

AVDIATVR ET ALTERA PARS

# Scientific Manifesto



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*On 11 June 2020 the undersigned, Professor Guus Berkhout, sent an open letter to the President of the Royal Netherlands Academy of Arts and Sciences (KNAW), as well as an English version to the European (EASAC) and global (IAP) umbrella organisations of the National Academies of Sciences. This letter (attached) expresses concern that academic freedom has largely disappeared in climate science.*

*The letter is based on CLINTEL's scientific manifesto, AVDIATVR ET ALTERA PARS ("Let both sides be heard", one of the two fundamental principles of natural justice recognized by the law of civilized nations). The manifesto comprises ten propositions governing independent scientific research. All scientific research ought to comply with these propositions. Bad scientific practice inevitably leads to bad scientific results.*

*The ten propositions are set out below, with a brief examination of the extent to which current climate research complies with them.*

## 1. THE COMPLEXITY OF MULTI-FACTOR, MULTI-SCALE SYSTEMS DEMANDS CLOSE CO-OPERATION BETWEEN A WIDE RANGE OF SCIENTIFIC FIELDS AND DISCIPLINES

Climate change has a wide variety of causes, natural as well as anthropogenic. Integration of knowledge from many scientific disciplines, such as astronomy, geology, archaeology, meteorology, oceanography and biology, is indispensable to a full understanding of the complex causal relationships that underlie climate change. At the same time, the integration of theoretical knowledge with measurement technology should have a high priority. This is hardly the case in today's mainstream climate research.

## 2. SOUND SCIENTIFIC RESEARCH IS OPEN-MINDED AND CHARACTERIZED BY A WIDE VARIETY OF VIEWPOINTS WITHOUT DOGMAS AND PREJUDICES

Within established climate science, curiosity and diversity are being suppressed and the Anthropogenic Global Warming (AGW) dogma is ruthlessly enforced. Think of IPCC's extreme unlikely scenario RCP 8.5, being widely presented in the literature as 'business as usual'. Despite pressing scientific, economic and social grounds for questioning that dogma, any scepticism is presented as unscientific. However, science is neither a religion nor a political faction. Science advances not by chanting "I believe!" but by asking "I wonder?" Funding for climate-sceptical research is non-existent today. Censorship complicates and all too often prevents the publication of critical articles in peer-reviewed scientific journals.

## 3. FAITH IN SCIENTIFIC MODELS IS FAITH IN THE UNDERLYING ASSUMPTIONS; ONLY CORRECT ASSUMPTIONS LEAD TO CORRECT ANSWERS

What computer models tell us depends entirely on what model-makers have input to them: hypotheses, relationships, parameterizations, arithmetical simplifications, boundary conditions, etc. Unfortunately, mainstream climatologists seldom discuss these choices in their complex climate models. For instance, how sensitive are the modelling results to the biased assumptions of climate modelling groups? We still know very little about it.

#### 4. WITH ENOUGH MODEL PARAMETERS IT IS ALWAYS POSSIBLE TO RECONSTRUCT MEASUREMENTS FROM THE PAST; MODEL VALIDATION REQUIRES A LOT MORE EFFORT

Parametric tuning says little about the validity of models. The famous mathematician John von Neumann (1903 – 1957) said: *“With four parameters I can fit an elephant: with five I can make him wiggle his trunk.”* The real test of models is whether they can accurately predict future measurements. But that is where climate models go wrong. For 30 years, the IPCC has falsely predicted alarming high temperatures in its reports. Considering its failure, why do we still allow IPCC to publish its terrifying speculative long-term climate predictions?

#### 5. IMPROVED MEASUREMENT SYSTEMS ARE DECISIVE IN SCIENTIFIC PROGRESS; SOUND SCIENCE REQUIRES A BALANCE IN THEORETICAL AND EMPIRICAL SCIENCE

Breakthroughs in science are initiated by the availability of improved measurement systems that provide researchers with new and/or better reproducible observations. Think of the spectacular improvements in microscopy and the capability of modern telescopes. Think of the Dutch LOFAR antenna network, which has already discovered thousands of new galaxies. Unfortunately, mainstream climate science is more interested in models than in measurements; model-makers are running the show. In the extremely complex climate issue, however, new measuring systems should have the highest priority as a yardstick to verify the validity of IPCC’s model assumptions.

