SPPI News Search 9-17-08

Government-funded Climate Scientists Approach Ethics "Redline"
http://www.haaretz.com/hasen/spages/1021802.html

By Zafrir Rinat

Israel will have to continue to use oil and coal for the vast majority of its energy needs, according to a recent survey of Israeli scientists and other experts commissioned by the Environmental Protection Ministry.

The survey also found that there is no way of predicting climate changes in as small a land mass as Israel, and cast doubt on whether there is evidence of such changes in the country.

Dr. Avraham Arbib, the Infrastructure Ministry's deputy chief scientist, said that while Israel needs to expand its use of renewable energy, such energy sources will still not meet most of the country's needs even in 30 years.

"Some of the technology exists, like solar collectors on roofs," said Arbib. "But building solar power stations requires land and financial resources."

Many local climate experts also accused some researchers of using the increasingly popular issue to increase their chances of getting their studies funded.

"There's no doubt that the slogan of climate change has been adopted by researchers from various disciplines to get research budgets because it is attractive to funding bodies in Israel and around the world," said Nurit Kliot, a member of the research team that conducted the survey and a professor in the University of Haifa's department of natural resources management.

Nonetheless, she said, *"one cannot argue that the scientific findings themselves were twisted in order to prove that climate change exists."*

"Nothing like that was said by the researchers we interviewed," added Kliot.

Indeed, most of the experts interviewed for the survey say they do not doubt that human activity can cause climate change, and call for saving energy and protecting water sources.

However, many are skeptical about the ability to predict climate change in Israel.

"Most scientists think that just like you need to take out insurance, you also need to take cautionary measures and get ready for climate changes likely to take place," said Kliot.

The research team compiled their findings after interviewing 97 scientists and experts in diverse fields including climate, medicine, agriculture, water and energy.

The researchers asked the experts to discuss scientific questions and speak out about necessary policies in light of possible future climate changes.

Prof. Uri Mingelgreen, a scientist at the government-run Agricultural Research Organization who used to serve as the Environmental Protection Ministry's chief scientist, called into question the ethics of some scientists. *"Climate researchers are approaching the red line when it comes to the ethics of their work," he said.*

"It's hard to see research budgets in front of you and not go in the direction that the funding

bodies want you to go in, instead of the directions that you think you should go."

Most of the scientists said the research was tilted toward studies highlighting the role of climate *change in an effort to win funding*, though they did not provide examples.

The United Nations, the World Bank and the European Union are among the institutions that provide funding and organizational support for research on climate changes, in addition to private foundations around the world.

"The research funders sometimes redirect the funds they have to researchers who show data that supports climate change," the report found.

Many scientists and experts said there is evidence of global warming in the Middle East and a reduction of precipitation, especially in the Kinneret area, but some prominent experts in the field of water and agriculture say it isn't so.

Gerald Stanhill, a scientist at the Agricultural Research Center, said that as long as people don't examine the influence of phenomena such as particles in the air that are liable to reduce the intensity of solar radiation, it is difficult to predict changes in the climate.

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The trillion dollar band-aid

http://www.guardian.co.uk/commentisfree/2008/sep/15/climatechange.eu

Solving climate change will be the most expensive public policy decision ever. Half-baked thinking won't fix it now

Björn Lomborg
Monday September 15 2008 09:30 BST

One commonly repeated argument for doing something about climate change sounds compelling, but turns out to be almost fraudulent. It is based on comparing the cost of action with the cost of inaction, and almost every major politician in the world uses it.

The president of the European commission, José Manuel Barroso, for example, used this argument when he presented the European Union's proposal to tackle climate change earlier this year. The EU promised to cut its carbon emissions by 20% by 2020, at a cost that the commission's own estimates put at about 0.5% of GDP, or roughly €60bn per year. This is obviously a hefty price tag – at least a 50% increase in the total cost of the EU – and it will likely be much higher (the commission has previously estimated the cost to be double its current estimate).

But Barroso's punchline was that "the cost is low compared to the high price of inaction". In fact, he forecasted that the price of doing nothing "could even approach 20% of GDP". (Never mind that this cost estimate is probably wildly overestimated – most models show about 3% damages.)

So there you have it. Of course, politicians should be willing to spend 0.5% of GDP to avoid a 20% cost of GDP. This sounds eminently sensible – until you realise that Barroso is comparing two entirely different issues.

The 0.5%-of-GDP expense will reduce emissions ever so slightly (if everyone in the EU actually fulfills their requirements for the rest of the century, global emissions will fall by about 4%). This

would reduce the temperature increase expected by the end of the century by just five-hundredths of a degree Celsius. Thus, the EU's immensely ambitious programme will not stop or even significantly impact global warming.

