

Apocalypse Cancelled

Part 1

LAST WEEK Gordon Brown and his chief economist both said global warming was the worst “market failure” ever. That loaded sound-bite suggests the “climate-change” scare is less about saving the planet than, in Jacques Chirac’s chilling phrase, “creating world government”. This week and next, I’ll reveal how politicians, scientists and bureaucrats contrived a threat of Biblical floods, droughts, plagues, and extinctions worthier of St. John the Divine than of science.

Nick Stern’s report on the economics of climate change says the debate’s over. It isn’t. There are more greenhouse gases in the air than there were, so the world should warm a bit, but that’s as far as the “consensus” goes. After the recent hysteria, you may not find the truth easy to believe. So Lord Copper has allowed me to post references and detailed calculations at www.telegraph.co.uk.

The Royal Society says there’s a worldwide scientific consensus. It brands Apocalypse-deniers as paid lackeys of coal and oil. I declare my interest: I once took the taxpayer’s shilling and advised Margaret Thatcher, FRS, on scientific scams and scares. Alas, not a red cent from Exxon.

In 1988 James Hansen, a climatologist, told Congress that temperature would rise 0.35C by the end of the century (it rose 0.1C), and that sea level would rise several feet by 2100 (one inch by 2000). The UN set up a transnational bureaucracy, the Intergovernmental Panel on Climate Change. The UK taxpayer meets the entire cost of its scientific team, which, in 2001, produced the *Third Assessment Report*, a Bible-length document presenting apocalyptic conclusions well beyond previous reports.

This week, I’ll show how the UN undervalued the sun’s effects on historical and contemporary climate, slashed the natural greenhouse effect, overstated the past century’s temperature increase, repealed a fundamental law of physics and tripled the manmade greenhouse effect.

Next week, I’ll demonstrate the atrocious economic, political and environmental cost of the high-tax, zero-freedom, bureaucratic centralism implicit in Stern’s report; I’ll compare the global warming scare with previous sci-fi alarums; and I’ll show how the environmentalists’ “precautionary principle” – get the State to interfere now, just in case – is killing people.

So to the scare. First, the UN implies that carbon dioxide ended the last four ice ages. It displays two 450,000-year graphs – a sawtooth curve of temperature and a sawtooth of airborne CO₂ that’s scaled to look similar. Usually, similar curves are superimposed for comparison. The UN didn’t do that. If it had, the truth would have shown: the changes in temperature *preceded* the changes in CO₂ levels.

Next, the UN abolished the mediaeval warm period. In 1995, David Deming, a geoscientist at the University of Oklahoma, had written an article reconstructing 150 years of North American temperatures from borehole data. He later wrote: “With the publication of the article in *Science*, I gained significant credibility in the community of scientists working on climate change. They thought I was one of them, someone who would pervert science in the service of social and political causes. One of them let his guard down. A major person working in the area of climate change and global warming sent me an astonishing email that said, ‘We have to get rid of the Mediaeval Warm Period.’”

So they did. The UN's second assessment report, in 1996, had had a 1,000-year graph showing that temperature in the Middle Ages was warmer than today's. But the 2001 report contained a new graph showing no mediaeval warm period. It wrongly concluded that the 20th century was the warmest for 1,000 years. The graph looked like a hockey-stick. The wrongly-flat 1000-1900AD temperature line was the shaft: the uptick from 1900 to 2000 was the blade. Here's how they did it:

- They gave one technique for reconstructing pre-thermometer temperature 390 times more weight than any other (but didn't say so).
- The technique they overweighted was one which the UN's 1996 report had said was unsafe: measurement of tree-rings from bristlecone pines. Tree-rings are wider in warmer years, but pine-rings are also wider when there's more carbon dioxide in the air: it's plant food. This carbon dioxide fertilization distorts the calculations.
- They said they'd included 24 datasets going back to 1400. Without saying so, they left out the set showing the mediaeval warm period, tucking it into a folder marked "CENSORED_DATA".
- They used a computer model to draw the graph from the data, but scientists later found that the model almost always drew hockey-sticks even if they fed in random, electronic "red noise".

