Dr. Rajendra Pachauri,
Chairman, Tata Energy Research Institute,
a.k.a. The Energy Research Institute.

Sir,

**A DEFECTIVE IPCC GRAPH AND ITS IMPLICATIONS**

In a lecture that you gave at the University of New South Wales in October last year, you reproduced the following diagram from the IPCC’s *Fourth Assessment Report*,¹ which was published at a time when you were Chairman of the IPCC as well as Chairman of the Tata Energy Research Institute, India –

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**Global Mean Temperature**

Frequently Asked Questions FAQ 3.1, Figure 1. ... Annual global mean observed temperatures from the HadCRUT3 dataset (black dots) along with simple fits to the data. The left hand axis shows anomalies relative to the 1961 to 1990 average and the right hand axis shows the estimated actual temperature (°C). Linear trend fits to the last 25 (yellow), 50 (orange), 100 (purple) and 150 years (red) are shown, and correspond to 1981-2005, 1956-2005, 1906-2005, and 1856-2005, respectively. **Note that for shorter recent periods, the slope is greater, indicating accelerated warming.** The blue curve is a smoothed depiction to capture the decadal variations. To give an idea of whether the fluctuations are meaningful, decadal 5% to 95% (light blue) error ranges about that line are given (accordingly, annual values do exceed those limits). Results from climate models driven by estimated radiative forcings for the 20th century (Chapter 9) suggest that there was little change prior to about 1915, and that a substantial fraction of the early 20th-century change was contributed by naturally occurring influences including solar radiation changes, volcanism and natural variability. From about 1940 to 1970 the increasing industrialisation following World War II increased pollution in the Northern Hemisphere, contributing to cooling, and increases in carbon dioxide and other greenhouse gases dominate the observed warming after the mid-1970s. ...

The text accompanying the defective diagram says, *inter alia,* -

*An increasing rate of warming has taken place over the last 25 years, ...*
The defective diagram, like the now-discredited “hockey-stick” graph in which the IPCC’s 2001 Third Assessment Report falsely purported to abolish the medieval warm period and to suggest that 20th-century temperature change was exceptional, is reproduced several times in the Fourth Assessment Report.

For instance, the diagram appears not only in the Frequently-Asked Questions but also in the Technical Summary, where the accompanying text says, inter alia –

**The rate of warming averaged over the last 50 years (0.13°C ± 0.03°C per decade) is nearly twice that for the last 100 years.**

The diagram and its accompanying Frequently-Asked Question also appears in chapter 3, Observations: Surface and Atmospheric Climate Change, where the caption, like that in the Frequently-Asked Questions chapter, contains the words –

**Note that for shorter recent periods, the slope is greater, indicating accelerated warming.**

My note of your lecture at the University of New South Wales indicates that you displayed the offending diagram, explained that it showed “surface temperature going back to the beginning of industrialization”, and commented as follows –

... in recent years this graph has become much steeper. If you draw a line through the last 100 years, the slope is a 0.74 C° line. But if you look at the last 50 years, [it is] almost twice as steep as the total 100-year period. So it would be appropriate to conclude that we are now at a stage where warming is taking place much faster, ...

So I’d like to emphasize the fact that we are at a stage where warming is taking place at a much faster rate, and clearly if we don’t bring about some changes we’d have much faster changes in future.

In short, your citation of the graph, and your commentary on it, show very clearly that it is at the very heart of the IPCC’s central message that the rate of warming is itself accelerating and that, therefore, drastic policy decisions will have to be taken or there will be a further, and perhaps catastrophic, acceleration of the warming rate in future.

This particular message of the IPCC has been widely reproduced in the news media, and, in particular, in the science journals. For instance, the December 2007 edition of Physics Today displays this diagram, and only this diagram, when praising Al Gore and the IPCC for winning the Nobel Peace Prize.

The defective diagram has also been relied upon by agencies of government, such as the US Environmental Protection Agency, which displays it in the Technical Support Document accompanying its December 2009 finding, timed to coincide with the Copenhagen climate
conference, that CO2 and five other classes of greenhouse gas are an endangerment to human health.

