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Betreft: Voorstel voor evaluatie van de staat van het klimaatonderzoek (2)

Geachte heer Dijkgraaf,

Op 8 januari zond ik U, mede namens collega's Dr(Hc) Ir N. van Andel en Dr. B. van Geel, een brief met de suggestie dat de KNAW het voortouw neemt bij het instellen van een commissie die een onderzoek doet naar de kwaliteit van de evaluatiestudies die in ons land worden verricht naar 'De staat van het klimaat'. In onze brief werd gesteld dat de aanhangers van de Anthropogenic Global Warming (AGW) theorie een machtstructuur hebben ontwikkeld. Een objectieve evaluatie is niet mogelijk indien zo'n kwaliteitsonderzoek wordt uitgevoerd binnen de kring van deze aanhangers. De leden van een evaluatiecommissie zouden derhalve bij voorkeur onderzoekers moeten zijn uit andere disciplines die ervaring hebben met zogenaamde 'site visits' van onderzoekinstellingen en die zich niet publiekelijk in het klimaatdebat hebben geprofileerd.

Inmiddels zijn in vele landen onderzoeken in deze geest gestart naar violaties van het beginsel van 'Good Scientific Practice' door het IPCC en belangrijke contribuanten aan haar rapportages, naar aanleiding van 'Climategate', 'Himalayagate', 'Amazongate' en andere fouten. De geloofwaardigheid van de IPCC rapportages staat hiermee op het spel, doch eveneens de berichtgeving van hen die op nationaal niveau de IPCC bevindingen onvoldoende kritisch hebben overgenomen. Er is hier mijns inziens sprake van 'advocacy research' (voor nadere toelichting zie aanhechtingen) en niet van objectieve waarheidsvinding.

Naar aanleiding van het rapport "News in Climate Science since IPCC 2007 " (R. van Dorland et al. d.d 30 november 2009) heb ik dit facet nader onderzocht en weergegeven in aangehechte notitie 'The state of climate research 2010'. Deze tamelijk uitgebreide studie (54 pagina's) is wellicht slechts interessant voor hen die zich dagelijks met de problematiek bezighouden. In het onderstaande geef ik derhalve de inhoudsopgave en de 'executive summary' separaat in een annex weer.

In afwachting van Uw reactie,

Hoogachtend,

Arthur Rörsch

## **THE STATE OF CLIMATE RESEARCH 2010**

### **A general view on the social infrastructure of climatology research By Arthur Rörsch**

**In response to publication of the report “News in Climate Science since IPCC 2007 “ by R. van Dorland at al published in the Netherlands, November 30, 2009**

A very serious reconsideration is recommended of the quality of scientific performance in the field of climatology. It will be addressed to the President of the Netherlands Royal Academy (KNAW), CC to the Minister of Science and to the current Dutch Minister of the Environment (VROM)

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## EXECUTIVE SUMMARY

This report provides a variety of considerations of the current state of climate research. And this report is presented in three Parts.

Part 1 considers the social, political and scientific infrastructure established by the Intergovernmental Panel on Climate change (IPCC) to assess climate change research and assesses whether the IPCC is functioning in an appropriate way according to western scientific philosophical tradition.

In the light of the observations in Part 1, Part 2 provides some criticism of a recent analysis of the state of the science by the Dutch advisory agency PBL.

Part 3 calls for a paradigm shift concerning considerations of global temperature change as an indicator for climate change. This paper argues that research is needed to test two different paradigms (explained in part 3, section 17) that are:

### **Paradigm 1, proclaimed by the IPCC.**

The atmosphere acts as an insulator over the globe and this hinders radiation from the surface escaping to space. This insulation is because greenhouse gases (notably CO<sub>2</sub>) absorb infrared (IR) radiation from the surface. This absorption helps warming of the atmosphere with resulting additional warming of the surface. This is presented in the metaphor of a greenhouse. The assumption of effective insulation leads to the conclusion that an increase of CO<sub>2</sub> in the atmosphere will cause an enhanced greenhouse effect and, therefore, global warming.

### **Paradigm 2, based on classical views in climatology.**

The globe as a whole acts as a large Carnot (heat) engine. Near the equator the temperature is approximately +40 °C at average and at the poles at -40 °C. The atmosphere can be seen as a semi transparent 'enclosure' for radiation that contains a heater at one side and coolers at the other sides. An average global temperature and balance is established by the weather events (induced by the rotation of the earth around an inclined axis and around the sun) which transport heat from the overheated equator to the cooler poles. Water (H<sub>2</sub>O) is the major component of the ocean/atmosphere system that holds heat on the planet. CO<sub>2</sub> functions as a minor holder of heat to be transported in the machine. It is questionable as to what extent the CO<sub>2</sub> concentration in the atmosphere can influence the surface temperature.

Paradigms are theoretical frameworks that need to be tested by comparison with observations. Neither of the two paradigms mentioned above has reached the status of being definitely proven. Objective scientific research requires that a specific paradigm is not prematurely chosen as the ultimate proof.

The philosophy of the social sciences considers 'advocacy research' to be when scientists – often with support of the machinery of government – develop a power structure to advocate a single paradigm. Advocacy research is considered to be a threat to investment in research which still has truth finding as its major priority.

Part 1 of this paper suggests that the IPCC assessments are insufficiently oriented to objective truth finding. Proclamations of the IPCC and their followers at the national level should be considered as being the result of 'advocacy research'. Readers of this paper are invited to come to their own conclusion that the IPCC proclamations are based on performance of scientists with self proclaimed expertise who have chosen to adopt Paradigm 1.

