientists and policy makers fine-tune their responses.

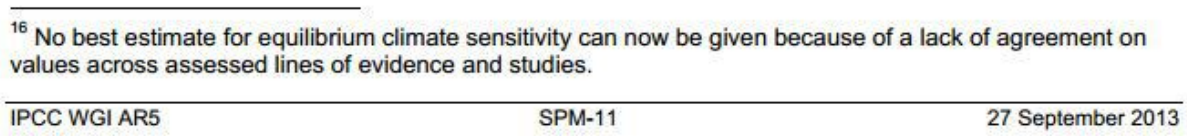
The summary previews a full report that will be issued next week as part of the group's fifth assessment, which will come in several phases. It is considered a more definitive document than its predecessors because it incorporates more recent scientific findings, a larger set of satellite, oceanic and terrestrial measurements and more robust computer modeling.

"Observations of changes in the climate system are based on multiple lines of independent evidence," said Qin Dahe, co-chair of the IPCC working group.

The IPCC's credibility took a hit after some shoddy data made its way into the 2007 report, including a claim that Himalayan glaciers would melt by 2035.
More recently, climate change science has come under attack because of a flattening of temperatures over the past 15 years, even though greenhouse gas emissions have continued to rise.
Scientists at the IPCC played down the apparent slowdown, arguing that a 15-year period is too short to reflect long-term climate trends.
Among the factors that could be behind the apparent slowdown are a cooling of the Pacific Ocean, a natural change in the 11-year solar cycle and nearly a dozen volcanic eruptions since 2005, which can spew sunlight-blocking particles into the atmosphere.
"We couldn't attribute exactly what was the contribution from each of these factors," said Dr. Le Quere. "But the overall picture is that the earth is continuing to take up heat even when the surface is warming slowly."
A version of this article appeared September 28, 2013, on page A9 in the U.S. edition of The Wall Street Journal, with the headline: U.N. Affirms Human Role in Global Warming.

Q. '97% CONSENSUS' APPARENTLY DOESN'T EXIST AT THE IPCC

Posted on September 27, 2013 by Anthony Watts
Consensus? What Consensus? You'd think they'd be able to agree on this most important number. They did for AR4.


[16] No best estimate for equilibrium climate sensitivity can now be given because of a lack of agreement on values across assessed lines of evidence and studies.

IPCC WGI AR5 SPM-11 27 September 2013

That footnote is on page 11 – h/t to Barry Woods. Directly above it is the statement on climate sensitivity

- The equilibrium climate sensitivity quantifies the response of the climate system to constant radiative forcing on multi-century time scales. It is defined as the change in global mean surface temperature at equilibrium that is caused by a doubling of the atmospheric CO_2 concentration. Equilibrium climate sensitivity is *likely* in the range 1.5°C to 4.5°C (*high confidence*), *extremely unlikely* less than 1°C (*high confidence*), and *very unlikely* greater than 6°C (*medium confidence*)[16]. The lower temperature limit of the assessed *likely* range is thus less than the 2°C in the AR4, but the upper limit is the same. This assessment reflects improved understanding, the extended temperature record in the atmosphere and ocean, and new estimates of radiative forcing. {TFE6.1, Figure 1; Box 12.2}

Yet, they are 95% certain.
Read it here: Summary for Policymakers (PDF)

R. UH OH, A SIGNIFCANT ERROR SPOTTED IN THE JUST RELEASED IPCC AR5 SPM

Posted on September 27, 2013 by Anthony Watts

Doug Keenan has just written to Julia Slingo about a problem with the Fifth Assessment Report (see here for context).
Dear Julia,
The IPCC's AR5 WGI Summary for Policymakers includes the following statement.
The globally averaged combined land and ocean surface temperature data as calculated by a linear trend, show a warming of 0.85 [0.65 to 1.06] °C, over the period 1880–2012….
(The numbers in brackets indicate 90%-confidence intervals.) The statement is near the beginning of the first section after the Introduction; as such, it is especially prominent.
The confidence intervals are derived from a statistical model that comprises a straight line with AR(1) noise. As per your paper "Statistical models and the global temperature record" (May 2013), that statistical model is insupportable, and the confidence intervals should be much wider—perhaps even wide enough to include 0°C.
It would seem to be an important part of the duty of the Chief Scientist of the Met Office to publicly inform UK policymakers that the statement is untenable and the truth is less alarming. I ask if you will be fulfilling that duty, and if not, why not.
Sincerely, Doug

S. INSIDE CLIMATE NEWS

inside climate news

Stories this week
you don't want to miss

Exclusively on InsideClimate News, This Year's Winner of the Pulitzer Prize for National Reporting

http://insideclimatenews.createsend5.com/t/ViewEmail/t/B4434B19ED7116CB/27996A161E61B94EC5EC08CADFFC107B
David Sassoons

T. EPA Say Protecting Environment is Just Silly

Michael Schaus | Sep 27, 2013

Arnie Feldman

U. To the IPCC: Forget about "30 years"

Posted on September 30, 2013 by Anthony Watts

Guest essay by Barry Brill

Under pressure at a media conference following release of its Summary for Policymakers, AR5 WG1 Co-Chair Thomas Stocker is reported to have said that *"climate trends should not be considered for periods less than 30 years"*.

Some have seen this as the beginning of an IPCC ploy to continue ignoring the 16-year-old temperature standstill for many years into the future. But even the IPCC must know that any such red herring is dead in the water:
1. When James Hansen launched the global warming scare in 1988, there had been no statistically significant warming over the previous 30 years and the warming trend during 1977-87 was 0.0°C. The IPCC was also established that year.
http://wattsupwiththat.com/2013/09/30/to-the-ipcc-forget-about-30-years/

Regards
George