University of Pretoria, Department of Civil Engineering
WATER RESOURCE AND FLOOD STUDIES

Climate change and its consequences – the manipulation of science

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A very serious situation has arisen between the developed and developing nations. It is essential that it be resolved before or during the UNFCCC conference to be held in Durban starting at the end of November.

As with any conflict, the causes have to be sought before the problem can be solved. As demonstrated in this report the problem is the manipulation of science initiated and funded by the developed nations accompanied by deliberate suppression of all contrarian research.

The developed nations are now in serious difficulty of their own making. They will soon face the anger of their own citizens when it becomes known that the costly emissions control measures and taxes are based on deliberately manipulated science, and that the rest of the world is unlikely to follow their suicidal example.

In their desperation, the developed nations failed in their attempt to involve the UN Security Council in the climate change issue. We now see pressures starting to build up here in South Africa. The NGOs are already active. Al Gore has accepted an invitation to present his views.

South Africa and all developing nations should take extreme care, especially when presented with false 'truths' and claims of scientific 'consensus' that the science is settled.

Offers of financial assistance should be treated with even greater caution. There will be strings attached. Africa has repeatedly stated that it requires trade not aid. This has not been forthcoming.

In this report I demonstrate that the activities of the Stern Review established by the G8 nations, initiated the manipulation of science that was later to become common practice. I also provide evidence of the deliberate suppression of the conclusive evidence that natural climate change resulting from variations in received solar energy and its redistribution by the global oceanic and atmospheric processes far outweighs any human-related activities.

Introduction

> *'That climates have changed radically in the past is indisputable, that they will change again in future is certain. Climate and its variability have always been major environmental determinants, with which mankind has had to contend.*
>
> *Mean temperature is of limited value as a parameter of climate.'*
>
> ***Climate change and variability in Southern Africa.*** P.D. Tyson (1987).

Peter Tyson is South Africa's doyen climatologist. Is it not clear from these quotes that the first and essential step in climate change analyses should be the determination of the natural conditions? When studying this report it will become obvious that climate change believers not only failed to follow this basic procedure, but also applied fundamentally unscientific practices to achieve their ends.

[Few people will die in Europe if the Kyoto Protocol is revived. In Africa, millions will lose their lives and livelihoods. My lifelong interest is in the welfare of the poor and disadvantaged people of this continent. This explains my vigorous protests in the face of many obstacles.]

Academies of Science

In 2005 the Academies of Science of eleven nations published a short document titled ***Global response to climate change***. The countries were Brazil, Canada, China, France, Germany, India, Italy, Japan, Russia, United Kingdom and the United States of America.

The document acknowledged that climate change is real; emphasised that the causes would have to be reduced; and that nations should prepare for the consequences of climate change. The academies called on world leaders including those meeting at the G8 summit to be held at Glen Eagles in Scotland in July 2005 to:

- Acknowledge that the threat of climate change is clear and increasing.
- Launch an international study to explore scientifically informed targets for atmospheric greenhouse gas concentrations, and their associated emissions scenarios, that will enable nations to avoid impacts deemed unacceptable.
- Identify cost effective steps that can be taken now to contribute to substantial and long-term reduction in net global greenhouse gas emissions. Recognise that delayed action will increase the risk of adverse environmental effects and will likely involve a greater cost.
- Work with developing nations to build a scientific and technological capacity best suited to their circumstances, enabling them to develop innovative solutions to mitigate and adapt to the adverse effects of climate change, **while explicitly recognising their legitimate development rights**. [My emphasis]
- Show leadership in developing and deploying clean energy technologies and approaches to energy efficiency, and share this knowledge with all other nations.
- Mobilise the science and technology community to enhance research and development efforts, which can better inform climate change decisions.

The following paragraph in the document is particularly important.

> The task of devising and implementing strategies to adapt to the consequences of climate change **will require worldwide collaborative inputs from a wide range of**

> **experts, including physical and natural scientists, engineers, social scientists, medical sciences, those in the humanities, business leaders and economists.** [My emphasis]

It is also important to note that three of the academies were from the major developing nations, Brazil, China and India. Yet it was these nations plus South Africa that wrecked the UNFCCC conference in Copenhagen at the end of 2009. What went wrong during the short four year intervening period?