Unwisely, the EPA continued to rely upon the graph even after having received the following warning from the South-Eastern Legal Foundation, acting on behalf of clients –

“The graph, like most others in your documentation, was lifted from a document of the IPCC – its 2007 assessment report. The graph purports to demonstrate, but does not in reality demonstrate, that the rate of “global warming” is itself increasing. No reasonable agency of government, acting responsibly and with due scientific competence and impartiality, would have unquestioningly reproduced such a graph. No competent and genuinely independent peer-reviewer would have sanctioned the use of this graph. However, not one of the 11 “Federal expert reviewers” whom you chose informed you that this graph was an instance of a well-known statistical fallacy. One of the “expert” reviewers was the lead author of the IPCC document in which the defective graph first appeared.

“It is instances such as this that underline the lack of wisdom of your repetition of the defective and highly-politicized analyses issued by the IPCC, and of your failure to ensure that genuinely independent scientific reviewers were invited to scrutinize your documentation to prevent you from merely repeating bad scientific errors such as that which the IPCC’s bogus graph represents.”

WHY THE OFFENDING DIAGRAM IS DEFECTIVE

As the EPA’s Technical Support Document itself admits (though with characteristic illogicality it ignores its own admission in the remainder of the same sentence) –

“Trends may be sensitive to changes of start date in a time series, …”

On any curve representing data in a stochastic time-series (from the Greek στόχος, “a guess”, because stochastic data are volatile and unpredictable), the choice of endpoints for a set including more than one least-squares linear-regression trend permits fabrication, at will, of a spurious acceleration or deceleration in the trend.

Though you are chairman of the IPCC, whose principal task is to evaluate and present climatological results, you are a railroad engineer by origin and may be unaware that the technique is a statistical abuse. Therefore, we will now show, using the same technique on the same data but selecting different endpoints, that it is possible to generate opposite results, demonstrating the technique to be defective.
The IPCC used start-dates in 1856, 1906, 1956, and 1981, with all trend-lines ending in 2005. We shall use start-dates in 1993 (top left below), 1997 (top right), 2001 (bottom left), and 2005 (bottom right), and ending in 2009 –

Our choice of endpoints on similar data (we have used the UAH and RSS satellite data) delivers a result precisely opposite to that which the IPCC obtains using the same method and the HadCRUT data. The conclusion is that a method that produces opposite results depending upon the choice of endpoints for sets of least-squares linear-regression trend-lines is fallacious.

Neither you nor the IPCC nor anyone else funded by taxpayers to assist in public policy-making should ever have resorted to a subterfuge of this kind, particularly in relation to the question – at the very heart of the IPCC’s argument – whether global temperature is rising at an ever-accelerating rate.

Where, then, lies the truth about the trend in mean global surface temperatures over the past century and a half? If we remove most of the trend-lines from the IPCC’s deceptive graph, and replace them with trend-lines marking the periods of the most rapid warming during the period, we find that the 23 years 1975-1998 (during which, at least in theory, humankind’s emissions of CO2 might have been sufficient to exercise some small influence on the global temperature trend) are not unique.

During two previous periods – 1860-1880 and 1910-1940 – the warming rate was identical to that from 1975-1998. Yet it is agreed among all parties that we cannot have had any
measurable effect on temperature trends in the two earlier periods. On St. George’s Day, 2009, Lord Leach of Fairfield asked Her Majesty's Government –

“... whether the rate of increase in global mean surface temperatures between 1975 and 1988 was similar to the rates of increase observed between 1860 and 1880 and between 1910 and 1940 ...”

Lord Hunt of King’s Heath replied –

“Observations collated at the Met Office Hadley Centre and the University of East Anglia Climate Research Unit indicate that the rate of increase in global average surface temperature between 1975 and 1998 was similar to the rates of increase observed between 1860 and 1880 and between 1910 and 1940 (approximately 0.16 °C per decade). This observation has no implications for our policy on anthropogenic warming. Little can be deduced from relatively short trends in the temperature record taken in isolation from the overall picture. ...”