The large, full-colour "hockey-stick" was the key graph in the UN's 2001 report, and the only one to appear six times. The Canadian Government copied it to every household. Four years passed before a leading scientific journal would publish the truth about the naff graph. Did Kofi or Ottawa apologize? Did they heck. The UN still uses the graph in its publications.

After the UN's graph was exposed, several scientific papers apparently confirming its abolition of the mediaeval warm period appeared. The US Congress asked independent statisticians to investigate. They found that the graph was unmeritorious, and that known associates of the scientists who'd compiled it had written many of the later papers supporting its conclusion.

The UN, echoed by Stern, says the graph isn't important. It is. Scores of scientific papers show that the mediaeval warm period was real, global and up to 3C warmer than now. There are usually no glaciers in the tropical Andes: today they're there. There were Viking farms in Greenland: now they're under permafrost. The Antarctic, which holds 90% of the world's ice and nearly all its 160,000 glaciers, has cooled and gained ice-mass in the past 30 years, reversing a 6,000-year melting trend. Data from 6,000 boreholes worldwide show global temperatures were higher in the Middle Ages than now. And the snows of Kilimanjaro are vanishing not because summit temperature's rising (it isn't) but because post-colonial deforestation's dried the air. Al Gore please note.

In some places it was also warmer than now in the Bronze Age and in Roman times. It wasn't carbon dioxide that caused those warm periods. It was the Sun. So the UN adjusted the math and all but extinguished the Sun's role in today's warming. Here's how –

- The UN dated its list of "forcings" – influences on temperature – from 1750, when the Sun, and consequently air temperature, was almost as warm as now. But its start-date for the increase in world temperature was 1900, when the Sun – and temperature – were much cooler.
- Every "forcing" produces "climate feedbacks" making temperature rise faster. For instance, as temperature rises in response to a forcing, the air carries more water vapour, the most important greenhouse gas; and polar ice melts, reducing the Earth's albedo. Up goes the temperature

again. The UN more than doubled the base forcings from greenhouse gases to allow for climate feedbacks. It didn't do the same for the base solar forcing.

Two centuries ago, the astronomer William Herschel was reading Adam Smith's *Wealth of Nations* when he noticed that quoted grain prices fell when the number of sunspots rose. Gales of laughter ensued, but he was right. At solar maxima, when the Sun was at its hottest and sunspots showed, temperature was warmer, grain grew faster and prices fell. Such observations show that even small solar changes affect climate detectably. But recent solar changes have been big.

Sami Solanki, a solar physicist, says that in the past half-century the Sun has been warmer, for longer, than at any time in at least the past 11,400 years, contributing a base forcing equivalent to a quarter of the past century's warming. That's before adding climate feedbacks. The UN expresses its heat-energy forcings in watts per square metre. It estimates that the Sun caused just 0.3 watts of forcing since 1750. Begin in 1900 to match the temperature start-date, and the base solar forcing more than doubles to 0.7 watts. Multiply by 2.7, which the Royal Society suggests is the UN's current factor for climate feedbacks, and you get 1.9 watts – more than six times the UN's figure. The entire 20th-century warming from all sources was below 2 watts. The Sun could have caused just about all of it.

Next, the UN slashed the natural greenhouse effect by 40% from 33C in the climate-phys textbooks to 20C, making the man-made additions appear bigger.

Then the UN chose the biggest 20th-century temperature increase it could find. Stern says: "As anticipated by scientists, global mean surface temperatures have risen over the past century." As *anticipated*? Only 30 years ago, scientists were anticipating a new Ice Age and writing books called *The Cooling*. In the US, where weather records have been more reliable than elsewhere, 20th-century temperature went up by only 0.3C. AccuWeather reckons world temperature rose by 0.45C. The US National Climate Data Center says 0.5C. The UN went for 0.6C, probably distorted by urban growth near many of the world's fast-disappearing temperature-stations.

