

From: Tom Wigley <wigley@meekeu.ucar.edu>
To: jan.goudriaan@staff.tpe.wau.nl, grassl_h@gateway.wmo.ch, Klaus Hasselmann <klaus.hasselmann@dkrz.de>, Jill Jaeger <jaeger@iiasa.ac.at>, rector@iss.nl, oriordan@enviro.uct.ac.za, uctpa84@ucl.ac.uk, john@pik-potsdam.de, mparry@geog.ucl.ac.uk, pier.vellinga@ivm.vu.nlam.de
Subject: Re: ATTENTION. Invitation to influence Kyoto.
Date: Tue, 25 Nov 1997 11:52:09 -0700 (MST)
Reply-to: Tom Wigley <wigley@meekeu.ucar.edu>
Cc: Mike Hulme <m.hulme@uea.ac.uk>, t.mitchell@uea.ac.uk

Dear Eleven,

I was very disturbed by your recent letter, and your attempt to get others to endorse it. Not only do I disagree with the content of this letter, but I also believe that you have severely distorted the IPCC "view" when you say that "the latest IPCC assessment makes a convincing economic case for immediate control of emissions." In contrast to the one-sided opinion expressed in your letter, IPCC WGIII SAR and TP3 review the literature and the issues in a balanced way presenting arguments in support of both "immediate control" and the spectrum of more cost-effective options. It is not IPCC's role to make "convincing cases" for any particular policy option; nor does it. However, most IPCC readers would draw the conclusion that the balance of economic evidence favors the emissions trajectories given in the WRE paper. This is contrary to your statement.

This is a complex issue, and your misrepresentation of it does you a dis-service. To someone like me, who knows the science, it is apparent that you are presenting a personal view, not an informed, balanced scientific assessment. What is unfortunate is that this will not be apparent to the vast majority of scientists you have contacted. In issues like this, scientists have an added responsibility to keep their personal views separate from the science, and to make it clear to others when they diverge from the objectivity they (hopefully) adhere to in their scientific research. I think you have failed to do this.

Your approach of trying to gain scientific credibility for your personal views by asking people to endorse your letter is reprehensible. No scientist who wishes to maintain respect in the community should ever endorse any statement unless they have examined the issue fully themselves. You are asking people to prostitute themselves by doing just this! I fear that some will endorse your letter, in the mistaken belief that you are making a balanced and knowledgeable assessment of the science -- when, in fact, you are presenting a flawed view that neither accords with IPCC nor with the bulk of the scientific and economic literature on the subject.

Let me remind you of the science. The issue you address is one of the timing of emissions reductions below BAU. Note that this is not the same as the timing of action -- and note that your letter categorically addresses the former rather than the latter issue. Emissions reduction timing is epitomized by the differences between the Sxxx and WRExxx pathways towards CO2 concentration stabilization. It has been clearly demonstrated in the literature that the mitigation costs of following an Sxxx pathway are up to five times the cost of following an equivalent WRExxx pathway. It has also been shown that there is likely to be an equal or greater cost differential for non-Annex I countries, and that the economic burden in Annex I countries would fall disproportionately on poorer people.

Furthermore, since there has been no credible analysis of the benefits (averted impacts) side of the equation, it is impossible to assess fully the benefits differential between the Sxxx and WRExxx stabilization profiles. Indeed, uncertainties in predicting the regional details of future climate change that would arise from following these pathways, and the even greater uncertainties that attend any assessment of the impacts of such climate changes, preclude any credible assessment of the relative benefits. As shown in the WRE paper (Nature v. 379, pp. 240-243), the

differentials at the global-mean level are so small, at most a few tenths of a degree Celsius and a few cm in sea level rise and declining to minuscule amounts as the pathways approach the SAME target, that it is unlikely that an analysis of future climate data could even distinguish between the pathways. Certainly, given the much larger noise at the regional level, and noting that even the absolute changes in many variables at the regional level remain within the noise out to 2030 or later, the two pathways would certainly be indistinguishable at the regional level until well into the 21st century.

