

On Wednesday 27th May, Dr David Golding CBE, Development Coordinator of Make Poverty History North East, and Chair of PANiC Stations, gave evidence at the Public Enquiry into the application to build a number of wind farms in North Northumberland.

David comments: “I was interested and impressed by the articulate presentations of those opposing the proposal, and even more by their patent sincerity and commitment to the conservation of the beauty of their locality. Obviously, turbines are not appropriate anywhere and everywhere - you’d be hard pressed to find anyone willing to see them on College Green in front of Durham Cathedral, for example!

“However, it is all too easy for NIMBY-ism to hold sway – ‘not in **my** back yard’! We all want the conveniences and luxuries of modern life, and they mean electricity. It has to be produced somehow and we simply must move away from the combustion of fossil fuels which, because it drives climate change, is already robbing millions of people in the poor countries not of convenience and luxury, but of the bare necessities. And worse, much worse, is to come.

“In general, the audience of protesters gave me a fair hearing, with just a few exclamations of derision from representatives of the ‘heads-in-the-sand-brigade’ as I summarised the desperate seriousness of the most recent scientific research. And when I finished I received what I can only call ‘faint applause’ – a new experience for me!

“The text of my submission is given below.”

**SUBMISSION TO PUBLIC ENQUIRY.
Berwick-upon-Tweed, 27th May 2009**

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Introduction: We believe that we must comprehensively decarbonise our economy with vigour and urgency. However, I wish to make it clear at the outset that, lacking the necessary detailed local knowledge and technical expertise, I make no comment on the appropriateness of the proposed developments as to their location and character, etc., but wish to draw attention to broader, fundamental issues in the sincere hope that all those involved will bear these in mind.

“Zewdie Tamirat’s eyes were swollen shut through malnutrition and her delicate skin was no longer able to mask the skeleton beneath. Brushing away flies from her face with a small twig, the little girl stood quietly as, in 2000, her father explained how three years of crop failure in Ethiopia had left his family facing starvation. Pitiably, she attempted a smile for the cameraman” (Courtesy, Jim Loring and Tearfund).

Some images remain in the mind and little Zewdie’s was one such and helped keep me going with my work for the world poverty campaign during the first four years of the new millennium. However, it came like a bolt from the blue when, after I retired at the end of 2005, I had the chance to read up on climate science. I read the text of a letter published on 15th September 2005 by Lord Robert May, then President of the Royal Society, to the G8 leaders, which stated that:



“Today, a scientific paper has been published in the journal Philosophical Transactions of the Royal Society which concludes that climate change, largely caused by a rise in greenhouse gas emissions from human activities, may already be responsible for an increase in drought conditions, and hence for a rise in the risk of famine, in eastern Africa where millions are already at risk of hunger.”

The letter referred specifically to *“a drop in rainfall since 1996 in Ethiopia and neighbouring countries”*.

In other words, since the main cause of global warming is the burning of fossil fuels – oil, gas, coal - by the rich countries, we are already doing terrible damage to the world’s poor. This damage will increase ten thousand-fold unless we change our ways, rapidly and radically, as we will see.

Upon further reading, I was just staggered at the scale of the problem, the urgency of the matter, and the dread consequences should we fail to rise to the challenge. According to Lord May, *“Never before have we [humanity] faced such a global threat.” “We are getting almost to the point of irreversible meltdown, and will pass it soon if we are not careful,”* warns Sir John Houghton, Fellow of the Royal Society and one of Britain’s leading climate scientists, with whom I have been in correspondence.

The study of global warming over the past 20 years is, I would judge, the greatest international collaborative scientific enterprise ever undertaken. *“No other scientific topic has been so thoroughly researched and reviewed”*, says Sir John Houghton.

The two main conclusions of Working Group 1 of the Intergovernmental Panel on Climate Change (IPCC, 2007) are that the globe is warming rapidly and man-made greenhouse gas emissions are mainly to blame. The scientific consensus on both these aspects is now overwhelming, and active, reputable climate scientists who doubt the existence of man-made climate change or the threat it poses to humanity have become as rare as hen’s teeth:

- As far as the occurrence of climate change is concerned, the IPCC states that *“Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level”* (IPCC WG1, 2007, p5).
- As far as its causation is concerned, the IPCC says that *“Most of the observed increase in globally averaged temperatures since the mid-20th century is very likely [ie, > 90%] due to the observed increase in anthropogenic greenhouse gas concentrations”* (IPCC WG1, 2007, p10). [This compares with the conclusion in the 2001 report, that it is *“likely”* that human causation is responsible.]

