



Peak Oil and the Environment Part 3 - Day 1

Posted by [Heading Out](#) on May 8, 2006 - 11:15pm

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Ah! Do we really need six pages of comment? Thank you at the back, we'll gladly cut it short. Suffice it to say I had the chance to split part of a bottle of wine with Ken Deffeyes (we talked a little about [Abu Sa'fah](#) the first indication of Saudi depletion, since the combined 800 kbd from it and Qatif were designated purely to match declines in existing fields at the time they came on stream.) There were a couple of short chats with Governor [Schweitzer of Montana](#) about 5-micron coal and a recognition, as the talks went on through the afternoon, that maybe the ground is changing.

But first an admission - they caught me out. Since [Dr James Hansen](#) had to be recognized as one of the Time 100 [Folk of the Year](#), later this afternoon, they moved his talk up, and so sadly I missed the first bit. So this is where I put in another plug for the [web site](#) (URL corrected here and earlier), to get the Powerpoints. His message, as I caught it, was largely that we can only afford to raise the temperature of the planet one single degree Centigrade, and beyond that the historic record suggests catastrophe. One part of this is the melting of the polar ice caps, and, in this regard he showed the melt pictures and the latest measurements of the weight of Greenland (from one of the satellites). What is interesting in that, is that the last couple of years seemed to have created more of a trend out of the data. He commented (perhaps in response to [Dr Crichton](#)) that this may provided more reliable data than models.

Business as Usual (BAU) will give temperature rises of up to five degrees, the icecaps melt and water levels rise 25 m (80 ft) and that will displace around 500 million folk. Long Island becomes Short Island and the White House is under 24 ft of water. It won't happen tomorrow, but likely over the course of the next century. He suggested phasing out coal after 2020, or at least making sure that all plants no longer generate carbon dioxide, and he also assumes that we do not chase after oil shale and the tar sands. The methane levels in the air, which are apparently worse than carbon dioxide, are stabilizing, but if we go up more than another degree then we can assume we will also see the impact of more methane from the thawing tundra and from the evaporation of the methane hydrates.

He poured cold water on our concerns over the decline in the Gulf Stream flows, considering it as an inconsequential against the overall Global Warming, and suggested that Europe is just going to get as hot as the rest of us.

The migration of species, and the changing growth patterns of plants as the soil moisture contents change are likely to impact agricultural effectiveness, and what will be available.

He was questioned about the latest publicity on his ability to speak out about the issues, and felt

that he was fortunate enough to already have a sufficient reputation so that he could surmount the restrictions, the jury is still out as to whether the message can be sustained with less well-known government scientists.

[Lester Brown](#), author most recently of "Plan B 2.0: Rescuing a Planet Under Stress and a Civilization in Trouble", one of those books that, as he said, "once you put it down, you can't pick up again!" then came to the podium and pointed out, inter alia, that we may no longer be the masters of our own destiny, since the Chinese are now consuming more of most major commodities, other than oil, than we are. His critical 3 recommendations were:

power by renewables
diversified transport
re-use and recycle.

Which led into a note that the increased reliance on bio-fuels will bring food and fuel prices more into harmony. Sugar, for example, has gone from \$0.07 to \$0.17 a lb (though droughts may also have had an impact), what 10% ethanol might do to corn prices should concurrently consider that 20% of the world goes to bed hungry, so that increased food prices could lead to riots in Indonesia, Mexico and similar nations. He felt that with the tax incentives and royalties that we may, for wind energy, be moving from a NIMBY to a PIIMBY (put it in my back yard) mentality - particularly with the larger diameter new wind turbine designs. And in terms of leadership he pointed out that President Roosevelt [banned private car manufacture](#) during the second World War.

The next speaker was Dr [William Catton](#) who wrote "Overshoot" about the time that OPEC was formed. He talked about human behavior and the Predator:Prey relationships and how there has to be enough of the latter to sustain the former. He discussed the advances that increased human doubling rates, and using [Kleiber's Law](#) suggested that an individual man should now be the size of a 64 ton dinosaur. He had less hope for our future than Lester Brown held out.

In the discussion that followed Mr Kharecha replaced Dr Hansen and reinforced the notion that if we don't control coal (or if we allow oil shale and tar sand production) then we cannot keep temperatures below the 2-3 deg C rise that takes us over the tipping point to rapid highly nonlinear melting of the ice sheets with water rises of a meter in just a few decades. Polar bears will be extinct before 2100.

It was pointed out that effective leadership can work, in Iceland in the 14th Century they were overgrazing the land, the foundation soil was being destroyed, and so they evaluated the land carrying capacity, calculating the number of sheep the land could carry, and divided the number among the families and reversed the process. The wool industry is still flourishing as a result.

They noted (and this came up again later) that the transport fuels are worse for Global Warming since the products cannot be sequestered, while those from power plants can be.

But they also raised the problem of water, and the dropping of water tables around the world. Since this impacts agriculture, and lower tables require more power for irrigation, it is another facet of the problem. It takes 1000 tons of water per ton of grain. Grain trade was controlled by population density, now it is moving to being controlled by water issues. China has drawn down their stocks of grain and are now importing soybeans and import 60% of their need. The same thing can occur with grain. This would lead to China competing with the US for food from the US. Interesting dynamic. This creates an umbilical that we have never seen before. China's need is forced by the loss of irrigation water.

There was then a short talk by [Robert Costanza](#) which had me note that you need the commentary to explain the viewgraphs, but which was, in reality setting the meeting up for tomorrow. To decide how to solve the problems we have to decide where we want the world to go, and what sort of place it should be. Work on what we then need as tools and how to use them.

("If you don't know where you're going, you end up somewhere else", Yogi Berra).

That then led into the reception and then the talk by Governor Schweitzer. I have to say that hearing him in person gives an entirely different picture than you get through the media. Very well in control of his topic, he gave a brief overview of his plans for energy for Montana clearly related to the audience, and offered 20% for conservation, 20% for biofuels a fair bit for coal (if you don't like it, take off your clothes and climb back into the trees) and the recognition that this only gets us 40 years in which to find a better answer. Funny, a man who gave us a clear indication of what to do to move the country forward, I am tempted to say that Bill Richardson had better look out in 2008, but then that would be getting OT. He held up a piece of coal and had clean hands, also sources for biodiesel, and his slogan was "how low can you go," in terms of energy use. When he presented his ideas to the Dept of Energy when they visited his state, they listened to him until finished, looked over his shoulder and said "next."

He pointed out that if we can teach folk in Iran and Iraq to grow their own food, then we can use the land where we now grow that food for them as sites to grow biofuel crops.

It was definitely worth being here, though I think you had to know a little bit about your subject to get the most out of the talks. But having heard about the problem, it is the expert views on the answers, that comes tomorrow, that really provides the reason for my being here. (But I'm afraid I might not get to post until quite late in the evening, due to travel).

And for all the comments that I missed, or contributors and ideas, I plead only the fullness of the day, and a not totally perfect memory.



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