The crux of this issue is developing policies for controlling greenhouse gas emissions where the reductions relative to BAU are neither too much, too soon (which could cause serious economic hardship to those who are most vulnerable, poor people and poor countries) nor too little, too late (which could lead to future impacts that would be bad for future generations of the same groups). Our ability to quantify the economic consequences of "too much, too soon" is far better than our ability to quantify the impacts that might arise from "too little, too late" -- to the extent that we cannot even define what this means! You appear to be putting too much weight on the highly uncertain impacts side of the equation. Worse than this, you have not even explained what the issues are. In my judgment, you are behaving in an irresponsible way that does you little credit. Furthermore, you have compounded your sin by actually putting a lie into the mouths of innocents ("after carefully examining the question of timing of emissions reductions, we find the arguments against postponement to be more compelling"). People who endorse your letter will NOT have "carefully examined" the issue.

When scientists color the science with their own PERSONAL views or make categorical statements without presenting the evidence for such statements, they have a clear responsibility to state that that is what they are doing. You have failed to do so. Indeed, what you are doing is, in my view, a form of dishonesty more subtle but no less egregious than the statements made by the greenhouse skeptics, Michaels, Singer et al. I find this extremely disturbing.

Tom Wigley

On Tue, 11 Nov 1997, Tim Mitchell wrote:

> Reference: Statement of European Climate Scientists on Actions to Protect
> Global Climate
>
> Dear Colleague,
>
> Attached at the end of this email is a Statement, the purpose of which is
> to bolster or increase governmental and public support for controls of
> emissions of greenhouse gases in European and other industrialised
> countries in the negotiations during the Kyoto Climate Conference in
> December 1997. The Statement was drafted by a number of prominent European
> scientists concerned with the climate issue, 11 of whom are listed after
> the Statement and who are acting as formal sponsors of the Statement.
>
> ***** The 11 formal sponsors are: *****
>
> Jan Goudriaan Hartmut Grassl Klaus Hasselmann Jill Jäger
> Hans Opschoor Tim O'Riordan Martin Parry David Pearce
> Hans-Joachim Schellnhuber Wolfgang Seiler Pier Vellinga
>
> After endorsements from many hundreds of other European climate-related
> scientists are collected (and we hope that you agree to be one of these), the
> Statement will be brought to the attention of key decision-makers (e.g. EU
> Kyoto negotiators and Environment Ministers) and other opinion-makers in
> Europe (e.g. editorial boards of newspapers) during the week beginning 24th
> November. The UK and other European WWF offices have agreed to assist in
> this activity, although the preparation of the Statement itself has in no
> way been initiated or influenced by WWF or any other body. This is an
> initiative taken by us alone and supported by our 11 Statement sponsors.

>
 > WHAT WE ASK FROM YOU
 >
 > We would very much like you to endorse this Statement. Unfortunately, at
 > this time we can no longer take into account any suggested modifications.
 > Nevertheless, we hope that it reflects your views closely enough so that
 > you can support it. If you agree with the Statement, then:
 >
 > 1. PLEASE IMMEDIATELY FILL OUT the form below and either reply via email
 > (preferably) or telefax (only if necessary) to the indicated fax number.
 > Replies received after Wednesday 19th November will not be included. If
 > replying by email please do not use the 'reply all' option. If this
 > invitation has been forwarded from a colleague, please make sure your reply
 > is directed to the originators of this invitation, namely:
 > t.mitchell@uea.ac.uk (on behalf of Mike Hulme and Joe Alcamo).
 >
 > 2. We have identified about 700 climate-related scientists in Europe who
 > are receiving this email directly from us. If you feel it is appropriate,
 > PLEASE FORWARD THIS MESSAGE to up to three colleagues in your country who
 > are working in climate-related fields, who you think may support the
 > Statement and whom we have not targeted. To identify colleagues whom we
 > have already invited you can examine the email address list we have used
 > for your country in the email header (or else appended to the end of this
 > email).
 >
 > We realize that you are very busy, but this action may have a very positive
 > influence on public discussions during the critical period leading up to
 > Kyoto and during the Conference itself.