The international scientific consensus was most clearly demonstrated on 7th June 2005, when the Royal Society (the oldest national academy of science in the world), the National Academy of Sciences of the USA (by far the most prestigious academy), the national academies of science of all the other G8 countries, and those of China, India and Brazil, put out a joint statement on the reality and causation of global warming – such a joint statement is without precedent in the history of science. It stated that, *“There is now strong evidence that significant global warming is occurring”* and continued: *“It is likely that most of the recent warming... can be attributed to human activities.” “The scientific understanding of climate change is now sufficiently clear... It is vital that all nations... contribute to substantial reduction in global greenhouse gas emissions.” “We urge all nations... to take prompt action to reduce the causes of climate change...”* It is unthinkable that the Presidents would have put their names to the statement, and put the prestige of their academies behind it, had it not been supported by all, or almost all, their most able climate scientists.

I prepared an introduction to the scientific consensus to the Churches Commission on Climate Change, of which I'm a member, and will provide it as an appendix to my submission. But before I leave the subject, I have one further quotation to cite: "*Carbon dioxide just accumulates in the atmosphere and there's no end point, it just gets hotter and hotter, and so at some point [the earth] becomes unliveable.*" I usually ask if anyone can guess who said it. Was it the Director of Greenpeace, the Development Coordinator of Make Poverty History NE (that's me), or Professor John Marburger, President Bush's chief science advisor? [I'm sure you've guessed by now!]

Turning to the effects of climate change, Dr Rajendra Pachauri, the Chair of the IPCC, has written that, "*The need for informing the public on the gravity of the impacts of climate change on human existence across the globe has never been greater... The impacts of climate change will fall disproportionately upon developing countries and the poor persons within all countries, and thereby exacerbate inequities in health status and access to adequate food, clean water and other resources.*"

The threat to the world's poor has now gripped British aid agencies. No wonder, since their consensus is that not only could climate change make the Millennium Development Goals unattainable, but that it could "*Even reverse human development achievements... The kind of devastation caused by Hurricane Mitch that hit Central America in 1998 or the 2004 floods in Bangladesh and India shows that an acute danger now exists for many of the slow, hard-won gains in human development of the last few decades: in places, these could be swept away in a matter of hours.*" I quote from a Royal Society conference in 2005: "*The threat of climate change to an already vulnerable Africa cannot be overestimated*".

Sea level rise is slow and insidious, but poses terrible threats to the world's poor, both because it will inundate low lying areas, some of which are the most densely populated in the world, and because it will exacerbate the effects of severe storms. According to Sir John Houghton, who updated me on developments in this area at the end of December on how the science has moved on since the IPCC, "*Recent best estimates give a mean sea level rise of up to one metre by 2100, with up to two metres not being ruled out*".

The threat to low lying states of the Pacific come immediately to mind, since they are in danger of total destruction. The other areas most at risk are the megadeltas of China, India and Bangladesh. "*Many millions more people are projected to be flooded*" [IPCC] as they are pushed off their land by the rising waters - ten million people live below the one metre contour line in Bangladesh alone - and the latest figures (March 2009) predict that 400 million people will become environmental refugees by 2050. Is it any wonder that Veena Khaleque, Director of the aid agency Practical Action in Bangladesh, expresses herself as she does: "*I find it almost impossible to image how the poor of Bangladesh will cope*". Surely you'd need a heart of stone not to be moved by her anguish! Douglas Alexander, the Minister for International Development, asks the obvious question, "*Where will they go?*" Perhaps someone here has some suggestions?



The gross injustice of all of this is obvious: we produce the pollution and they are the ones to suffer first and most severely. But of course, it is not only '*the children of the poor*' about whom we should be concerned. Make no mistake, eventually, the catastrophe will certainly engulf our own children and grandchildren – two of mine are shown, left - unless we change our ways.

"*How could I look my grandchildren in the eye and say I knew about this and did nothing?*", asks Sir David Attenborough.

I've already quoted the words of Professor John Marburger, President Bush's chief science advisor, but as his *"the earth becomes unliveable [uninhabitable]"* comment indicates, this is no laughing matter, but desperately serious:

- *"Never before have we faced such a global threat. The longer we prevaricate, the more difficult the task becomes"* (Lord Robert May, then President of the Royal Society, 2005).
- *"We have just a small window of opportunity and it is closing rapidly. There is not a moment to lose... We are risking the ability of the human race to survive"* (Dr Rajendra Pachauri, Chair of the IPCC, 2005).
- *"We are getting almost to the point of irreversible meltdown, and will pass it soon if we are not careful"* (Sir John Houghton, Former Co-Chair of the IPCC, 2006).
- *"The Earth today stands in imminent peril... ..and nothing short of a planetary rescue will save it from the environmental cataclysm"* (Prof James Hansen, NASA's Chief Climate Scientist, 2007).
- *Failure to tackle this problem will have "consequences that would haunt humanity until the end of time"* (Professor Ross Garnaut, the Australian government's advisor on climate change, Sept 2008).