In other words, if Barroso fears costs of 20% of GDP in the year 2100, the 0.5% payment every year of this century will do virtually nothing to change that cost. We would still have to pay by the end of the century, only now we would also have made ourselves poorer in the 90 years preceding it.

The sleight of hand works because we assume that the action will cancel all the effects of inaction, whereas of course, nothing like that is true. This becomes much clearer if we substitute much smaller action than Barroso envisions.

For example, say that the EU decides to put up a diamond-studded wind turbine at the Berlaymont headquarters, which will save one tonne of CO2 each year. The cost will be $1bn, but the EU says that this is incredibly cheap when compared to the cost of inaction on climate change, which will run into the trillions. It should be obvious that the $1bn windmill doesn't negate the trillions of dollars of damage from climate change that we still have to pay by the end of the century.

The EU's argument is similar to advising a man with a gangrenous leg that paying $50,000 for an aspirin is a good deal because the cost compares favorably to the cost of inaction, which is losing the leg. Of course, the aspirin doesn't prevent that outcome. The inaction argument is really terribly negligent, because it causes us to recommend aspirin and lose sight of smarter actions that might actually save the leg.

Likewise, it is negligent to focus on inefficiently cutting CO2 now because of costs in the distant future that in reality will not be avoided. It stops us from focusing on long-term strategies like investment in energy research and development that would actually solve climate change, and at a much lower cost.

If Barroso were alone, perhaps we could let his statement go, but the same argument is used again and again by influential politicians. Germany's Angela Merkel says it "makes economic sense" to cut CO2, because the "the economic consequences of inaction will be dramatic for us all." Australia's Kevin Rudd agrees that "the cost of inaction will be far greater than the cost of action." United Nations secretary general Ban Ki-Moon has gone on record with the exact same words. In the United States, both John McCain and Barack Obama use the cost of inaction as a pivotal reason to support carbon cuts.

California senator Diane Feinstein argues that we should curb carbon emissions because the Sierra snowpack, which accounts for much of California's drinking water, will be reduced by 40% by 2050 due to global warming. What she fails to tell us is that even a substantial reduction in emissions – at a high cost – will have an immeasurable effect on snowmelt by 2050. Instead, we should perhaps invest in water storage facilities.

Likewise, when politicians fret that we will lose a significant proportion of polar bears by 2050, they use it as an argument for cutting carbon, but forget to tell us that doing so will have no

measurable effect on polar bear populations. Instead, we should perhaps stop shooting the 300 polar bears we hunt each year.

The inaction argument makes us spend vast resources on policies that will do virtually nothing to deal with climate change, thereby diverting those resources from policies that could actually make an impact.

We would never accept medical practitioners advising ultra-expensive and ineffective aspirins for gangrene because the cost of aspirin outweighs the cost of losing the leg. Why, then, should we tolerate such fallacious arguments when debating the costliest public policy decision in the history of mankind?

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NH climate task force would trample individual rights
By Geoffrey Lawrence

Residents of New Hampshire could soon have their ability to choose how they live, how they travel and what they buy taken away from them.

The New Hampshire Department of Environmental Services (DES) is currently considering a large basket of costly new taxes, subsidies and regulations designed to reduce emissions of greenhouse gases. They include statewide restrictions on zoning, housing development, energy use, industrial processes and transportation.

Last December, Gov. John Lynch created the New Hampshire Climate Change Policy Task Force to work in conjunction with DES to develop policy options designed to address global warming. The DES, in turn, hired a global warming alarmist group called Carbon Solutions New England (CSNE) to serve as a technical consultant to the task force on scientific and policy issues related

CSNE writes on its Web site that "we must achieve an urgent and unprecedented level of carbon dioxide emission reduction over the next decade . . . addressing the interdependent issues of energy and climate requires a transformational response." This transformation envisions the state restricting personal freedom in an effort to coerce individuals into making the "right" decisions as interpreted by the state.

Even more distressing is that Cameron Wake, who represents multiple organizations and is CSNE's director, has monopolized the information that is presented to the task force. Wake has also presented material in conjunction with a related organization called Clean Air-Cool Planet (where he is identified as "chief scientist") and on behalf of the University of New Hampshire's Climate Change Research Center, where he holds a full-time position.

