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FOS MEMBERSHIP QUARTERLY NEWSLETTER
No. 44

"FoS is dedicated to providing the public with insight into Climate Science"

PRESIDENT'S MESSAGE

In 2013 we became aware that the Alberta School Boards Commodities Purchasing Consortium had offered some 40 school boards a chance to participate in a long-term power purchase agreement (PPA) of ~20 years, plus an equity position and possible 'Renewable Energy Certificate" trades in Alberta School Board's own ~$160 million purpose-built wind farm. They had tendered this project some time earlier. Most of the school boards were in favour of the deal at that time, but several felt it too risky to become involved in something they were completely unfamiliar with. The arrangement was kept extremely confidential and only made the news in patches, usually after the fact of signing. Friends of Science publicized it and complained about the non-transparent use of taxpayer's money practices in a letter to the Alberta School Boards Commodities Purchasing Consortium. Wind is the most expensive form of power generation. We felt that this was an extremely risky venture for the school boards to become involved in, especially as a report to the Market Surveillance Authority by Morrison Park Associates indicated that private investors were unwilling to invest in wind in Alberta; why should taxpayers, we reasoned? We note that it was recently reported that the wind farm will now reduce the number of turbines from 46 to 13, so possibly we had some influence in encouraging some school boards do a thorough cost-benefit analysis. We know at least one large school board withdrew after they did a cost-benefit analysis, and after we had publicized our concerns.

We earlier reported on our billboard campaign. After the installation near the Calgary airport (left), Pattison Outdoor came up with a vibrant graph and we booked digital billboards near the Calgary Stampede Grounds to reach our 1 million Stampede visitors. The response on social media was incredible.

We then had our messages go up on two 42-foot super-boards along the QE2 highway in Alberta – one at Airdrie and the other at Bowden. As before, social media picked up our message and again it went viral. As a result of these successes, we ran a national campaign during November in Vancouver and Surrey, B.C., Calgary and Edmonton, Toronto, Ottawa, and Montreal. The Montreal billboard was in French, and created a huge stir on social media. Many assumed it was designed to support the Energy East Pipeline, which in fact never even occurred to us. There were 47 complaints filed with Advertising Standards Canada, which we had to respond to with technical information to support our statements on the billboard. Not to be intimidated, we engaged a local company to continue our campaign with an 8 ft. by14 ft. video board in downtown Montreal on a busy street where they have their Santa Claus parade, attended by 300,000 people. Some of the interesting responses are shown in a press release we put out here.

Our Communications Manager, Michelle Stirling, was recently interviewed by Sun News television commentator Ezra Levant, see here. She did an excellent job of answering his questions. Throughout his entire program that evening, he also repeatedly flashed our billboard, as he is obviously a supporter of our position.

Considering the amount of ongoing effort put forth by our volunteer board of directors, which unfortunately has been significantly reduced in numbers this past year, it is necessary that we build up

our forces in order to continue with our current volume of activity. We would sincerely appreciate it if any of our local members could please volunteer to assist on various projects from time to time, or consider becoming a director in the future. Periodically working with any of our current directors to assist them would be much appreciated. Occasionally attending some of our regular meetings would provide good insight into our future plans and activities.

Len Maier
President, Friends of Science

POLITICAL DEVELOPMENTS

Towards Paris 2015 – Part 4

As Donna Laframboise writes: "Five years ago we were told that the 2009 Copenhagen climate summit was the last chance to save civilization. As the 2015 Paris summit approaches, the same sort of fear mongering is ramping up." For example, a climate declaration appeared as a full-page ad in the international edition of the *New York Times*. This declaration told us that:

> the UN Climate Summit in Paris in December 2015 **may be the last chance** to agree a treaty capable of **saving civilization**; [bold added]

The final climate summit before the big one in Paris took place in Lima, Peru from December 1 to 14, with the object of delivering a draft text to be adopted in Paris. Going into the summit the positions of the four main players were:

- **The US** wanted a bottom-up plan, that lets each country determine its own emissions cuts, with no sanctions against those that don't offer any cuts or fail to abide by them. This was coupled with a $3 billion pledge to the Green Climate Fund, something that Congressional Republicans have promised to thwart.
- **China's** top climate negotiator said: "Developed countries... should continue to take the lead in cutting emissions by large margins and at the same time provide developing countries with support for financing, technology and capability building." Also, China rejects any scrutiny of its efforts to limit CO_2 emissions.
- **India**, the third largest CO_2 emitter, won't sign any deal to cut greenhouse gas emissions that threatens its growth or its fight against poverty, and refuses to set a deadline for capping emissions, unlike China. It wants developed countries to compensate developing ones for the effects their greenhouse gas emissions have had on the climate.
- **The EU's** position was an ambitious call for "transparent quantifiable and comparable" national commitments on CO_2 reductions, something that developing countries reject.