Budapest Declaration on Science

In 1999 the world's two premier scientific institutions, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and the International Council for Science (ICSU) held a world conference in Budapest that produced a ***Declaration on Science and the Use of Scientific Knowledge***. The declaration emphasised that future problems would be complex and would require multidisciplinary approaches. It recommended that vigorous scientific debates should be encouraged. Most importantly it stated that research should always aim at the welfare of humankind.

This report was produced during the period when I served on the United Nations Scientific and Technical Committee on Natural Disasters from 1994 to 2000. I previously served as Manager of Scientific Services in the South African Department of Water Affairs. In this capacity I was a member of the South African National Programme on Environmental Sciences and chaired its section on Inland Water Ecosystems.

I am very familiar with the requirements of multidisciplinary scientific endeavour within national and international contexts. My own specialist fields are the collection and publication of hydro-meteorological data that are currently observed at a rate of more than half a million station days per year in South Africa, the development and application of methods for water resource and flood frequency analyses, as well as the assessment of natural disaster vulnerability and mitigation measures.

Stern Review

The G8 meeting in Glen Eagles responded to the concerns of the Academies of Science by appointing a distinguished economist Nicholas Stern to review the climate change situation. He then called for submissions on this subject.

When I responded to the Stern Review's call for submissions in November 2005, I believed that I could make a valuable contribution that reflected an international perspective with emphasis on the situation on the African continent. I submitted two comprehensive documents. The first was my report ***Risk and Society - an African Perspective*** (1999) commissioned by the United Nations IDNDR secretariat and financed by the South African Department of Foreign Affairs. It was based on interviews with the responsible authorities of many African countries with emphasis on natural disasters, their causes and consequences, how these countries responded to them, and my recommendations for future mitigation measures.

The second report was my technical report ***An Assessment of the Likely Consequences of Global Warming on the Climate of South Africa*** (2005)**.** I produced this on my own initiative. I described the results of my studies of the largest and most comprehensive hydro-meteorological database assembled and studied for this purpose anywhere. All the data were obtained from data published by the responsible national authorities. My analytical methods were simple and could be replicated by anybody familiar with time series analyses. My

conclusion was that the effects of human activity on floods, water resources and natural disasters, if present, were undetectable against the background of natural variability.

Purpose of my report

The purpose of my 92-page technical report ***An assessment of the likely consequences of global warming on the climate in Africa***, submitted to the Stern Review is described on its title page:

> *The purpose is to provide linkages between climatic processes and hydrometeorological responses. This is required for the reconciliation of climate change theory with observational deductions derived from extensive studies of a comprehensive South African database.*

The report included 14 tables, 16 figures and 50 references. The conclusions were summarised on the first page under the heading: *Climate change: there is no need for concern*.

The fundamental difference between this report and the IPCC assessment reports is that this report was the application of evidence based science that has been practiced by civil engineers since the beginning of civilisation. It is the basis for the design of thousands of dams and bridges across rivers ever since Roman times. You will not find any major civil engineering structures based on climatic processes.

The IPCC assessment reports are almost exclusively based on ivory tower science published in the peer-reviewed literature. It has little practical significance. The important question that needs to be answered is why did the Stern Review completely ignore my report based on a wealth of hydro-meteorological data provided by the responsible authorities, despite my protestations and my offer to come to the UK to present it to a critical audience of his choice?

There can be only one answer.

Report of the Stern Review

In January 2006 Nicholas Stern delivered his Oxonia lecture and invited comments. He completely ignored my submissions. I protested and produced supporting reports in March and April that were also ignored.

The final Stern Review does not comment on my submissions either favourably or critically. Nor does the Review include comment on the reports of the many South African commissions of enquiry on related subjects during the past century. Nor are there references to the many South African scientific and engineering publications in the fields of floods, droughts, water resource development and natural disasters during the past 50 years.

By implication South African scientists in climate-related fields are either incompetent or do not exist. Instead, the Review contains alarmist, completely unsubstantiated and demonstrably false claims based on academic studies by UK scientists commissioned by the Review, who have no practical experience in these fields.

The following are a few extracts from the introductory pages of the Review in the order in which they appear. They set the scene for the scientific dishonesty that permeates the Review.