The task force has neither heard testimony nor been presented any evidence that contradicts the viewpoints held by CSNE. As one official document states, CSNE is to "inform and support the development of technical and policy consensus." Allowing for open and honest debate before the task force would certainly not generate the consensus sought by these alarmist advocates, as CSNE has been allowed to set the agenda and control the process. The executive branch has effectively given them carte blanche to develop their own policies that are designed to address their foregone conclusions.

One policy being considered would dramatically increase the proportion of land that is state owned in order to prohibit development on that land. The very purpose of this would simply be to force individuals onto smaller plots of land and into smaller homes.

Other policies under consideration include: taxing individuals for each pound of trash they produce; imposing higher automotive registration and insurance rates on individuals who drive more; increasing gasoline taxes; reducing the availability of parking; and establishing "Residential Behavior Change Programs" that would employ community networks to intimidate individuals into "making sustained, socially beneficial changes at the household level."

According to official DES documents, "behavioral change strategies that target the root causes of climate change inaction should be employed through a comprehensive system of outreach activities that do not rely on information-based campaigns."

What benefit might Granite Staters reasonably expect to receive in exchange for their freedom? Realistically, they should expect these policies to have no effect at all on global warming. Thomas Wigley, a well-known climatologist who served as an adviser to Al Gore, has concluded that a major reduction in greenhouse gas emissions on a global scale (in line with the Kyoto Protocol) would have no measurable effect on temperature over the next century. If the entire world could have no measurable effect, it is absurd to presume that New Hampshire could have any effect on temperature by acting alone.

Control of public policy in New Hampshire is under siege from environmental extremists who care little for individual rights. The policies likely to be proposed by the Climate Change Policy Task Force would lay the foundation for a carbon police state in New Hampshire. Granite Staters should be extremely skeptical of any policy proposals to come out of this task force because executive branch officials certainly haven't been.

Geoffrey Lawrence is a research analyst for Climate Strategies Watch, a free-market, limited-government project that assesses global warming commissions in the states.

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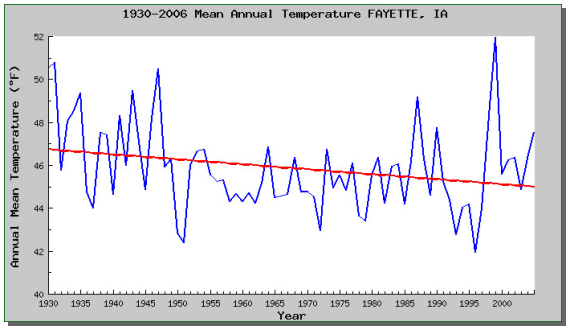
USHCN Temperature Record of the Week: Fayette, IA
http://co2science.org/data/ushcn/stationoftheweek.php

To bolster our claim that "There Has Been Little Net Global Warming Over the Past 70 Years," each week we highlight the temperature record of one of the 1221 U.S. Historical Climatology Network (USHCN) stations from 1930-2005.

This issue's temperature record of the week is from Fayette, IA. During the period of most significant greenhouse gas buildup over the past century, i.e., 1930 and onward, Fayette's mean annual temperature has *cooled by 1.74 degrees Fahrenheit*. Not much global warming here!



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Warming of Antarctic Tundra
http://co2science.org/articles/V11/N38/B1.php

Reference

Day, T.A., Ruhland, C.T. and Xiong, F.S. 2008. Warming increases aboveground plant biomass and C stocks in vascular-plant-dominated Antarctic tundra. *Global Change Biology* **14**: 1827-1843.

Background
In the introduction to the report of their recently concluded study, the authors enunciate one of the purposes for undertaking it, writing that "if ecosystem carbon stocks increase with warming, their greater net uptake of CO2 would slow increases in concentrations of this greenhouse gas in the atmosphere, providing a negative feedback to further greenhouse warming."

What was done
Working on the easternmost island of Stepping Stones (64°47'S, 64°04'W) near Palmer Station along the west coast of the Antarctic Peninsula, Day *et al.* used small greenhouses to warm daytime and diel canopy air temperatures by 2.3 and 1.3°C, respectively, as well as alter the ultraviolet light regime of the local tundra, which is inhabited by two prostrate perennial vascular plants (Antarctic pearlwort and hairgrass), a variety of mosses, and an occasional lichen and liverwort. Then, after four growing seasons with this temperature treatment, plus an unwarmed control treatment, they determined the mass of all above- and below-ground organic materials and their carbon (C) and nitrogen (N) contents.

What was learned
The three researchers report that the four seasons of warming "resulted in a substantial increase (23-34%) in total C in this ecosystem," due to "greater aboveground plant biomass, as well as greater mass of the litter layer and organic soil horizon." In addition, they say the litter and organic soil pools "were likely more recalcitrant to decomposition, based on their higher C:N values."

