

From: Kristie L Ebi via deohs-faculty <deohs-faculty@u.washington.edu>

To: Lianne Sheppard <sheppard@uw.edu>

Cc: Environmental and Occupational Health Sciences via deohs-faculty <deohs-faculty@u.washington.edu>

Subject: Re: [faculty] Follow-up on the threat to EPA's "endangerment finding" for greenhouse gases

Date: Tue, 12 Aug 2025 17:48:21 +0000

Importance: Normal

Attachments: ClimateHealthWorkingGroup_-_EPA-comment-EGUs-Aug5-2025.pdf; ATT00001.txt

Dear Lianne:

Thank you.

A consortium of climate and health researchers submitted the attached.

On the DOE report, there are multiple parallel activities, including by Prof Andy Dessler at TAMU (more than 70 collaborators) and Carbon Brief. There is a required format for DOE responses, otherwise the comments will be ignored.

I assume everyone saw the Executive Order on the new approach to Federal research grants: <https://www.whitehouse.gov/presidential-actions/2025/08/improving-oversight-of-federal-grantmaking/>

Best wishes,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHAnGE)
University of Washington
Seattle, WA 98195
USA
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<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Aug 12, 2025, at 10:25 AM, Lianne Sheppard via deohs-faculty <deohs-faculty@u.washington.edu> wrote:

Colleagues,

As I mentioned at faculty meeting on Friday, there are steps we can all take to make our voices heard regarding EPA's plans to roll back greenhouse gas regulations in the hopes of stopping this planned action.

Below is some information that I hope you will find helpful.

- First, a relevant article regarding EPA rule change threatens the greenhouse gas endangerment finding: <https://www.technologyreview.com/2025/07/30/1120849/epa-endangerment-finding/>
- DOE published a "Climate Working Group" report "[A Critical Review of Impacts of Greenhouse Gas Emissions in U.S. Climate](#)" that EPA is using to help justify its proposal to rescind the greenhouse gas endangerment finding. (Link here: <https://www.energy.gov/topics/climate>) Comments are due by September 2. Instructions: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at www.regulations.gov under docket number DOE-HQ-2025-0207 The notice for public comment is at: <https://www.federalregister.gov/documents/2025/08/01/2025-14519/notice-of-availability-a-critical-review-of-impacts-of-greenhouse-gas-emissions-on-the-us-climate>
- Separately, the National Academies is self-funding its own fast-track review of the latest scientific evidence on whether greenhouse gas emissions are reasonably anticipated to endanger public health and welfare in the U.S., " in time to inform EPA's decision process." <https://www.nationalacademies.org/news/2025/08/national-academies-launch-fast-track-review-of-latest-evidence-for-whether-greenhouse-gas-emissions-endanger-public-health-and-welfare>
 - National Academies have a Request for Information (due 8/27/25): "We encourage you to submit peer-reviewed articles, white papers, technical reports, or other comments relevant to the committee's charge". <https://survey.alchemer.com/s3/8416653/Request-for-Information-Anthropogenic-Greenhouse-Gases-and-US-Climate-Evidence-and-Impacts>
- Finally, today I learned of another useful article that helps citizens understand what the problems are with the approach and how to push back. Link: <https://theconversation.com/4-laws-that-could-stymie-the-trump-epas-plan-to-rescind-the-endangerment-finding-that-underpins-us-climate-policies-262952>



4 laws that could stymie the Trump EPA's plan to rescind the endangerment finding that underpins US climate policies - The Conversation

The 2009 finding that greenhouse gases endanger public health underpins many U.S. climate policies. A new report meant to challenge it may run afoul of several laws.

theconversation.com

I hope you find this information helpful in navigating your own response.

-Lianne--

Lianne Sheppard, PhD

Interim Chair, Environmental and Occupational Health Sciences

Rohm & Haas Endowed Professor in Public Health Sciences

Professor, Department of Environmental and Occupational Health Sciences

Professor, Department of Biostatistics

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From: Rachel Cleetus <RCleetus@ucs.org>

To: Kristie L Ebi <krisebi@uw.edu>

Subject: RE: Endangerment Finding expert sign-on letter

Date: Mon, 7 Jul 2025 09:31:22 +0000

Importance: Normal

Dear Kris, just reupping this for your attention. Thank you again for taking a look.

An update on timing: the EPA has sent the proposal to the OMB on 6/30 so we expect that it will be public within a couple of weeks, so we're trying to make sure the letter is buttoned down now so we can get it in wide circulation as soon as we see the proposal.

Best,
Rachel

From: Rachel Cleetus <RCleetus@ucs.org>

Sent: Monday, June 30, 2025 11:29 AM

To: Kristie L Ebi <krisebi@uw.edu>

Subject: RE: Endangerment Finding expert sign-on letter

Thank you so much, Kris—much appreciated!

Best,
Rachel

From: Kristie L Ebi <krisebi@uw.edu>

Sent: Monday, June 30, 2025 11:27 AM

To: Rachel Cleetus <RCleetus@ucs.org>

Subject: Re: Endangerment Finding expert sign-on letter

Dear Rachel:

Apologies for the slow response — I ran an 80-person international workshop last week and am now digging out my inbox. I will read and get back to you tomorrow.

Best wishes,

Kris

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On Jun 23, 2025, at 4:16 PM, Rachel Cleetus <RCleetus@ucs.org> wrote:

Dear Kris, I hope you are keeping well. I am writing to ask if you would consider being an anchor signer for the attached letter defending the EPA's Endangerment Finding for greenhouse gases.

As you probably know, we're expecting to see a proposal from the EPA soon (likely sometime in July) that will seek to undermine or overturn this Finding. Once the proposal is out, UCS is planning to circulate this letter for sign-on by climate scientists, public health experts and economists. Ahead of that, we wanted to have a core group of signers on board—and you immediately came to mind. I hope you think the letter is in good shape—although if there are any red flag edits you'd like to propose, those are most welcome. (If you could get them to me by the end of the week or early the next, that would be great.)

Please let me know what you think, and please hold the letter confidential for now. Once we see the proposal, we might want to make a few tweaks but I am hopeful that the core content is in good shape. If you have recommendations for other public health experts who might want to sign, please let me know and we can add them to the list for the broader sign-on.

Best,
Rachel

<Endangerment Finding Letter.docx>

From: Rachel Cleetus <RCleetus@ucs.org>

To: Kristie L Ebi <krisebi@uw.edu>

Subject: RE: Endangerment Finding expert sign-on letter

Date: Tue, 8 Jul 2025 10:29:30 +0000

Importance: Normal

Thank you so much, Kris—very helpful edits!

I will keep you posted once the proposal is public and we push this letter into wide circulation. Really appreciate your early support for this effort!

Best,
Rachel

From: Kristie L Ebi <krisebi@uw.edu>

Sent: Monday, July 7, 2025 6:38 PM

To: Rachel Cleetus <RCleetus@ucs.org>

Subject: Re: Endangerment Finding expert sign-on letter

Dear Rachel:

Thanks; it is a busy time.

A few edits and comments to make the letter clearer and more accurate. Please let me know if there are any questions.

Best wishes,

Kris

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Please let me know what you think, and please hold the letter confidential for now. Once we see the proposal, we might want to make a few tweaks but I am hopeful that the core content is in good shape. If you have recommendations for other public health experts who might want to sign, please let me know and we can add them to the list for the broader sign-on.

Best,
Rachel

<Endangerment Finding Letter.docx>

From: "West, Jason" <jjwest@email.unc.edu>

To: Kristie L Ebi <krisebi@uw.edu>

Subject: Re: DOE climate report response working group information

Date: Tue, 5 Aug 2025 13:16:39 +0000

Importance: Normal

Kris

I don't see your name on the signup sheet below.

I'd be happy to talk about the heat and health sometime.

Jason West

From: Kristie L Ebi <krisebi@uw.edu>

Sent: Tuesday, August 5, 2025 9:11 AM

To: West, Jason <jjwest@email.unc.edu>

Subject: Re: DOE climate report response working group information

Hi Jason:

I thought I did sign up. Is my name not there? There have been so many requests to sign up... I already wrote the response on CO2 and nutrient density.

I looked at the heat — it's based on Gasparrini's papers. I think there are fundamental issues that Antonio will not acknowledge. He doesn't care is the problem. Happy to discuss how to address.

Best wishes,

Kris

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On Aug 5, 2025, at 5:36 AM, West, Jason <jjwest@email.unc.edu> wrote:

Hi Kris

I hope you're doing well!

I imagine you have thoughts on the new DOE climate report being used to challenge the endangerment finding.

Andy Dessler is organizing a response (see below). The document has sections on temperature and health and the crop nutrition response to climate, and I think you'd be good to contribute to the response.

If you have time in the next month, would you sign up?

Thanks

Jason West

From: Andrew Dessler <adessler@tamu.edu>
Sent: Monday, August 4, 2025 5:24 PM
Subject: Re: DOE climate report response working group information

[You don't often get email from adessler@tamu.edu. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

Howdy! Quick reminder to sign up for topics at the link below (and thanks to those of you who already signed up). I'd like to get authors assigned to most topics by early tomorrow. There are some topics with no one, so if you think you can contribute to that, that would be great. Let me know if you have any questions. Thanks again!

Link to sign up:

https://docs.google.com/spreadsheets/d/1_7UeX9xiEnQzxK4jim4EF5KCBSrlmE-d2O3MTth7fC0/edit?usp=sharing

On Sun, Aug 3, 2025 at 12:15 PM Andrew Dessler <adessler@tamu.edu> wrote:

>

> Howdy! I'm emailing you because you signed up for the effort to write
> a response to the DOE climate working group report
> (<https://www.energy.gov/topics/climate>). This email provides an
> update.

>

> Here are the important things to know:

> 1) The window to submit comments for the DOE report closes Sept. 2 (we
> also plan on submitting a modified version to the EPA; the deadline
> for that is Sept. 15). This means we need a first draft in about 2
> weeks. So the good news is that this will not be a long and drawn out
> process.

>

> 2) We had around 70 people sign up, which is fantastic. This is more
> good news: it means that no one person need do too much. If a
> significant fraction of those 70 write 1-3 pages, then we're in great
> shape. And hopefully you authors have sufficient expertise in their
> areas that you can write without doing much research.

>

> 3) We now need people to sign up for topics. I briefly thought about

> assigning people to tasks, but quickly decided it was better to let
> everyone decide what to work on. So I've put a sign up sheet here:
> https://docs.google.com/spreadsheets/d/1_7UeX9xIEnQzxK4jim4EF5KCBSrImE-d2O3MTth7fC0/edit?usp=sharing
> Please go there and put your name and email next to topics you want to
> write on. You're welcome to sign up for as many sections as you want.
> If you've changed your mind and no longer want to contribute, that's
> fine, just don't sign up for any topics.
>
> The sign-up process needs to be done by Monday night. Late Monday, I
> will finalize the writing groups for each topic and contact each group
> individually. So please sign up by then.
>
> It would be great to have a few people on each topic, so if you can't
> decide between two categories, sign up for ones that have fewer
> authors.
>
> Ideally, the groups would work together as an IPCC-like writing team,
> and if that's possible, that would be excellent. However, given that
> we need to receive drafts in two weeks, there may be no practical way
> to coordinate a single writing team on each topic. In that case,
> everyone can just write their own document and we will make efforts to
> combine them into one when we receive them. We'll have to play this
> by ear.
>
> Ultimately, the most important thing is that we get these arguments
> into the public record. It doesn't really matter if points are
> duplicated, sections don't smoothly fit together, or if the overall
> narrative of the document doesn't flow particularly smoothly.
>
> I've been talking to a few people with regulatory experience and will
> have more to tell you about what points to emphasize when I email you
> on Tuesday.
>
> One other thing: Please be careful about what you put in email. Do
> not assume what you write will remain private. That's particularly
> true of anything sent to me.
>
> Again, thanks for volunteering. One thing that every policymaker and
> those adjacent tell me is that these comments are crucially important
> for supporting the science of climate change, which many of us have
> literally spent our lives working on.
>
> If you have questions or ideas to make this process work better,
> please email me.
>
> I look forward to working with you over the next few weeks.
> Andy Dessler
>
> --
> Andrew Dessler
> Professor of Atmospheric Sciences
> Director, Texas Center for Extreme Weather
> Texas A&M University
> adessler@tamu.edu
> website: <https://artsci.tamu.edu/atmos-science/contact/profiles/andrew-dessler.html>

--
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Director, Texas Center for Extreme Weather
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From: Kristie Ebi <krisebi@uw.edu>

To: Jonathan Patz <jonpatz2025@gmail.com>

Cc: Caitlin Warlick-Short <caitlin.warlickshort@gmail.com>, Jenny Bratburd <bratburdj@gmail.com>, "Limaye, Vijay" <vlimaye@nrdc.org>, Nicholas Mailloux <nicholas.mailloux@gmail.com>, Howard Frumkin <hfrumkin@gmail.com>, Jonathan.buonocore@gmail.com

Subject: Re: IMPORTANT & Time-Sensitive: EPA Endangerment Finding Repeal and Vehicle Standards Public Comment

Date: Fri, 22 Aug 2025 12:42:51 -0700

Importance: Normal

Dear Jonathan:

Are you going to upload to the NASEM call for comments / papers for their fast track review? It could be quite useful for them to have.

Best,

Kris

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On Aug 22, 2025, at 10:19 AM, Jonathan Patz <jonpatz2025@gmail.com> wrote:

Dear Colleagues,

As promised we have a few updates for you. Importantly, the deadline for public comments has been extended until September 22, 2025, thankfully, giving us a bit more time to get this together and circulate for signatures.

We also have a detailed outline of the comment. We are not sharing a public link, but if you would like to access to review and provide feedback or support with writing you can request access via [this link](#). If you would just like to review the final comment and sign on later that is just fine and we will be in touch in early-mid September.

Thanks again for your interest in addressing this key issue and we look forward to further engagement over the next few weeks.

Best,
Jonathan Patz (and team)

Jonathan Patz, MD, MPH
jonpatz2025@gmail.com

=====
Aug 12, 2025 (from Caitlin Warlick-Short)

Subject: EPA Endangerment Finding Repeal & Vehicle Standards Public Comment

Dear Colleagues,

Thank you again for your contributions to our last [public comment](#) on EPA's proposed power plant emissions rollbacks. Our team has started digging through EPA's proposed repeal of the Endangerment Finding and a recent DOE report on climate science that EPA relies on. As we prepare to draft comments in response to EPA, we are consulting with several trusted environmental lawyers about the most critical scientific questions for us to address in our next comment. **We wanted to share a few brief updates about this effort, and flag several opportunities to engage with us in this work:**

1. [NASEM has launched a fast-track review](#) on greenhouse gases and human health risks. Susan Anenberg (GW) has been tapped to contribute to this effort (as we expect others in this group have also), and as such, will not be able to lead our health science expert group for this comment as planned. Instead, Jonathan Patz and our Climate Solutions for Health team at UW will take the lead on the health science commenting effort (see #2 below)

You can [submit studies for NASEM](#) to consider by August 27, 2025 at 11:59pm ET.

2. With support from our partners with environmental law perspective, we have identified six areas of focus to address in our public comment on EPA's proposal (see below). We are spending some time digging through the details in each of these areas and assessing potential other areas of concern. Below are the six areas along with the relevant documents. If you'd like to review or share your own perspectives or reflections with the team, please reply to this email and we would be happy to include you in the early stages of comment outlining and drafting.

Documents for review:

- [EPA Endangerment Finding Reconsideration Proposal](#) (comments due [here](#) by 9/15)
 - [EPA Draft Regulatory Impact Analysis](#) for the reconsideration proposal
- [DOE Climate Science Report](#) (comments due [here](#) by 9/2 - note, this report does not engage with climate-health science)

Critical focus areas for comment to EPA:

- **Climate Change Endangers Health** – While not specifically addressed in the reconsideration proposal, this will be our central critical message to deliver.