This Review has assessed a wide range of evidence on the impacts of climate change.
FALSE. The evidence here and elsewhere in the document refers to the output of computer models. All references to evidence in the document are false and misleading. Hard

observational evidence based on standard statistical time series analyses is completely ignored in the Review.

The costs of extreme weather are already rising. **FALSE**. My United Nations report showed that the rising costs are the consequence of population increases that force people to occupy vulnerable areas. My extensive studies demonstrated that there is no statistically significant evidence that indicates an increase in the magnitudes or frequency of extreme events.

Developing countries must also take significant action. **FALSE**. There is no believable evidence to support the claim that actions of the nations of the African continent will have any measurable effect on global warming. Such action will not only be fruitless, it must inevitably cause severe damage to our national economies with increasing unemployment, poverty, malnutrition, disease and crime. **It will also reduce our economic competitiveness in world trade**. It is now clear that this was indeed the purpose of the Stern Review.

The power section around the world needs to be at least 60% decarbonised by 2050 and deep emissions cuts will also be required in the transport centre. This is an **IMPOSSIBLE TARGET** for South Africa and other countries on the African continent without causing severe and irreversible damage to their economies with all its consequences.

Climate change is the greatest market failure the world has ever seen. **ABSOLUTE RUBBISH**.

There is a solid basis in the literature for the principles underlying our analysis. This is **TOTALLY FALSE** as far as South Africa is concerned. Our abundant literature to the contrary was ignored in the Review.

Human-induced climate change is caused by the emissions of carbon dioxide and other greenhouse gasses that have accumulated in the atmosphere over the past 100 years. **FALSE.** There is no believable evidence of human-induced climate change in sub-continental Africa where all the evidence points to the opposite. There is no observational evidence at all that links rising greenhouse gas emissions with corresponding adverse climate-related increases in sub-continental Africa.

The scientific evidence that climate change is a serious and urgent issue is now compelling. **TOTALLY FALSE**. No such evidence of adverse effects in this region exists. Reports to the contrary were ignored in the Review.

We focus on a quantifiable understanding of risk, assisted by recent advances in the science that have begun to assign probabilities to the relationship between climate and the natural environment. **WHAT NONSENSE**. The title of my 1999 United Nations report was ***Risk and Society***. I have produced two books and many published papers and presentations on the development and application of risk analysis methods related to floods, water resources and natural disasters. These in turn followed a very large volume of peer reviewed international literature during the past 50 years. The Review is obviously completely ignorant on this subject that is the foundation of its whole analysis. There are many other examples in the Review.

Awkward questions

What motivated the Stern Review to produce this demonstrably erroneous and highly prejudiced report? To answer this question we have to go back to the 1999 Budapest Declaration with its emphasis on multidisciplinary studies, vigorous debates, and welfare of humankind. In September 2006 the UK Royal Society made an unprecedented request to oil companies to cease funding research that did not acknowledge that human activity was the

direct cause of climate change and all its postulated adverse effects. The Royal Society also requested the media not to report any adverse research. Research funding in the UK encouraged alarmist research and discouraged contrarian research. Vigorous debates never occurred.

Stern's instructions were to report on the economic aspects of climate change and its environmental consequences. These were hot political issues in the UK and Europe. The effects on human welfare were a side issue other than a convenient excuse for the alarmist predictions in the politically motivated Review. The actions of the world-renowned UK scientific agencies are a totally dishonourable and unforgivable approach to the very essence of scientific endeavour on a global issue of this magnitude.

With this in mind it is little wonder that scientists who relied on research funding chose to follow the alarmist route. This in turn allowed the Review to maintain that there was a consensus among scientists. This is the reason for the absence of references to my work, or even criticism of it if necessary, as well as that of other South African scientists and engineers who hold similar views.

My appeals

I made two appeals in my emailed correspondence addressed to the Stern Review. On 20 February 2006, I wrote.

> *Please note the consequences that your authoritative report will have on the prosperity of South Africa and other nations on the African continent. Your Prime Minister has expressed his firm intention to assist Africa to overcome the problems of poverty, malnutrition and disease. This will be a hollow promise if at the same time he supports the position of your Review committee, which will have the opposite effect.*

In a follow-up email of 13 April I wrote.