What it means
In light of the findings of this study, it would appear that a warming of Antarctic tundra ecosystems would indeed provide "a negative feedback to further greenhouse warming," as suggested by Day *et al.*, and that a warming-induced loss of some of the ice covering parts of the continent would likely accelerate the phenomenon.

Reviewed 17 September 2008

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Debilitating Drought and the Classic Mayan Collapse
http://co2science.org/articles/V11/N38/C2.php

Reference
Webster, J.W., Brook, G.A., Railsback, L.B., Cheng, H., Edwards, R.L., Alexander, C. and Reeder, P.P. 2007. Stalagmite evidence from Belize indicating significant droughts at the time of Preclassic Abandonment, the Maya Hiatus, and the Classic Maya collapse. *Palaeogeography, Palaeoclimatology, Palaeoecology* **250**: 1-17.

What was done
An active stalagmite (MC01) was removed from the entrance chamber of Macal Chasm -- a cave on the Vaca Plateau west of the Rio Macal in the Cavo District of Belize near the border with Guatemala (~17°N, 89°W) -- from which the authors obtained "reliably dated reflectance, color, luminescence, and C and O stable isotope records for the period from 1225 BC to the present."

What was learned
As Webster *et al.* describe it, "the interval in our record from AD 750 to 1150 was the most prolonged dry phase in our 3300-year record," which period of time can be seen from the Interactive Map and Time Domain Plot of our Medieval Warm Period (MWP) Project to correspond well with the MWP's mean time of occurrence around the globe, which period, in their words, "coincided with the collapse of the Maya civilization." More specifically, they say their data

depict "a series of droughts centered at about AD 780, 910, 1074, and 1139," with "successive droughts increasing in severity."

What it means
In concluding their paper, the seven scientists state that the results of their investigations "add to a growing body of evidence suggesting that severe dryness affected a broad region of Mesoamerica and contributed to the collapse of the Maya civilization during the Late Classic period." Consequently, although the *warmth* of the MWP was beneficial to Norse settlers on Greenland, its *dryness* across a broad swath of Mesoamerica spelled an end to the indigenous civilization of that region.

Reviewed 17 September 2008

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An 800-Year History of Australian Tropical Cyclones
http://co2science.org/articles/V11/N38/C1.php

Reference
Nott, J. 2007. The importance of Quaternary records in reducing risk from tropical cyclones. *Palaeogeography, Palaeoclimatoloogy, Palaeoecology* **251**: 137-149.

Background
In introducing the subject of his review article, the author says that "in tropical Australia, palaeo-tropical cyclone records occur in the form of low-resolution millennial-scale sedimentary ridges and high-resolution centennial-scale stalagmite records of isotopically depleted tropical cyclone rainfall."

What was done
Nott describes the various records to which he refers, recounts their findings, and discusses their relevance to risk assessment and their role in "decoupling human induced changes in cyclone behavior from natural variability."

What was learned
The Australian researcher says the *clear message* of the several papers he reviewed is that "the historical/instrumental record substantially underestimates the frequency of the most extreme tropical cyclone events," citing the findings of Chappell *et al.* (1983), Chivas *et al.* (1986), Hayne and Chappell (2001), Nott and Hayne (2001) and Nott *et al.* (2007). More specifically, he notes that "tropical cyclone activity in north-east Queensland has been in a phase of quiescence since before European settlement of the region," and that "the period between AD 1600 and 1800 [during the Little Ice Age] had many more intense or hazardous cyclones impacting the site than the post AD 1800 period." In addition, he notes that the *first* 200 years of the tropical cyclone record -- from AD 1200 to 1400, which represents the latter part of the Medieval Warm Period (MWP), as one can see from the Interactive Map and Time Domain feature of our MWP Project) -- had the *fewest* intense cyclones of all. As per the criterion he used to define them, in fact, this period of significant global warmth had *none*, as did the latter decades of the 20th century, which according to climate alarmists were the warmest of the past one to two millennia. In fact, the entire 20th century had but *one* such intense cyclone (and that was in its early stages in 1911); while there were as many as *seven* intense tropical cyclones during the global chill that prevailed between AD 1600 and 1800.

What it means
Over the past eight centuries, it is clear that relative *global warmth* appears to translate into *fewer* intense tropical cyclones in the region of northeast Queensland, Australia.

References
Chappell, J., Chivas, A., Rhodes, E. and Wallensky, E. 1983. Holocene palaeo-environmental changes, central to north Great Barrier Reef inner zone. *Journal of Australian Geology and Geophysics* **8**: 223-235.

