OPINION | COMMENTARY

The Phony War Against CO2

Increased atmospheric carbon dioxide has helped rapoverty.



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"The Phony War Against CO2" Nichols & Schmitt, The Wall Street Journal



NOVEMBER 7, 2016

SHOULD WE MAKE PEACE WITH CO2?

BY JOSEPH MAJKUT

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Last week, Rodney Nichols and Harrison Schmitt published an op-ed in **The** *Wall Street Journal* (http://climatefeedback.org/evaluation/thephony-war-against-co2-the-wall-street-journal-rodney-nicholsharrison-schmitt/) protesting what they call the "phony war against CO2." The authors are the co-founders of the CO2 Coalition (http://co2coalition.org/), a group established to publicize the positive benefits of CO2. The arguments in the op-ed are similar to those we recently saw (https://niskanencenter.org/blog/will-global-greeningsave-us/) from Matt Ridley, but push the benefits of increased CO2 even more fervently.

Our friends over at *Climate Feedback* (http://climatefeedback.org/evaluation/analysis-of-matt-ridleybenny-peiser-your-complete-guide-to-the-climate-debate/)

assembled a group of 6 scientists to examine their claims; claims that are, unfortunately, rather omnipresent on the Right. We repost their response in full below, but contributing scientist Lauren Simkins about sums it up.

Simkins: The authors do not support their claims with scientific references and data. Their logic is flawed and does not take into account basic scientific theories that explain, for example, the role of certain gases in causing a greenhouse effect and the negative impacts of high levels of greenhouse gases in the atmosphere. [...]

So based on this statement and the lack of scientific references in this article, readers should be prompted to disregard the majority of claims it presents.

The following is a repost from Climatefeedback.org, visit the original posting here (http://climatefeedback.org/evaluation/the-phony-war-against-co2-the-wall-street-journal-rodney-nichols-harrison-schmitt/).

This commentary in the *Wall Street Journal* by Rodney Nichols and Harrison Schmitt tries to argue that CO_2 emitted by humans is, overall, "beneficial"– particularly for agriculture. To do so, the authors ignore all the evidence of the negative impacts of increasing CO_2 concentrations in the atmosphere (due to climate change and ocean acidification, for example). The commentary relies on claims that are not supported by any evidence, like the assertion that more CO_2 in the atmosphere has helped to reduce poverty.

The authors invite the reader to "check the facts" but do not apply that maxim to themselves. Instead of referring to published scientific research, the article draws heavily from information created by an advocacy group that exists to promote CO₂ emissions as beneficial. Taken as a whole, the body of scientific evidence clearly shows that **this is not the case** (https://www.ipcc.ch/pdf/assessmentreport/ar5/wg2/ar5_wgll_spm_en.pdf).

GUEST COMMENTS

Wolfgang Cramer (http://www.imbe.fr/wolfgang-cramer), Professor, Directeur de Recherche, Mediterranean Institute for Biodiversity and Ecology (IMBE):

The article speaks about scientific questions under an "opinion" banner—as if questions about the role of CO_2 in the Earth system could be a matter of opinions. Virtually every single point in the article can be easily proven wrong by referral to standard textbook knowledge. For the major final conclusion "*With more CO_2 in the atmosphere, the challenge [to feed additional 2.5 billion people] can and will be met.*", there is absolutely no scientific credibility, nor support in the scientific literature—it is pure fantasy.

These comments are the overall opinion of scientists on the article, they are substantiated by their knowledge in the field and by the content of the analysis in the annotations on the article.

William Anderegg (http://wrlanderegg.com/), Associate Professor, University of Utah:

The opinion article makes sweeping assertions that are not in line with the scientific understanding. The conclusions on CO_2 uniformly benefiting agriculture are simply misleading—yes, CO_2 can help plants but higher temperatures and more drought and pests with climate change also hurt plants.

Timothy Osborn (https://www.uea.ac.uk/environmentalsciences/people/profile/t-osborn), Professor of Climate Science, University of East Anglia:

The article presents a biased view by understating the degree and impacts of global warming while overstating or simplifying the benefits of CO_2 fertilisation.

James Renwick (http://www.victoria.ac.nz/sgees/about/staff/jamesrenwick), Professor, Victoria University of Wellington:

The article is full of half-truths, untruths, and red herrings. Casting increased CO_2 as a benefit to humankind, without considering the impacts and risks associated with a changing climate, is dangerous and irresponsible.