Yet the IPCC, in its defective graph, had indeed sought to deduce from a “relatively short trend” in the data – namely, the last 25 years – that the trend was exceptionally high, when, as Her Majesty’s Government were compelled to admit, the trend over that period had two previous precedents occurring at ~60-year intervals in the 150-year instrumental record –

The above diagram represents the unvarnished truth. The correct conclusion, therefore, is that there is no discernible human influence on global temperature: merely a continuation of
the recovery of global temperatures from the Little Ice Age (a recovery that began 300 years ago), overlaid by an apparent ~60-year cycle in global temperatures.

Given the 300-year uptrend in global temperatures, it is scarcely a surprise – and does not in any way indicate anthropogenicity – that, as the IPCC’s 2007 report repeatedly puts it, ten of the last 12 years have been the warmest in the brief global instrumental record. We may put this remark into context by noting the temperature trend over nine of those years –

Though we do not assert that a nine-year temperature trend indicates anything more than natural variability in the climate, and though it should be noted that in the above diagram the IPCC’s projections are for equilibrium temperature change on the A2 scenario, the contrast between the picture of events portrayed in this graph and the picture falsely portrayed in the artificially-chosen trend lines in the IPCC’s defective graph is stark.

Indeed, one of the revealing Climategate emails admits that global temperatures have now been declining for almost a decade, and that it is a “travesty” that this departure from the official predictions cannot be explained.

Furthermore, the earliest instrumental record we have – the Central England temperature record, which has recently been shown to be a good proxy for the UK as a whole – shows warming at a rate of ~0.55 °C/decade for 40 years from 1695-1735, nine times the rate of ~0.06 °C/decade observed from 1906-2006.
The instrumental period is simply too short to draw the conclusion that you, the IPCC and the EPA have sought to draw from your fabricated set of trend-lines founded on what we shall call the endpoint fallacy.

In particular, we have demonstrated the invalidity of your own conclusion that –

... we are now at a stage where warming is taking place much faster, ... So I'd like to emphasize the fact that we are at a stage where warming is taking place at a much faster rate, and clearly if we don’t bring about some changes we’d have much faster changes in future.

**WHY THE IPCC’S “PEER REVIEW” PROCESS FAILED**

In your New South Wales lecture, you said –

“The role of the IPCC is to assess on a comprehensive, objective and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of climate change, its potential impacts and options for adaptation and mitigation.

“We function on a very transparent basis. The process that’s followed ... is for every draft of the report to be reviewed carefully, and the very first draft is reviewed by expert reviewers, and a number of comments are provided, each one is very carefully logged, and we have to record which ones are accepted, and the ones that are not accepted we have to provide reasons for non-acceptance. Then, finally, the second draft is reviewed by Governments and experts, and the draft summary for policymakers, incidentally, has to be accepted word by word.”

However, the defective graph that is the subject of this letter is not “transparent” or “objective”. It is dishonest.

Why, then, did the IPCC’s “review” process fail, particularly since your lecture points out that in addition to the 450 lead authors and 800 contributing authors there were also more than 2500 scientific expert reviewers from 130 countries?

There are at least four possible reasons for the failure –

First and foremost, the IPCC’s documents are not peer-reviewed in the accepted sense. In the true peer-review process followed by the learned journals, it is the anonymous reviewers and the editors who have the last word on whether a correction should be made.

However, with the IPCC’s climate assessment reports it is the authors who have the final say. They can – and usually do – simply override or ignore reviewers’ comments.
For instance, some 53% of reviewers’ comments on the crucial chapter of the 2007 report attributing most of the warming since 1950 to humankind were highly critical of the chapter, but the authors paid little attention and came to their conclusion anyway, no doubt partly on the “evidence” of the defective graph.

Secondly, the IPCC’s process is political rather than scientific, and the pressure on authors and reviewers to conform to the official story-line is overwhelming.

Thirdly, since the defective diagram is merely one of many grave errors in the IPCC’s documents, it is evident that the review process is not fit for its purpose.

Fourthly, since all of the errors we have identified tend towards inventing a climatic problem where there is none and exaggerating it where there is one, the possibility of scientific and financial fraud must be considered.

