

Rural Times 20

Greenhouse

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Our family farm has experienced a run of excellent seasons and high yields. Since the end of the seventies, the climate has been kind. I have more than once heard it laughingly remarked that, if this is the greenhouse effect, then we are all for it.

Although higher rainfall, particularly of the stormy variety we have experienced, is consistent with predictions made by greenhouse doomsayers, and although, in laboratory experiments, better plant growth is consistently associated with higher levels of carbon dioxide, we do not seriously credit 'the greenhouse effect' with much of our success. There are too many contrary indications and alternative explanations. For instance, this year we also had the heaviest winter frosts we can remember, the weather has always been erratic, and new varieties and management practices, particularly the use of weed killers, may be sufficient to explain our higher yields.

The transcript of a televised debate between scientists expert in long-term weather patterns has lent support to our instinctive scepticism. The only strong correlation that they identified was between doomsaying and research grants.

Professor Michaels, who is head of the Department of Environmental Sciences at the University of Virginia, had conducted an interesting and relevant experiment. On 120 occasions, in cities that had, in fact, experienced an unusually cool summer, he asked audiences, mostly comprised of scientists, to estimate by how much the summer of 1988 had differed from the normal. Summing the individual estimates, in every case the audience estimated that the summer temperature had been above average. The experiment tells us nothing about the weather but something about human nature.

Professor Lindzen, who is Professor of Dynamic Meteorology at MIT, Boston commented:

The notion that warming is catastrophic is drilled into people, to the point where it seems surprising that anyone should question it, and yet underlying it there is very little evidence at all. In fact there is ample evidence to the contrary.

Over the past 100 years, recorded temperatures at weather stations have risen by about half a degree celsius. That is not a large amount but Professor Wiggley, who is Head of the Climatic Research Unit at the University of East Anglia, UK, said that it is "a significant and important change". No one on the program challenged the significance of "half a degree celsius", but Dr Balling, the Director of the Laboratory of Climatology at Arizona State University, USA, challenged the worth of the data. Most weather stations are in towns, and towns certainly have got warmer. By analysing data from a thousand weather stations situated in very small towns he had been able to show that non-urban United States---i.e. most of it---had, in fact, become cooler this century.

Most of the Earth's surface is sea. Dr Spencer, who is a physicist at the Marshall Space Flight Centre, University of Alabama, USA, who gets his information from satellites which measure land and sea alike, says that over a ten-year period there is no trend. Over different five year periods within the ten, however, it is possible to show that the world is getting warmer or cooler---you can take your pick to suit your theory.

Professor Lindzen pointed out that there was a similar difficulty with interpretation of even Professor Wiggley's 100 years of weather station data. If instead of 100 years we looked at the last fifty, then there had been no change. Temperature, in fact, went down and then up. If the period 1930 to 1970 is chosen the temperature fell quite sharply. Again it seems that one can reach either conclusion by choosing the period analysed.

There are similar difficulties with measuring whether sea levels are rising or falling. In the northern part of the British Isles sea levels are falling, while in the southern part they are rising. The difficulty in reaching a general conclusion is that the land does not stay still. If this trend were to continue and to accelerate the poor Brits might all fall into the sea off the southern end of whatever was left of their island. I would not, however, wish to be responsible for starting a new panic.

Over much longer periods the relationship between carbon dioxide levels and temperature is also vexed. We know that during the last Ice Age carbon dioxide levels were much lower than they are today. But we also know that the temperature fell long before the carbon dioxide levels. If there is a causal relationship, which way does it flow? Weather systems are complex and scientists are often wrong about them even in the short run---could they also be wrong in the long run?

Professor Michaels reminded us that when he was at graduate school it was gospel that the Ice Age was about to start; Dr Spencer, that science benefits from scary scenarios;

and Dr Schneider, a modeller from the National Centre for Atmospheric Research Colorado, that even scientists sometimes use truth selectively. It seems that even the scientists' motives must be suspect.

The evidence so far certainly does not justify public policies that have large economic costs.

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