The number of temperature-stations round the world peaked at 6,000 in 1970. It's fallen by two-thirds to 2,000 now: a real "hockey-stick" curve, and an instance of the UN's growing reliance on computer guesswork rather than facts.

Even a 0.6C temperature rise wasn't enough. So the UN repealed a fundamental physical law. Buried in a sub-chapter in its 2001 report is a short but revealing section discussing "lambda" – the crucial factor converting forcings to temperature. The UN said its climate models had found lambda near-invariant at 0.5C per watt of forcing.

You don't need computer models to "find" lambda. Its value's given by a century-old law, derived experimentally by a Slovenian professor and proved by his Austrian student (who later committed suicide when his scientific compatriots refused to believe in atoms). The Stefan-Boltzmann law, not mentioned once in the UN's 2001 report, is as central to the thermodynamics of climate as Einstein's later equation is to astrophysics. Like Einstein's, it relates energy to the square of the speed of light, but by reference to temperature rather than mass.

The bigger the value of lambda, the bigger the temperature increase the UN could predict. Using poor Ludwig Boltzmann's law, lambda's true value is just 0.22-0.3C per watt. In 2001 the UN effectively

repealed the law, doubling lambda to 0.5C per watt. A recent paper by Hansen says lambda should be 0.67, 0.75 or 1C: take your pick. Sir John Houghton, who chaired the UN's scientific assessment working group until recently, tells me it now puts lambda at 0.8C: that's 3C for a 3.7-watt doubling of airborne CO₂. Most of the UN's computer models have used 1C. Stern implies 1.9C.

On the UN's figures, the entire greenhouse-gas forcing in the 20th century was 2 watts. Multiplying by the correct value of lambda gives a temperature increase of 0.44 to 0.6C, in line with observation. But using Nick's 1.9C per watt gives 3.8C. Where did 85% of his imagined 20th-century warming go?

As Professor Dick Lindzen of MIT pointed out in the *Sunday Telegraph* last week, the UK's Hadley Centre had the same problem, and solved it by dividing its modelled output by three to "predict" 20th-century temperature correctly.

A spate of recent scientific papers, gearing up for the UN's fourth report next year, gives a different reason for the failure of reality to keep up with prediction. The oceans, we're now told, are acting as a giant heat-sink. In these papers the well-known, central flaw – not mentioned by Stern – is that the computer models' "predictions" of past ocean temperature changes only approach reality if they're averaged over a depth of at least a mile and a quarter. Deep-ocean temperature hasn't changed at all – it's barely above freezing. The models tend to overpredict the warming of the climate-relevant surface layer up to threefold. A recent paper by John Lyman of NOAA reports that the oceans have cooled sharply in the past two years. The computers didn't predict this. Sea level is scarcely rising faster today than a century ago – an inch every 15 years.

Hansen now says the oceanic "flywheel effect" gives us extra time to act, so Stern's alarmism and Ken Livingstone's frenetic leap on to the bandwagon last week are misplaced.

Finally, the UN's predictions are founded not only on an exaggerated forcing-to-temperature conversion factor justified neither by observation nor by physical law but also on an excessive rate of increase in airborne carbon dioxide. The true rate is 0.38% year on year since records began in 1958. The models assume 1% pa, more than two and a half times too high. In 2001 the UN used these and other adjustments to predict a 21st-century temperature increase of 1.5 to 6C. Stern suggests up to 10C.

Dick Lindzen emailed me last week to say that constant repetition of wrong numbers like this doesn't make them right. Removing the UN's solecisms, and using reasonable data and assumptions, a simple global model shows that temperature will rise by just 0.1 to 1.4C in the coming century, with a best estimate of 0.6C, well within the mediaeval temperature range and only a fifth of what I'm told is the UN's new, central projection.

Why haven't air or sea temperatures turned out as the UN's models predicted? Because the science is bad, the "consensus" is wrong, and Herr Professor Ludwig Boltzmann, FRS, was as right about energy-to-temperature as he was about atoms.

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Part 2

IN the climate change debate, one figure is real. The *Sunday Telegraph's* website registered 120,000 hits in response to last week's article revealing that the UN had minimized the Sun's role in changing past and present climate, persisted in proven errors and used unsound data, questionable graphs and meretricious maths to exaggerate future warming threefold.