The IPCC developed such a power structure of leading scientists. It sounded impressive that thousands of scientists all over the world, working within the IPCC framework, were

producing indisputable evidence for anthropogenic global warming (AGW). But that is not the reality. Very few contributions concerned the proof of the CO<sub>2</sub> paradigm or produced an explanation for the functioning of the earth's greenhouse effect. The great majority of publications reported on climate change evidence as such, and they took the CO<sub>2</sub> paradigm for granted. The leaders of IPCC projects gave a misleading impression that there exists a worldwide consensus on the origin of climate change: in fact, only a very small group of scientists were really involved in research on the likelihood of the CO<sub>2</sub> paradigm.

The scientific opposition to the IPCC is concentrated around a number of individual scientists, who publish in the regular literature, but who are not recognized in the IPCC circuit. An important aspect of the climate debate is the fact that the climate advocacy research (CAR) is tagged by the public proclamation that proof of AGW is guaranteed by what is presented as observations and interpretations in the so-called peer reviewed literature. The CAR has strongly asserted to the public that peer review is an adequate scientific practice to prove the correctness of scientific work. But this is not a proof which is acceptable to current understanding in objective research. For example, in the US the Data Quality Act (DQA) is the guideline for scientific work by US agencies, and it does not accept peer-reviewed papers as proof. The DQA emphasizes the need for reproducibility, and it states that information must be "presented in a clear and unbiased manner, and as a matter of substance is accurate, reliable and unbiased". The DQA explicitly mentions the reliability of data handling by statistics.

It seems quite clear from recent performance of the IPCC that if the US Data Quality Act were to be accepted worldwide then abolition of the IPCC would be recommended.

But nevertheless many a well known person in society continues to refer to AGW as a threat. This leads to the following questions.

- \* Do these people know that discussions on warming still concern mere tenths of a degree C.?
- \* Do they have any understanding of the natural Earth's greenhouse effect that is water driven?
- \* Are they acquainted with the properties and effects of advocacy research?
- \* Are they not aware of the resemblance of the functioning of the IPCC circuit to advocacy research?
- \* Does none of them remember the some eighty alarming environmental forecasts produced by advocacy research scientists during the most recent two decades which have not come true?

The subject of climate change is sufficiently important to request not only from political decisions makers, but also other influential people in society who produce 'opinions', to study in more detail the background of the scientific questions, the manner in which assessment reports are produced, and the social infrastructure which is behind the alarming climate change view.

The preface to the recent Dutch report "News in Climate Science since IPCC 2007" by R. van Dorland et al, says that report is prepared in response to a governmental assignment "to evaluate new scientific insights regarding the IPCC conclusions of 2007, to provide views on possible acceleration of climate change". It is obvious that an 'unbiased' (scientific) assessment has not been requested because these conclusions are based solely on Paradigm 1. The style of the report indicates that its authors and assessors, honestly followed the governmental assignment. To begin with the first statement "*Claims that global warming has stopped since 1998, are at odds with long-term observations*" obviously neglects the important observations that since 2002 the average global temperature has stabilized. A claim that global warming may be continuing is certainly based on the presumptions of Paradigm 1 only. Such a claim is at odds with the application of curve fitting theory to establish a

relationship between variables (e.g. temperature and CO<sub>2</sub> rise), which requires that more than one function is considered to find a natural 'law'.

The temperature records presented in the Report are limited to groundstation observations, , **the quality of which has been questioned** seriously .No mention is being made of the satellite observations, (since 1980) which are considered today the more reliable, because they are less influenced by local warming, nor the so called Urban Heat Island effect, and references to recent papers on this subject is missing.

The section in the Report on expected sea level rise is of course of special importance to the Netherlands. In the elaboration on the subject is mentioned: "*Observations of sea level rise taken by satellite measurements since the IPCC AR4 report do not show any major change in the current rate of sea level rise, which is around 3 mm/yr (Cazenave et al. 2009).*" But the summary of the section gives quite a more alarming impression based on the speculations on ice melting in the polar areas.

The section on the influence of the sun variance honestly states:" *Recent studies either confirm or do not convincingly reject the conclusion (as stated in the IPCC AR4 report) that for the period from 1950 to 2005, it is very unlikely that solar radiation has had a significant warming effect*". The second part of this opinion is, however, largely based on modelling exercises with build in assumptions on the expected 'forcings' from the elements that are involved in temperature variability.

The section in the Report on the Carbon Cycle contains valuable new information, especially with respect to flows through the biosphere. Little attention is paid to the natural grand global cycle in which the oceans participate.

In the section Climate Sensitivity and feedbacks is presented as a major issue:

*Recent studies that use information in a relatively complete manner, generally confirm the likely range (66%) of the climate sensitivity to be between 2 and 4.5 °C, as indicated in the IPCC AR4 report.*

In discussions with KNMI co-workers this was strongly contested by N. van Andel, and his view is reproduced in this note in section 18 'Climate Sensitivity revisited. He reaches the conclusion: "There is a large negative feedback which should be incorporated into models. The result would be that the climate sensitivity is reduced tenfold. A doubling of the CO<sub>2</sub> concentration has such a small temperature effect, that this is indiscernible from all other effects".

In summing up it is remarkable, that in several Sections of the Report the contributing scientists paid attention to the importance of meteorological events for the climate system. A critical reader, who takes note of the elaborations, will notice that in fact several literature references and arguments may more strongly support Paradigm 2 (the regulatory mechanism of global averaged temperature by weather events) than Paradigm 1 (that CO<sub>2</sub> is of great importance in the greenhouse effect.) But such a discriminating test was not in the governmental assignment.