CLIMATE CHANGE: A VIEW FROM THE OTHER SIDE OF THE EQUATOR

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With the next G8 meeting only weeks away, once again the developing countries will be under pressure to implement costly measures to reduce greenhouse gas emissions. This can only be achieved at the expense of the more pressing poverty alleviation and other programmes. This is my response.

Mix Al Gore, polar bears, Kilimanjaro, Katrina, the Royal Society, the Stern Review, the 2000 IPCC scientists and what do you get – the end of the world. Should we in Africa start digging our graves or make reservations at the crematorium? Or should we challenge the doomsday scenarios?

As conscientious scientists we have a responsibility to examine the basis for this alarmism notwithstanding the edicts of the Royal Society. We in South Africa are in an ideal position to do this. We have a wide range of climatic conditions from winter rainfall in the south to summer rainfall over most of the country. We experience occasional tropical cyclones in the north-east and the world's oldest desert in the north-west. We have a very good meteorological and hydrological gauging network extending back for more than 100 years at some sites and more than 70 years at many others.

We note that the alarmist theories have as their basis the increasing global atmospheric temperatures. From this increase, northern hemisphere scientists proceed via mathematical global climate models to the causes and consequences of global warming. The causes are of little more than academic interest in this part of the world. It is the postulated, i.e. unproven consequences that are of interest. These are the predicted increases in the climatic extremes, principally floods and droughts. These in turn pose threats of loss of life and property as well as to our already scarce water resources. Further down the scale is the threat of severe damage to our natural environment and its unique variety of flora and fauna of which we are justifiably proud and protective.

A good place to start our evaluation is the repeated claim that global atmospheric temperatures during the past decade were higher than at any time during the past centuries and are still rising. If there is indeed a link between global temperatures, floods and droughts, then this should be readily apparent in the data recorded and published by the responsible national agencies.

Floods Have Not Increased

In many regions of South Africa, the highest floods were in the mid-1800s. In April 1856 the Mgeni River burst its banks and flowed across Durban and into the harbour. Many other coastal rivers experienced their historic maxima during this season. It is very interesting to note that the highest flood recorded on the abutment of the bridge across the Loire River in Orleans, France, occurred two months later in June 1856. These events were concurrent with the sunspot minimum. Were these three occurrences purely chance-related? We can now demonstrate otherwise.

All South African dams are designed to withstand the regional maximum flood (RMF). The RMF is based in turn on an upper envelope of maximum floods

recorded in the region. These are well documented in design manuals. No floods during the past decade exceeded the RMF. There is no statistically believable evidence at all of major increases in floods in sub-Saharan Africa in recent years despite increases in global temperatures.

Droughts Have Not Increased

The next issue is the claim that global warming will result in an increase in the occurrence of droughts. Concerns relating to droughts are as old as civilisation itself. They are well documented in the early scientific literature.

Soon after WWII there was international realisation that many regions of the world faced serious water shortages resulting from increased water demands arising from growing populations, industrial activity and living standards, viewed against the background of recurrent droughts. There was a huge hydrological interest. There were hundreds of papers in refereed journals and many discussions at South African and international conferences on issues relating to the numerical characterisation of river flow. This was essential for the optimum development of the diminishing availability of unexploited resources. Climate change scientists have completely ignored this incredible wealth of hydrological information and corresponding understanding of basic climate-related processes.

Extensive national drought investigations and commissions of inquiry in South Africa during the past century demonstrated that there is no statistically believable evidence of increases in the occurrence of droughts during the period of record through to the present day.

Natural Disasters Have Not Increased

This is a subject of deep personal concern. For the past fifteen years I have been closely involved in all aspects of natural disasters, from direct discussions with the affected communities, discussions and cooperation with the local authorities, discussions with national agencies, presentations at national and international conferences, presentation of training courses, and membership of the highest international authority, the United Nations Scientific and Technical Committee on Natural Disasters from 1995 through to the end of the international decade in 2000.

Our first and most important task was to determine whether or not the increase in loss of lives and property during natural disasters was a consequence of increases in the hazards themselves, especially floods and droughts. We could draw on the experiences of the national agencies. These in turn had direct contact with the affected communities and local experts.

Our conclusion was unequivocal. There were no reports of increases in the frequency of the hazards in any African countries. It was obvious that the increases in damage in the developing countries were due to increasing vulnerability to the hazards, and not increases in the magnitudes of the hazards themselves. I described this in my report titled Risk and Society, an African Perspective commissioned by the United Nations body.

It is important to note that the national agencies had every incentive to identify the causes of the increase in damage, and would not have hesitated to report increases in the magnitude of the hazards had this been

the case. Not a single African country identified global warming as an issue of concern.

Temperature Increases are Irrelevant

The claimed increases in surface air temperature resulting from global warming are less than those between breakfast and morning tea on a sunny day. In our part of the world they are also considerably less than those experienced when moving in and out of the shade on a cloudless day.

There is no evidence of regional scale environmental damage resulting from these very small temperature increases. On the contrary, during 2006 virtually the whole of the African subcontinent from Angola and Malawi southwards was greener and wetter than at any time in human memory. This was despite alarmist claims that future climate would become warmer and drier, and that this would result in the desertification of the subcontinent and the wholesale destruction of plant and animal life.