#### 6. THE HISTORY OF SCIENCE SHOWS THAT NEW INSIGHTS DO NOT COME FROM FOLLOWERS BUT FROM DISSENTERS; DOUBTERS AND DISSENTERS MAKE HISTORY IN SCIENCE

Copernicus, Galilei, Newton, Gauss, Curie, Einstein, Watson, Crick, Wilkins and Hawking all looked critically at the prevailing consensus and dared to take a different path. Progress would not have been possible without them. In contrast, the mainstream climate community have produced few advances. They have diverted themselves into an ever-bitterer defence of the narrow CO<sub>2</sub>-warming hypothesis. Doubters and dissenters are not tolerated.

#### 7. SEPARATION OF SCIENCE AND POLITICS IS A GREAT GOOD; ACADEMIES OF SCIENCES SHOULD PROTECT SCIENTISTS FROM POLITICAL IDEOLOGIES

When political ideologues proclaim “consensus”, critical scientists are sidelined, excluded from the scientific discourse or even dismissed. For instance, Professor Peter Ridd, an expert on coral reefs, exposed several unsound peer-reviewed scientific papers falsely asserting that climate change is killing the Great Barrier Reef. His university dismissed him after decades of service. The courts have declared his dismissal improper and have ordered the university to compensate him. Not only was the university’s misconduct a flagrant violation of academic freedom, it has also sent a dangerous signal to young scientists: do not dare to defy dogma or you will be driven out. Climate censorship brings us back to the Middle Ages. AGW dissenters are excommunicated.

#### 8. ACADEMIES OF SCIENCES HAVE A MORAL RESPONSIBILITY TO WARN SOCIETY OF SENSELESS CONCLUSIONS THAT FOLLOW FROM NAÏVE BELIEF IN IMMATURE SCIENTIFIC MODELS

So far, climate models have proven unable to make reliable predictions of global warming. Therefore, their predictions are not a sound basis for making government policy. Climate policies are costly. They have major consequences for society. For example, IPCC’s predictions about extreme warming and sea-level rise have caused much fear and unrest in the world. As today’s climate policy is based on these alarming model predictions, the existing energy infrastructure is unnecessarily



being demolished with imprudent haste. A typical example of climate stupidity is spending billions of dollars on the dirty, wood-fired power stations. For this supposedly “green” solution, forests with unique ecosystems are being destroyed. Bizar!

## 9. THE SCIENTIFIC COMMUNITY SHOULD BE MORE HONEST ABOUT THE LIMITS ON THE POWER OF MANKIND TO SUBDUCE NATURAL VARIABILITY

Science should start to resist the absurd green engineering agendas of supranational organisations. To think that we can always control the complex processes from weather and climate in the macro world to the mutation of pathogens in the micro world is as naïve as it is arrogant. Let us not behave as though we were present-day Don Quixotes. In climate research, we should focus not on mitigation but on adaptation to the many consequences of natural variability ahead of us – changes that we are powerless to control.

## 10. THE SCIENCE IS SETTLED IS A CONSENSUS STATEMENT THAT WILL NEVER BE USED BY SCIENTISTS OF INTEGRITY

Argument from consensus conflates two ancient logical fallacies – of appeal to pure headcount and of appeal to imagined authority (*argumentum ad populum* and *argumentum ad verecundiam*). The statement that “the science is settled” is an assertion of imagined consensus deployed by climate activists as a substitute for science. Quoting Michael Crichton (1942 – 2008) on this subject: “*Science is not consensus and consensus is not science*”. The Paris Climate Accord of 2015, which set the climate agenda for decades, is based on this statement. However, the truth is that the science is not settled at all. We have little idea how much or how little mankind is contributing to global warming. We also do not know whether, or to what extent, warmer worldwide weather will be net-harmful or net-beneficial.