- **Scientific Uncertainty** – The reconsideration mischaracterizes current scientific consensus on climate change in terms of observed impacts and future forecasts.
 - **Grouping Pollutants** – The reconsideration contends that EPA should not regulate greenhouse gases as a group, even though the Clean Air Act authorizes the agency to do so in other settings (e.g., fine particulate matter).
 - **Pollutant Sources** – The reconsideration claims that individual pollutant sources from different classes of motor vehicles are each insignificant rather than addressing them collectively.
 - **Local vs. Global Pollution** – The reconsideration claims that global issues are not EPA domain, despite the agency’s recognized authority to regulate other internationally-transported pollutants such as ground-level ozone and PM.
 - **Co-benefits and Economic Effects** – The costs and benefits considered in the reconsideration proposal and Regulatory Impact Analysis are extremely narrow and fail to consider health co-benefits of GHG reductions as well as climate-related economic damages, including those to human health.
3. We are working on a health science comment outline to organize these arguments, which **we will share next week with this group for feedback and additional contributions**. We will also certainly be including much of the content and context from our previous comment, but updated to address the critical argument frameworks above. **Please feel free to add resources related to the 5 points above on our [Resources and References shared document](#).**
4. Comment Review and Sign-On – once our draft comment is developed, we would like to engage you and other expert health scientists for review in late August/early September. We will share the final draft comment for sign-on before the 9/15 deadline.

We’ll be in touch next week with an update on the draft comment outline and timeline/next steps for drafting and review. If you have any questions in the meantime, please feel free to reach out by replying-all to this email which will keep our whole team in the loop.

Best regards,
Caitlin

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Caitlin Warlick-Short, M.S.
Digital Design & Media Consulting
caitlin.warlickshort@gmail.com
574-238-6170

[she/her/hers - pronouns matter](#)
cshort2@wisc.edu | WARF 626
University of Wisconsin–Madison

Research Program Coordinator | Center for Health, Energy, & Environmental Research (CHEER)
Department of Population Health Sciences, School of Medicine & Public Health

Outreach Specialist | [Climate Solutions for Health Lab](#)
Nelson Institute, Center for Sustainability and the Global Environment (SAGE)

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One attachment • Scanned by Gmail

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Subject: Re: IMPORTANT & Time-Sensitive: EPA Endangerment Finding Repeal and Vehicle Standards Public Comment

Date: Sat, 23 Aug 2025 10:13:58 -0500

Importance: Normal

Kris,
We have sent them our last public comment and link to all the PDFs. We won't have a full draft on this next common until ~Sept 8.

Jonathan

On Fri, Aug 22, 2025 at 2:45 PM Kristie L Ebi <krisebi@uw.edu> wrote:

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EPA Endangerment Finding Repeal & Vehicle Standards Public Comment

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- [DOE Climate Science Report](#) (comments due [here](#) by 9/2 - note, this report does not engage with climate-health science)

Critical focus areas for comment to EPA:

- **Climate Change Endangers Health** – While not specifically addressed in the reconsideration proposal, this will be our central critical message to deliver.
- **Scientific Uncertainty** – The reconsideration mischaracterizes current scientific consensus on climate change in terms of observed impacts and future forecasts.
- **Grouping Pollutants** – The reconsideration contends that EPA should not regulate greenhouse gases as a group, even though the Clean Air Act authorizes the agency to do so in other settings (e.g., fine particulate matter).
- **Pollutant Sources** – The reconsideration claims that individual pollutant sources from different classes of motor vehicles are each insignificant rather than addressing them collectively.
- **Local vs. Global Pollution** – The reconsideration claims that global issues are not EPA domain, despite the agency's recognized authority to regulate other internationally-transported pollutants such as ground-level ozone and PM.
- **Co-benefits and Economic Effects** – The costs and benefits considered in the reconsideration proposal and Regulatory Impact Analysis are extremely narrow and fail to consider health co-benefits of GHG reductions as well as climate-related economic damages, including those to human health.

3.

We are working on a health science comment outline to organize these arguments, which **we will share next week with this group for feedback and additional contributions**. We will also certainly

be including much of the content and context from our previous comment, but updated to address the critical argument frameworks above. **Please feel free to add resources related to the 5 points above on our [Resources and References shared document](#).**

4. Comment Review and Sign-On – once our draft comment is developed, we would like to engage you and other expert health scientists for review in late August/early September. We will share the final draft comment for sign-on before the 9/15 deadline.

We'll be in touch next week with an update on the draft comment outline and timeline/next steps for drafting and review. If you have any questions in the meantime, please feel free to reach out by replying-all to this email which will keep our whole team in the loop.

Best regards,
Caitlin

--

Caitlin Warlick-Short, M.S.
Digital Design & Media Consulting
caitlin.warlickshort@gmail.com
574-238-6170

[she/her/hers - pronouns matter](#)
cshort2@wisc.edu | WARF 626
University of Wisconsin–Madison

Research Program Coordinator | Center for Health, Energy, & Environmental Research (CHEER)
Department of Population Health Sciences, School of Medicine & Public Health

Outreach Specialist | [Climate Solutions for Health Lab](#)
Nelson Institute, Center for Sustainability and the Global Environment (SAGE)

<image.png> <image.png>
One attachment • Scanned by Gmail

--
Jonathan Patz, MD, MPH
jonpatz2025@gmail.com

From: Joel Smith <joelbsmith.climate@gmail.com>

To: Kristie L Ebi <krisebi@uw.edu>

Subject: Re: Comments to NASEM Panel

Date: Wed, 27 Aug 2025 07:24:55 -0400

Importance: Normal

Is Dessler submitting comments to NASEM or DOE?

On Tue, Aug 26, 2025 at 10:55 AM Kristie L Ebi <krisebi@uw.edu> wrote:

Dear Joel:

This is very useful; thank you. This is an important submission.

I heard from Dessler that his submission (on behalf of 70 scientists) is nearly 450 pages.

Thanks,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)

University of Washington

Seattle, WA 98195

USA

krisebi@uw.edu

<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Aug 26, 2025, at 5:35 AM, Joel Smith <joelbsmith.climate@gmail.com> wrote:

Hi Friends

Pure FYI. For years I have kept a bibliography of climate change literature that I thought was interesting. It's mainly on climate change science, impacts and adaptation, but also has some on mitigation.

I mainly use it when drafting articles or other research work.

With the NASEM rapid review on whether climate change endangers human health or the environment, I plowed through the 262 pages to select recent literature that I thought would be most relevant. Our friend Anand P gave me the idea that perhaps the most useful literature is the IPCC burning embers assessments since 2001. That shows that in the eyes of the assessment community, the thresholds for "dangerous" impacts have been lowered over the years.

What I just submitted is in the attachment.

yours

Joel

Joel B. Smith

Climate Vulnerability and Adaptation Researcher

[1402 Oakleaf Circle](#)

[Boulder CO 80304 USA](#)

e-mail: joelbsmith.climate@gmail.com

Tel: 1-303-249-2204

<NASEM Endangerment Assessment_SuggestedLiterature_JoelBSmith.docx>

From: Joel Smith <joelbsmith.climate@gmail.com>

To: Kristie L Ebi <krisebi@uw.edu>

Subject: Re: Comments to NASEM Panel

Date: Wed, 27 Aug 2025 12:17:28 -0400

Importance: Normal

Good. I'm going to try to comment on DOE . I y my flight back to Colorado.

On Wed, Aug 27, 2025 at 9:10 AM Kristie L Ebi <krisebi@uw.edu> wrote:

Both

Kristie L. Ebi, Ph.D., MPH
Professor, Center for Health and the Global Environment
University of Washington
Seattle WA 98195
USA

From: Joel Smith <joelbsmith.climate@gmail.com>

Sent: Wednesday, August 27, 2025 4:24:55 AM

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What I just submitted is in the attachment.

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[Boulder CO 80304 USA](#)
e-mail: joelbsmith.climate@gmail.com
Tel: 1-303-249-2204

<NASEM Endangerment Assessment_SuggestedLiterature_JoelBSmith.docx>

From: Hilary Godwin <hgodwin@uw.edu>

To: Kristie L Ebi <krisebi@uw.edu>, Heidi van Rooyen <heidisa@uw.edu>

Subject: RE: FYI: Just released response to DOE climate change report

Date: Tue, 2 Sep 2025 22:01:00 +0000

Importance: Normal

Inline-Images: image001.jpg; image002.jpg; image003.jpg; image004.jpg; image005.jpg; image006.png

Thank you for forwarding this, Kris.

Hilary Godwin

Pronouns: She/Her/Hers

Dean, University of Washington School of Public Health

Email: hgodwin@uw.edu

University of Washington

To schedule an appointment, please contact:

JeShawna Schmidt, Executive Assistant to the Dean

Email: jacs1007@uw.edu

Phone: 206-685-6643



Our vision is a world of healthy people.



From: Kristie L Ebi <krisebi@uw.edu>

Sent: Tuesday, September 2, 2025 2:56 PM

To: Hilary Godwin <hgodwin@uw.edu>; Heidi van Rooyen <heidisa@uw.edu>

Subject: FYI: Just released response to DOE climate change report

Dear Hilary and Heidi:

As you may know, EPA issued a Federal Register notice to void the Supreme Court “endangerment finding” that supports all climate policies in the US.

<<<https://www.scientificamerican.com/article/trumps-epa-targets-endangerment-finding-underlying-climate-change-policy-for/>>>

To support EPA, DOE released a report written by 5 well-known climate skeptics

<<https://www.energy.gov/sites/default/files/2025-07/DOE_Critical_Review_of_Impacts_of_GHG_Emissions_on_the_US_Climate_July_2025.pdf>>.

The comment period on that report closes today.

Prof Andy Dessler, Texas A&M, organized a rebuttal to the DOE report. The team included 85 scientists, several from UW. I was the only person involved from the SPH because one of my papers was cited in the DOE report and because I research one topic discussed (heat vs cold mortality). Andy's rebuttal (three times longer than the DOE report) was just released and is attached.

As you can imagine, this is drawing significant media attention, so I wanted you to be aware.

Also, the authors of the DOE report stated they plan retribution against anyone who provided comments. I cannot imagine being targeted in any way but there are other UW scientists they may go after.

Happy to answer any questions.

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

Begin forwarded message:

From: Kristie Ebi <krisebi@uw.edu>

Subject: Link to response to DOE report; just released

Date: September 2, 2025 at 11:15:02 AM PDT

To: "Jeremy J. Hess" <jjhess@uw.edu>, Marci Burden <mburden@uw.edu>, "Tania Busch-Isaksen" <tania@uw.edu>, Nicole Errett <nerrett@uw.edu>, Chris Boyer <cboyer10@uw.edu>, Haemin Park <haeminp@uw.edu>

Cc: Phil Levin <pslevin@uw.edu>

Climate_Experts_Review_of_DOE_CWG_Report.pdf
drive.google.com



From: Heidi van Rooyen <heidisa@uw.edu>

To: Kristie L Ebi <krisebi@uw.edu>, Hilary Godwin <hgodwin@uw.edu>

Subject: Re: FYI: Just released response to DOE climate change report

Date: Thu, 4 Sep 2025 16:53:55 +0000

Importance: Normal

Inline-Images: drive_2020q4_32dp.png

Thanks for keeping us in the loop Kris.

Regards

Heidi

From: Kristie L Ebi <krisebi@uw.edu>

Sent: Tuesday, September 2, 2025 2:56 PM

To: Hilary Godwin <hgodwin@uw.edu>; Heidi van Rooyen <heidisa@uw.edu>

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Cc: Phil Levin <pslevin@uw.edu>

Climate_Experts_Review_of_DOE_CWG
_Report.pdf
drive.google.com



From: "Sarah Vican (she/her)" <vican@eli.org>

To: Kristie L Ebi <krisebi@uw.edu>

Cc: "Nika Seider" <nseider@eli.org>

Subject: ELI Webinar: Scientific Support for the Endangerment Finding

Date: Mon, 8 Sep 2025 14:44:28 +0000

Importance: Normal

Attachments: unnamed

Hi all,

Many thanks for your participation in ELI's upcoming webinar! Please log into Zoom using your individual link below. We'll start on the hour, but if you can, please join around 10 minutes early to touch base and do quick tech checks.

John: [https://us02web.zoom.us/j/87064421641?
tk=FxZP92ZF9yN_Gpn26OwmLSypAreYpb6oakPzPgPGIVM.DQgAAAAURXGICRY4TFdpLWlyMFFIV0ZCbIE3ZERGMEpBAAAA
AA](https://us02web.zoom.us/j/87064421641?tk=FxZP92ZF9yN_Gpn26OwmLSypAreYpb6oakPzPgPGIVM.DQgAAAAURXGICRY4TFdpLWlyMFFIV0ZCbIE3ZERGMEpBAAAAA&utm_source=invitation&utm_medium=email&utm_campaign=invite)

Kristy: [https://us02web.zoom.us/j/87064421641?tk=PqbXXCsxftQx_JoL5-
dY1br3ywr3Mdz6gnmoMDPiins.DQgAAAAURXGICRZkTHhjNm9LVlJDV0ZrNGh2ay1KUWRBAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA](https://us02web.zoom.us/j/87064421641?tk=PqbXXCsxftQx_JoL5-dY1br3ywr3Mdz6gnmoMDPiins.DQgAAAAURXGICRZkTHhjNm9LVlJDV0ZrNGh2ay1KUWRBAAAAAAAAAAAAAAAAAAAAAAAAA&utm_source=invitation&utm_medium=email&utm_campaign=invite)

David: [https://us02web.zoom.us/j/87064421641?
tk=vIH5VO0GaOBk9nw7BEI9ORZbT6MFcdX2pSBuM6LM8_c.DQgAAAAURXGICRZBTnRsSkZhb1RBeWQ1ZXJ1R3p2eHp3AAA
AA](https://us02web.zoom.us/j/87064421641?tk=vIH5VO0GaOBk9nw7BEI9ORZbT6MFcdX2pSBuM6LM8_c.DQgAAAAURXGICRZBTnRsSkZhb1RBeWQ1ZXJ1R3p2eHp3AAA&utm_source=invitation&utm_medium=email&utm_campaign=invite)

Jason: [https://us02web.zoom.us/j/87064421641?
tk=VU_BKUCgR4DVlITsnxMJwD7_kgVPTakPjhLYNGj1Hh0.DQgAAAAURXGICRZjMDNWdXBweIFJV3N5R01LYk1KbFF3AAAA
AA](https://us02web.zoom.us/j/87064421641?tk=VU_BKUCgR4DVlITsnxMJwD7_kgVPTakPjhLYNGj1Hh0.DQgAAAAURXGICRZjMDNWdXBweIFJV3N5R01LYk1KbFF3AAAA&utm_source=invitation&utm_medium=email&utm_campaign=invite)

Best,
Sarah

Event: ELI Webinar: Scientific Support for the Endangerment Finding

Start Date: 2025-09-15 16:00:00 +0000

End Date: 2025-09-15 17:30:00 +0000

Organizer: Sarah Vican (she/her) <vican@eli.org>

Location: Zoom Webinar

Class: X-PERSONAL

Date Created: 2025-09-08 14:44:41 +0000

Date Modified: 2025-09-08 15:32:17 +0000

Priority: 5

DTSTAMP: 2025-09-08 14:44:27 +0000

Attendee: Kristie L Ebi <krisebi@uw.edu>; John Doherty <doherty@eli.org>; Kristina Dahl <kdahl@climatecentral.org>; David Lobell <dlobell@stanford.edu>; Samenow, Jason <jason.samenow@washpost.com>; Madison Calhoun (she/her) <calhoun@eli.org>; ELI Education Team <educationteam@eli.org>; Nika Seider <nseider@eli.org>

Alarm: Display the following message 15m before start

| Reminder

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Kristy: https://us02web.zoom.us/j/87064421641?tk=PqbXXCsxftQx_JoL5-dY1br3ywr3Mdz6gnmoMDPiins.DQgAAAAURXGICRZkTHhjNm9LVlJDV0ZrNGh2ay1KUWRBAAAAAAAAAAAAAAAAAAAAA

David: [https://us02web.zoom.us/j/87064421641?
tk=vlH5VO0GaOBk9nw7BEI9ORZbT6MFcdX2pSBuM6LM8_c.DQgAAAAURXGICRZBTnRsSkZhb1RBeWQ1ZXJ1R3p2eHp3AA
AAA](https://us02web.zoom.us/j/87064421641?tk=vlH5VO0GaOBk9nw7BEI9ORZbT6MFcdX2pSBuM6LM8_c.DQgAAAAURXGICRZBTnRsSkZhb1RBeWQ1ZXJ1R3p2eHp3AAA)

Jason: [https://us02web.zoom.us/j/87064421641?
tk=VU_BKUCgR4DVIItsnxMJwD7_kgVPTakPjhLYNgj1Hh0.DQgAAAAURXGICRZjMDNWdXBweIFJV3N5R01LYk1KbFF3AAAAA
AAA](https://us02web.zoom.us/j/87064421641?tk=VU_BKUCgR4DVIItsnxMJwD7_kgVPTakPjhLYNgj1Hh0.DQgAAAAURXGICRZjMDNWdXBweIFJV3N5R01LYk1KbFF3AAAAA)

Best,

Sarah

From: Bud Ward <wardbud@gmail.com>

To: Henry D Jacoby <hjacoby@mit.edu>, Richard Alley <rba6@psu.edu>, Benjamin Santer <bensanter1289@gmail.com>, Richard Richels <richard.richels@gmail.com>, "Kristie L. Ebi" <krisebi@uw.edu>, Gary Yohe <gyohe@wesleyan.edu>, Bud Ward <wardbud@gmail.com>

Subject: Fwd: pdf

Date: Mon, 8 Sep 2025 12:09:09 -0400

Importance: Normal

Inline-Images: image001.jpg

...and this from Naomi...