>
 > With best wishes,
 >
 > Michael Hulme, Climatic Research Unit, UEA, Norwich
 > Joseph Alcamo, University of Kassel, Germany
 >
 > (On behalf of the other signatories of the Statement)
 >
 >

> I agree to have my name placed on the list of scientists that endorse the
 > Statement of European Climate Scientists on Actions to Protect Global
 > Climate.

>
 > Full Title and Name
 >
 > Affiliation Country
 >
 > Signature (for fax replies only)
 >
 > Date
 >
 > Other comments:
 >
 >

> We would prefer you to return this email message to us by email, having
 > duly completed the form above. You should be sending the form to:

```

*****
**                               **
**  t.mitchell@uea.ac.uk        **
**                               **
*****

```

>
 > If you would rather not use the email reply function, then please print out
 > the form above and fax it (filled in) to:
 >
 > "Attention: European Climate Statement"
 > Climatic Research Unit, University of East Anglia

> Telefax: +44 1603 507784

>
>
> _____
>
>
> Statement of European Climate Scientists on Actions to Protect Global Climate

> =====

> In 1992, the nations of the world took a significant step to protect global
> climate by signing the Framework Convention on Climate Change. This year,
> at the coming Climate Summit in Kyoto*, they have the chance to take
> another important step. It is our belief that the nations of the world
> should agree to substantive action for controlling the growth of greenhouse
> gas emissions.

> Our opinion is bolstered by the latest assessment of scientific knowledge
> carried out by the Inter-governmental Panel on Climate Change (IPCC). The
> IPCC reported that "the balance of evidence suggests a discernible human
> influence on global climate". They also gave examples of observed climate
> change up to now, including:

- > · Global mean surface air temperature has increased by between 0.3 to 0.6
> degrees Celsius since the late 19th century, and recent years have been the
> warmest since 1860.
- > · Global sea level has risen between 10 and 25 centimeters over the past
> 100 years.

> Based on estimates from computer models, the IPCC also maintained that
> humanity will have a continuing and cumulative effect on climate in the
> future. Future society may find that some climate impacts are positive, as
> in the possible increase in rainfall and crop yield in some dry regions;
> and society may be able to adapt to some impacts, such as by building dikes
> against rising sea level. But many, if not most, climate impacts will
> increase risks to society and nature, and will be irreversible on the human
> time scale. Among the possible changes are further increases in sea level,
> the transformation of forest and other ecosystems, modifications of crop
> yield, and shifts in the geographic range of pests and pathogens. It is
> also possible that infrequent but disastrous events, such as droughts and
> floods, could occur more often in some regions. At particular risk are
> people living on arid or semi-arid land, in low-lying coastal areas and
> islands, in water-limited or flood-prone regions, or in mountainous
> regions. The risk to nature will be significant in the many areas where
> ecosystems cannot quickly adapt to changing climate, or where they are
> already under stress from environmental pollution or other factors.

> Because of these risks, we consider it important for nations to set limits
> on the increase of global temperature due to human interference with the
> climate system. We recommend that European and other industrialized nations
> use such long-term climate protection goals as a guide to determining
> short-term emission targets. This approach has been adopted, for example,
> by the European Union and the Alliance of Small Island States.

> Some may say that action to control emissions should be postponed because
> of the scientific uncertainties of climate change and its impact. Our view
> is that the risks and irreversibility of many climate impacts require
> "precautionary measures to anticipate, prevent, or minimize the causes of
> climate change", as stated in the Framework Convention on Climate Change.

> We also acknowledge that economic arguments have been put forward for
> postponing the control of emissions in Europe and elsewhere. However, after
> carefully examining the question of timing of emission reductions, we find
> the arguments against postponement to be more compelling. First, postponing
> action could shift an unfair burden for more severe reductions of emissions
> onto future generations. Second, it will lead to a greater accumulation of
> greenhouse gases in the atmosphere and hence make it more difficult to
> prevent future climate change when action is finally taken. Third, the
> latest IPCC assessment makes a convincing economic case for immediate
> control of emissions.