Lauren Simkins (http://laurensimkins.weebly.com/), Postdoctoral Research Associate, Rice University:

The lack of distinction between the role of solid particulates and greenhouse

gases in the atmosphere makes many of the authors' claims false and misleading. The article does not present a complete or accurate discussion of climate change, its causes, and its societal influence. The authors state that readers should 'check the facts' regarding climate change, but have presented us with little scientific support for their own claims.

Victor Venema (http://www2.meteo.unibonn.de/mitarbeiter/venema/), Scientist, University of Bonn, Germany:

This has nothing to do with science.

Notes:

[1] See the **rating guidelines (http://climatefeedback.org/process/#tit4)** used for article evaluations.

[2] Each evaluation is independent. Scientists' comments are all published at the same time.

KEY TAKE-AWAYS

The statements quoted below are from Harrison Schmitt and Rodney Nichols; comments and replies are from the reviewers.

1. The negative impacts of continued CO_2 emissions are significant and serious. The authors only find human emissions of CO_2 beneficial by ignoring all the reasons it is harmful.

Nichols and Schmidt: "Unlike genuine pollutants, carbon dioxide (CO_2) is an odorless, colorless gas. Every human being exhales about two pounds of CO_2 a day, along with a similar amount of water vapor. CO_2 is nontoxic to people and animals"

Timothy Osborn (https://www.uea.ac.uk/environmentalsciences/people/profile/t-osborn), Professor of Climate Science, University of East Anglia:

This is a diversionary tactic: the concern about CO_2 is not about its smell, its colour or its direct toxicity; instead it is about its effect on the Earth's climate. So it is a strawman statement that may be easily demolished but not relevant to the concern about CO_2 and climate change.

Victor Venema (http://www2.meteo.unibonn.de/mitarbeiter/venema/), Scientist, University of Bonn, Germany:

There are many toxic gases that are odorless and colorless. The best known one is, like CO_2 , also related to combustion: carbon monoxide (CO).

Nichols and Schmidt: "But a myth persists that is both unscientific and immoral to perpetuate: that the beneficial gas carbon dioxide ranks among hazardous pollutants. It does not."

James Renwick (http://www.victoria.ac.nz/sgees/about/staff/jamesrenwick), Professor, Victoria University of Wellington:

This is semantics. Some call carbon dioxide a "pollutant" and others don't. What is relevant is that the huge amount of CO_2 that humanity has put into the atmosphere is changing the climate significantly. The hazard comes from changes to precipitation and extremes, leading to reduced food security and water availability. No wonder the Pentagon rates climate change as a critical threat to US national security. Just look at what's happening in Syria and north Africa, on the back of a severe drought and a spike in food prices.

Reference:

 Kelley et al (2015) Climate change in the Fertile Crescent and implications of the recent Syrian drought (http://www.pnas.org/content/112/11/3241.short). Proceedings of

the National Academy of Sciences

Nichols and Schmidt: "[CO₂] is also a greenhouse gas which helps maintain earth at a habitable temperature."

Wolfgang Cramer (http://www.imbe.fr/wolfgang-cramer), Professor, Directeur de Recherche, Mediterranean Institute for Biodiversity and Ecology (IMBE):

While the presence of CO_2 has warmed the atmosphere to "habitable" temperatures, the additional increase of it will bring temperatures way outside habitable ranges in many regions including the oceans, as well as disturbing the water cycle and acidifying the oceans.

"But observations, such as those on our CO₂ Coalition website, show that increased CO₂ levels over the next century will cause modest and beneficial warming—perhaps as much as one degree Celsius (1.8 degrees Fahrenheit)"

James Renwick (http://www.victoria.ac.nz/sgees/about/staff/jamesrenwick), Professor, Victoria University of Wellington:

That [1 °C warming] is an absolute best-case scenario, if significant mitigation action is taken urgently. Increased CO_2 leads to warming, which leads to increased atmospheric water vapor, less ice, and other feedbacks. A doubling of CO_2 concentrations would lead to about 3 °C warming.

Timothy Osborn (https://www.uea.ac.uk/environmentalsciences/people/profile/t-osborn), Professor of Climate Science, University of East Anglia:

Projections of future warming can't be made from observations alone: we need understanding of the mechanisms and physical processes. Neither of these are provided by the quoted website, which instead contains inaccurate articles about supposed adjustments to temperature data and claiming a new 'little ice age' is already here—both of which have been shown to be incorrect by scientific research. (For example, **section 1.3.2 of the Fourth**

Assessment Working Group I IPCC report

(https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch1s1-3-

2.html) compared global temperature records from various vintages and found broad consistency.)