Chivas, A., Chappell, J. and Wallensky, E. 1986. Radiocarbon evidence for the timing and rate of island development, beach rock formation and phosphatization at Lady Elliot Island, Queensland, Australia. *Marine Geology* **69**: 273-287.

Hayne, M. and Chappell, J. 2001. Cyclone frequency during the last 5,000 yrs from Curacoa Island Queensland. *Palaeogeography, Palaeoclimatology, Palaeoecology* **168**: 201-219.

Nott, J. and Hayne, M. 2001. High frequency of 'super-cyclones' along the Great Barrier Reef over the past 5,000 years. *Nature* **413**: 508-512.

Nott, J.F., Haig, J., Neil, H. and Gillieson, D. 2007. Greater frequency variability of landfalling tropical cyclones at centennial compared to seasonal and decadal scales. *Earth and Planetary Science Letters* **255**: 367-372.

Reviewed 17 September 2008

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West Antarctic Ice Sheet (Dynamics) -- Summary
http://co2science.org/subject/w/summaries/waisdynamics.php

For quite some time now, the world's climate alarmists have obsessed over what they contend will be the imminent demise of the West Antarctic Ice Sheet (WAIS) if human-induced CO2 emissions are not dramatically reduced. As Al Gore (2006) has phrased it, if "half of Antarctica melted or broke up and slipped into the sea, sea levels worldwide would increase by between 18 and 20 feet." But is this really about to happen? In what follows, we briefly review the findings of a number of studies of the dynamics of various components of the WAIS and what they suggest about the subject.

Writing in the journal *Science* were Bindschadler and Vornberger (1998), who utilized satellite imagery taken since 1963 to examine spatial and temporal changes of Ice Stream B, which flows into the Ross Ice Shelf. The data indicated that since that time, the ice stream's width had increased by nearly 4 kilometers, at a rate that was, in their words, an "order of magnitude faster than models have predicted." However, they reported that the *flow speed* of the ice stream had *decreased* over this time period by about 50 percent, noting that "such high rates of change in velocity greatly complicate the calculation of mass balance of the ice sheet," and that such changes "do not resolve the overriding question of the stability of the West Antarctic Ice Sheet."

Bindschadler (1998) reviewed what was known about the WAIS for *Science* and analyzed its historical retreat in terms of its grounding line and ice front. This work revealed that from the time of the Last Glacial Maximum to the present, the retreat of the WAIS's grounding line had been faster than that of its ice front, which resulted in an expanding Ross Ice Shelf. In fact, Bindschadler reported that "the ice front now appears to be nearly stable," although its grounding line appeared to be retreating at a rate that suggested complete dissolution of the WAIS in another 4,000 to 7,000 years. Such a retreat would indeed result in a sustained sea level rise of 8 to 13 cm per century. However, even the smallest of these sea level rates-of-rise would require, according to Bindschadler, "a large negative mass balance for all of West Antarctica," and there were no broad-based data to support that scenario.

Switching from *Science* to *Nature*, Oppenheimer (1998) reviewed 122 studies that dealt with the stability of the WAIS and its effects on global sea level, concluding that "human-induced climate change may play a significant role in controlling the long-term stability of the West Antarctic Ice Sheet and in determining its contribution to sea-level change in the near future." Other of his statements, however, seemed to detract from this conclusion. He noted, for example, that the Intergovernmental Panel on Climate Change (IPCC) "estimated a zero Antarctic contribution to sea-level rise over the past century, and projected a small negative (about -1 cm) contribution for the twenty-first century." Furthermore, with respect to potential anthropogenic modification of the state and behavior of the atmosphere and ocean above and around Antarctica, he acknowledged that "measurements are too sparse to enable the observed changes to be attributed to any such [human-induced] global warming." And in the case of sea-ice extent, he admitted there appeared to not even be a modification; for he stated that "the IPCC assessment is that no trend has yet emerged."

Oppenheimer concluded his review with four scenarios of the future based upon various assumptions. One was that the WAIS will experience a sudden collapse that causes a 4-6 m sea-level rise within the coming century. However, he stated that this scenario "may be put aside for the moment, because no convincing model of it has been presented." A second scenario had the WAIS gradually disintegrating and contributing to a slow sea-level rise over two centuries, followed by a more rapid disintegration over the following 50 to 200 years. Once again, however, he noted that "progress on understanding [the] WAIS over the past two decades has enabled us to lower the relative likelihood of [this] scenario."