> Rather than delay, we strongly urge governments in Europe and other
 > industrialized countries to agree to control greenhouse emissions as part
 > of a Kyoto agreement. Some controls can be achieved by reducing fossil fuel
 > use at little or no net cost through accelerated improvements in the
 > efficiency of energy systems, the faster introduction of renewable energy
 > sources, and the reduction of subsidies for fossil fuel use. Moreover,
 > reducing the use of fossil fuels will also reduce local and regional air
 > pollution, and their related impacts on human health and ecosystems.

> We believe that the European Union (EU) proposal is consistent with long
 > term climate protection. This proposal would reduce key greenhouse gas
 > emissions by 15% from industrialized countries (so-called Annex I
 > countries) by the year 2010 (relative to year 1990). Although stronger
 > emission reductions will be needed in the future, we see the EU, or
 > similar, goal as a positive first step "to prevent dangerous anthropogenic
 > interference with the climate system" and to lessen risks to society and
 > nature. Such substantive action is needed now.

> *Third Conference of the Parties to the Framework Convention on Climate
 > Change, Kyoto, Japan, December, 1997.

> Signed:

> Jan Goudriaan	Hartmut Grassl	Klaus Hasselmann
> Jill Jäger	Hans Opschoor	Tim O'Riordan
> Martin Parry	David Pearce	Hans-Joachim Schellnhuber
> Wolfgang Seiler	Pier Vellinga	

> *****
 > ** This message originated from the
 > ** Climatic Research Unit, University of East Anglia, Norwich, UK.
 > ** It was sent out by
 > ** Mike Hulme and Tim Mitchell on behalf of the 11 key signatories.
 > ** If you object to being on this email address list,
 > ** please accept our apologies and inform us;
 > ** we will then remove your address from the list.
 > ** Please direct any comments to:
 > ** t.mitchell@uea.ac.uk
 > *****

> The list below consists of the people with UK email addresses to whom this
 > message has been sent:

- > all CRU staff
- > Adger, N
- > Alcock, Graeme
- > Allan, P
- > Allan, Richard P
- > Anderson, Dennis
- > Armstrong, Adrian
- > Arnell, N W
- > Audsley, Eric
- > Baker, Richard
- > Baran, A J
- > Barker, Terry
- > Benestad, R E
- > Bentham, G
- > Bigg, G
- > Boucher, Keith R
- > Bouma, D
- > Bramwell, Penny
- > Brooks, Roger
- > Brown, Philip RA
- > Brugge, Roger
- > Bullock, P
- > Burkhardt, Ulrike
- > Butterfield, Ruth

- > Cai, Xiaoming
- > Cannell, Melvyn
- > Carling, Bob
- > Castleford, John
- > Chan, Angela H Y
- > Clark, Douglas B
- > Cluckie, I D
- > Collins, Matthew
- > Colman, Andrew
- > Connolley, William M
- > Cornford, Dan
- > Costigan, Peter
- > Cox, Peter
- > Cox, Peter M
- > Cui, Zhiqiang
- > Culf, Alastair
- > Cullum, Dave
- > Dale, Ian
- > Davis, Gerald R
- > Dewhurst, Nicola
- > Doherty, Ruth
- > Dokerty, T
- > Dorling, S
- > Downey, Ian
- > Downing, Tom
- > East, M.
- > Easthope, Mark
- > Evans, Sam
- > Favis-Mortlock, David
- > Ferris, Rachel
- > Fisher, Helen
- > Folland, Chris
- > Foot, John S
- > Ford, I J
- > Fowler, David
- > Friend, Andrew
- > Fruh, Wolf-Gerrit
- > Gallop, Rowland
- > Gawith, Megan
- > Geer, Alan
- > George, Glen
- > Gibson, J K
- > Giles, Brian
- > Goode, Helen Rachel
- > Gregory, David
- > Gregory, Jonathan
- > Gregory, Ken
- > Griggs, D
- > Grubb, Michael
- > Hannah, David M
- > Hansen, Jim
- > Harrison, Paula
- > Hawksworth, Kevin Stuart
- > Hedger, Merylyn
- > Hewitt, Chris
- > Highwood, Eleanor
- > Holt, Chris
- > Horton, Briony
- > Houghton, J
- > Houseago, Richenda
- > Huntingford, Chris
- > Hutchings, Jenny
- > Ingram, John
- > Ingram, W J
- > Jackson, Tim
- > Jakob, Christian
- > Jeffree, Christopher E
- > Jenkins, Geoff
- > Johns, Tim