Mainstream climate science does not meet any of these ten propositions. Climate research has taken a direction that may be profitable to its practitioners and beneficiaries, but it is unworthy of science. The interests of science and politics have become strongly intertwined. As a result, the search for the objective scientific truth has been abandoned for decades. History will blame the scientists, administrators and politicians who initiated, fostered and furthered this scientific misconduct.

In 2015, the National Academies of Sciences should have warned world leaders loud and clear that the science is not settled at all. By their negligence, the Academies made themselves complicit in the absurdity of the Paris Agreement.

The Academies of Sciences see themselves (rightly or wrongly) as guardians of science. If so, should they not at last creak into action? On the basis of immature scientific models, an absurdly costly climate policy is being imposed on the world. In the name of science, vital infrastructures are being destroyed. Worse, poor people are dying every year because they cannot afford costly “renewable” electricity.

### DR. A.J. (GUUS) BERKHOUT

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President Climate Intelligence Group (CLINTEL)

Annex: Letter to the new President  
of the Royal Netherlands Academy  
of Arts and Sciences

Prof. Dr. Ineke Sluiter, President  
Royal Netherlands Academy of Arts and Sciences (KNAW)  
Trippenhuis, Kloveniersburgwal 29  
1011 JV AMSTERDAM

The Hague, 10 June 2020

Dear Professor Sluiter,

As a dedicated KNAW member, I wrote to past-President José van Dijck more than two years ago and past-President Wim van Saarloos more than a year ago to express concern that climate science is being abused for political purposes. I wrote that climate policy was being made under the pretext that “the science is settled”.

Both presidents’ answers were far from reassuring: *“The question has been carefully considered. We have full confidence in the IPCC. There is no reason for the KNAW to take further action.”*

### **Why don’t we hear any alarm bells?**

I am addressing you in your capacity as the new President of the KNAW because the climate issue is escalating. The IPCC and the associated activist climate movement have become highly politicised. Sceptical scientists are being silenced. As an IPCC expert reviewer, I critically looked at the latest draft climate report. My conclusion is that there is little evidence of any intent to discover the objective scientific truth.

Though IPCC’s doomsday scenarios are far from representative of reality, they play an important role in government climate policy. Only courageous individuals dare to point out that the predictions of the IPCC’s computer models of climate have not come to pass, in that contemporary measurements contradict them. IPCC’s confidence in its own models does not match the real-world outturn. In the past, scientific societies such as ours would have sounded the alarm.

In your interview with *Elsevier Weekblad* (6 June 2020) you say: *“Dutch science should be proud of itself”* and, a little later, *“A hallmark of high-quality research must be a wide variety of viewpoints – fewer dogmas, more perspectives.”* I fully agree with you. Unfortunately, your observations do not apply to climate science. There, diversity is suppressed and the Anthropogenic Global Warming (AGW) dogma is promoted. That is why I am writing to you.

### **Faith in models is faith in modellers**

Models’ outputs are not magically correct, even if those models run on supercomputers. After all, models are the work of fallible humans. What models tell us depends entirely on what the modellers have put in: hypotheses, relationships, parameters, simplifications, boundary conditions, and so on. Unfortunately, there is little discussion about the validity of these crucial inputs. All that is discussed is the output.

As a result, tuning of models has come to be falsely equated with validation. The famous mathematician John von Neumann said: *“The near-perfect match between your model and your data doesn’t tell you much about how good your model is. With four parameters I can fit an elephant. With five I can wiggle his trunk.”*

With sufficient tunable parameters compared to the data count, a model can replicate any dataset. This is exactly what happens when tuning climate models.

The real test of models is not how well they have been tuned to fit the past but how well they predict the future. Seen in the light of this test, climate models have failed. They cannot yet make reliable predictions. Therefore, they are unsuitable for long-term policymaking, particularly where, as here, the policies that IPCC and others advocate on the basis of these failed predictions have costly consequences for us all.