> *My only appeal is that when producing your report, you do not imply that global warming has in the past, or will in the future, pose a threat to the prosperity of the peoples of the African continent. Should you not heed my written reports, then I appeal to you to invite me to the UK to give evidence to a critical audience before you make any final decisions.*

All my appeals were ignored. I never received a response other than acknowledged receipts. I sincerely trust that readers of this report appreciate that the lives and livelihoods of tens of millions of people on the African continent are dependent on the outcome of the Stern Review's recommendations and the many subsequent reports based on them. This is quite literally a life and death matter for many people on the African continent. This is not a matter for international political opportunism. The peoples of Africa have many problems. We can do without this resurgence of European colonialism and paternalism.

In retrospect there can be little doubt that the motivation for the production of the Stern Review was to intimidate the developing countries into taking action that will reduce their economic competitiveness.

The developed nations of the western world have strong economies, influential environmental movements and extensive research facilities. The economically poorer nations, particularly those in Africa, have none of these. We have to rely on the honesty and integrity of the developed countries, particularly of the UK with its strong economic and political ties with many of these countries dating back to the colonial era.

The Stern Review not only exploits this misguided trust but deliberately ignores research out of Africa that questions the very basis of the Review's position.

The physical drivers of natural climate change

Introduction

London is burning. The US, EU and the UK are in serious financial difficulties. Millions of people are suffering and thousands have already lost their lives in the Horn of Africa famine, but there have been no serious responses from the Western world. NATO's forces are providing military assistance and finance to the rebel movements in Libya in order to restore democracy, but doing nothing to restore democracy in the Horn of Africa.

No agreement was reached in the June discussions in Bonn that were to provide the basis for the UNFCCC conference to be held in Durban starting at the end of November. If Durban fails this will leave the developed nations that have already imposed costly emissions control measures and taxes out in the cold. We have yet to see how they will react. At the end of this report I suggest a possible solution.

My conscientious studies during the past 40 years have come to a head with the solidly based conclusion that the very basis of climate change science is fundamentally in error. While I am by no means the only one who has come to this conclusion, I have not seen a step-by-step analysis of the basis for these views.

References will be found in my accompanying 2006 report ***A critical assessment of current climate change science*** that I submitted to the Stern Review. I must acknowledge the cooperation and assistance over the years of my professional colleagues, staff and students. Above all are the results of the coordinated but individual studies by a small group of professional colleagues during the past five years.

This is the brief sequence of the main events.

1. In the mid-1800s British astronomers reported the synchronous linkage between sunspot activity and famines in India.
2. In the 1890s a South African scientist published a list of observations that included a synchronous linkage between sunspot activity, temperature and rainfall in South Africa.
3. In 1970 the multidisciplinary South African Commission of Enquiry into Water Matters published an extensive report that included a recommendation that the linkage between variations in solar activity and climatic responses be researched. This was the commencement of my direct involvement. I subsequently produced a number of reports and refereed papers on the linkage. Initially the research results were inconclusive but with the passage of time the length of available records grew and there was greater confidence in the conclusions.
4. The strong periodic behaviour of the hydro-climatic processes and the closely synchronous concurrence with sunspot activity became unambiguous.
5. At this stage we made contact with Fred Bailey of the UK via the Internet. His interest was in the physical behaviour of the solar system. He described the Sun's 'wobble' about solar system's centre of mass (SSCM) as the system moves through galactic space. Counter-intuitively, he maintained that the Earth orbited the SSCM and not the

Sun. The SSCM lies within the Sun's perimeter most of the time. As a result there were changes in the distance between Earth and the Sun with consequent changes in received solar energy that far outweighed changes attributed to human activities.