YOUR CONFLICTS OF INTEREST

We note that throughout your chairmanship of the IPCC you have also been chairman of Tata Energy Research Institute (TERI), founded by the multi-billion-dollar Tata steel and energy conglomerate. In 2003 the institute, which you have headed since 1981, was renamed simply “The Energy Research Institute”.

TERI was originally founded by a consortium of Tata Group companies, initially operating from the headquarters of the Tata Group, which can trace its origins to 1868, when its founder, Jamsetji Nusserwanji Tata, established a trading company in Bombay to deal in opium.

The Tata group is now owner of Corus Steel, which, not long ago, closed down the steelworks in Redcar, UK, putting 1,700 workers out of their jobs. Corus stands to make billions by cashing in on now-surplus EU “carbon credits” given to the steelworks. It stands to make a great deal more, via the Clean Development Mechanism that is one spin-off from the IPCC process, by transferring steel production from the Redcar works to India.

Tata stands to gain from the Clean Development Mechanism by receiving credits for notional carbon "savings" obtained by investing in a new steel plant in the Indian province of Orissa, which will initially produce 3 million tons of hot rolled steel – exactly the capacity of the now-closed Redcar plant.

The Clean Development Mechanism, which was established to implement the 1997 Kyoto Protocol, is administered by the UN, of which you are a senior official. You are also an advocate for the carbon trading scheme represented by the Clean Development Mechanism.

Tata, therefore, which founded the institute (now employing 700) that you head and that has been paying you substantial benefits, has taken full and very profitable advantage of the
various carbon trading schemes that you, as chairman of the IPCC, have been instrumental in establishing.

We note that you do not declare this manifest and serious conflict of interest to the extent of making explicit the connection between Tata and the institute that it had established. There is no explicit mention of the connection on the institute's official website. There is no mention of it on your personal website. There is no mention of it on your curriculum vitae.

Indeed, a year after you were appointed chairman of the IPCC, the Tata Energy Research Institute was quietly renamed as The Energy Research Institute. The only overt link now is a listing of Tata Tea Limited – a wholly-owned division of the Tata Group – as one of the institute's corporate sponsors.

Notwithstanding the apparent softening of your institute’s sponsorship, in reality its relation with the entire multi-billion-dollar Tata Group remains unaltered, as your communication manager Annapurna Vanchewsaran, explained in January 2003 –

"We have not severed our past relationship with the Tatas. It [the name-change from Tata Energy Research Institute to The Energy Research Institute] is only for convenience."

We also understand that you are now Director-General of The Energy and Resources Institute in the United States, where one of your board of directors is Dr. Timothy Gregoire, JP Weyerhauser Jr. Professor of Forest Management in the School of Forestry and Environmental Studies at Yale University, where – if our information is correct – you have been nominated to head the newly-established Yale Climate and Energy Institute.

We also understand that you are a trustee of TERI-Europe, with offices in Albert Grove, London, where two of your fellow-trustees are Sir John Houghton, a former IPCC science chairman and founder of the UK’s Hadley Centre, and Sir Crispin Tickell, author of a book on man and the climate of which the first edition said that taxpayer funding should be made available to prevent global cooling, and the current edition says taxpayer funding should be made available to prevent global warming.

TERI-Europe has recently compiled a study on "Developing Clean Development Mechanism projects for renewable energy technologies", sponsored by the Foreign and Commonwealth Office.

In 2006 BP had announced it was funding TERI in India to the tune of $9.4 million to produce biodiesel from Jatropha Curcas, a non-edible-oil-bearing crop, which could benefit from a renewable Clean Development Mechanism credit.

The project, of which you are in charge, was expected to take 10 years and would cultivate around 8000 hectares of land currently designated as wasteland with Jatropha Curcas and install all the equipment necessary for seed crushing, oil extraction and processing to produce 9 million litres of bio-diesel per annum.
Just a year later, Tata Chemicals – a wholly owned division of the Tata Group – announced plans to "foray into biodiesel", disclosing that it was already in talks for securing the required raw material from "several leading plantation groups" that were engaged in growing *Jatropha* and *pongamia* plants on a commercial scale.