A new analysis published only last Wednesday (19th May 2009) by scientists at the Massachusetts Institute of Technology shows that, without urgent and comprehensive action, warming could be double previous estimates – in all seriousness, that would involve the collapse of world civilisation by the end of this century. *"There's no way the world can or should take these risks"*, says Prof Ronald Prinn, Director of MIT's Center for Global Change Science, and Co-Author of the report. [Go to <http://web.mit.edu/newsoffice/2009/roulette-0519.html>]

People say to me, *"But we're only one country and a fairly small one"*. Of course that's true, but although we in Britain can't – I speak figuratively - provide the fuel, we can provide the spark! Indeed, we have often done, from the abolition of slavery onwards. More to the point, Britain pioneered the industrial revolution and the North East was at the epicentre of that great change. Last year, our Parliament passed the only climate change bill in the world, but this is a challenge to which all of us need to rise – from national government, through local government, companies and voluntary bodies, right through to families and individuals.

For some time I looked not for warnings – they're two-a-penny in the science - but for someone who would give us a positive message – one of encouragement and inspiration. I found one, in the Nobel Peace Prize winner, Al Gore:

"Not too long from now, when our children assess what we and our generation did here in this world, they will ask one of two questions.

"They'll look back, and either they will ask 'What were you thinking? Didn't you see the glaciers melting? Didn't you see the deserts growing, and the droughts deepening, and the crops drying up? Didn't you care? What were you thinking?'"

"Or they'll ask a second question, one that I'd much prefer them to ask. I want them to look back on this time, and ask: 'How did you find the moral courage to successfully address a crisis that so many said was impossible?'"

"And when they ask that question, I want you to tell them that you saw it as a privilege to be alive at a moment when a relatively small group of people could control the destiny of all generations to come. Instead of shaking our heads at the difficulty of this task, and saying 'Woe is us, this is impossible, how can we do this?', we ought to feel a sense of joy that we have work that is worth doing that is so important to the future of all humankind. We ought to feel a sense

of exhilaration that we are the people alive at a moment in history when we can make all the difference.”

“Never have we faced such a global threat”, said Lord Robert May, President of the Royal Society. But never have we been offered such an opportunity to bring such benefit to humankind, as that presented by the current challenge to close the centuries-long chapter of carbon profligacy and open a new chapter of environmental responsibility!

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Notes:

Re. the occurrence of climate change, the IPCC states that *“Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level”* (IPCC WG1, 2007, p5).

Similarly a major article published in the top science journal Nature, on 15th May 2008, entitled, *“Attributing physical and biological impacts to anthropogenic climate change”*, examined data sets extending between 1970 and 2004. Where significant changes were observed, *“95% of the 829 physical changes have been in directions consistent with warming, such as glacier wastage and an earlier peak in river discharge.”* Similarly, *“90% of the approximately 28,800 [28,800!] documented changes in plants and animals are responding consistently to temperature changes... for example by earlier blooming, a pole-ward shift in geographical distribution, etc.”* The authors also concluded that it is *“exceptionally unlikely”* that the association between warming and changes in wildlife can *“be explained by natural internal climate variability or natural variability of the [biological] systems”*. The article’s lead author, Professor Cynthia Rosenzweig, who is head of the Climate Impacts Group at Nasa’s Goddard Institute for Space Studies in New York, says, *“When we look at these impacts together, it is clear they are across continents and endemic. We’re getting a sense that climate change is already changing the way the world works... It’s real and it’s happening now”*. [My emphasis]

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Perhaps the strongest evidence for human causation has been provided by comparisons between the temperatures that are actually measured and those that we would expect to see. Global temperatures have risen significantly over the past 50 years, whereas if only natural factors were involved, we would expect to see no rise, or even a small decline. [The natural factors include the strength of the sun’s radiation and the incidence of volcanic eruptions, etc.] It is only when the ‘greenhouse effect’ of increasing levels of carbon dioxide in the atmosphere are included in the calculations that the expected trend coincides with the observed changes.

At a public meeting to which I contributed last year, one speaker claimed that most of the carbon dioxide in the atmosphere comes from volcanoes, rather than from our use of fossil fuels. But the study of bubbles of air trapped in the ice of glaciers going back a thousand years shows that the level of CO₂ in the atmosphere showed almost no change... until? Until we started to use coal, oil and gas, after which it rose steadily! Are we to believe the volcanoes just happened to wake up at that particular time? Similarly, the steady rise in CO₂ concentrations shows no relationship whatever to the incidence of volcanic eruptions, which are sporadic in nature. [What distressed me was not that the man concerned didn’t know the facts, but that I was pretty sure that he would spout the same nonsense the next time he had the opportunity.]