In another scenario, the WAIS takes 500-700 years to disappear, as it raises sea-level by 60-120 cm per century. Oppenheimer assesses the relative likelihood of this scenario to be the highest of all, "but with low confidence," as he puts it. Last of all is what occurs if ice streams slow, as a result of internal ice sheet readjustments, and the discharge of grounded ice decreases, which could well happen, even if ice shelves thin and major fast-moving glaciers do not slow. In such a situation, he notes that "the Antarctic contribution to sea-level rise turns increasingly negative," i.e., sea level *falls*. And in commenting upon the suite of scenarios just described, Oppenheimer emphatically states that "it is not possible to place high confidence in any specific prediction about the future of WAIS."

Also writing in *Nature*, Bell *et al.* (1998) used aerogeophysical data to investigate processes that govern fast moving ice streams on the WAIS. In conjunction with various models, these data suggested a close correlation between the margins of various ice streams and the underlying sedimentary basins, which appeared to act as lubricants for the overlying ice. As a result, the seven scientists suggested that the positions of ice-stream margins and their onsets were controlled by features of the underlying sedimentary basins; and they concluded that "geological structures beneath the West Antarctic Ice Sheet have the potential to dictate the evolution of the dynamic ice system, modulating the influence of changes in the global climate system," although their work did not indicate what effect, if any, a modest rise in near-surface air temperature might have on this phenomenon.

Returning to *Science*, Rignot (1998) reported on satellite radar measurements of the grounding line of Pine Island Glacier from 1992 to 1996, which were studied to determine whether or not this major ice stream in remote West Antarctica was advancing or retreating. The data indicated that the glacier's grounding line had retreated inland at a rate of 1.2 ± 0.3 kilometers per year over the four-year period of the study; and Rignot suggested that this retreat may have been the result of a slight increase in ocean water temperature. Because the study had utilized only four years of data, however, questions concerning the long-term stability of the WAIS, in the words of the researcher, "cannot be answered at present." In addition, although the glacier's grounding line had been found to be retreating, subsequent satellite images suggested that the location of the ice front had remained stable.

Finally advancing from 1998 to 1999, but still publishing in the journal *Science*, Conway *et al.* (1999) examined previously reported research, while conducting some of their own, dealing with the retreat of the WAIS since its maximum glacial extent some 20,000 years ago. In doing so, they determined that the ice sheet's grounding line remained near its maximum extent until about 10,000 years ago, whereupon it began to retreat at a rate of about 120 meters per year. This work also indicated that at the end of the 20th century it was retreating at about the same rate, which suggests that if it continues to behave as it has in the past, complete deglaciation of the WAIS will occur in about 7000 years. The researchers thus concluded that the modern-day grounding-line retreat of the WAIS is part of an ongoing recession that has been underway since the early to mid-Holocene; and that "it is not a consequence of anthropogenic warming or recent sea level rise." Consequently, climate alarmists who claim that CO2-induced global warming is responsible for every inch of WAIS retreat, as well as every iceberg that breaks free of the ice sheet, are not justified in making such claims.

Stepping another year into the future, Stenoien and Bentley (2000) mapped the catchment region of Pine Island Glacier using radar altimetry and synthetic aperture radar interferometry, which they used to develop a velocity map that revealed a system of tributaries that channel ice from the catchment area into the fast-flowing glacier. Then, by combining the velocity data with information on ice thickness and snow accumulation rates, they were able to calculate, within an uncertainty of 30%, that the mass balance of the catchment region was not significantly different from zero.

One year later, Shepherd *et al.* (2001) used satellite altimetry and interferometry to determine the rate of change of the ice thickness of the entire Pine Island Glacier drainage basin between 1992 and 1999. This work revealed that the grounded glacier thinned by up to 1.6 meters per year between 1992 and 1999. Of this phenomenon, the researchers wrote that "the thinning cannot be explained by short-term variability in accumulation and must result from glacier dynamics," and since glacier dynamics typically respond to phenomena operating on time scales of hundreds to thousands of years, this observation would argue *against* 20th-century warming being a primary cause of the thinning. Shepherd *et al.* additionally say they could "detect no change in the rate of ice thinning across the glacier over a 7-year period," which also suggests that a long-term phenomenon of considerable inertia must be at work in this particular situation.

But what if the rate of glacier thinning, which *sounds* pretty dramatic, were to continue unabated? The researchers state that "if the trunk continues to lose mass at the present rate it will be entirely afloat within 600 years." And if that happens, they say they "estimate the net contribution to eustatic sea level to be 6 mm," which means that over each century of the foreseeable future, we could expect global sea level to rise by about one millimeter, or about the thickness of a paper clip.