After running into 1-1/2 days of overtime, delegates reached what environmental groups referred to as an ineffectual compromise, which calls for:

- An "ambitious agreement" in 2015 that reflects "differentiated responsibilities and respective capabilities" of each nation;
- Developed countries to provide financial support to "vulnerable" developing nations;
- National pledges to be submitted by the first quarter of 2015 by those states "ready to do so";
- Countries to set targets that go beyond their "current undertaking" (e.g., Canada will have to commit to something more than the 17% reduction below 2005 levels it promised in Copenhagen);
- The UN climate change body to report back on the national pledges in November 2015.

In other words, three of the above four main players listed above got exactly what they wanted at the start of the conference. The EU got nothing.

The UNFCCC published the four-page text of the agreement, officially known as the Lima Call for Climate Action (LCCA), together with a 39-page Annex titled "Elements for a draft negotiating text." This Annex, with its 261 contentious Options, is going to be transformed into a "last-chance-to-save-civilization" treaty in a year's time? – Not likely.

A member of Friends of Science attended the Lima summit as part of a South American agricultural group. He decided to run a little survey to test the factual knowledge of a sampling of delegates. He reports:

a) *How many ppm or % of CO_2 in the atmosphere?* Only five respondents (approx. 10%) knew the order of magnitude; one said "far too much" and the rest said, "That I should know, but I cannot tell you."
b) *How many degrees did the average global temperature rise over the last 10 years?* They mentioned numbers between 0.1°C to 10°C (no exaggeration!). All claimed that the temperature has risen, but 80% said they would not be able to state a number. None of the respondents knew that the average global temperature has not risen for 17 years and part of them did not believe it when told so.
c) *By how many km^2 of global extent did sea ice shrank in the last 30 years?* Nobody knew a number. Everyone agreed that sea ice is declining (though two knew of the anomaly that Antarctic ice is expanding). Nobody knew that the global expansion of sea ice last year again reached values as high as in the early 80s.
d) *How do you see the future of humanity?* Two responded 'negative', unrestricted. Too late: the planet can no longer be saved. The negotiations are useless. Many said "positive". 75% a conditional positive: a condition that a serious agreement is reached in Paris in 2015.

Ian Cameron
Director, Friends of Science

SCIENCE NEWS

Western Hudson Bay Polar Bear Population

Dr. Susan J. Crockford is a zoologist and an adjunct professor at the University of Victoria, B.C. She writes a science blog about polar bears at PolarBearScience.com. She reveals that leading polar bear biologists knew by November 2013 that the Western Hudson Bay (WHB) subpopulation of polar bears had not changed appreciably since 2000 but none said so publically. A 2011 study by Environment Canada predicted that the WHB population "would continue to decline". An updated Environment Canada study dated 26 November 2013 corrected errors in methodology in the 2011 report and found that the WHB polar bear population has been stable for 10 years from 2000 to 2011 at about 800. Both reports were unpublished, but Dr. Crockford got a copy of the 2013 report December 10, 2014, see here.

The Western Hudson Bay polar bear population has been used by activists to predict the demise of polar bears due to the impacts of climate change on sea ice. See BBC report here.

Dr. Crockford writes, "An unpublished 2011 mark-recapture study concluding the population had declined since 2004 was apparently based on a statistical misconstruction that was corrected more than a year ago in another unpublished report. However, you wouldn't have gathered any of that from comments made by prominent polar bear researchers to the media since 2013. The fact that these taxpayer-funded reports were not made public has allowed this deplorable situation to occur."