Nichols and Schmidt: "The costs of emissions regulations, which will be paid by everyone, will be punishingly high and will provide no benefits to most people anywhere in the world."

Lauren Simkins (http://laurensimkins.weebly.com/), Postdoctoral Research Associate, Rice University:

This is simply not accurate. Global warming is a global issue that, for example, affects global coastal populations, marine ecology, crop stability, and the area of habitable land. Humans, especially in countries with the largest carbon emissions, have been successfully altering the entire Earth system; therefore, climate change is currently the most global issue that we face and will continue to face in the coming centuries.

Wolfgang Cramer (http://www.imbe.fr/wolfgang-cramer), Professor, Directeur de Recherche, Mediterranean Institute for Biodiversity and Ecology (IMBE):

It is unclear what costs are referred to here. The regulations themselves cost nothing. The reductions of emissions will avoid huge damage costs and also produce economic benefits in other than the fossil-fuel dependent economic sectors. It is the damage costs that will be "paid by everyone", not the emission reductions.

2. Continued CO₂ emissions will not improve future crop production. The IPCC report concludes (http://www.ipcc.ch/report/ar5/wg2/docs/WGIIAR5_SPM_Top_Level_Findings.pdf) that the net result of further climate change will be to hinder global crop yields.

Nichols and Schmidt: *"In 2013 the level of U.S. farm output was about 2.7 times its 1948 level, and productivity was growing at an average annual rate of 1.52%. From 2001 to 2013, world-wide, global output of total crop and livestock commodities was expanding at an average rate of 2.52% a year[...] Along with better plant varieties, cropping practices and fertilizer, CO₂ has contributed to this welcome increase in productivity."*

G Philip Robertson

(http://www.kbs.msu.edu/people/faculty/robertson), Professor, Michigan State University:

In general, CO_2 has had a positive effect on crop growth, but it's impossible to separate historical effects from the greater effects of genetics and nitrogen and other inputs. However, it's generally considered to be a fraction of those. We know better future effects because we have CO_2 fertilization experiments in the field comparing present to future CO_2 levels. Those experiments suggest that corn may have about a 1% gain [because of increased CO_2] and soybeans 3-4 times that. However, these gains will almost certainly be offset by yield declines associated with the temperature increases caused by elevated CO_2 , which are well known. Historically, it's worth noting that we had elevated CO_2 long before we had the green revolution, and crop yields didn't increase much until the green revolution. You can see this in graphs of average US corn yields from 1900.



(http://climatefeedback.org/wpcontent/uploads/2016/11/CornYieldGraphLG.gif)

Source: University of Nebraska-Lincoln (http://passel.unl.edu/pages/informationmodule.php? idinformationmodule=1075412493&topicorder=7&maxto=12&minto=1)

Nichols and Schmidt: *"With more CO₂ in the atmosphere, the challenge [feeding 2.5 billion more people] can and will be met."*

Wolfgang Cramer (http://www.imbe.fr/wolfgang-cramer), Professor, Directeur de Recherche, Mediterranean Institute for Biodiversity and Ecology (IMBE): There is absolutely no scientific study that would support such a conclusion. And even if there was no climate effect of CO_2 , a simple speculative growth enhancement by CO_2 could not produce such an effect.

James Renwick (http://www.victoria.ac.nz/sgees/about/staff/jamesrenwick), Professor, Victoria University of Wellington:

This is very naïve. Many factors control food production. If further large changes in climate come to pass, no amount of extra CO_2 will improve food security.

Nichols and Schmidt: *"Feeding these people and assuring them a comfortable living standard should be among our highest moral priorities."*

Lauren Simkins (http://laurensimkins.weebly.com/), Postdoctoral Research Associate, Rice University:

Climate change and poverty go hand in hand, as developing countries are disproportionately affected by climate change.

Nichols and Schmidt: *"When someone says, 'climate science is settled,' remind them to check the facts."*

James Renwick (http://www.victoria.ac.nz/sgees/about/staff/jamesrenwick), Professor, Victoria University of Wellington:

The basic radiation physics has been well known for 150 years. The details will always be under discussion, but we are already seeing very clearly the expected patterns of climate change.

Lauren Simkins (http://laurensimkins.weebly.com/), Postdoctoral Research Associate, Rice University:

This statement highlights the major problem with this article. The authors do not support their claims with scientific references and data. Their logic is flawed and does not take into account basic scientific theories that explain, for example, the role of certain gases in causing a greenhouse effect and the negative impacts of high levels of greenhouse gases in the atmosphere. [...]

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