6. Our five-authored, refereed paper ***Linkages between solar activity, climate predictability and water resource development*** was published in the *Journal of the South African Institution of Civil Engineering* in June 2007. In June 2008 my article ***The likelihood of a global drought in 2009-2016*** was published in *Civil Engineering*. My predictions have already been verified. There are still five years to go before the Sun returns to its more active cycle.
7. The remaining knowledge gap was the causal linkage between variations in received solar energy and the synchronous climatic responses.
8. This was addressed by our co-author David Bredenkamp. He described the role of the oceans in the storage and release of solar energy and the consequent cyclical behaviour of global climate that is by inference denied in the IPCC reports. This is a world first.
9. Together, the five of us have investigated and determined the causes of the periodic and therefore predictable linkage between variations in received solar energy and the Earth's climate.
10. There was still one mystery. Why was the obvious and well-documented linkage that was first reported 150 years ago not given prominence in the IPCC documentation? I assumed that the reason was to demonstrate that climatic variations were solely the consequence of human activities. This is the central assumption in the IPCC reports
11. Another puzzle was the use of the concept of radiative forcing in units of watts per square metre as the driver of global climate. This completely ignores the fact that it is energy and not temperature that drives the world's climate. I could not understand why this was not appreciated by all those contributors to the IPCC reports.
12. Nor could I understand why the IPCC documentation does not give prominence to the obvious irregularities in the global storage and subsequent release and redistribution of this energy. Readers are given the impression that the Sun's input and the energy redistribution processes are continuous and constant. Even the dominant and well-documented presence of multi-year periodicity in global climate is ignored. It takes less than a day with a pocket calculator to determine the presence of oscillating behaviour in the hydro-climatic data.
13. Nor were any serious attempts made in the IPCC reports to link the well-known El Niño and la Nina phenomena with radiative forcing. Something was seriously amiss.
14. Surprisingly, solar physicists were late comers. Two of them have become actively involved -- David Bredenkamp from South Africa and Oliver Manuel from the US. They have altogether different professional backgrounds but both maintain that the Sun has a dense, mobile core that exhibits an inertial response to the Sun's acceleration and deceleration associated with its wobble through galactic space. This also results in changes in the solar radiation received on Earth.
15. This leaves one more but fundamentally important missing link. What is the origin of the deliberate attempts to ignore or discount the increasing volume of contrarian views on several key aspects of climate change? I have personally experienced some of these tactics. The first was my response to the Stern Review's call for comments. I submitted three detailed reports. He did not respond to any of them.

16. The totally unprofessional and unscientific activities that I have experienced include a vicious personal attack published in Noseweek; an e-mail to an editor insisting that my paper not be published; and the refusal to participate in any roundtable discussions. These actions flouted the detailed recommendation in the high level international ***Budapest Declaration on Science*** published in 1999. Once again the reasons are obvious.
17. There is now a conspiracy theory circulating on the Internet. It is maintained that the IPCC was established in order to unify nations and reduce the threat of nuclear war. I have no personal knowledge but if true everything starts falling into place. Those deliberate (and acknowledged) falsehoods in the IPCC's reports regarding the imminent melting of the Himalayan glaciers and disappearance of the Amazon forest are two examples; the extreme measures adopted to silence all those who disagreed; the actions of the Royal Society; and the patently false scientific foundations on which the IPCC's conclusions are based. These actions were obviously intended to suppress contrarian views. Why was this necessary?

A possible but unlikely solution

The Stern Review is manipulative, misleading and politically motivated. These are harsh words but the issues are of great national and international importance. The Review maintains that the lives of millions of people are at stake if extensive and costly action is not taken by all the nations of the world including the developing nations. But equally, the lives and welfare of the millions of people in the poor, developing nations will be at risk if the drastic measures recommended in the Review are implemented. Their sacrifices will be in vain because the theory on which the alarmist predictions are based is fundamentally flawed despite its wide academic support.

It is very difficult not to come to the conclusion that underlying the Stern Review's report and the subsequent Royal Society's edicts that followed, are a deliberate attempt to force developing countries of Africa and elsewhere to undertake measures that will irreversibly damage their economies and reduce their international trade competitiveness. I cannot think of any logical alternative explanation for the actions of the Royal Society and the Stern Review.

Returning to the current economic and sociological instability in many countries, it is obvious that all nations of the world must be concerned regarding the recent developments and must be searching for a common approach to reduce the risk of a meltdown.

Scientists could play an important role by demonstrating the false basis of climate change theory and so removing it from the international agenda. This will require considerable courage by the believers. But there should be no doubt regarding the consequence to themselves, their institutions and national interests if they continue on their present path.

I recommend that South Africa should take the lead by informing the Durban conference that South Africa intends appointing a high level, independent, multidisciplinary Commission of Enquiry that will operate on the basis recommended by the Budapest ***Declaration on Science and the Use of Scientific knowledge.*** I believe that many nations will accept this proposal with relief.

I see no other solution to this very difficult problem.