### **In the name of science**

What concerns me about this embarrassing state of affairs is that science is being misused to provide spurious justification for wishful climate policy and that the scientific establishment is looking the other way.

Why do scientific institutions not warn society that all these climate-change doom and gloom scenarios have little or no scientific justification? I know that there are many scientists around the world who doubt or disagree with the IPCC's claims. I also know from my own experience and from correspondence with colleagues that there is much pressure on researchers to conform to what we are told is the climate "consensus". But the history of science shows time and again that new insights do not come from followers but from critical thinkers. For valid new insights, measurements trump models.

The KNAW, as the guardian of science, must surely take action now. The more governments invest in expensive climate policies in the name of climate science, the more difficult it becomes to point out that climate science in its present state falls a long way short of providing any justification for such policies. There are more and more indications that things are not right. If the scientific community waits for the dam to burst, the damage to science will be enormous. Society will then rightly ask itself the question: why were the Academies of Sciences silent? Surely there has been enough warning from scientific critics of the official position?

The KNAW must, of course, stay clear of politics and focus on excellence in finding the truth. But I repeat that the KNAW is also the guardian of science. In climate policy in particular, science is abused on a global scale. How can one plausibly state, on such a highly complex subject as the Earth's climate, that "the science is settled"? That is not excellence: it is stupidity.

There has been no clear warning from the European Academies (EASAC) and/or the InterAcademy Partnership (IAP) that the climate sciences did a lot of work, but are still a long way from reaching definitive conclusions. I consider such a warning to be a moral scientific duty. After all, built on the IPCC's myth of catastrophe, politicians are turning society upside down and, in the name of science, imposing upon us an extremely expensive climate policy.

Worried citizens, who no longer have any trust in science and want to know what is really going on, now approach me. I feel partly responsible for the lack of criticism from my colleagues. I try to explain the true state of affairs.

### **My explanation to troubled citizens**

The Earth's climate is a highly complex system. Science is only at the beginning of a fascinating voyage of discovery. Those who maintain that their models' outputs are correct are telling a political story, not a scientific one. The geological record – I am a geophysicist – shows that climate changes on all timescales.

There were large temperature fluctuations long before humans walked the Earth. Certainly, anthropogenic CO<sub>2</sub> has a warming effect, but there is clearly a lot more going on. The climate movement focuses far too much on what is happening today. In doing so, it is looking through a keyhole at long-term climate processes.

Few sceptical scientists deny that CO<sub>2</sub> has a warming effect. However, we do not know how substantial the effect of CO<sub>2</sub> is compared with the contribution from natural factors. Measurements and research in recent years show that our contribution seems modest (of order 1 C° per century). Accordingly, climate catastrophism, whether concerning warming itself or its consequences such as sea-level rise, has no scientific basis. Scientific institutions are failing in their duty to warn society that research results are being abused. Indeed, climate activists imagine that they have the support of the wider scientific community when launching their extreme CO<sub>2</sub> reduction proposals. But those proposals are entirely unfeasible and unaffordable.

The IPCC was supposed to be a scientific initiative – I was a strong supporter of it myself. However, it has emerged as a political organisation that abuses science. It spreads doomsday scenarios about global warming with the same arrogance as the Club of Rome 50 years ago.

Now it is even more embarrassing. As I have said, climatologists persist in the scientific error of confusing model tuning with validation. Worst of all, the IPCC has proven to be totalitarian. It does not tolerate criticism. Critical input is invariably rejected or ignored. This is a mortal sin in science, isn't it?

### **The decay of climate science**

In your inaugural speech you said scientists make errors. I agree. We err all the time when building models. More importantly, when measurements indicate that those models are wrong, we should be willing to acknowledge that our assumptions are wrong. That is a matter of fundamental scientific integrity.

You say in *Elsevier Weekblad*: *"As an academic, one should be protected against government interference."* As a former Senate member of my alma mater, I am sad to see how many university Senates seem willing to make science subservient to the will of government. This defect has escalated in government-guided climate research programs and related energy transition research. Scientists who take a sceptical stance are side-lined, excluded or even dismissed. Yet, as you say yourself, being critical is part of the scientific process.

