Keine „Klimakatastrophe“ durch CO2-Emissionen!

Die wissenschaftliche Grundlage des angeblichen Einflusses der CO2-Konzentration auf das globale Klima ist der so genannte Treibhauseffekt, der für das Spurengas CO2 nach dem international anerkannten MODTRAN-Programm bei Verdoppelung eine Temperaturerhöhung von ca. 0,6°C bewirken würde. Dies ist sehr wenig und kein Anlass zu Befürchtungen. Die obengenannten hohen Temperaturerhöhungen ergeben sich aus der Annahme des IPCC-Berichtes, dass der geringe CO2-Effekt wesentlich verstärkt würde durch einen dadurch verursachten Wasserdampf-Anstieg (das eigentliche "Treibhausgas" in der Atmosphäre). Allerdings gibt es für diese Annahme immer noch keinen Nachweis.

Die IPCC-Annahme einer Klimasensitivität von 3°C steht auf schwachen Füßen und basiert trotz umfangreicher Forschungs-Investitionen bisher nur auf Modell-Annahmen, nicht aber auf Messungen, was auch durch die immer noch bestehende große Unsicherheit von +/- 1,5°C bestätigt wird.

Aber machen wir einmal mit den umstrittenen hohen Annahmen des IPCC eine kleine, für jedermann verständliche Rechnung auf:

Der gegenwärtige jährliche Anstieg der CO2-Konzentration schwankt zwischen 1,5 und 2,5 ppm mit einem recht stabilen Mittelwert von ca. 2 ppm/Jahr. Der heutige Stand liegt bei 390 ppm und die Verdoppelung auf 780 ppm würde damit nicht weniger als **195 Jahre** dauern (!). Mit der "Klimasensitivität" des IPCC-Berichtes, d.h. bei einem globalen Temperaturanstieg von 3°C bei Verdoppelung des CO2-Gehaltes, ergibt sich bis zum immer zitierten Jahr 2100, d.h. in 90 Jahren, ein Temperaturanstieg von **1,38°** C (90/195 x 3°).

Eine neue Analyse des NASA Earth Science Team vom Dezember 2010, die erstmalig auch den Kühlungseffekt der durch den CO2-Anstieg verursachten Wachstumsförderung der Vegetation berücksichtigte, kam zu einer CO2-Klimasensitivität von nur 1,64 ° bei Verdoppelung*. In diesem Fall wäre der zu erwartende Temperatureffekt bis zum Jahr 2100 **nur 0,76°C** – und das **ohne jede Reduktion der gegenwärtigen Emissionen !**

Nun kann man einwenden, die CO2-Konzentration könnte künftig schneller steigen als mit derzeit 2 ppm/Jahr, aber genauso kann man argumentieren, dass dieser Anstieg auch geringer werden kann durch die Bemühungen, fossile Brennstoffe zu ersetzen und auch durch den zu erwartenden natürlichen Rückgang der Öl- und Gasförderung in den nächsten 50 Jahren

In Anbetracht dieser Tatsachen stellt sich die kritische Frage: Wozu gab es bisher **16 internationale UN-Klimakonferenzen** mit bis zu 15 000 Teilnehmern (!) zur Diskussion der Frage der Begrenzung von CO2-Emissionen ? Ein gewaltiger Finanz-Aufwand und jedes Jahr viele Millionen Tonnen zusätzlicher CO2-Emissionen durch die Reisen der Teilnehmer aus 194 Ländern. Davon sollte eigentlich jeder imstande sein, die obige Rechnung selbst durchzuführen.

Oder könnte es sein, dass es einen ganz anderen Grund für diese endlose Zahl gewaltiger Konferenzen gibt ? Wer einmal daran teilgenommen hat, will offenbar auf diesen kostenlosen zweiwöchigen Aufenthalt in den attraktiveren Orten der Erde (Kyoto – Bali – Nairobi – Rio de Janeiro – Genf – New Delhi – Marrakesch – Buenos Aires – Kopenhagen – Cancun, und nächstes Jahr Durban/Südafrika) nicht mehr verzichten. Der wichtigste Beschluss jeder Konferenz war, sich nächstes Jahr wieder zu treffen. Alleine schon deshalb muss wohl eine angebliche "Klimakatastrophe" unbedingt erhalten bleiben.