Tata's closure of the Redcar steel plant, with the loss of 1700 jobs, will help the UK to meet the emission reduction targets that are currently being negotiated – under your aegis – in Copenhagen.

We have looked for your declaration of these interests in the documents of the IPCC, particularly in its 2007 *Fourth Assessment Report*, but we have not found them.

Our conclusion is that you have numerous substantial direct or indirect vested financial and commercial interests profiting from the emissions reduction processes that the documents produced by the IPCC under your chairmanship have triggered.

Finally, we note that TERI Biotech, a subdivision of TERI, is tendering for a UN contract worth $3 billion to clean up Kuwait after the oilfield fires. Once again, the conflict of interest is material and severe.

**CORRECTING THE IPCC’S ERRORS AND EXAGGERATIONS**

In the context of your material financial and commercial interests that we have outlined, it is necessary that you should now ensure that any errors or exaggerations in the IPCC’s case for reduction of carbon emissions are corrected forthwith.

We should be grateful, therefore, if you would write to us within the next 48 hours to reassure us, as a first step, that the IPCC graph that we have here identified as defective be removed from the IPCC’s 2007 *Fourth Assessment Report*, together with your false conclusion, and that of the IPCC itself, that the rate of “global warming” is itself accelerating, when it is not.

We know that immediate amendments even to the published final versions of the IPCC’s documents can be made online, because we have been given evidence that they have been made before.

Recently, for instance, the United Nations Environment Programme, one of the two parent bodies of the IPCC, issued an update on the state of the climate that was intended to reinforce the propaganda message that has been circulating in certain quarters in the months preceding the Copenhagen talks – namely, that – as the IPCC’s defective graph itself implies – climatic trends are getting rapidly worse.
One of the graphs originally included in that document by UNEP was a graph purporting to reinstate the conclusion of a now-discredited graph from the IPCC’s 2001 report to the effect that the warming of the 20th century was unprecedented in at least the last millennium –

![Figure 1.3: Correlation between temperature and CO₂](image)

This graph was stated to be from Hanno (2009): however, no reference to it was listed in the UNEP document’s list of references. The graph had in fact been lifted from Wikipedia, the online “encyclopedia” that any idiot can edit and only a cretin can credit – in short, from what is universally regarded with contempt as the least reliable data source on the planet.

Within a day or two of the bogus graph being publicly identified, UNEP had hastily replaced it with another graph, this time properly sourced, that did not show what the false graph had purported to show.

In 2007, on the day of publication of the IPCC’s Fourth Assessment Report, one of us noticed, and pointed out to the IPCC, that a table that had not been included in the IPCC’s final draft report had appeared in the Summary for Policymakers. The table contained four erroneous values, each exaggerated tenfold, purporting to show that the observed contribution of the Greenland and Antarctic ice sheets to sea-level rise in recent decades had been an order of magnitude greater than it was. The IPCC immediately moved, relabelled and corrected the table, changed the units of measurement, and quietly posted up the new version of the 2007 report on its website.

For these reasons, we know that the IPCC and its parent bodies can and do correct the online versions of their defective reports, and we must now insist that the offending IPCC graph that is the subject of this letter be removed forthwith from the IPCC’s 2007 report.

We should be grateful for your response within 48 hours, failing which we shall be entitled to presume that you, the IPCC and the EPA – to whose administrator we are copying this letter – intend to conspire, and are conspiring, to obtain a pecuniary advantage by deceiving the public as to the nature, degree, and significance of the global surface temperature trend. In that event, conspiracy to defraud taxpayers would be evident, and we should be compelled to place this letter in the hands of the relevant investigating and prosecuting authorities.
In any event, errors and exaggerations such as that which is evidenced in the IPCC’s defective graph do not inspire confidence in the reliability of the IPCC’s scientific case. Given this and other mistakes that an international body of this nature ought not to have made, and given your numerous and direct conflicts of interest that have, in our opinion, been insufficiently disclosed, we are also copying this letter to the delegations of the states parties to the UN Framework Convention on Climate Change with a request that you be stripped of office forthwith.

Yours faithfully,

VISCOUNT MONCKTON OF BRENCHLEY
United Kingdom

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Cover figure from COP15 website.

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