----- Forwarded message -----

From: **Oreskes, Naomi** <oreskes@fas.harvard.edu>

Date: Mon, Sep 8, 2025 at 11:35 AM

Subject: Re: pdf

To: Bud Ward <wardbud@gmail.com>

Good stuff.

Also good to remind people to comment on the proposed EPA revision of the endangerment finding. Esp if people can speak to health dangers.

Online portal: The EPA's preferred method for receiving comments is through the federal eRulemaking portal at [regulations.gov](https://www.regulations.gov).

- Search for the docket number: **EPA-HQ-OAR-2025-0194**.

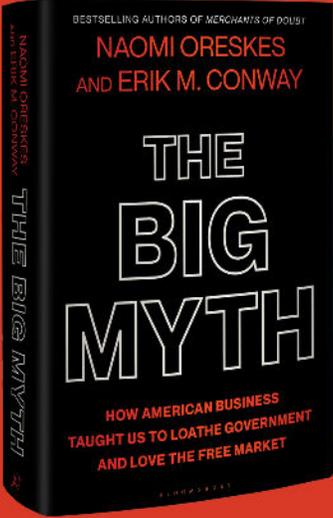
<https://www.regulations.gov/commenton/EPA-HQ-OAR-2025-0194-0093>

Naomi Oreskes

Henry Charles Lea Professor of the History of Science

Affiliated Professor of Earth and Planetary Sciences

“If you only read one book this year, make it *The Big Myth*.”
—Nancy MacLean, author of *Democracy in Chains*



“An urgently needed political analysis.”
—JANE MAYER, author of *Dark Money*

“An invaluable exposé of how a certain kind of magical thinking was turned into accepted wisdom.”
—AMITAV GHOSH, author of *The Great Derangement*

“Trenchant investigative brilliance.”
—ADAM HOCHSCHILD, author of *American Midnight*

The bestselling authors of *Merchants of Doubt* offer a profound, startling history of one of America’s most tenacious—and destructive—false ideas: **the myth of the “free market.”**

AVAILABLE NOW EVERYWHERE BOOKS ARE SOLD

From: Bud Ward <wardbud@gmail.com>

Date: Monday, September 8, 2025 at 11:19 AM

To: Bud Ward <wardbud@gmail.com>

Subject: Fwd: pdf

Resending, as some were unable to open the earlier attachment, below as a pdf.

A Substack Climate Cafe site I work with has posted an open letter, below, to climate scientists, urging more to speak out

in defense of their own and their colleagues' decades of important work establishing the vast body of peer-reviewed

climate science. (We're well aware of the hesitancy of many given legitimate concerns about retribution toward themselves,

their colleagues, and their research institutions and employers, be they universities or otherwise).

We salute the more than 80 leading scientists who this past week criticized the Energy Department's August flawed report.

Looking ahead, with an EPA rulemaking moving toward canceling the Endangerment Decision that the DOE report was

written to support, still many more authoritative climate scientists must go public in defense of their own and their colleagues'

peer-reviewed research and findings.

We hope you will consider reposting the open letter on social media and on web sites and share it with colleagues,

professional science societies, other science interests, and the public generally.

--

Bud Ward
P.O. 1317
White Stone, Va. 22578-1317
Cell: 703-307-0150
EMAIL: wardbud@gmail.com

--

Bud Ward
P.O. 1317
White Stone, Va. 22578-1317
Cell: 703-307-0150
EMAIL: wardbud@gmail.com

From: Henry D Jacoby <hjacoby@mit.edu>

To: "Alley, Richard B" <rba6@psu.edu>, Ben Santer <bensanter1289@gmail.com>, 'Bud Ward' <Wardbud@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>, "Krisebi@uw.edu" <krisebi@uw.edu>, Richard Richels <richard.richels@gmail.com>

Subject: Re: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

Date: Tue, 16 Sep 2025 22:18:32 +0000

Importance: Normal

OOPS! I mean announce 20 hours before the release. Means no study?

Jake

From: Henry D Jacoby <hjacoby@mit.edu>

Date: Tuesday, September 16, 2025 at 5:48 PM

To: Alley, Richard B <rba6@psu.edu>, Ben Santer <bensanter1289@gmail.com>, 'Bud Ward' <Wardbud@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>, Krisebi@uw.edu <krisebi@uw.edu>, Richard Richels <richard.richels@gmail.com>

Subject: FW: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

Friends,

In case you haven't seen it elsewhere, see below the note from a colleague, Arthur Lee, who is on the NASEM committee. Odd that they announce two days before the event. I have a conflict and can't watch. I hope one or more of us can.

Jake

From: Arthur Lee <alee7900166@gmail.com>

Date: Tuesday, September 16, 2025 at 5:36 PM

To: Guest Arthur Lee [Arthur Lee, Emeritus Fellow] <alee7900166@gmail.com>

Cc: Guest Arthur Lee [Arthur Lee, Emeritus Fellow] <alee7900166@gmail.com>

Subject: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

Colleagues:

FYI. Developments here in the U.S.

Arthur Lee

Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

I am forwarding this announcement to you from the National Academies of Sciences, Engineering, and Medicine. A virtual event will be held on Wednesday, 17 September, 1 pm Eastern (Noon Central, 11 am Pacific). [Register via this page](#). I am a member of the authoring committee of the subject report. "The National Academies of Sciences, Engineering, and Medicine invites you to a public webinar to discuss its new report, Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health,

and Welfare. This study reviews the latest scientific evidence on whether greenhouse gas emissions are reasonably anticipated to endanger public health and welfare in the United States.

The report will be posted online at 12:00 p.m. EDT on Wednesday, September 17, 2025. The public briefing will be held at 1:00 p.m. EDT. Members of the report's authoring committee will share the major conclusions of the report, followed by a Q&A.

This event will be held in a virtual setting, available to attend online on the event webpage. Please register today to receive email updates as they become available. If you are unable to attend, the video recording will be posted in the days following the briefing. "

Arthur Lee

Chevron Fellow Emeritus

Mobile: (925) 389-0361

Email: alee7900166@gmail.com

[NotebookLM overview of Arthur Lee](#)

Chevron 'Day in the Life of' video: <https://youtu.be/mhbjJPXi3Zw>

[Stanford University guest lecture](#) 13 February 2023

Music: [Art Elle Quartet - Topic - YouTube](#)

Music: [Art Elle Quartet - Apple Music](#)

Music: [Art Elle Quartet | Spotify](#)

[Arthur Lee | LinkedIn](#)

[Nobel Peace Prize IPCC recognition](#)

From: Henry D Jacoby <hjacoby@mit.edu>

To: "Alley, Richard B" <rba6@psu.edu>, Ben Santer <bensanter1289@gmail.com>, 'Bud Ward' <Wardbud@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>, "Krisebi@uw.edu" <krisebi@uw.edu>, Richard Richels <richard.richels@gmail.com>

Subject: FW: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

Date: Tue, 16 Sep 2025 21:48:16 +0000

Importance: Normal

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Date: Tuesday, September 16, 2025 at 5:36 PM

To: Guest Arthur Lee [Arthur Lee, Emeritus Fellow] <alee7900166@gmail.com>

Cc: Guest Arthur Lee [Arthur Lee, Emeritus Fellow] <alee7900166@gmail.com>

Subject: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

Colleagues:

FYI. Developments here in the U.S.

Arthur Lee

Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

I am forwarding this announcement to you from the National Academies of Sciences, Engineering, and Medicine. A virtual event will be held on Wednesday, 17 September, 1 pm Eastern (Noon Central, 11 am Pacific). [Register via this page](#). I am a member of the authoring committee of the subject report.

"The National Academies of Sciences, Engineering, and Medicine invites you to a public webinar to discuss its new report, Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare. This study reviews the latest scientific evidence on whether greenhouse gas emissions are reasonably anticipated to endanger public health and welfare in the United States.

The report will be posted online at 12:00 p.m. EDT on Wednesday, September 17, 2025. The public briefing will be held at 1:00 p.m. EDT. Members of the report's authoring committee will share the major conclusions of the report, followed by a Q&A.

This event will be held in a virtual setting, available to attend online on the event webpage. Please register today to receive email updates as they become available. If you are unable to attend, the video recording will be posted in the days following the briefing. "

Arthur Lee

Chevron Fellow Emeritus

Mobile: (925) 389-0361

Email: alee7900166@gmail.com

[NotebookLM overview of Arthur Lee](#)

Chevron 'Day in the Life of' video: <https://youtu.be/mhbjJPXi3Zw>

[Stanford University guest lecture](#) 13 February 2023

Music: [Art Elle Quartet - Topic - YouTube](#)

Music: [Art Elle Quartet - Apple Music](#)

Music: [Art Elle Quartet | Spotify](#)

[Arthur Lee | LinkedIn](#)

[Nobel Peace Prize IPCC recognition](#)

From: Gary Yohe <gyohe@wesleyan.edu>

To: Kristie L Ebi <krisebi@uw.edu>

Cc: Henry D Jacoby <hjacoby@mit.edu>, Richard B Alley <rba6@psu.edu>, Ben Santer <bensanter1289@gmail.com>, Bud Ward <wardbud@gmail.com>, Richard Richels <richard.richels@gmail.com>

Subject: Re: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

Date: Tue, 16 Sep 2025 23:21:13 +0000

Importance: Normal

All:

I think that I will be home from visiting Linda's mom just in time. Thanks for the share Jake.

G

Sent from my iPhone

On Sep 16, 2025, at 6:54 PM, Kristie L Ebi <krisebi@uw.edu> wrote:

There is a study. You will find out tomorrow that I was a reviewer. My comments were due on the 6th, so this was a fast turnaround. As you know, I won't know until tomorrow the extent to which my comments were addressed — and don't know the other comments. I'm going to tune in out of curiosity. Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Sep 16, 2025, at 3:18 PM, Henry D Jacoby <hjacoby@mit.edu> wrote:

OOPS! I mean announce 20 hours before the release. Means no study?
Jake

From: Henry D Jacoby <hjacoby@mit.edu>

Date: Tuesday, September 16, 2025 at 5:48 PM

To: Alley, Richard B <rba6@psu.edu>, Ben Santer <bensanter1289@gmail.com>, 'Bud Ward' <Wardbud@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>, Krisebi@uw.edu<krisebi@uw.edu>, Richard Richels <richard.richels@gmail.com>

Subject: FW: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare
Friends,

In case you haven't seen it elsewhere, see below the note from a colleague, Arthur Lee, who is on the NASEM committee. Odd that they announce two days before the event. I have a conflict and can't watch. I hope one or more of us can.

Jake

From: Arthur Lee <alee7900166@gmail.com>
Date: Tuesday, September 16, 2025 at 5:36 PM
To: Guest Arthur Lee [Arthur Lee, Emeritus Fellow] <alee7900166@gmail.com>
Cc: Guest Arthur Lee [Arthur Lee, Emeritus Fellow] <alee7900166@gmail.com>
Subject: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

Colleagues:

FYI. Developments here in the U.S.

Arthur Lee

Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

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"The National Academies of Sciences, Engineering, and Medicine invites you to a public webinar to discuss its new report, Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare. This study reviews the latest scientific evidence on whether greenhouse gas emissions are reasonably anticipated to endanger public health and welfare in the United States. The report will be posted online at 12:00 p.m. EDT on Wednesday, September 17, 2025. The public briefing will be held at 1:00 p.m. EDT. Members of the report's authoring committee will share the major conclusions of the report, followed by a Q&A.

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Arthur Lee

Chevron Fellow Emeritus

Mobile: (925) 389-0361

Email: alee7900166@gmail.com

[NotebookLM overview of Arthur Lee](#)

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[Stanford University guest lecture](#) 13 February 2023

Music: [Art Elle Quartet - Topic - YouTube](#)

Music: [Art Elle Quartet - Apple Music](#)

Music: [Art Elle Quartet | Spotify](#)

[Arthur Lee | LinkedIn](#)

[Nobel Peace Prize IPCC recognition](#)

From: "Carlos Gould (Google Docs)" <comments-noreply@docs.google.com>

To: "Kristie L Ebi" <krisebi@uw.edu>

Subject: EPA Endangerment ... - this is rather run-on. I suggest a su...

Date: Tue, 16 Sep 2025 18:42:20 -0700

Importance: Normal

Carlos Gould replied to a comment in the following document

 EPA Endangerment Finding Repeal - Health Science Comment

 1 comment

with the bulk through climate change impacts on increasing levels of extreme weather including heat, cold and warming temperatures leading to increased exposure to air pollutants, pollen, and changes in the dynamics of vector borne diseases due to changes in habitat and climate

 Kristie L Ebi • 6:20 PM, Sep 16 (PDT)

this is rather run-on. I suggest a succinct stand-alone sentence or two

 Carlos Gould • 6:23 PM, Sep 16 (PDT) New

Agreed - the wording is also a bit unclear as is (e.g., levels of extreme weather is vague, I think we're missing a comma after weather, are we referring to wildfires or other sources [dust?] in warming temperatures leading to increased exposure to air pollutants). I'm not sure if we're omitting certain domains on purpose or not. We may be best served by stopping at both direct and indirect or trying to be more thorough in our listing.

[Open](#)

Google LLC, 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA

You have received this email because you are a participant in this thread. [Change what Google sends you](#). You can reply to this email to reply to the discussion.



From: "Nicholas Mailloux (Google Docs)" <comments-noreply@docs.google.com>

To: "Kristie L Ebi" <krisebi@uw.edu>

Subject: EPA Endangerment Finding Repeal - Health Science Comment

Date: Wed, 17 Sep 2025 07:40:05 -0700

Importance: Normal

New activity in the following document

 EPA Endangerment Finding Repeal - Health Science Comment

 2 resolved

Suggestions

 Kristie L Ebi • 8:06 PM, Sep 16 (PDT)

Add: *"(or frequency)"*

 Nicholas Mailloux • 7:34 AM, Sep 17 (PDT) **New**

Accepted suggestion

[Reply](#)

[Open](#)

 Kristie L Ebi • 8:06 PM, Sep 16 (PDT)

Add: *"(or frequency)"*

 Nicholas Mailloux • 7:34 AM, Sep 17 (PDT) **New**

Accepted suggestion

[Reply](#)

[Open](#)

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 Google™

From: "Caitlin Warlick-Short (Google Docs)" <comments-noreply@docs.google.com>

To: "Kristie L Ebi" <krisebi@uw.edu>

Subject: EPA Endangerment Finding Repeal - Health Science Comment

Date: Wed, 17 Sep 2025 11:24:34 -0700

Importance: Normal

New activity in the following document

 EPA Endangerment Finding Repeal - Health Science Comment

 2 resolved

Suggestions

 Kristie L Ebi • 6:10 PM, Sep 16 (PDT)

Add: "L."