Views of 200 readers who emailed me are at www.telegraph.co.uk. About a third are scientists, including well-known climatologists, and a physicist who confirmed my calculations. Some advise governments. Nearly all condemn the "consensus". Most feel the UN has misled them, especially by using the defective "hockey-stick" temperature graph instead of apologizing. Here's how it's done. Last week I implied James Hansen told Congress sea level would rise several feet by 2000 (no, 2100); for "Congress" I wrote "Senate"; I added a tautologous "per second" to "watts per square metre"; and I mentioned the perhaps-apocryphal Arctic voyage of Chen Ho. Sorry.

Sir Nick Stern's report on climate-change economics says the world must spend 1% of GDP from now on to avert disaster. The current draft of the UN's 2007 report says up to 5%. Sir Nick's team tell me, "We are confident that the UN will publish a range for costs next year in which ours will be centrally placed." So some quiet, high-level co-ordination is going on. The oddest thing about this curious report was its timing. Publication of the UN's next major science assessment is only months ahead. Why not wait and base the economics on that?

The UN needed Stern more than Stern needed the UN. Its 2001 report had numbers more extreme than anyone else's, so sceptics abounded. This time, an international spinfest is shutting off dissent in advance. First, the damage done by the defective graph had to be repaired, so a series of papers supporting its conclusions quickly appeared, many written by associates of its authors.

Next, the failure of observed temperature to rise as the UN projected had to be explained. Hence another flurry of learned papers, this time about the ocean notion – the maritime heat-sink into which the missing temperature might be vanishing.

Above all, it was vital that this time the UN's report should not be seen to print the biggest exaggerations around. Enter Stern.

My calculations last week had to be rubbished. Separately, the *Sunday Telegraph's* letters editor and I received emails saying I'd wrongly assumed the Earth was a "blackbody" with no greenhouse effect at all (I hadn't). The www.realclimate.org website, run by two of the "hockey-stick" graph's authors, said the same in a blog titled *Cuckoo science* that's a hoot but not science.

Finally, on Thursday Margaret Beckett, the Foreign Secretary, compared climate sceptics to advocates of Islamic terror. Neither, she said, should have access to the media.

At whom is this spin aimed? At the Chinese, the Indians and the Brazilians. China has 30,000 coal mines. It's opening a new power station every five days till 2012. The Third World is growing. It won't be told it can't enjoy the growth we've already had. It wouldn't sign Kyoto till it was exempted, so,

under Clinton, the US Senate voted unanimously to reject Kyoto. Whatever the West does to Save The Planet is mere gesture unless the developing world agrees to give up its right to grow as we've grown.

Sir Nick says if we spend 1% of GDP now and forever we can reduce "the chances of temperature rises of 4-5C and above – at which levels some of the worst impacts occur". The crucial number when evaluating the income-stream from forward investments like this is the discount rate – the annual percentage by which any forecast of tomorrow's revenue is cut to allow for the risks inherent in not getting it today. Stern discusses the rate at length, and even has a technical annex on it, but – astonishingly – not once in 700 pages does he put a figure on it.

I gave his team 24 hours' notice of the question: What discount rate or rates and why? Six hours after my deadline, as the Treasury was closing, they said they might answer "next week". The following morning, with the page held for my copy, I rang and asked again. "There's nobody in who worked on that part of the report," they said. But they admitted they'd used several rates, all of them low because "if you're richer in future you value each unit of output a bit less", and because they hadn't discounted the future just because it was the future as that would be intertemporally inequitable (in English, not fair to the kids). Too low a discount rate makes spending 1% of GDP now look cheaper than waiting.

They're also coy about what value our \$500 billion a year would buy us. They say that if the world stabilizes atmospheric CO₂ at around 485 parts per million we'll have spent 1% of GDP to get – er – a 1.1% fall in consumption. If we stabilized at 400ppm, consumption would fall by only 0.6%, but that's a pipedream: we're at 380ppm already, and, on Stern's figures, we'll reach 400 in just eight years.