Solar Linkage

There remains one very important issue that has to be resolved. It is the relative roles of human activities and natural solar radiation on climate. The synchronous linkages between regular, and therefore predictable, changes in regional rainfall and river flow with sunspot cycles were first reported in South Africa in 1889, more than a hundred years ago. However, Lord Kelvin in his presidential address to the Royal Society three years later discredited the influence of variability in solar activity on climate. He maintained that the variations in received solar energy were too small to have any meaningful effect. This remains the view of climate change scientists through to the present day.

This response is wholly unscientific. Evidence of a synchronous linkage between sunspot activity and alternating, multiyear, wet and dry periods is overwhelming. It dates all the way from biblical times through to the present day. My comprehensive analyses of a very large hydrometeorological database demonstrated that the regional rainfall and river flow data exhibited a statistically significant 21-year periodicity that was synchronous with the double sunspot cycle. There was no statistically significant 11-year periodicity. This was because the sunspot numbers in the alternating sunspot cycles were different. They were synchronous with the alternating wet and dry periods in the hydrometeorological data. There was an urgent need to identify the physical processes in solar activity that were responsible for the synchronous behaviour.

Six of us accepted the challenge. We are three civil engineers, one chemical engineer, one geohydrologist and most importantly, one retired naval architect. Three of us are from South Africa, two from the UK and one from the Republic of Ireland. We come from different professional backgrounds and analysed different data sets using different methodologies. We corresponded via the Internet. Our problem was difficult as it involved the visualisation of the four-dimensional movement of the solar system through galactic space. We solved the problem of identifying the causal linkage between variations in solar activity and synchronous variations in the hydrometeorological processes.

Very briefly, there are three centres of mass that are of interest, those of the sun, the major planets, and the solar system itself. Once every eleven years or so the four major planets are grouped ahead of the sun as the solar system moves through galactic space. This causes the sun to occupy a reciprocal position on the opposite side of the solar system's centre of mass. About eleven years later the major planets are grouped behind the sun causing it to occupy a reciprocal position ahead of the solar system's centre of mass.

The sun therefore alternately accelerates as it moves forward through galactic space and then decelerates to occupy a position behind the solar system's centre of mass. All this occurs while the solar system as a whole moves forward through galactic space.

The acceleration and deceleration cause the sun to wobble in its path. This feature is well known to astronomers. The wobble in turn creates indigestion in the sun's interior, which is characterised by changes in sunspot activity and other phenomena.

What is very important, and makes our studies unique, is that this acceleration and deceleration and resultant changes in sunspot numbers, are synchronous with the alternating, predictable, multiyear wet and dry sequences that characterise our climate. Despite a diligent search we were unable to find any anomalies or trends in the data that could be attributed to human activities.

Our studies are based on data obtained from the responsible national agencies. Our calculations are reproducible by anybody with sufficient knowledge and patience. Our paper has passed the review process and is due for publication in June, coincidentally with the publication of the IPCC's full report and the G8 meeting.

What Now?

The establishment of the IPCC nearly 20 years ago arose from the genuine concern of many scientists that the continued discharge of undesirable greenhouse gasses into the atmosphere could, over a period of time, have serious deleterious effects on the world's climate. Now, twenty years later after a massive research effort the IPCC has yet to produce its final report. Obviously something is amiss.

Dishonest Science

Acting under political pressures of their own making, northern hemisphere scientists have allowed themselves to be forced into a claustrophobic position from which there is no escape. They are now desperately trying to convince the rest of the world of the catastrophic terrestrial consequences of global warming. In the absence of believable evidence of the claimed consequences, they are exercising dangerous practices of attempting to suppress all research that questions human causality.

The reprehensible edicts of the Royal Society, the patently dishonest Stern Review and the pompous attempts to prevent the distribution of the DVD on the climate change swindle are evidence of the desperate situation in which the doomsday advocates find themselves.

Taking a broader view, if the developing nations of the world refuse to implement the costly emissions control measures, and the forthcoming G8

meeting fails to convince them otherwise, and continuing research succeeds in demonstrating that variations in solar activity and not human activity are the dominant cause of climate variability thereby exposing the dishonest science, then the whole climate change issue must collapse like a pack of cards.

Broken Promises

The developing countries of Africa with their fragile economies have repeatedly called for trade not aid. Promises of assistance for the implementation of emissions control measures that were made at Gleneagles have not been fulfilled. Technical assistance is not feasible as Africa does not have the expertise to implement it. Financial assistance is vulnerable to corruption by both donor and recipient agencies. The World Trade Organisation has failed in its attempts to lift trade restrictions imposed by affluent countries. In a recent development, some UK organisations have reduced the importation of perishable agricultural products from Africa using the excuse that this will reduce air pollution.

Now the developed countries have the audacity to expect African countries to bow to their pressures based on corrupt science and broken promises of aid, in order to save the world from their imaginary doomsday scenarios. We are not that stupid.

Regards

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