 Caitlin Warlick-Short • 11:19 AM, Sep 17 (PDT) New

Accepted suggestion

[Reply](#)

[Open](#)

 Kristie L Ebi • 6:11 PM, Sep 16 (PDT)

Delete: "University of Washington,"

 Caitlin Warlick-Short • 11:19 AM, Sep 17 (PDT) New

Accepted suggestion

[Reply](#)

[Open](#)

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From: "Vijay Limaye (Google Docs)" <comments-noreply@docs.google.com>

To: "Kristie L Ebi" <krisebi@uw.edu>

Subject: EPA Endangerment ... - Delete: "both"

Date: Wed, 17 Sep 2025 12:53:00 -0700

Importance: Normal

Vijay Limaye accepted a suggestion in the following document

 EPA Endangerment Finding Repeal - Health Science Comment

 1 resolved

Suggestions

 Kristie L Ebi • 6:24 PM, Sep 16 (PDT)

Delete: "both"

 Vijay Limaye • 12:47 PM, Sep 17 (PDT) 

Accepted suggestion

[Open](#)

Google LLC, 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA

You have received this email because you are a participant in this thread. [Change what Google sends you](#). You can reply to this email to reply to the discussion.



From: "Nicholas Mailloux (Google Docs)" <comments-noreply@docs.google.com>

To: "Kristie L Ebi" <krisebi@uw.edu>

Subject: EPA Endangerment ... - Replace: "s" with "d"

Date: Thu, 18 Sep 2025 05:09:47 -0700

Importance: Normal

Nicholas Mailloux accepted a suggestion in the following document

 EPA Endangerment Finding Repeal - Health Science Comment

 1 resolved

Suggestions

 Kristie L Ebi • 6:23 PM, Sep 16 (PDT)

Replace: "s" with "d"

 Nicholas Mailloux • 5:04 AM, Sep 18 (PDT) 

Accepted suggestion

[Open](#)

Google LLC, 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA

You have received this email because you are a participant in this thread. [Change what Google sends you](#). You can reply to this email to reply to the discussion.



From: "Jonathan Patz (Google Docs)" <comments-noreply@docs.google.com>

To: "Kristie L Ebi" <krisebi@uw.edu>

Subject: EPA Endangerment ... - this is rather run-on. I suggest a su...

Date: Thu, 18 Sep 2025 14:46:04 -0700

Importance: Normal

Jonathan Patz resolved a comment in the following document

 EPA Endangerment Finding Repeal - Health Science Comment

 1 resolved

Comments

with the bulk through climate change impacts on increasing levels of extreme weather including heat, cold and warming temperatures leading to increased exposure to air pollutants, pollen, and changes in the dynamics of vector borne diseases due to changes in habitat and climate

 Kristie L Ebi • 6:20 PM, Sep 16 (PDT)

this is rather run-on. I suggest a succinct stand-alone sentence or two

 Carlos Gould • 6:23 PM, Sep 16 (PDT)

Agreed - the wording is also a bit unclear as is (e.g., levels of extreme weather is vague, I think we're missing a comma after weather, are we referring to wildfires or other sources [dust?] in warming temperatures leading to increased exposure to air pollutants). I'm not sure if we're omitting certain domains on purpose or not. We may be best served by stopping at both direct and indirect or trying to be more thorough in our listing.

 Jonathan Patz • 2:41 PM, Sep 18 (PDT) 

Marked as resolved

[Open](#)

You have received this email because you are a participant in this thread. [Change what Google sends you](#). You can reply to this email to reply to the discussion.

From: "Jonathan Patz (Google Docs)" <comments-noreply@docs.google.com>

To: "Kristie L Ebi" <krisebi@uw.edu>

Subject: EPA Endangerment ... - Add: “,”

Date: Thu, 18 Sep 2025 14:40:46 -0700

Importance: Normal

Jonathan Patz rejected a suggestion in the following document

 EPA Endangerment Finding Repeal - Health Science Comment

 1 resolved

Suggestions

 Kristie L Ebi • 6:19 PM, Sep 16 (PDT)

Add: “,”

 Jonathan Patz • 2:35 PM, Sep 18 (PDT) 

Rejected suggestion

[Open](#)

Google LLC, 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA

You have received this email because you are a participant in this thread. [Change what Google sends you](#). You can reply to this email to reply to the discussion.



From: "Nicholas Mailloux (Google Docs)" <comments-noreply@docs.google.com>

To: "Kristie L Ebi" <krisebi@uw.edu>

Subject: EPA Endangerment ... - needs to move down to vector borne di...

Date: Thu, 18 Sep 2025 12:17:00 -0700

Importance: Normal

Nicholas Mailloux resolved a comment in the following document

 EPA Endangerment Finding Repeal - Health Science Comment

 1 resolved

Comments

The latest IPCC assessment report stated with high confidence that climate change had increased vector-borne disease ranges and/or the reproduction of vectors (IPCC 2023)



Joshua Rosenthal • 2:57 PM, Sep 16 (PDT)

needs to move down to vector borne disease section below. confusing to state this here and then go onto coccidioidomycosis.



Kristie L Ebi • 6:31 PM, Sep 16 (PDT)

also, the citation is 2022 -- and the conclusions was increase in the geographic range, seasonality, and intensity of transmission



Nicholas Mailloux • 12:11 PM, Sep 18 (PDT) **New**

Marked as resolved

[Open](#)

Google LLC, 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA

You have received this email because you are a participant in this thread. [Change what Google sends you](#). You can reply to this email to reply to the discussion.



From: James Colborn <jcolborn@impactnexus.africa>

To: Dr Anban Pillay <anban.pillay@health.gov.za>, Jorge Quevedo <jquevedo@impactnexus.africa>, "Vishal Brijlal" <vbrijlal@impactnexus.africa>, Kristie L Ebi <krisebi@uw.edu>

Subject: Updated GCF concept note

Date: Mon, 25 Aug 2025 03:36:17 +0000

Importance: Normal

Attachments: SA_GCF_ToC.docx; SA_GCF_24Aug_clean.docx

Inline-Images: image001.png

Good morning, Dr. Pillay,

Attached for your consideration please find an updated version of the GCF concept note and annex, which has what we are hoping to be nearly final versions of the technical sections and executive summary.

In order to adhere to the recommended word limit we have moved some key details, including the specific outputs and outcomes for each work plan (WP), into the attached annex. This is in following with recommendations provided by DBSA, and so something we also expect GCF will accept.

We look forward to any comments or suggestions you may have, and I hope your meetings this week with Jorge and the team go well.

All the best,
James

-- --

James Colborn, PhD, MSPH

Senior Climate Advisor

Impact Nexus

+12088634866

[Jcolborn@impactnexus.africa](mailto:jcolborn@impactnexus.africa)

Impactnexus.africa

ImpactNexus 

From: James Colborn <jcolborn@impactnexus.africa>

To: Kristie L Ebi <krisebi@uw.edu>

Cc: Jorge Quevedo <jquevedo@impactnexus.africa>

Subject: Re: Trimmed section C2

Date: Thu, 28 Aug 2025 00:19:56 +0000

Importance: Normal

Attachments: SA_GCF_27Aug_clean.docx

Hi Kris,

As promised attached is an updated version of the CN, where I've managed to get section C2 below the 1000 word limit. I also tried to highlight areas where we can reference evidence gaps that we intend to fill through the PPF (which was DBSA's specific request/recommendation), though in adding this into the executive summary I pushed that over the word limit.

Thanks in advance for any thoughts you have,
James

From: Kristie L Ebi <krisebi@uw.edu>

Date: Wednesday, August 27, 2025 at 5:27 PM

To: James Colborn <jcolborn@impactnexus.africa>

Cc: Jorge Quevedo <jquevedo@impactnexus.africa>

Subject: Re: Trimmed section C2

Dear James:

Interesting on using an online tool so people can't get around the word limit.

I suggest working on the previous version, seeing how many words can be eliminated. Light on details will raise more questions to address, so getting in what is possible would be better. Do you want me to work on any of the sections?

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Aug 26, 2025, at 8:54 PM, James Colborn <jcolborn@impactnexus.africa> wrote:

Hi both,

Given our hard cap on word limits with the online GCF application I ran section C2 through ChatGPT to see what it would look like. I think its quite light on details so my initial thought would be to go back through the previous version and cut manually and decide what more can move to the annex, but perhaps this level of detail (or lack thereof), is to be expected given the word limit?

Jorge its probably best to stick with the previous version I shared for Anban's review so he can review the full technical components of the work plans, then just ensure we maintain the key components in the final trimmed version?

Open to any other suggestions, and thanks.

James

<C2_trimmed.docx>

From: Jorge Quevedo <jquevedo@impactnexus.africa>

To: Kristie L Ebi <krisebi@uw.edu>, Caradee Wright | SAMRC <Caradee.Wright@mrc.ac.za>

Cc: "Vishal Brijlal" <vbrijlal@impactnexus.africa>, cboyer10 <cboyer10@uw.edu>, Chris Jack <cjack@csag.uct.ac.za>, James Colborn <jcolborn@impactnexus.africa>, Guy Howard <guy.howard@bristol.ac.uk>

Subject: Re: Concept note update

Date: Sun, 14 Sep 2025 22:31:40 +0000

Importance: Normal

Attachments: SA_GCF_12Sep2025_Concept_Note.docx; SA_GCF_10Sep2025_ANNEX_G3_ESS.docx; SA_GCF_10Sep2025_ANNEX_G4_TOC.pdf; SA_GCF_10Sep2025_ANNEX_SITE_PRIORITIZATION.docx

Inline-Images: image001[46].jpg

Dear All,

Many thanks for the great work and team effort.

Below please find some of the feedback we received from the GCF as part of an earlier soft submission:

1. *Excellently crafted concept note:*

- a. *Concise analysis of the climate context, hazards and related health impacts. This might receive some feedback from our climate people but let's leave it as is for now.*
- b. *Masterful packaging of 4 manageable program components....*
- c. *An innovative financing structure emphasizing catalytic impact, leveraging GCF concessional funding to unlock domestic resources and monetized earned efficiencies, ensuring immediate climate-health impacts and long-term sustainability - remarkable!*

I have enclosed the final package. We will be in contact as soon as we heard back from GCF (around early to mid Oct).

Best,

J.

Jorge Quevedo

Managing Director

ImpactNexus Africa

jquevedo@impactnexus.africa | +1 857 295 5444

ImpactNexus 

From: Kristie L Ebi <krisebi@uw.edu>

Date: Saturday, September 13, 2025 at 3:14 PM

To: Caradee Wright | SAMRC <Caradee.Wright@mrc.ac.za>

Cc: Vishal Brijlal <vbrijlal@impactnexus.africa>, Jorge Quevedo <jquevedo@impactnexus.africa>,

cboyer10 <cboyer10@uw.edu>, Chris Jack <cjack@csag.uct.ac.za>, James Colborn <jcolborn@impactnexus.africa>, Guy Howard <guy.howard@bristol.ac.uk>

Subject: Re: Concept note update

Dear Vishal:

Congratulations — and good luck with the review.

Best wishes,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)

University of Washington

Seattle, WA 98195

USA

krisebi@uw.edu

<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Sep 13, 2025, at 12:26 AM, Caradee Wright | SAMRC <Caradee.Wright@mrc.ac.za> wrote:

Dear Vishal,

This is excellent news! Thank you so much for letting us all know.

Now we hold thumbs tightly!

Best regards,
Caradee

Sent from [Outlook for iOS](#)

From: Vishal Brijlal <vbrijlal@impactnexus.africa>

Sent: Saturday, September 13, 2025 7:37:47 AM

To: Kristie L Ebi <krisebi@uw.edu>; Jorge Quevedo <jquevedo@impactnexus.africa>; Caradee Wright | SAMRC <Caradee.Wright@mrc.ac.za>; cboyer10 <cboyer10@uw.edu>; cjack <cjack@csag.uct.ac.za>; James Colborn <jcolborn@impactnexus.africa>; Guy Howard <guy.howard@bristol.ac.uk>

Subject: [EXTERNAL SENDER] Re: Concept note update

<Image.png>

Dear All

A big thank you and Congratulations to All

The concept note was submitted to the GCF.

An amazing effort

Thanks

Vishal (विशाल)

Vishal Brijlal
(विशाल बृजलाल)

"Work hard in silence; let success make the noise" - Abdul Kalam (11th President of India)

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From: Kristie L Ebi <krisebi@uw.edu>
Sent: Friday, August 29, 2025 11:57:56 PM
To: Jorge Quevedo <jquevedo@impactnexus.africa>
Cc: Caradee Wright | SAMRC <Caradee.Wright@mrc.ac.za>; James Colborn <jcolborn@impactnexus.africa>; Chris Jack <cjack@csag.uct.ac.za>; cboyer10 <cboyer10@uw.edu>; Guy Howard <guy.howard@bristol.ac.uk>; Vishal Brijlal <vbrijlal@impactnexus.africa>; Andrew Storey <astorey@impactnexus.africa>
Subject: Re: Concept note update

Dear Jorge:

First, let me echo your statements about everyone's dedication and excellent contributions. This literally could not have been done without you. Thank you.

Second, unless GCF changed their processes (which they do regularly), CN often come back with pages of review comments that need to be addressed in typical peer review style (e.g., written responses for each comment detailing changes to the text). At this point, word limits are thrown out the window. There can be several rounds of review; two is typical. Let's hope they have moved to something simpler.

Third, I really hope they changed the rules on full proposals. Until recently, those ran to hundreds of pages between the proposal and the annexes.

Fourth, a full feasibility study will be conducted during the project preparation phase. When we do talk, it would be useful to start considering what will needed for that.

In other words, there will be a lot more work ahead — all valuable, but still a lot of work.

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Aug 29, 2025, at 2:22 PM, Jorge Quevedo <jquevedo@impactnexus.africa> wrote:

Dear Team,

I wanted to share a quick update on the process and next steps, and to thank you for your exceptionally high-quality work and very fast turnaround. The note is in excellent shape.

We have already gone through the full draft with Dr Pillay a couple of times, and by tomorrow he will complete one final review. We are aiming for a soft submission by Saturday afternoon (SAST). As of this writing, the total note is for about \$90M over a 5 year period. The concessional grant request is for \$50M. The rest is a projected combination of savings generated by the solar portion and leveraged funding from NDOH.

The GCF Secretariat will then conduct a soft review, with feedback expected Monday morning (SAST). Provided there are no major comments, the Accredited Entity (DBSA) will move forward with the formal submission. GCF will subsequently begin its internal review, and once endorsed, will authorize DBSA to prepare a Project Preparation Facility application to support full proposal development.

We will share the final submission with you by Tuesday. Following that, we plan to propose an introductory call and debrief with Dr Pillay over the next couple of weeks.

Many thanks again for the excellent collaboration and teamwork on this important project.

Best,

J.

Jorge Quevedo
Managing Director
ImpactNexus Africa
jquevedo@impactnexus.africa | +1 857 295 5444
<image001[2].jpg>

From: Benjamin Santer <bensanter1289@gmail.com>

To: 'Henry D Jacoby' <hjacoby@mit.edu>, Richard Richels <richard.richels@gmail.com>, "Yohe, Gary" <gyohe@wesleyan.edu>, Richard Alley <rba6@psu.edu>, Bud Ward <wardbud@gmail.com>, Kristie L Ebi <krisebi@uw.edu>

Subject: Fwd: Reporter here — talking new DOE report?

Date: Tue, 29 Jul 2025 13:57:21 -0700

Importance: Normal

Dear folks,

Coincidentally (after our discussion today of the efforts to roll back the endangerment finding), I just received this email from Molly Taft. I spoke with Molly a few minutes ago. I agreed to have a look at the DOE report she mentioned. A cursory read of the Executive Summary of the report suggests that sea level rise and ocean acidification aren't a big deal, climate models aren't useful, etc., etc.

Sound familiar?

Molly agreed that it's o.k. for me to share the DOE report with you.