By 2035, says Sir Nick, temperature will have risen by "over 2C". Sounds alarming. What he means, though, is over 2C since 1750, when we don't know what temperature was. Stern's 485 parts per million by 2035 is based on the UN's worst case. Even then, the increase compared with today would be just 0.7C. On the UN's lower projection, implying 425ppm by 2035, only 0.3C.

The UK accounts for just 2% of global emissions, and falling. Even if Britain stopped using energy altogether, global temperature by 2035 would be six thousandths of a degree C less than if we carried on as usual. If we shut down once a week on Planet Day, make that less than one thousandth. Even if every Western country complied with Kyoto (and most won't), Senator Inhofe of Oklahoma says temperature a century from now would be a twenty-fifth of a degree lower than without Kyoto.

In that context, the few femtowatts you'll save by turning off the standby LED on your TV don't rate. It is not that energy efficiency, renewables and recycling will not make enough difference. They will hardly make any.

We are addressing the wrong problem. In the UK, energy is about to run out. In ten years, a third of our power stations will be worn out or against EU pollution laws. By 2035 oil prices could be ten times today's. Our children would be immeasurably better off if we sequestered North Sea oil by leaving it in the ground than if we sequestered carbon dioxide at Peterhead.

While the Government quixotically tilts at wind-power the Danes, who did it first, have stopped building bird-slicers. You need a wind-farm the size of Greater Manchester to match the output of one nuclear power station, and not a watt if the wind isn't blowing. As for hydro, if you want to build a

plant above a megawatt in Scotland, you can't, because for the last year two bureaucracies have been arguing about which of them should grant planning permission.

Grow up, the lot of you. The UK needs to start building (not designing, or having ten-year planning enquiries about) 12 nuclear power stations this year. Nuclear power does not emit CO₂. The French, 80% nuclear, have half the UK's carbon footprint. And what is Stern's policy on nuclear power? "We argue that a portfolio of technologies will be needed." The Government's? "Er ...". The Tories'? "Um, a last resort. Let's all have pedal-powered toothbrushes."

Sci-fi panics like climate change are dangerous because they distract politicians from what really needs doing. Y2K bug: correct solution, laugh; actual solution, Y2K Office; result, zilch at great cost. BSE/CJD: correct solution, eat British beef; actual solution, massive research and widespread hysteria; result, nada. Bird flu: correct solution, do nothing; actual solution, jobs for virologists and, weirdly, purchase of 200,000 body-bags; result, nil. Climate change: correct solution, go nuclear and reverse 20th-century deforestation; actual solution, pedal-powered toothbrushes, rampant deforestation, EU paying farmers not to plant trees or anything else; result, energy crisis, species loss and no fall in CO₂.

Shouldn't we take precautions, just in case? No. The "precautionary principle" kills. Example - DDT: correct solution, limit it in agriculture but allow indoor spraying against malaria; actual solution, give the inventor a Nobel Prize, then say it's cancerous (it's safe enough to eat) and ban it, especially for indoor spraying; result, only this year, after 30 million dead of malaria and counting, has the WHO agreed to recommend indoor spraying.

Carbon taxes? Bizarrely, the UK's climate-change levy taxes all forms of generation even if they don't emit CO₂. David Milliband, the Environment Secretary, told the BBC this week how good it was. The BBC didn't argue.

Emissions trading? The EU's daft scheme allows more emissions to be traded than are being emitted – except in the UK, whose business-unaware Government sets us at a disadvantage by imposing a lower limit and not even exempting the NHS. Result: poor hospitals have to buy emission rights from rich oil companies. Milliband told the BBC how good it was. The BBC didn't argue.

All such interventions advocated by the climate-change "consensus" will be expensively futile without the consent of the Third World's fast-growing nations. That consent will rightly be withheld until the UN produces soundly-based, scientifically-honest, fair and realistic projections. Meanwhile, cut out and keep this article. If Margaret Beckett has her way, you won't ever see one like it again.