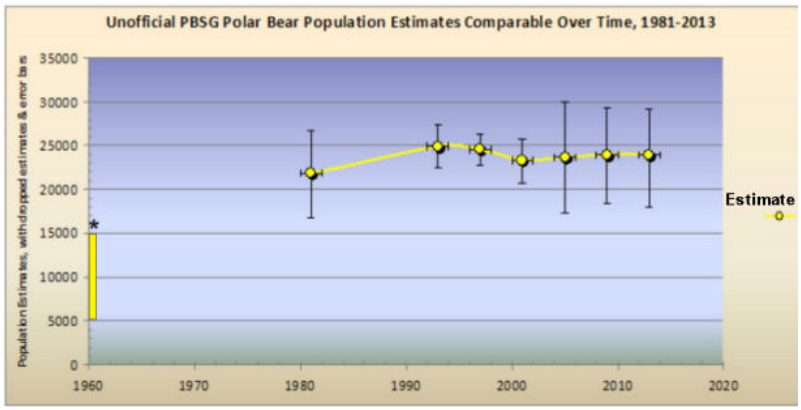
The paper published February 2014 using data from a Government of Nunavut aerial survey conducted in August 2011 found that the WHB polar bear population was about 1030, significantly more that the 2011 estimate of 806 given in the 2013 Environment Canada report that used the mark-recapture method. The abstract says "Our results suggest that mark–recapture estimates may have been negatively biased due to limited spatial sampling."

The Canadian Ice Service reports that the Hudson Bay ice coverage for the week of December 11, 2014 was 807,000 km^2, or 93.5%, which is well above the 1971 to 2014 average of 80.0%, graph here.

Faulty Polar Bear Models

A news release from the US Geological Survey in November 2014 (USGS 2014) claimed "that during the first decade of the 21st century, the number of polar bears in the southern Beaufort Sea experienced a sharp decline of approximately 40 percent."

Jim Steele, director of San Francisco State University's Sierra Nevada Field Campus from 1985 to 2009, says there are major problems with the polar bear models used to estimate current and future populations. He writes, the USGS 2014 studies "purported 25 to 50% population decline is simply **not real**. The unprecedented decline is a statistical illusion generated by the unrealistic modeling of polar bear survival from 2003 to 2007. The highly unlikely estimates of low survival were made possible only by ignoring the documented effect of cycles of heavy springtime sea ice which forces bears to hunt outside the researchers' study area. Although several of Bromaghin's co-authors had previously published about negative impacts of heavy springtime ice, they oddly chose to never incorporate that evidence into the USGS models. ... Any movement outside the study area prevents subsequent recapture and can erroneously cause models to assume emigrant bears are dead. That false assumption creates lower survival estimates which then dramatically lower population estimates.", see here.



Forecasts of polar bear survival are usually based on climate model temperature projections, which bears (pun intended) no resemblance to reality. Dr. Ross McKitrick warned of the danger of using the output of climate models as input to other models at the 11th FoS luncheon.

The graph above, produced by Dr. Susan J. Crockford and discussed in her blog post here, based on data from the IUCN/SSC Polar Bear Specialist Group, shows that the world polar bear population has been stable since 1993 and might be 2.5 times higher than in 1960. (Sentence revised March 23, 2015)