Dr. D. E.Koelle EIKE

*) http://www.nasa.gov/topics/earth/features/cooling-plant-growth.html

Hier die NASA Presseinformation im Wortlaut:

> New NASA Study on CO2 Warming with consideration of the vegetation cooling effect
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> The cooling effect would be -0.3 degrees Celsius globally and -0.6 degrees C over land, compared to simulations where the feedback was not included, said Lahouari Bounoua, of Goddard Space Flight Center, Greenbelt, Md. Bounoua is lead author on a paper detailing the results that has been published Dec. 7, 2010 in the journal Geophysical Research Letters.
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> With the negative feedback included, the model found a warming of 1.64 degrees C globally when carbon dioxide was doubled.
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> Patrick Lynch
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> NASA’s Earth Science News Team
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> 7. Dez.2010
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> From NASA Earth Science news: A new NASA computer modeling effort has found that additional growth of plants and trees in a world with doubled atmospheric carbon dioxide levels would create a new negative feedback – a cooling effect – in the Earth’s climate system that could work to reduce future global warming.
>
> The cooling effect would be -0.3 degrees Celsius (C) (-0.5 Fahrenheit (F)) globally and -0.6 degrees C (-1.1 F) over land, compared to simulations where the feedback was not included, said Lahouari Bounoua, of Goddard Space Flight Center, Greenbelt, Md. Bounoua is lead author on a paper detailing the results that will be published Dec. 7 in the journal Geophysical Research Letters.
>
> Without the negative feedback included, the model found a warming of 1.94 degrees C globally when carbon dioxide was doubled.

Bounoua stressed that while the model's results showed a negative feedback, it is not a strong enough response to alter the global warming trend that is expected. In fact, the present work is an example of how, over time, scientists will create more sophisticated models that will chip away at the uncertainty range of climate change and allow more accurate projections of future climate.

"This feedback slows but does not alleviate the projected warming," Bounoua said.

To date, only some models that predict how the planet would respond to a doubling of carbon dioxide have allowed for vegetation to grow as a response to higher carbon dioxide levels and associated increases in temperatures and precipitation.

Of those that have attempted to model this feedback, this new effort differs in that it incorporates a specific response in plants to higher atmospheric carbon dioxide levels. When there is more carbon dioxide available, plants are able to use less water yet maintain previous levels of photosynthesis. The process is called "down-regulation." This more efficient use of water and nutrients has been observed in experimental studies and can ultimately lead to increased leaf growth. The ability to increase leaf growth due to changes in photosynthetic activity was also included in the model. The authors postulate that the greater leaf growth would increase evapotranspiration on a global scale and create an additional cooling effect.

"This is what is completely new," said Bounoua, referring to the incorporation of down-regulation and changed leaf growth into the model. "What we did is improve plants' physiological response in the model by including down-regulation. The end result is a stronger feedback than previously thought."

The modeling approach also investigated how stimulation of plant growth in a world with doubled carbon dioxide levels would be fueled by warmer temperatures, increased precipitation in some regions and plants' more efficient use of water due to carbon dioxide being more readily available in the atmosphere. Previous climate models have included these aspects but not down-regulation. The models without down-regulation projected little to no cooling from vegetative growth.

Scientists agree that in a world where carbon dioxide has doubled – a standard basis for many global warming modeling simulations – temperature would increase from 2 to 4.5 degrees C (3.5 to 8.0 F). (The model used in this study found warming – without incorporating the plant feedback – on the low end of this range.) The uncertainty in that range is mostly due to uncertainty about "feedbacks" – how different aspects of the Earth system will react to a warming world, and then how those changes will either amplify (positive

feedback) or dampen (negative feedback) the overall warming.

An example of a positive feedback would be if warming temperatures caused forests to grow in the place of Arctic tundra. The darker surface of a forest canopy would absorb more solar radiation than the snowy tundra, which reflects more solar radiation. The greater absorption would amplify warming. The vegetative feedback modeled in this research, in which increased plant growth would exert a cooling effect, is an example of a negative feedback. The feedback quantified in this study is a result of an interaction between all these aspects: carbon dioxide enrichment, a warming and moistening climate, plants' more efficient use of water, down-regulation and the ability for leaf growth.

This new paper is one of many steps toward gradually improving overall future climate projections, a process that involves better modeling of both warming and cooling feedbacks.

"As we learn more about how these systems react, we can learn more about how the climate will change," said co-author Forrest Hall, of the University of Maryland-Baltimore County and Goddard Space Flight Center. "Each year we get better and better. It's important to get these things right just as it's important to get the track of a hurricane right. We've got to get these models right, and improve our projections, so we'll know where to most effectively concentrate mitigation efforts."

The results presented here indicate that changes in the state of vegetation may already be playing a role in the continental water, energy and carbon budgets as atmospheric carbon dioxide increases, said Piers Sellers, a co-author from NASA's Johnson Space Center, Houston, Texas.

"We're learning more and more about how our planet really works," Sellers said. "We have suspected for some time that the connection between vegetation photosynthesis and the surface energy balance could be a significant player in future climate. This study gives us an indication of the strength and sign of one of these biosphere-atmosphere feedbacks."

Patrick Lynch?NASA's Earth Science News Team