Publishing in same year were Pudsey and Evans (2001), who studied ice-rafted debris obtained from four cores in Prince Gustav Channel, which until 1995 was covered by floating ice shelves. Their efforts indicated that the ice shelves had also retreated in mid-Holocene time, but that, in their words, "colder conditions after about 1.9 ka allowed the ice shelf to reform." Although they thus concluded that the ice shelves are sensitive indicators of *regional* climate change, they were careful to state that "we should not view the recent decay as an unequivocal indicator of anthropogenic climate change." Indeed, the disappearance of the ice shelves was *not unique*; it had happened before without our help, and it could well have happened again on its own. In fact, the breakup of the Prince Gustav Channel ice shelves was likely nothing more than the culmination of the Antarctic Peninsula's *natural recovery* from the cold conditions of Little Ice Age, as has been observed in many places throughout the Northern Hemisphere and several parts of the Southern Hemisphere as well (see Little Ice Age in our Subject Index).

Taking another step into the future, Raymond (2002) presented a brief appraisal of the status of the world's major ice sheets. His primary conclusions relative to the WAIS were that (1) "substantial melting on the upper surface of WAIS would occur only with considerable

atmospheric warming," (2) of the three major WAIS drainages, the ice streams that drain northward to the Amundsen Sea have accelerated, widened and thinned "over substantial distances back into the ice sheet," but that "the eastward drainage toward the Weddell Sea is close to mass balance." And (3) of the westward drainage into the Ross Ice Shelf, "over the last few centuries, margins of active ice streams migrated inward and outward," while the "overall mass balance has changed from loss to gain," as "a currently active ice stream (Whillans) has slowed by about 20% over recent decades."

In a summary statement that takes account of these observations, Raymond says that "the total mass of today's ice sheets is changing only slowly, and even with climate warming increases in snowfall should compensate for additional melting," such as might possibly occur for the WAIS if the planet's temperature continues its post-Little Ice Age rebound.

Fast-forward another year and Stone *et al.* (2003) -- working on western Marie Byrd Land -- report how they determined cosmogenic ^{10}Be exposure dates of glacially-transported cobbles in elevation transects on seven peaks of the Ford Ranges between the ice sheet's present grounding line and the Clark Mountains some 80 km inland. Based on these ages and the elevations at which the cobbles were found, they reconstructed a history of ice-sheet thinning over the past 10,000-plus years. This history showed, in their words, that "the exposed rock in the Ford Ranges, up to 700 m above the present ice surface, was deglaciated within the past 11,000 years," and that "several lines of evidence suggest that the maximum ice sheet stood considerably higher than this."

Stone *et al.* additionally report that the consistency of the exposure age versus elevation trends of their data "indicates steady deglaciation since the first of these peaks emerged from the ice sheet some time before 10,400 years ago," and that the mass balance of the region "has been negative throughout the Holocene." The researchers also say their results "add to the evidence that West Antarctic deglaciation continued long after the disappearance of the Northern Hemisphere ice sheets and may still be under way," noting that the ice sheet in Marie Byrd Land "shows the same pattern of steady Holocene deglaciation as the marine ice sheet in the Ross Sea," where ice "has thinned and retreated since 7000 years ago," adding that "there is strong evidence that the limit of grounded ice in both regions -- and in Pine Island Bay -- is still receding."

As long contended by scientists who disagree with climate-alarmist claims that we are witnessing the CO_2-induced "early stages of rapid ice sheet collapse, with potential near-term impacts on the world's coastlines" -- as described by Ackert (2003) -- the work of Stone *et al.* convincingly demonstrates that the current thinning and retreat of the WAIS are merely manifestations of a slow but steady deglaciation that has been going on and on and on, ever since the beginning-of-the-end of the last great ice age. This phenomenon is unabashedly used by climate alarmists to scare people into believing anthropogenic CO_2 emissions are rapidly leading to the demise of the WAIS; but Stone *et al.* say something quite different, i.e., that "the pattern of recent change is consistent with the idea that thinning of the WAIS over the past few thousand years is continuing," while Ackert makes the point even plainer, when he says that "recent ice sheet dynamics appear to be dominated by the ongoing response to deglacial forcing thousands of years ago, rather than by a recent anthropogenic warming or sea level rise."

In conclusion, the massive ice repository that is the West Antarctic Ice Sheet is *not* "slip-sliding away" and about to redefine the world's coastlines in response to rising sea levels, as contended by folks such as Al Gore and James Hansen. It seems to be behaving quite nicely, just as it has for thousands of prior years.