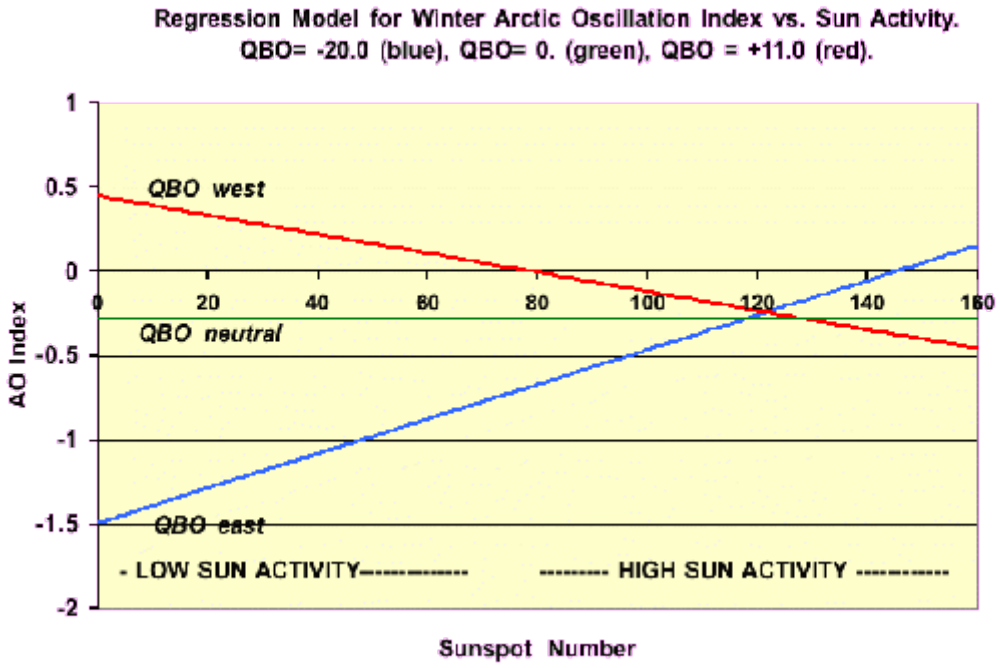
Low Solar Activity May Cause Cold Northern Hemisphere Winters

Jarl R. Ahlbeck of the Abo Akademi University, Finland analyzed the statistical relation between the Quasi-Biennial Oscillation (**QBO**) index (a measure of the direction and strength of the stratospheric wind in the Tropics), the solar activity, and the Arctic Oscillation (**AO**) index in a paper published March 2010. The AO is an index related to the non-seasonal sea-level air pressure variations of the Arctic (full definition). The paper is not new, but is very relevant to the last few winters. We are currently at a solar maximum, but it is a weak maximum. The graph here shows the last 3 sunspot solar cycles. The current cycle 24 maximum is 72, less than half of the cycle 22 maximum of 157 which was 25 years ago. The past 60 winters in the northern exotropics have been strongly dependent on the AO. When the AO index is in "positive phase" or "warm phase", high atmospheric pressure persists south of the North Pole, and lower pressures on the North Pole. This keeps the jet stream stable so cold Arctic air does not extend south into the middle of North America. During the negative or cold AO phase, cold Arctic air often extends far south in the winter due to a less stable polar vortex. The graph here shows the very strong correlation between the AO index and winter temperatures at Turku, Finland.

The author writes, "It is very obvious that a predominantly low sunspot solar activity at negative (easterly) Quasi-Biennial oscillation index is able to decrease the Arctic Oscillation index much more than the other combinations are able to change the Arctic Oscillation index. ... This analysis however shows that the influence of solar activity together with stratospheric mechanisms acting on the Arctic Oscillation is statistically significant." The AO index (1950 to 2014 of Jan to March) from NOAA is here.

See the paper here.

A negative QBO value corresponds to easterly stratospheric tropical wind, and a positive value to westerly wind. The graph below links the solar activity to the stratospheric winds and the AO.



Solar Activity and Antarctic Temperatures During the Past 11,000 Years

A paper published by Zhao and Feng in the Journal of Atmospheric and Solar-Terrestrial Physics in November 2014 investigated correlations between sun spot number (SSN), Vostok, Antarctica temperature and CO_2 concentrations from ice core data. The authors say "We find that the variations of SSN and temperature have some common periodicities, such as the 208 year (yr), 521 yr, and ~1000 yr cycles." They found that the millennial variation of SSN leads that of temperature by 30–40 years, which keeps stable nearly over the whole 11,000 years of the past. The correlation of CO2 and temperature is neither strong nor stable. See here.

Ken Gregory
Past Director, Friends of Science

DONATIONS

To accomplish our goal of educating the broader public and policy makers on the diversity of views on climate change, and the important natural factors, we need financial help from our members. Thank you for your help to date. **This debate matters, you are making a difference.**

Please continue to make donations to Friends of Science. We can be a voice for your climate change issues – and we thank all of you who have given us tips on the misinformation they see in the marketplace. Donations made directly to Friends of Science will help us bring in quality guest speakers, expand our media presence and create a platform for informed debate. To make a contribution at www.friendsofscience.org; click on DONATE in the upper right of the home page. Alternately, you can mail donations to Friends of Science at the following address:

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