With kind regards,

Ben

----- Forwarded Message -----

Subject: Reporter here — talking new DOE report?

Date: Tue, 29 Jul 2025 16:12:08 -0400

From: Taft, Molly <molly_taft@wired.com>

To: bensanter1289@gmail.com

Hi Ben — hope all is well.

Molly with WIRED here, doing a writeup of the endangerment finding rollback and the associated report issued by the DOE featuring Steve Koonin and Judith Curry (plus some others) as authors:

[https://urldefense.com/v3/__https://www.energy.gov/sites/default/files/2025-07/DOE_Critical_Review_of_Impacts_of_GHG_Emissions_on_the_US_Climate_July_2025.pdf__;!!K-Hz7m0Vt54!iL5-la65hhREh9CHNqg_sCksh_a93Yw-FkhgUCajsTh72VVY5BGk7hkd4sFRPt6YFihpU6uk8dKbTRKfD2rI2w\\$](https://urldefense.com/v3/__https://www.energy.gov/sites/default/files/2025-07/DOE_Critical_Review_of_Impacts_of_GHG_Emissions_on_the_US_Climate_July_2025.pdf__;!!K-Hz7m0Vt54!iL5-la65hhREh9CHNqg_sCksh_a93Yw-FkhgUCajsTh72VVY5BGk7hkd4sFRPt6YFihpU6uk8dKbTRKfD2rI2w$)

I covered your letter

<[https://urldefense.com/v3/__https://gizmodo.com/top-climate-scientist-blasts-government-lab-after-denie-1846956716__;!!K-Hz7m0Vt54!iL5-la65hhREh9CHNqg_sCksh_a93Yw-FkhgUCajsTh72VVY5BGk7hkd4sFRPt6YFihpU6uk8dKbTRLXtv-JLw\\$](https://urldefense.com/v3/__https://gizmodo.com/top-climate-scientist-blasts-government-lab-after-denie-1846956716__;!!K-Hz7m0Vt54!iL5-la65hhREh9CHNqg_sCksh_a93Yw-FkhgUCajsTh72VVY5BGk7hkd4sFRPt6YFihpU6uk8dKbTRLXtv-JLw$)>
around LNL and Koonin a few years ago when I was at Gizmodo, and I'm wondering if you might be able to give some thoughts around the arguments made in this new DOE report.

My deadline is a little early tomorrow — around 10 am ET — but can push

if needed. happy to have a quick phone call or take an analysis over email, so let me know.

thanks!
Molly

Molly Taft
Senior Reporter, WIRED
One World Trade Center, 27th Floor
New York, NY 10007
Signal: mollytaft.76

/Read about WIRED's 'On Background' policy here

<

From: Joel Smith <joelbsmith.climate@gmail.com>

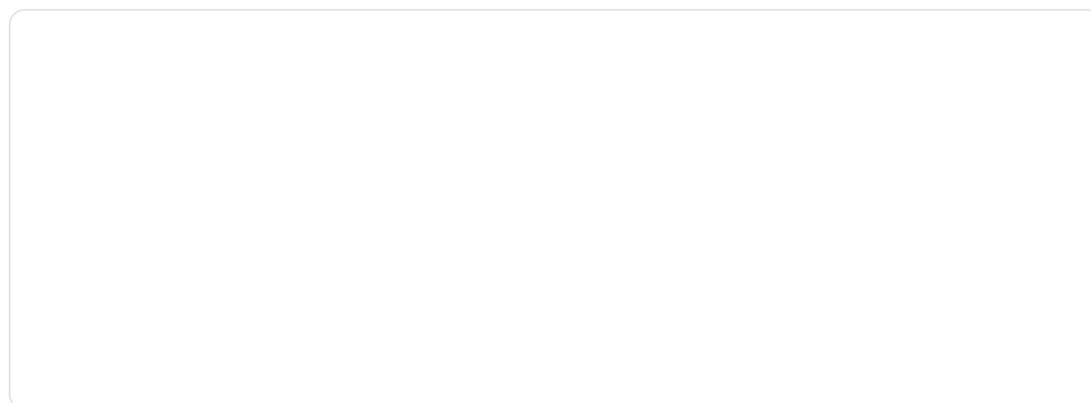
To: Michael Oppenheimer <omichael@princeton.edu>, Kristie L Ebi <krisebi@uw.edu>, Ian Burton <burtoni.ian@gmail.com>, "Yohe, Gary" <gyohe@wesleyan.edu>

Subject: Richard Tol's take on DOE report

Date: Thu, 31 Jul 2025 05:45:51 -0600

Importance: Normal

(thanks to Andy Revkin)



Tol's post is entitled "**Is climate change dangerous?**"

His opening line is:

Yes, it is.

There is a long debate in the literature about the extent of the impacts of climate change but no one doubts that people will get hurt. The uncertainty about climate change impacts is large, which in itself is a reason to worry, and most would say the uncertainty is skewed the wrong way: Negative surprises are more likely than positive surprises (of equal size). If President

Obama had asked me to write his Endangerment Finding I would have given him two words: “well duh”.

The Trump Administration wants to overturn this. The EPA published a legal document. The EPA argues that “GHGs [...] impact[] public health and welfare only indirectly and not by its mere presence in the ambient air”. That is true. Carbon dioxide (CO₂) is not toxic. Your lungs are full of it. We worry about CO₂ because it changes the climate, an indirect effect.

We often worry about indirect effects. As Einstein noted, it is not the fall that kills you, it is the sudden stop. Pushing someone off a building only indirectly kills them.

The EPA does not take issue with characterizing nitrogen dioxide (NO₂) and sulphur dioxide (SO₂) as air pollutants, even though these gases too affect public health and welfare only indirectly, after being transformed into nitric acid (HNO₃) and sulphuric acid (H₂SO₄), respectively.

My legally trained friends tell me that the law is impartial. If a line of argument holds for two substances (NO₂ and SO₂) then it also holds for a third (CO₂).

Their conclusion that “poor countries” are “likely to benefit” is again not backed up with references. Tol (2024), the only reference in the paragraph, concludes the opposite.

Tol then turns to the report by Spencer, Christy, McKittrick, Koonin and Curry, focusing on a section relying on his scholarship:

Their conclusion that “poor countries” are “likely to benefit” is again not backed up with references. Tol (2024), the only reference in the paragraph, concludes the opposite.

Here’s the cited Tol paper and a key section of the abstract:

Tol, Richard S.J. (2024) A meta-analysis of the total economic impact of climate change. *Energy Policy* 185

113922 <https://doi.org/10.1016/j.enpol.2023.113922>

Earlier meta-analyses of the economic impact of [climate change](#) are updated with more data, with three new results: (1) The central estimate of the economic impact of [global warming](#) is always negative. (2) The confidence interval about the estimates is much wider. (3) Elicitation methods are most pessimistic, [econometric](#) studies most optimistic. Two previous results remain: (4) The uncertainty about the impact is skewed towards negative surprises. (5) Poorer countries are much more vulnerable than richer ones. A meta-analysis of the impact of weather shocks reveals that studies, which relate economic growth to temperature levels, cannot agree on the sign of the impact whereas studies, which make economic growth a function of temperature change do agree on the sign but differ an order of magnitude in effect size. The former studies posit that climate change has a permanent effect on economic growth, the latter that the effect is transient.

Joel B. Smith
Climate Vulnerability and Adaptation Researcher
1402 Oakleaf Circle
Boulder CO 80304 USA
e-mail: joelbsmith.climate@gmail.com
Tel: 1-303-249-2204

From: "Alley, Richard B" <rba6@psu.edu>

To: "richard.richels@gmail.com" <richard.richels@gmail.com>, 'Henry D Jacoby' <hjacoby@mit.edu>, 'Ben Santer' <bensanter1289@gmail.com>, 'Bud Ward' <wardbud@gmail.com>, 'Gary Yohe' <gyohe@wesleyan.edu>, "'Kristie L. Ebi'" <krisebi@uw.edu>

Subject: Re: Response to recent edits

Date: Sun, 3 Aug 2025 13:16:43 +0000

Importance: Normal

Folks—There is some discussion at Penn State about a possibly organized response to the Anti-Endangerment-Finding “report” from Christy et al. at DOE. At this point, do you know if there are organized efforts to debunk this with formal filing at DOE? (AGU, or...) Chasing down a lot of the nonsense in a Gish Gallop like this one is a lot of work, and it might be more efficient to support other comments rather than trying to generate new ones. Thanks for any thoughts. Best—Richard

From: "richard.richels@gmail.com" <richard.richels@gmail.com>

Date: Sunday, August 3, 2025 at 8:50 AM

To: 'Henry D Jacoby' <hjacoby@mit.edu>

Cc: Richard Alley <rba6@psu.edu>, 'Ben Santer' <bensanter1289@gmail.com>, 'Bud Ward' <wardbud@gmail.com>, 'Gary Yohe' <gyohe@wesleyan.edu>, "'Kristie L. Ebi'" <krisebi@uw.edu>

Subject: Response to recent edits

Dear Jake,

Attached are my responses to you last edits. As usual, I found them to be right on target. Thank you.

I am circulating this version to the group to provide all with the opportunity to weigh in.

With best regards,

Rich

From: Benjamin Santer <bensanter1289@gmail.com>

To: "Alley, Richard B" <rba6@psu.edu>, "richard.richels@gmail.com" <richard.richels@gmail.com>, 'Henry D Jacoby' <hjacoby@mit.edu>, 'Bud Ward' <wardbud@gmail.com>, 'Gary Yohe' <gyohe@wesleyan.edu>, "'Kristie L. Ebi'" <krisebi@uw.edu>

Subject: Re: Response to recent edits

Date: Sun, 3 Aug 2025 06:54:13 -0700

Importance: Normal

Attachments: DOE_Report_Nature_02_AUG_2025.pdf

Dear Richard,

Andy Dessler is putting together some form of coordinated response. So are the folks who organized the "Weather and Climate Livestream" at the end of May.

Together with a few of my colleagues, I've been working on a response to the DOE report's misrepresentation of our "vertical fingerprint" research. In confidence, I'm appending what we've done thus far. Please do not share with others.

Nature has expressed some interested in our response to the DOE report. I should find out in a few days whether we'll be submitting it there.

With kind regards,

Ben

P.S.: I thought you might be interested in this:

[https://urldefense.com/v3/__https://www.linkedin.com/posts/ben-santer-29b3996_exceptional-stratospheric-contribution-to-activity-7357078563671474177-x8Fx?utm_source=social_share_send&utm_medium=member_desktop_web&rcm=ACoAAAEf21cBU-YvK3L_m5LpWFXvgdvqIxY5zJ8__!!K-Hz7m0Vt54!j0BRnksLc9J5M5bFcbVerUd4lJjBjdWDr0g7jyfTzaiJT1BqINh3OJiLLGHRryWNrgXLKI8DXUDgip6fRZ1eZw\\$](https://urldefense.com/v3/__https://www.linkedin.com/posts/ben-santer-29b3996_exceptional-stratospheric-contribution-to-activity-7357078563671474177-x8Fx?utm_source=social_share_send&utm_medium=member_desktop_web&rcm=ACoAAAEf21cBU-YvK3L_m5LpWFXvgdvqIxY5zJ8__!!K-Hz7m0Vt54!j0BRnksLc9J5M5bFcbVerUd4lJjBjdWDr0g7jyfTzaiJT1BqINh3OJiLLGHRryWNrgXLKI8DXUDgip6fRZ1eZw$)

On 8/3/25 6:16 AM, Alley, Richard B wrote:

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> organized response to the Anti-Endangerment-Finding “report” from
> Christy et al. at DOE. At this point, do you know if there are
> organized efforts to debunk this with formal filing at DOE? (AGU,
> or...) Chasing down a lot of the nonsense in a Gish Gallop like this one
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> comments rather than trying to generate new ones. Thanks for any
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> *From: *"richard.richels@gmail.com" <richard.richels@gmail.com>

> *Date: *Sunday, August 3, 2025 at 8:50 AM

> *To: *Henry D Jacoby' <hjacoby@mit.edu>
> *Cc: *Richard Alley <rba6@psu.edu>, 'Ben Santer'
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> *Subject: *Response to recent edits

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> be right on target. Thank you.

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> I am circulating this version to the group to provide all with the
> opportunity to weigh in.

>
> With best regards,

>
> Rich

>

From: Rachel Cleetus <RCleetus@ucs.org>

To: Kristie L Ebi <krisebi@uw.edu>

Subject: UCS scientists sign-on letter opposing the Endangerment Finding repeal

Date: Mon, 4 Aug 2025 13:04:31 +0000

Importance: Normal

Dear Kris, I just wanted to let you know that the scientists and experts letter you helped review launched on Saturday, link below.

UCS scientists' sign-on letter opposing the repeal of the Endangerment Finding: <https://secure.ucs.org/a/2025-scientists-stop-attack-climate-science>

As you'll see, we updated the letter to add a short paragraph on the sham DOE report. (I also had a comms colleague copyedit it). Thank you again for your support and advice. Please feel free to share the letter with your networks for signing on.

We are also developing plans for technical comments on both the EPA actions and the DOE report, working in collaboration with external scientists. There seem to be a lot of different efforts underway. If you see opportunities to bring some of the threads together, please let me know.

Best,
Rachel

Rachel Cleetus, Ph.D.
Senior Policy Director, Climate and Energy Program
Union of Concerned Scientists
Two Brattle Square, Cambridge, MA 02138
rcleetus@ucs.org
+1 617-799-0051 (Mobile/WhatsApp/Signal)

The Union of Concerned Scientists puts rigorous, independent science to work to solve our planet's most pressing problems. Joining with people across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.
www.ucs.org

From: "richard.richels@gmail.com" <richard.richels@gmail.com>

To: "Ben Santer" <bensanter1289@gmail.com>

Cc: "Alley, Richard B" <rba6@psu.edu>, "Bud Ward" <wardbud@gmail.com>, "Gary Yohe" <gyohe@wesleyan.edu>, "Henry D Jacoby" <hjacoby@mit.edu>, "Kristie L. Ebi" <krisebi@uw.edu>

Subject: Endangerment finding

Date: Tue, 5 Aug 2025 09:17:33 -0400

Importance: Normal

Dear Ben,

I offer a few suggestions for your response to the DOE report. My comments are based on 1) the report itself, and 2) how it may be packaged by others to bolster the Administration's position. For the latter, I perused what appears to be one such effort.

<https://www.youtube.com/watch?v=0FQnfchshf0>

I had no luck in revealing the originators of the YouTube video, other than "Paper Talk". But cloaked in its "authoritative" veneer, it comes across as an endorsement of the subject matter.

In addition to highlighting the obvious mischaracterizations of the scientific literature, the report also misrepresents the nature of the policy problem. The inference is that uncertainty justifies further procrastination. The report's authors claim that there may be other contributors to warming than those emphasized by the scientific community. Fair enough, this is the way science works; all avenues of legitimate inquiry need to be pursued.

But the implication is that until other possibilities are put to rest, regardless of their likelihood—unknown or extremely low. Uncertainty is not grounds for policy paralysis. But this does not mean that in the interim, policy comes to a halt. The choice is between doing nothing and some combination of abatement and adaptation. And the authors seem to be recommending the former. Or perhaps, to spend nothing today with the promise of spending what will be necessary for adaptation if it turns out to be necessary.

Of course, this is a very risky policy prescription, unless we are convinced that 1) damages from waiting are small, 2) their likelihood is insignificant, and/or 3) we find the risks to be tolerable. We do have ways to analyze such problems; it is called risk benefit-cost analysis. It is what we all do when we purchase insurance. We balance the upside and the downside risks. Doing too much, too soon or too little, too late.

Nothing new, but I thought worth keeping I mind.