- > Johnston, Peter
- > Jolliffe, Ian
- > Jones, Clive
- > Jones, Colin
- > Jordan, A
- > Joyce, Andrew N
- > Keen, Ann
- > Kennedy, Hamid
- > Kenworthy, Joan M
- > Keramitsoglou, Iphigenia
- > Kilsby, Chris
- > King, Ben P
- > King, John
- > Kings, John
- > Kniveton, Dom
- > Lamptey, Benjamin Lantei
- > Lary, David J
- > Liss, P
- > Livermore, Matt
- > Lloyd, Colin
- > Lynagh, Norman
- > Marshall, David
- > Marshall, Stewart
- > Maskell, Kathy
- > Matthews, B
- > Mavromatis, Theodoros
- > Mayes, Julian
- > Mayr, Thomas
- > McClatchey, John
- > McGregor, Glenn Russell
- > McKay, Douglas
- > McLaren, Alison
- > McMichael, Tony
- > Medlyn, Belinda
- > Merchant, Chris
- > Mitchell, John
- > Morison, James
- > Morse, Andy
- > Mulligan, Mark
- > Murphy, James
- > Murrill, A
- > Nicholls, Robert
- > Noguera, Maria
- > Orr, John
- > Palmer, Tim
- > Palutikof, Jean
- > Parker, David
- > Parkinson, Stuart
- > Parry, M
- > Pedder, Mike
- > Perry, Allen
- > Pierce, Clive
- > Pilling, C
- > Pope, V D
- > Pugh, D
- > Ravetz, Jerome R
- > Read, P L
- > Rey, N
- > Reynard, Nick
- > Reynolds, David
- > Roberts, D L
- > Rosier, Suzanne
- > Rounsevell, Mark
- > Rowell, Dave
- > Ryan, Sonja
- > Sanderson, Michael G
- > Scaife, Adam
- > Sear, Chris
- > Semenov, Mikhail

- > Shackley, Simon
- > Shao, Jianmin
- > Shine, Keith P
- > Simpson, I
- > Simpson, V
- > Sims, Graham
- > Skea, Jim
- > Slingo, Julia
- > Smithson, Peter
- > Snow, Keith
- > Spellman, Greg
- > Standley, Andy
- > Stott, Peter
- > Subak, S
- > Sumner, Graham
- > Sutton, R T
- > Tait, Andrew
- > Taylor, C M
- > Tett, Simon
- > Thorncroft, Chris
- > Thornes, John E
- > Thornton, Tim
- > Thorpe, Robert
- > Thuburn, John
- > Todd, Martin
- > Tullett, Michael
- > Turner, R K
- > Unwin, David
- > Veal, Anthony
- > Viterbo, Pedro
- > Walker, Malcolm
- > Wang, Kuoying
- > Warrilow, David
- > Washington, Richard
- > Webb, Mark
- > Wheeler, Tim
- > Wigley, Tom
- > Wilby, Rob
- > Wild, Richard
- > Williamson, P
- > Woodward, Stephanie
- > Wright, Peter
- > Wynne, Brian
- > Yamin, Farhana
- >
- >

```

*****
*Tom M.L. Wigley                                     *
*Senior Scientist                                   *
*National Center for Atmospheric Research           *
*P.O. Box 3000                                       *
*Boulder, CO 80307-3000                             *
*USA                                                  *
*Phone: 303-497-2690                                 *
*Fax: 303-497-2699                                  *
*E-mail: wigley@ucar.edu                             *
*****

```