A characteristic example is Prof. Peter Ridd, a reef expert, who opposed the doomsday scenario that anthropogenic climate change is causing the Great Barrier Reef to die off on a large scale. He publicly denounced shortcomings in the alarming science about the reef and was fired by his university after decades of service. He fought his resignation and was proved right by the judge on all fronts. But it wasn't enough for the university and with the most expensive lawyers they appealed. This shameless lawsuit is still on going. It is not only a very serious violation and threat to academic freedom, it also sends a completely wrong signal to young scientists: don't you dare go against the IPCC dogma, because this awaits you. And unfortunately Professor Ridd is not the only one. In the climate world, contrarians are harshly punished.

### **Conclusion**

Today the KNAW cannot any longer rely upon the imagined credibility of the IPCC. Tenured professors are



terrified of being excluded, with the result that they are no longer permitted to participate.

There is an enormous fear of using new concepts to take climate insights further. In the last 30 years we have hardly seen any new concepts in the IPCC community. It is all about reinforcing the CO<sub>2</sub> hypothesis, right or wrong.

In astronomy there was a time when errors in calculating planetary orbits were fixed by epicycles on epicycles. An innovative proposal of Copernicus (1473-1543) to improve the method was severely punished. And of course, we also know what happened to Galileo (1564-1642) when he proposed his revolutionary discovery. Are we back in the time of Copernicus and Galileo?

It is not models but data that are definitive. Think of the spectacular developments in the telescope and microscope. Recently the Large Hadron Collider confirmed the existence of the Higgs boson. The new Dutch LOFAR antenna network has discovered some 300,000 new galaxies. The more complex the systems we investigate, the more important it becomes to invest in better measurement systems, so as to refine and validate our theoretical models. That is no less true for climate research than for any other field of scientific endeavour.

Scientific progress always comes from those who dare to go against established opinion. The Paris Climate Accord (2015) is based on the lie that the science is settled. How sad it is that scientists who oppose it are condemned. Scientific progress springs from disagreement and discussion. We have taken a direction in climate research that is unworthy of science. History will blame those responsible. Evil is not done by those who initiate it so much as by those who facilitate it.

### **Proposal**

Authoritative researchers, university boards and umbrella scientific organisations should at least speak out against:

1. The science is settled;
2. The careless utilization of today's climate models;
3. The exclusion of scientists with a different vision.

In addition, an open scientific debate should be organised on at least the following themes:

1. Validation of IPCC's climate models (today, there is not even a protocol!);
2. Varying solar irradiance and its contribution to climate change, including the role of clouds;
3. Variations in the Gulf Stream, such as the North Atlantic Oscillation, and their influence on climate change;
4. Influence of increasing atmospheric CO<sub>2</sub> on global warming;
5. Reality checks of the alarming IPCC scenarios;
6. The sustainability of biofuels, wind farms and solar fields;
7. Nuclear energy as the energy source of the future.

I propose to organise an international open blue-team/red-team meeting together with the KNAW, in which both teams can present their scientific views\*. These discussions could be the start of a new era in climate science. *Audiatur et altera pars.*

I am sending an English version of this letter to Professor Christina Moberg, President of EASAC and professor Volker ter Meulen, President of the IAP.

I wish you every success and satisfaction in your new role as President of the KNAW and look forward to your response.

Yours sincerely,



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*KNAW member, Domain Natural and Technical Sciences*

\* Organizations that regularly verify the effectiveness of their strategy may use an intensive “blue-team/red-team” exercise, in which two teams with opposing viewpoints – for example, “all’s well” (blue team) versus “change is essential” (red team) – debate with the aim of increasing the resilience of the organization. One team are the attackers; the other are the defenders.

In my proposal, the blue team represents the position of the IPCC and the red team represents the position of critical climate scientists. I am in regular contact with Professor Will Happer, emeritus professor of physics at Princeton University and, until recently, scientific advisor to President Trump. Professor Happer has proposed such an approach in the US. He is one of my international advisors on climate science and policy.