With best regards,

Rich

From: Benjamin Santer <bensanter1289@gmail.com>

To: "richard.richels@gmail.com" <richard.richels@gmail.com>

Cc: "'Alley, Richard B'" <rba6@psu.edu>, 'Bud Ward' <wardbud@gmail.com>, 'Gary Yohe' <gyohe@wesleyan.edu>, 'Henry D Jacoby' <hjacoby@mit.edu>, "'Kristie L. Ebi'" <krisebi@uw.edu>

Subject: Re: Endangerment finding

Date: Tue, 5 Aug 2025 06:47:12 -0700

Importance: Normal

Attachments: DOE_Report_Nature_04_AUG_2025_new.pdf

Dear Rich,

Unfortunately, I don't think I can take the lead on a broader scientific response to the DOE report (along the lines you suggested). My strategy has been to focus on specific scientific issues that are directly in my wheelhouse - like the misrepresentation of our "vertical fingerprint" research in Section 5.5 of the DOE report. This is an issue where the DOE report is demonstrably wrong. The report is using our 2023 PNAS paper to claim that human activities are NOT affecting atmospheric temperature. The DOE claim is the opposite of what we actually found in our 2023 paper.

I am also going to be involved in technical responses that focus on Sections 5.2, 5.3, and 5.4 of the DOE report, as well as on a response to the report section that deals with optimal fingerprinting.

I hope someone else is responding to the broader issues you mentioned in your email, Rich. Perhaps we can talk about that on Thursday.

I'm appending (in confidence) the current version of our response to the "vertical fingerprint" stuff in the DOE report. Our response has evolved quite a bit since you first saw it. My coauthors and I hope to submit this to Nature soon.

With best wishes,

Ben

On 8/5/25 6:17 AM, richard.richels@gmail.com wrote:

>

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>

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> comments are based on 1) the report itself, and 2) how it may be
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>

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> little, too late.
>
> Nothing new, but I thought worth keeping I mind.
>
> With best regards,
>
> Rich
>

From: Antonio Gasparrini <Antonio.Gasparrini@lshtm.ac.uk>

To: Kristie L Ebi <krisebi@uw.edu>, Andrew Haines <Andy.Haines@lshtm.ac.uk>

Subject: Re: DOE report features Antonio's research in section 10.3.1

Date: Thu, 7 Aug 2025 17:44:53 +0000

Importance: Normal

Dear Kris,

Thanks for reaching out.

Indeed, I have been contacted by several people, including Associated Press and Carbon Brief, to comment on the report, in particular about the reporting and citation of our work. In addition, several MCC colleagues has gotten in touch, with some suggestions to write a commentary or some kind of rebuttal, trying to address the most outrageous statements.

I will send an email around later tonight, including all the colleagues who can be interested in contributing.

Feel free then to reply and suggest any strategy and action.

Best

-AG

From: Kristie L Ebi <krisebi@uw.edu>

Date: Thursday, 7 August 2025 at 05:46

To: Andrew Haines <Andy.Haines@lshtm.ac.uk>, Antonio Gasparrini <Antonio.Gasparrini@lshtm.ac.uk>

Subject: DOE report features Antonio's research in section 10.3.1

Dear Antonio and Andy:

I'm sure you've heard about the efforts by USEPA and DOE to void the endangerment finding made by EPA in 2009 that carbon dioxide and methane pose a threat to public health and welfare; this is the legal basis for regulating these emissions in the US.

DOE released a report last week written by well-known climate skeptics (attached). There are multiple efforts to respond to the accuracy of the report, including media such as Associated Press, Carbon Brief, a collaboration of over 70 scientists led by Prof Andrew Dessler at TAMU, and undoubtedly others.

The report uses Antonio's research and other citations to conclude that rising temperatures will result in a net saving of lives.

Please let me know if you would like to engage in responding to the claims and to answer the questions of whether your research was misrepresented and, if so, why/how. If yes, then I will put you in touch with Dessler and Carbon Brief.

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

From: Andrew Haines <Andy.Haines@lshtm.ac.uk>

To: Antonio Gasparrini <Antonio.Gasparrini@lshtm.ac.uk>, Kristie L Ebi <krisebi@uw.edu>

Subject: Re: DOE report features Antonio's research in section 10.3.1

Date: Thu, 7 Aug 2025 17:48:43 +0000

Importance: Normal

Inline-Images: image.png

Dear Kris

I am happy to contribute if useful but Antonio is the best person to lead the rebuttal!

Best

Andy

Andy Haines

Professor of Environmental Change and Public Health

London School of Hygiene and Tropical Medicine

15-17 Tavistock Place

London WC1H 9SH

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SCHOOL of
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& TROPICAL
MEDICINE



Climate Change
& Planetary
Health



lshtm.ac.uk/planetaryhealth



[@LSHTM_Planet](https://twitter.com/LSHTM_Planet)

From: Antonio Gasparrini <Antonio.Gasparrini@lshtm.ac.uk>

Sent: 07 August 2025 19:44

To: Kristie L Ebi <krisebi@uw.edu>; Andrew Haines <Andy.Haines@lshtm.ac.uk>

Subject: Re: DOE report features Antonio's research in section 10.3.1

Dear Kris,

Thanks for reaching out.

Indeed, I have been contacted by several people, including Associated Press and Carbon Brief, to comment on the report, in particular about the reporting and citation of our work. In addition, several MCC colleagues has gotten in touch, with some suggestions to write a commentary or some kind of rebuttal, trying to address the most outrageous statements.

I will send an email around later tonight, including all the colleagues who can be interested in contributing.

Feel free then to reply and suggest any strategy and action.

Best

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Date: Thursday, 7 August 2025 at 05:46

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Please let me know if you would like to engage in responding to the claims and to answer the questions of whether your research was misrepresented and, if so, why/how. If yes, then I will put you in touch with Dessler and Carbon Brief.

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

From: "Yeager, Ray" <ray.yeager@louisville.edu>

To: "Weuve, Jennifer" <jweuve@bu.edu>, "krisebi@uw.edu" <krisebi@uw.edu>, "George.Thurston@nyulangone.org" <George.Thurston@nyulangone.org>

Subject: RE: NASEM -- FW: Request for input: fast-track study on greenhouse gas emissions and health -- deadline is AUGUST 27, 2025 at 11:59 ET

Date: Fri, 22 Aug 2025 15:51:35 +0000

Importance: Normal

Inline-Images: image001.png

Thanks, Jennifer!

ALA is making a big push on this too. I have already alerted the NAC PC and my climate colleagues to help spread the word. I wonder if it would make sense to have the link posted across the ISEE socials?

Best,
Ray

From: Weuve, Jennifer <jweuve@bu.edu>

Sent: Friday, August 22, 2025 8:46 AM

To: krisebi@uw.edu; Yeager, Ray <ray.yeager@louisville.edu>; George.Thurston@nyulangone.org

Subject: FW: NASEM -- FW: Request for input: fast-track study on greenhouse gas emissions and health -- deadline is AUGUST 27, 2025 at 11:59 ET

CAUTION: This email originated from outside of our organization. Do not click links, open attachments, or respond unless you recognize the sender's email address and know the contents are safe.

Dear ISEE Colleagues,

This NASEM notice below, re: the health effects of greenhouse gasses, showed up on a listserv I follow. I reached out to Barbara Hoffman about appropriate folks at ISEE who might be interested in orchestrating a response (if they aren't already), and she directed to you.

Happy to pitch in as needed.

In solidarity,
Jennifer

From: spiritof1848@googlegroups.com <spiritof1848@googlegroups.com> **On Behalf Of** Krieger, Nancy

Sent: Thursday, August 21, 2025 2:21 PM

To: 1848 (spiritof1848@googlegroups.com) <spiritof1848@googlegroups.com>

Cc: Krieger, Nancy <nkrieger@hsph.harvard.edu>

Subject: [spiritof1848] NASEM -- FW: Request for input: fast-track study on greenhouse gas emissions and health -- deadline is AUGUST 27, 2025 at 11:59 ET

fyi – for those on you on the listserv with relevant knowledge & resources re environmental justice & climate justice that can respond to this request from NASEM, please be aware of this opportunity to contribute – mindful that the EPA under the current administration is seeking to negate the possibility of its regulating greenhouse gases ...

DEADLINE TO SUBMIT MATERIALS: WED, AUG 27, 2025 AT 11:59 ET

From: NASEM Health and Medicine <HMDnews-list@nationalacademies.org>

Sent: Thursday, August 21, 2025 2:01 PM

Subject: Request for input: fast-track study on greenhouse gas emissions and health

REQUEST FOR INPUT FROM DIVISION OF EARTH AND LIFE SCIENCES

Anthropogenic Greenhouse Gases and US Climate: Evidence and Impacts

The Division of Earth and Life Sciences (DELS) of the National Academies of Sciences, Engineering, and Medicine invites input to inform a new study reviewing the latest scientific evidence on whether greenhouse gas emissions are reasonably anticipated to endanger public health and welfare in the U.S.

The committee conducting the study will focus on evidence gathered by the scientific community since 2009 — when the U.S. Environmental Protection Agency first declared greenhouse gas emissions a danger to public health. Any conclusions in the committee's report will describe supporting evidence, the level of confidence in a conclusion, and areas of disagreement or unknowns.

We encourage you to submit peer-reviewed articles, white papers, technical reports, or other comments relevant to the committee's charge. Submissions to this Request for Information will be considered by the committee in preparing its report, however the committee will not provide responses to individual comments. All submissions will be accessible as part of the public record for this project.

The deadline for submitting information is Wednesday, August 27 at 11:59 PM ET.

General comments about the study can also be submitted through our main [project input portal](#).

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--
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From: "Weuve, Jennifer" <jweuve@bu.edu>

To: "krisebi@uw.edu" <krisebi@uw.edu>, "ray.yeager@louisville.edu" <ray.yeager@louisville.edu>, "George.Thurston@nyulangone.org" <George.Thurston@nyulangone.org>

Subject: FW: NASEM -- FW: Request for input: fast-track study on greenhouse gas emissions and health -- deadline is AUGUST 27, 2025 at 11:59 ET

Date: Fri, 22 Aug 2025 12:45:59 +0000

Importance: Normal

Inline-Images: image002.png

Dear ISEE Colleagues,

This NASEM notice below, re: the health effects of greenhouse gasses, showed up on a listserv I follow. I reached out to Barbara Hoffman about appropriate folks at ISEE who might be interested in orchestrating a response (if they aren't already), and she directed to you.

Happy to pitch in as needed.

In solidarity,
Jennifer

From: spiritof1848@googlegroups.com <spiritof1848@googlegroups.com> **On Behalf Of** Krieger, Nancy

Sent: Thursday, August 21, 2025 2:21 PM

To: 1848 (spiritof1848@googlegroups.com) <spiritof1848@googlegroups.com>

Cc: Krieger, Nancy <nkrieger@hsph.harvard.edu>

Subject: [spiritof1848] NASEM -- FW: Request for input: fast-track study on greenhouse gas emissions and health -- deadline is AUGUST 27, 2025 at 11:59 ET

fyi – for those on you on the listserv with relevant knowledge & resources re environmental justice & climate justice that can respond to this request from NASEM, please be aware of this opportunity to contribute – mindful that the EPA under the current administration is seeking to negate the possibility of its regulating greenhouse gases ...

DEADLINE TO SUBMIT MATERIALS: WED, AUG 27, 2025 AT 11:59 ET

From: NASEM Health and Medicine <HMDnews-list@nationalacademies.org>

Sent: Thursday, August 21, 2025 2:01 PM

Subject: Request for input: fast-track study on greenhouse gas emissions and health

REQUEST FOR INPUT FROM DIVISION OF EARTH AND LIFE SCIENCES

Anthropogenic Greenhouse Gases and US Climate: Evidence and Impacts

The Division of Earth and Life Sciences (DELS) of the National Academies of Sciences, Engineering, and Medicine invites input to inform a new study reviewing the latest scientific evidence on whether greenhouse gas emissions are reasonably anticipated to endanger public health and welfare in the U.S.

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<https://groups.google.com/d/msgid/spiritof1848/BYAPR07MB79738EAE3C2E3FE51F9DF7D6FC32A%40BYAPR07MB7973.namprd07.prod.outlook.com>.

From: "richard.richels@gmail.com" <richard.richels@gmail.com>

To: "Ben Santer" <bensanter1289@gmail.com>, "Bud Ward" <wardbud@gmail.com>, "Gary Yohe" <gyohe@wesleyan.edu>, "Henry D Jacoby" <hjacoby@mit.edu>, "Kristie L Ebi" <krisebi@uw.edu>

Subject: The risks overreacting versus underreacting

Date: Sun, 24 Aug 2025 14:38:44 -0400

Importance: Normal

Attachments: Draft_of_risk_perspective_cafe_piece_Aug_24.docx

Dear All,

I've tried to cast the policy perspective differently than the Administration, which frames our options as fossil fuels for economic gain or wind and solar for loss. My aim is to offer a more nuanced understanding, though some details have surely been missed.

I'm not sure if this fits Richard's request for risk team input and certainly any feedback is eagerly welcomes. As this is your first review, I take responsibility for all its content.

If you agree and time allows, we can perhaps set aside a little time on Tuesday to discuss further.

Best regards,

Rich

From: Joel Smith <joelbsmith.climate@gmail.com>

To: Michael Oppenheimer <omichael@princeton.edu>, Kristie L Ebi <krisebi@uw.edu>, "Yohe, Gary" <gyohe@wesleyan.edu>, Ian Burton <burtoni.ian@gmail.com>

Subject: Comments to NASEM Panel

Date: Tue, 26 Aug 2025 08:35:03 -0400

Importance: Normal

Attachments: NASEM_Endangerment_Assessment_SuggestedLiterature_JoelBSmith.docx

Hi Friends

Pure FYI. For years I have kept a bibliography of climate change literature that I thought was interesting. It's mainly on climate change science, impacts and adaptation, but also has some on mitigation.

I mainly use it when drafting articles or other research work.

With the NASEM rapid review on whether climate change endangers human health or the environment, I plowed through the 262 pages to select recent literature that I thought would be most relevant. Our friend Anand P gave me the idea that perhaps the most useful literature is the IPCC burning embers assessments since 2001. That shows that in the eyes of the assessment community, the thresholds for "dangerous" impacts have been lowered over the years.

What I just submitted is in the attachment.

yours

Joel
Joel B. Smith
Climate Vulnerability and Adaptation Researcher
1402 Oakleaf Circle
Boulder CO 80304 USA
e-mail: joelbsmith.climate@gmail.com
Tel: 1-303-249-2204

From: Gary Yohe <gyohe@wesleyan.edu>

To: Henry D Jacoby <hjacoby@mit.edu>, Richard Richels <richard.richels@gmail.com>, "Alley, Richard B" <rba6@psu.edu>, Ben Santer <bensanter1289@gmail.com>, 'Bud Ward' <wardbud@gmail.com>, "Kristie L. Ebi" <krisebi@uw.edu>

Subject: An important paper

Date: Tue, 26 Aug 2025 16:11:57 +0000

Importance: Normal

All:

We had an assignment to highlight an important paper to post. I suggest this one from 2019 that shows that all is worse since the first endangerment finding of 2009:

<https://www.science.org/doi/pdf/10.1126/science.aat5982>

Gary

Gary W. Yohe
Huffington Foundation Professor of Economics
and Environmental Studies
Wesleyan University
238 Church Street
Middletown, CT 06459 USA

Office: 860-685-3658
Mobile: 860-803-8670
Web site: gyohe.faculty.wesleyan.edu

From: Gary Yohe <gyohe@wesleyan.edu>

To: 'Henry D Jacoby' <hjacob@mit.edu>, Bud Ward <wardbud@gmail.com>, Richard Richels <richard.richels@gmail.com>, Richard Alley <rba6@psu.edu>, Benjamin Santer <bensanter1289@gmail.com>, "Kristie L. Ebi" <krisebi@uw.edu>

Subject: A first posting of somebody else and reopening our doors

Date: Tue, 2 Sep 2025 15:22:29 +0000

Importance: Normal

Attachments: You_may_have_noticed_that_we_climate.docx

All:

I attach a draft of what might be a first or early post after our vacation; it builds on last week's phone conversation.