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Last updated 17 September 2008

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Palpa-Nasca Basin, Northern Atacama Desert, Peru
http://co2science.org/data/mwp/studies/l3_palpanasca.php

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Description

Working in the hyper-arid zone of the northern Atacama Desert of Peru between Pisco/Ica and Nazca/San Juan (~14.3°S, 75.3°W), Unkel *et al.* employed "geomorphological field-work" and "chronometric analyses" -- consisting of conventional ^{14}C-dating of charcoal, wood and root samples and optical-stimulated luminescence dating of feldspar and quartz -- while investigating "alluvial archives and debris flow deposits." This work, together with that of others, indicated the

existence of a period of "fluvial silence" for "the time of the 9th-13th centuries," due to "increased aridification," which they associated with the Medieval Warm Period (~AD 800-1250).

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Animal Migrations and Climate Change
http://co2science.org/articles/V11/N38/EDIT.php

In their recent essay on the subject of threats to the ability of animals to successfully complete their historic annual migrations, Wilcove and Wikelski (2008) write that "in general, the threats to migrants fall into four nonexclusive categories: habitat destruction, the creation of obstacles and barriers such as dams and fences, overexploitation, and climate change." However, there is something about the several examples they report that leads us to believe that *climate change* should not have been included in their list of offending phenomena.

Consider the salmon of Pacific Northwest USA fame. As young fish they leave their natal rivers and head to sea, where they dramatically increase in size, returning a year or two later to their points of origin to spawn and die. Wilcove and Wikelski report that "prior to European settlement, 160-220 million kilograms of salmon migrated each year up the rivers of Washington, Idaho, Oregon, and California," but that "today, after decades of dam construction, overfishing, water withdrawals for irrigation, logging, and streamside grazing by livestock, salmon populations have plummeted," to where they say that only 12-14 million kilograms of salmon make the return trek each year, all courtesy, we would add, of *something other than climate change*.

Then there are the bison of the U.S. Great Plains, hundreds of thousands of which could be seen "trekking across the prairies, as was possible less than two centuries ago," according to the two researchers, but which are only seen today in national parks and private ranches. And, of course, there are -- or rather *were* -- the famed passenger pigeons of eastern North America, which once "temporarily obscured the sun as they migrated to and from their breeding grounds," but which today no longer cast a shadow there -- *or anywhere* -- all courtesy of *something other than climate change*.

Also of note are the more recent declines in the breeding populations of migratory songbirds in eastern North America and Europe, of which Wilcove and Wikelski report that "no one can say with confidence the degree to which the observed declines are a function of the loss of breeding habitat, the loss of winter habitat, heightened mortality during migration (due to habitat destruction, pesticides, communications towers, and other factors), or some combination of the three," in addition to which challenges they mention *wind farms* in the case of migratory bats. But, of course, we *can* say "with confidence" that the declines have been due to *something other than climate change*.

Some people, however, would like to *challenge* this statement, expressing concern, as Wilcove and Wikelski phrase it, "that the phenology of migration could be disrupted by climate change." As an example, they write that "the spring migration of many songbirds in both Europe and North America coincides with the leaf-out of deciduous trees and the emergence of caterpillars, which the birds eat." If these caterpillars "are emerging earlier in the season due to warming temperatures, but the birds are not migrating earlier because they are relying on different cues (e.g., minor changes in day length in the tropics), then," as they continue, "the songbirds could face serious food shortages during the migration or breeding season."

This concept, however, has not been proven. It is only a *scenario*, which the two scientists say in prefacing their prior remarks "some have theorized," and which they say must be thoroughly tested in order to determine "whether such a scenario is truly plausible." That it is probably *not* plausible -- or at least not of much consequence -- is suggested by the fact that the ancestors of

today's songbirds had to have successfully dealt with the cooling following the Roman Warm Period, the warming following the subsequent Dark Ages Cold Period, the cooling following the subsequent Medieval Warm Period, and the warming following the subsequent Little Ice Age that ushered in the Current Warm Period.

Yes, the very real impediments to historical animal migrations that plague their current populations are not the result of global warming, CO2-induced or otherwise. They are the result of a host of much more *direct* human impacts on the natural environment, such as those that fall within the other three categories of threats listed by Wilcove and Wikelski. Consequently, if people are concerned about the abilities of today's migrating animals to continue their ages-old seasonal travels, they need to focus on the much more mundane things we do to make their trips miserable ... or even impossible.

Sherwood, Keith and Craig Idso

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