G

Gary W. Yohe
Huffington Foundation Professor of Economics
and Environmental Studies
Wesleyan University
238 Church Street
Middletown, CT 06459 USA

Office: 860-685-3658
Mobile: 860-803-8670
Web site: gyohe.faculty.wesleyan.edu

From: Joel Smith <joelbsmith.climate@gmail.com>

To: Kristie L Ebi <krisebi@uw.edu>, Michael Oppenheimer <omichael@princeton.edu>, Ian Burton <burtoni.ian@gmail.com>, "Yohe, Gary" <gyohe@wesleyan.edu>

Subject: My submitted comments on DoE "science" report

Date: Tue, 2 Sep 2025 13:42:15 -0600

Importance: Normal

Attachments: Comments_to_DOE.CWG_on_Report.JoelSmith.pdf

Joel B. Smith
Climate Vulnerability and Adaptation Researcher
1402 Oakleaf Circle
Boulder CO 80304 USA
e-mail: joelbsmith.climate@gmail.com
Tel: 1-303-249-2204

From: Joel Smith <joelbsmith.climate@gmail.com>

To: Kristie L Ebi <krisebi@uw.edu>

Subject: Re: Inside Climate News on Dessler et al. comments

Date: Tue, 2 Sep 2025 20:13:11 -0600

Importance: Normal

Attachments: Dozens_of_Scientists_Call_DOE_Climate_Report_‘Fundamentally_Incorrect’_-
_Inside_Climate_News.pdf

here it is.

On Tue, Sep 2, 2025 at 7:38 PM Kristie L Ebi <krisebi@uw.edu> wrote:

Thanks Joel but it is behind a pay wall. Glad the Dessler report is getting good coverage.

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA

krisebi@uw.edu

<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Sep 2, 2025, at 6:28 PM, Joel Smith <joelbsmith.climate@gmail.com> wrote:

<https://insideclimatenews.org/news/02092025/scientists-respond-to-trump-energy-climate-report/>

Joel B. Smith
Climate Vulnerability and Adaptation Researcher
1402 Oakleaf Circle
Boulder CO 80304 USA
e-mail: joelbsmith.climate@gmail.com
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Dozens of Scientists Call DOE Climate Report 'Fundamentally Incorrect'

The review comes as the Trump administration is leaning on the report as part of its justification to end EPA regulation of greenhouse gases.

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The Department of Energy's headquarters in Washington, D.C. Credit: J. David Ake/Getty Images

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comprehensive **review** released Tuesday. The DOE's **report** cherry-picked evidence, lacked peer-reviewed studies to support its questioning of the detrimental effects of climate change in the U.S. and is “fundamentally incorrect,” the authors concluded.

Scientists have accurately modeled and predicted the volume and impact of excess CO2 in the Earth's atmosphere since the 1970s, when Exxon workers **first began measuring the impacts of their product on the planet's atmosphere**. Since then, climate science has matured into a crucial tool to help humans gauge how a warming planet may affect everything from weather and crops to the economy and mental health.

“This report makes a mockery of science. It relies on ideas that were rejected long ago, supported by misrepresentations of the body of scientific knowledge, omissions of important facts, arm waving, anecdotes, and confirmation bias,” said Andrew Dessler, a professor of atmospheric sciences at Texas A&M University, in a statement accompanying the review.

“This report makes it clear DOE has no interest in engaging with

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“in a more thoughtful and science-based conversation about climate change and energy. This report was reviewed internally

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review from the scientific community and general public via the public comment period.”

U.S. government scientists have for decades contributed to Intergovernmental Panel on Climate Change reports, considered by many to be the Earth’s preeminent collection of climate science. The process and timeline the DOE followed in creating the new report before releasing it in July is unknown, and there do not appear to have been any public meetings associated with its drafting process. The document was internally peer reviewed “amongst DOE’s scientific research community,” the agency said in a [statement](#) accompanying the report’s release.

While it is not uncommon for scientists to disagree, many of the review’s authors feel what the DOE produced isn’t science at all. “Trying to circumvent, bypass, undermine decades of the government’s own work with the nation’s top scientists to generate definitive information about climate science to use in policymaking—that’s what’s different here,” said Kim Cobb, a professor of Earth, environmental, and planetary sciences at Brown University and director of the Institute at Brown for

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Under President Donald Trump’s second administration, the Environmental Protection Agency has announced that it is

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its proposal to rescind the finding, the EPA cited the DOE's climate report as one of many that led the agency to develop "serious concerns" with how the U.S. regulates greenhouse gases. "It's really important that we stand up for the integrity of [climate science] when it matters the most," Cobb said. "And this may very well be when it mattered the most."

Roger Pielke Jr., a science policy analyst and senior fellow at the American Enterprise Institute, who is cited in the DOE report, doesn't believe the push to overturn the endangerment finding will come down to that report. In his view, the administration's arguments are mostly legal, not scientific. "I think that given the composition of the Supreme Court, the endangerment finding might be in danger. But it's not going to be because of the science," he said.

But as more communities grapple with the fallout of hurricanes, wildfires, floods and other natural disasters exacerbated by climate change, Cobb fears the federal government is turning away from the best tool it has to help people across the U.S. adapt to a warming planet.

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you turn your back on it in general—it's not just going to be climate science, it's going to be many other aspects of science and technology that are going to be forsaken—that will have grave

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Jake Bolster

Reporter, Wyoming and the West

Jake Bolster reports on Wyoming and the West for Inside Climate News. Previously, he worked as a freelancer, covering climate change, energy, and the environment across the United States. He holds a Masters in Journalism from Columbia University.



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From: Bud Ward <wardbud@gmail.com>

To: Henry D Jacoby <hjacoby@mit.edu>, Benjamin Santer <bensanter1289@gmail.com>, Richard Richels <richard.richels@gmail.com>, Richard Alley <rba6@psu.edu>, "Kristie L. Ebi" <krisebi@uw.edu>, Gary Yohe <gyohe@wesleyan.edu>, Bud Ward <wardbud@gmail.com>

Subject: Fwd: pdf

Date: Mon, 8 Sep 2025 12:08:09 -0400

Importance: Normal

Attachments: Climate_Change_and_the_Gold_Standard_DW090825.docx

this from Don Wuebbles of U. of Illinois.

----- Forwarded message -----

From: **Wuebbles, Don** <wuebbles@illinois.edu>

Date: Mon, Sep 8, 2025 at 11:49 AM

Subject: Re: pdf

To: Bud Ward <wardbud@gmail.com>

Bud:

Thanks. I wrote a related OpEd I hope to send out later today, enclosed
Don

Donald J. Wuebbles, Ph.D.
Harry E. Preble Emeritus Professor
Special Advisor to the President of the University of Illinois
Distinguished Scientist, Discovery Partners Institute, University of Illinois

School of Earth, Society, and Environment
Department of Climate, Meteorology, and Atmospheric Sciences
University of Illinois
3052 Natural History Building
1301 West Green Street
Urbana, IL 61801

Mobile: 217-840-0100
wuebbles@illinois.edu

On Sep 8, 2025, at 10:16 AM, Bud Ward <wardbud@gmail.com> wrote:

Resending, as some were unable to open the earlier attachment, below as a pdf.

A Substack Climate Cafe site I work with has posted an open letter, below, to climate scientists, urging more to speak out in defense of their own and their colleagues' decades of important work establishing the vast body of peer-reviewed

climate science. (We're well aware of the hesitancy of many given legitimate concerns about retribution toward themselves, their colleagues, and their research institutions and employers, be they universities or otherwise).

We salute the more than 80 leading scientists who this past week criticized the Energy Department's August flawed report. Looking ahead, with an EPA rulemaking moving toward canceling the Endangerment Decision that the DOE report was written to support, still many more authoritative climate scientists must go public in defense of their own and their colleagues' peer-reviewed research and findings.

We hope you will consider reposting the open letter on social media and on web sites and share it with colleagues, professional science societies, other science interests, and the public generally.

--

Bud Ward
P.O. 1317
White Stone, Va. 22578-1317
Cell: 703-307-0150
EMAIL: wardbud@gmail.com

<An Open Letter to the climate science community--PDF.pdf>

--

Bud Ward
P.O. 1317
White Stone, Va. 22578-1317
Cell: 703-307-0150
EMAIL: wardbud@gmail.com

From: Bud Ward <wardbud@gmail.com>
To: "Kristie L. Ebi" <krisebi@uw.edu>
Subject: Fwd: pdf
Date: Mon, 8 Sep 2025 13:39:29 -0400
Importance: Normal

Kris: Sharing this with you from Bob Berley gien Wa connection, etc. Bud

----- Forwarded message -----
From: <rberley@comcast.net>
Date: Mon, Sep 8, 2025 at 1:33 PM
Subject: RE: pdf
To: Bud Ward <wardbud@gmail.com>

Hey Bud:

Good to see this, you, heavy lifting, etc.

I've moved off CPA-NA to work with WA Physicians for Social Responsibility on a project trying to describe prodromal climate distress .. eg, what he are deeply enmeshed in right not that's influencing so much of the craziness.

Can I make a suggestion? With all the distrust of everyone, everywhere, make a note of how science (writ large) is responsible for pretty much everything people interact with all day .. food, materials, gadgets, transportation, etc., etc. "From the people who brought you .. EVERYTHING!" .. science wouldn't be so successful if it didn't have some basis in reality, so there has to be kernels of truth worth paying attention to. The focus on what's not trustworthy has totally obscured how the method and careful research produces results that are largely (and don't have to be perfectly) robust.

Take care ..

Bob

Love this life. Do not be daunted by the enormity of the world's grief. Do justly, now. Love mercy, now. Walk humbly now. The day is short, the task is great, the wages are paltry and the matter is pressing. You are not obligated to complete the work but neither are you free to abandon it.

The Talmud

*The mind is its own place, and in itself
can make a Heav'n of Hell, a Hell of Heav'n*

J. Milton, "Paradise Lost"

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Robert A. Berley, Ph.D., C.G.P., F.A.G.P.A.
1314 NE 43rd St., #214
Seattle, WA 98105

From: Bud Ward <wardbud@gmail.com>
Sent: Monday, September 8, 2025 8:16 AM
To: Bud Ward <wardbud@gmail.com>
Subject: Fwd: pdf

Resending, as some were unable to open the earlier attachment, below as a pdf.

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We hope you will consider reposting the open letter on social media and on web sites and share it with colleagues,

professional science societies, other science interests, and the public generally.

--

Bud Ward
P.O. 1317
White Stone, Va. 22578-1317
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--

Bud Ward
P.O. 1317
White Stone, Va. 22578-1317
Cell: 703-307-0150
EMAIL: wardbud@gmail.com

From: Benjamin Santer <bensanter1289@gmail.com>

To: Bud Ward <wardbud@gmail.com>, Henry D Jacoby <hjacoby@mit.edu>, Richard Alley <rba6@psu.edu>, Richard Richels <richard.richels@gmail.com>, "Kristie L. Ebi" <krisebi@uw.edu>, Gary Yohe <gyohe@wesleyan.edu>

Subject: Re: Fwd: pdf

Date: Tue, 9 Sep 2025 04:23:30 +0100

Importance: Normal

The "Dessler report" that was submitted during the public comment phase on the July 2025 DOE report will also be submitted, in slightly modified form, to the "federal eRulemaking portal" of the EPA.

With best wishes,

Ben

On 9/8/25 9:09 AM, Bud Ward wrote:

> ...and this from Naomi...

>

> ----- Forwarded message -----

> From: *Oreskes, Naomi* <oreskes@fas.harvard.edu>

> Date: Mon, Sep 8, 2025 at 11:35 AM

> Subject: Re: pdf

> To: Bud Ward <wardbud@gmail.com>

>

>

> Good stuff.

>

>

> Also good to remind people to comment on the proposed EPA revision of the endangerment finding. Esp if people can speak to health dangers.

>

> *Online portal:* The EPA's preferred method for receiving comments is

> through the federal eRulemaking portal at regulations.gov

> <[https://urldefense.com/v3/__http://regulations.gov__;!!K-Hz7m0Vt54!jruiR0DoNAGNVcxMqln1g-EwafmUpWJo-Q0DNSHJpd40dHI-ITq3VxqLXsPGS0GE3JkLQto5zfQqp3OKAs9cKA\\$](https://urldefense.com/v3/__http://regulations.gov__;!!K-Hz7m0Vt54!jruiR0DoNAGNVcxMqln1g-EwafmUpWJo-Q0DNSHJpd40dHI-ITq3VxqLXsPGS0GE3JkLQto5zfQqp3OKAs9cKA$)>.

>

> * Search for the docket number: *EPA-HQ-OAR-2025-0194*.

>

> [https://urldefense.com/v3/__https://www.regulations.gov/commenton/EPA-HQ-OAR-2025-0194-0093__;!!K-Hz7m0Vt54!jruiR0DoNAGNVcxMqln1g-EwafmUpWJo-Q0DNSHJpd40dHI-ITq3VxqLXsPGS0GE3JkLQto5zfQqp3Myg0U1Aw\\$](https://urldefense.com/v3/__https://www.regulations.gov/commenton/EPA-HQ-OAR-2025-0194-0093__;!!K-Hz7m0Vt54!jruiR0DoNAGNVcxMqln1g-EwafmUpWJo-Q0DNSHJpd40dHI-ITq3VxqLXsPGS0GE3JkLQto5zfQqp3Myg0U1Aw$)

>

> Naomi Oreskes

>

> Henry Charles Lea Professor of the History of Science

>

> Affiliated Professor of Earth and Planetary Sciences

>

> A book with text on it Description automatically generated

>

> *From: *Bud Ward <wardbud@gmail.com>

> *Date: *Monday, September 8, 2025 at 11:19 AM
> *To: *Bud Ward <wardbud@gmail.com>
> *Subject: *Fwd: pdf
>
> *Resending*, as some were unable to open the earlier attachment, below
> as a pdf.
>
> A Substack Climate Cafe site I work with has posted an open letter,
> below, to climate scientists, urging more to speak out
>
> in defense of their own and their colleagues' decades of important
> work establishing the vast body of peer-reviewed
>
> climate science. (We're well aware of the hesitancy of many given
> legitimate concerns about retribution toward themselves,
>
> their colleagues, and their research institutions and employers, be
> they universities or otherwise).
>
> We salute the more than 80 leading scientists who this past week
> criticized the Energy Department's August flawed report.
>
> Looking ahead, with an EPA rulemaking moving toward canceling the
> Endangerment Decision that the DOE report was
>
> written to support, still many more authoritative climate scientists
> must go public in defense of their own and their colleagues'
>
> peer-reviewed research and findings.
>
> We hope you will consider reposting the open letter on social media
> and on web sites and share it with colleagues,
>
> professional science societies, other science interests, and the
> public generally.
>
> --
>
> Bud Ward
> P.O. 1317
> White Stone, Va. 22578-1317
> Cell: 703-307-0150
> EMAIL: wardbud@gmail.com
>
>
>
>
> --
> Bud Ward
> P.O. 1317
> White Stone, Va. 22578-1317
> Cell: 703-307-0150
> EMAIL: wardbud@gmail.com

From: Bud Ward <wardbud@gmail.com>

To: Henry D Jacoby <hjacoby@mit.edu>, Benjamin Santer <bensanter1289@gmail.com>, Richard Alley <rba6@psu.edu>, "Kristie L. Ebi" <krisebi@uw.edu>, Gary Yohe <gyohe@wesleyan.edu>

Subject: Fwd: Open Letter on Climate Change

Date: Wed, 10 Sep 2025 04:32:10 -0400

Importance: Normal

Attachments: Open_Letter_on_Climate_Science.pdf

Ahhhh. This would send it out to several thousand EPA employees, members of the EPA Alumni Association. Can't hurt. Bud

----- Forwarded message -----

From: **David Calkins** <cleanairdave@gmail.com>

Date: Tue, Sep 9, 2025 at 8:02 PM

Subject: Open Letter on Climate Change

To: Weil, Steve <srweil520@gmail.com>, Stephen Weil <srweil@earthlink.net>

Steve,

I have attached a very significant "open letter" by six respected climate change specialists, primarily addressed to the U.S. Department of Energy recent negative findings on climate change and the Endangerment Finding "dismissal" efforts.

I recommend it be inserted into an upcoming weekly EPA Alumni Association newsletter, as well as other appropriate media opportunities.

I received it from one of the authors, Bud Ward, who I have known for several decades and worked with at the National Commission on Air Quality.

Thanks, Dave Calkins

--

Bud Ward

P.O. 1317

White Stone, Va. 22578-1317

Cell: 703-307-0150

EMAIL: wardbud@gmail.com

From: Gary Yohe <gyohe@wesleyan.edu>

To: Bud Ward <wardbud@gmail.com>, Henry D Jacoby <hjacoby@mit.edu>, "Alley, Richard B" <rba6@psu.edu>, Richard Richels <richard.richels@gmail.com>, Ben Santer <bensanter1289@gmail.com>, "Kristie L. Ebi" <krisebi@uw.edu>

Subject:

Date: Fri, 19 Sep 2025 13:07:08 +0000

Importance: Normal

Attachments: A_tour_de_force_DRAFT.docx

All:

Here is a draft of a timely piece on the NASEM release that I hope we can massage and get out quickly. Perhaps we can chat about it this afternoon.

Gary

Gary W. Yohe
Huffington Foundation Professor of Economics
and Environmental Studies
Wesleyan University
238 Church Street
Middletown, CT 06459 USA

Office: 860-685-3658
Mobile: 860-803-8670
Web site: gyohe.faculty.wesleyan.edu

From: Jonathan Patz <jonpatz2025@gmail.com>

Cc: Caitlin Warlick-Short <caitlin.warlickshort@gmail.com>, Jenny Bratburd <bratburdj@gmail.com>, Nicholas Mailloux <nicholas.mailloux@gmail.com>, Jordan Fischbach <jordan.fischbach2@gmail.com>, Howard Frumkin <hfrumkin@gmail.com>, Jon Levy <jonlevy10@gmail.com>, "Limaye, Vijay" <vlimaye@nrdc.org>

Subject: Link to our submitted Public Comment on the Endangerment Finding

Date: Wed, 24 Sep 2025 08:52:25 -0500

Importance: Normal

Dear Colleagues,

We are pleased to share this [direct link to the PDF of our final submitted public comment](#), sent on Monday. We'd also like to express our deepest gratitude to dozens of you who provided important text, comments, edits and references to the draft document, making this as strong as it could be. Also thanks to the 114 of you who read and signed on to our compilation of the scientific evidence in response to EPA's proposed rule change. And to others, you're valued for the work you are doing in this field.

[This link](#) takes you to both the Comment file and References file with PDFs of all studies cited.

There are now so many of us working in this area of climate change and health. Since we've convened as an Expert Working Group (and should expand to include other scientists in this space) in this current anti-science period, we think it's important to keep this group together so that our collective action might move policy forward for sustainable public health and wellbeing. So we'll keep in touch with you on the next steps we are planning.

With the utmost gratitude to you.

Thanks so incredibly much!

Jonathan Patz (and team)

Howie Frumkin

Vijay Limaye

Jon Levy

--

Jonathan Patz, MD, MPH
jonpatz2025@gmail.com

From: Bud Ward <wardbud@gmail.com>

To: Henry D Jacoby <hjacoby@mit.edu>, Benjamin Santer <bensanter1289@gmail.com>, "Kristie L. Ebi" <krisebi@uw.edu>, Gary Yohe <gyohe@wesleyan.edu>, Richard Richels <richard.richels@gmail.com>, Richard Alley <rba6@psu.edu>, Bud Ward <wardbud@gmail.com>

Subject:

Date: Mon, 29 Sep 2025 10:03:18 -0400

Importance: Normal

Attachments: Elections_matter9.30.25_(Bud).docx

Here's where I am on the "consequential presidency" analysis piece we've discussed.
A little background on why I think this piece fits into our Substack:

1. It's an analysis of the climate change significance -- not the merits -- of Trump's second term;
2. But not until it first seeks to educate and inform a lay audience on how to think about "consequentiality" (a real word?);
3. So it's beginning is to set up an assessment of what constitutes a "consequential" presidency as historians view things, only then getting to climate per se after the second bold-face subhead more than half-way down page two;
4. It points out that on climate issues, Trump is consequential from both a domestic and an international perspective. Quite an "accomplishment" and not a really common one for any president.

So, in the end, I'm hoping it can be informative and educational for a general audience and not narrowly and outwardly strongly critical from a climate "only" perspective. Plenty on that latter perspective in other pieces, past and future on our site.

I'll welcome your comments and thoughts and edit suggestions. Thanks.

Bud

--

Bud Ward

P.O. 1317

White Stone, Va. 22578-1317

Cell: 703-307-0150

EMAIL: wardbud@gmail.com

From: Benjamin Santer <bensanter1289@gmail.com>

To: Henry D Jacoby <hjacoby@mit.edu>, "Alley, Richard B" <rba6@psu.edu>, 'Bud Ward' <Wardbud@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>, "Krisebi@uw.edu" <krisebi@uw.edu>, Richard Richels <richard.richels@gmail.com>

Subject: Re: Revised post on science attack and defense

Date: Wed, 1 Oct 2025 11:14:36 +0100

Importance: Normal

Attachments: Science_&_the_fight_over_the_EF_(9-29)BDS.docx

Dear Jake,

Here are my comments on the latest draft. I hope these are helpful.

With best wishes,

Ben

On 9/30/25 6:12 PM, Henry D Jacoby wrote:

>

> To all,

>

> Many thanks to Bud, Rich, Richard, Kris and Gary for comments and

> edits. Attached is a revised version. I think it is ready to go,

> though I will welcome any further suggestions, particularly from

> anyone who would like to sign on.

>

> See you tomorrow morning,

>

> Jake

>

Countering the Administration's Attack Meets on Effective Defense of Climate Science

We are witnessing the next phase of the Trump Administration's campaign to cripple any U.S. response to a changing climate. It has already scrapped greenhouse gas control activities ~~under that were under~~ way when it took office. Now it is attempting to ~~hamper the prospect of any freeze the prospect of~~ future action by expunging the foundation of federal climate policy. ~~The Administration's~~ target is the 2009 Endangerment Finding (EF), the basis of federal ability to regulate ~~greenhouse these~~ gases. ~~T, and the method of~~ attack is to try to discredit the climate science that underlies ~~the EF~~ it.

This authority for federal ~~action action originates instems from~~ a 2007 Supreme Court ruling that CO₂ and other greenhouse gases are ~~appropriately considered to be~~ pollutants under the Clean Air Act (~~CAA~~)-(CAA). However, the Court ruled that taking regulatory or other action required a finding that these emissions endanger public health and welfare. In 2009 the EPA provided the evidence to show that they do, and in the years since, the EF has been the foundation of greenhouse measures under the CAA.

The Administration's Attack

In March, EPA head Lee Zeldin, with his goal of, "driving a dagger straight into the heart of the climate change religion", proposed a ~~rule a Rule~~ to rescind the finding, and the Department of Energy (DOE) stepped up with a climate study in support ~~of this rule~~. ~~Both the EPA proposal and the DOE report~~ These two actions have led to ~~tour de force a strong of~~ reactions in defense of the science ~~underpinning the EF~~.

~~T~~ One point of forceful opposition to the Administration's attack was stimulated by the ~~DOE's~~ "critical review" of the impacts of greenhouse gases ~~was~~ ordered by DOE Secretary Chris Wright. To carry out the review, he appointed a Climate Working Group (~~CWGA~~) composed of five prominent climate deniers. ~~N~~ and, not surprisingly, ~~their draft report~~ challenged ~~many of the key findings of the~~ peer-reviewed ~~climate science,~~ particularly consensus findings of the Intergovernmental Panel on Climate Change. ~~It was in its proposed rule, the EPA extensively cited in the DOE EPA's proposed Rule report 16 times, thereby. In the contributing to the DOE's view, the of its goal to CWG report it marked "... mark~~ a critical step forward in achieving President Trump's commitment to unleash American energy dominance and return to commonsense policymaking."

Defense of the Science

~~The response in support of the established of the science community was ferocious.~~ As is common for agency studies, the draft of the DOE report was published in the Federal Register with a request for comments. ~~The response of the science community was~~

[swift and clear](#). When the window for comments closed on September 2, [the Registry's count](#) of responses had risen to ~~over more than 59,000 thousand~~. Prominent among these was a [compilation by 85 scientists with deep knowledge of the issues covered](#), led by Professor's Andrew Dessler and Robert Kopp of Texas A&M and Rutgers. [Dessler's summary](#) was blunt:

“This report makes a mockery of science. It relies on ideas that were rejected long ago, supported by misrepresentations of the body of scientific knowledge, omissions of important facts, arm waving, anecdotes, and confirmation bias”.

Secretary Wright [has](#) since disbanded the [climate](#) working group in response to a lawsuit charging that [its appointment violated the Federal Advisory Committee Act](#) ~~it had been illegally appointed~~. Whether ~~its the CWGA~~ report will be withdrawn is still in litigation [[check before posting](#)], but its [authors declared publicly](#) that they will continue to work independently [on the report](#). [While these legal issues are being adjudicated](#), [Secretary Wright has continued to defend the findings of the DOE report in the media](#).

~~The response to EPA head Zelin's attack on the Endangerment Finding and its science underpinnings was similarly strenuous.~~ In an August 1 [Federal Register](#) listing, the EPA posted ~~the details of~~ its proposed rule to, “rescind the Administrator's prior findings in 2009 because the EPA unreasonably analyzed the scientific record and because developments cast significant doubt on the reliability of the findings.” [The response to this attack on the EF and its science underpinnings was just as comprehensive as the response to the DOE climate reports similarly strenuous](#). When the window for public comments closed on this [EPA Federal Register](#) listing on September 22nd, it had received ~~over more than~~ 140 thousand submissions. Among these was a report by the [nation's top heavyweight of U.S. sciences scientific body](#): the National Academies of Sciences, Engineering and Medicine (NASEM).

~~Founded in the Congress established the National Academy of Sciences AS in the middle of the Civil War, the Academies. The National Academies of Engineering and Medicine were added later. The NASEM~~ ~~it is were created by law to be~~ a private, non-profit society of distinguished scholars charged with providing independent, objective advice to the nation on matters related to science, ~~and~~ technology, ~~and~~ [medicine](#). ~~Their Academy~~ advisory committees conduct studies on issues of national importance. [For example, federal law on health and welfare instructs the EPA to draw on NASEM findings, recommendations, and comments in its rulemaking](#). ~~Most of these NASEM studies~~ are requested and funded by government agencies, but studies also are generated internally and funded with Academy endowment, as was the case with the [NASEM climate report that was submitted to the Federal Register in September 2025](#).

Commented [BS1]: See, e.g., <https://www.eenews.net/articles/wright-defends-trump-administrations-climate-change-report/#:~:text=If%20the%20data%20and%20what%20we've%20said,publicly%20rebuked%20the%20DOE%20report%20as%20activists.>

Benjamin Santer
2025-10-01 08:52:00

Commented [BS2]: The National Academy of Sciences was established by President Lincoln in 1863. The National Academies of Engineering and Medicine were added later (in 1964 and 1970, respectively).
Benjamin Santer
2025-10-01 08:58:00

~~For this study the Academies' work was carried out under extreme pressure from the Administration and its supporters. For example, the Chairman of the House Committee on Oversight and Government Reform, James Comer, initiated an investigation of the decision to conduct the study, claiming that it, "... appears to be inconsistent with the purpose of the National Academies and a blatant partisan act to undermine the Trump Administration." In a letter to Academies President Marcia McNutt he further accused study committee members of partisan bias and suggested that Academy internal funds came from donors with, "radical leftist views about climate change".~~

~~The threat to the Academies is real, particularly considering they have already felt the Administration's displeasure in devastating financial cuts, largely achieved by means of stop work orders on existing contracts for advisory reports.~~

The Academies [NASEM](#) held fast to ~~their~~ [its](#) calling. [ItsTheir study](#), "Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health and Welfare", was released on September 18, [2025](#). [The rollout of the report](#) was accompanied by a [40-minute video](#) ~~where-in which~~ the authors explained the [process and science steps](#) that led to their conclusions.¹ The report is comprehensive and meticulously referenced. ~~I as~~ it assesses the progress of the science over the years since the 2009 EF. The authors summarized their conclusion in 32 words:

"EPA's 2009 finding that the human caused emissions of greenhouse gases threaten human health and welfare was accurate, has stood the test of time, and is now reinforced by even stronger evidence."²

~~T~~[For this study the Academies' NASEM work on this study was immediately challenged by supporters of](#) ~~carried out under extreme pressure from the Administration and its supporters. For example, the Chairman of the House Committee on Oversight and Government Reform, James Comer (R-Ky), initiated an investigation of the decision to conduct the study, claiming that it, "... appears to be inconsistent with the purpose of the National Academies and a blatant partisan act to undermine the Trump Administration." In a letter to Academies President Marcia McNutt, Mr. Comer he further accused study committee members of partisan bias and suggested that Academy internal funds came from donors with, "radical leftist views about climate change".~~

~~The threat to the Academies NASEM is real and credible – the National Academies, particularly considering they have it~~ [has](#) ~~already experienced significant negative~~

¹ In addition to explaining the study's process, the video is an excellent teaching document on the components of climate science and how they relate to one another.

² This kind of ex post review had already been done once. In 2019 a group of 15 natural and social scientists prepared a detailed [assessment](#) of new evidence and advances in understanding about the climate threat since the 2009 Finding. It also found strengthened scientific support for the earlier conclusion.

~~consequences through felt the Administration's displeasure in devastating financial cuts, largely achieved by means of stop-work orders on existing contracts for advisory reports.~~

The Continuing Task

The battle lines have been clearly drawn. The scientific evidence stands in the way of ~~President Trump's publicly stated view an Administration policy that requires agreement~~ that climate change is a "hoax" and represents no meaningful threat to the country. Yet "Facts are stubborn things", as John Adams put it. ~~At a minimum the s~~Scientific evidence of the reality and seriousness of human-caused climate change is ~~inconvenient-embarrassing~~ to the Administration, directly undercutting the wisdom of the Administration's "drill baby drill" energy policy. More consequentially, strong representation of ~~mature~~the scientific understanding ce diminishes will weigh heavily on their the EPA's prospects for success when its the attempt to overthrow the EF likely inevitably reaches the courts.

The Administration is not done fighting, of course. Further moves are likely coming, as suggested by a comment to Daily Caller by former EPA Chief of Staff Mandy Gunasekara that the Academies are, "~~...~~perverting science with ~~!~~Leftwing activism. Its greenhouse gas 'report' includes the same biased conclusions used to justify the Green New Scam, which the American people are no longer buying."

What Mandy Gunasekara, Chris Wright, Lee Zeldin, and James Comer do not understand, however, is that inconvenient science is difficult to expunge from the face of the Earth. By attacking science, they have brought climate science into sharper focus and energized an entire global community. That energy is limitless.

~~Supporters of the established science need to be ready to again mount the defense when the Administration's next moves come.~~

~~come.~~

From: Bud Ward <wardbud@gmail.com>

To: Benjamin Santer <bensanter1289@gmail.com>, Richard Richels <richard.richels@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>, "Kristie L. Ebi" <krisebi@uw.edu>, Richard Alley <rba6@psu.edu>, Henry D Jacoby <hjacoby@mit.edu>, Bud Ward <wardbud@gmail.com>

Subject: "Consequential" presidency column

Date: Fri, 3 Oct 2025 16:34:56 -0400

Importance: Normal

Attachments: Elections_matter10.3.25_(HJ_BW).docx

Attached, reflecting input provided by Jake and open to edits, suggestions, from all as you see fit (and not screwing up an early fall weekend).

Have at it, and don't be shy about "signing up" as a co-author if you're so inclined. Thanks. Bud

--

Bud Ward"

P.O. 1317

White Stone, Va. 22578-1317

Cell: 703-307-0150

EMAIL: wardbud@gmail.com

From: "richard.richels@gmail.com" <richard.richels@gmail.com>

To: <krisebi@uw.edu>, "Ben Santer" <bensanter1289@gmail.com>, "Bud Ward" <Wardbud@gmail.com>, "Gary Yohe" <gyohe@wesleyan.edu>

Cc: "Henry D Jacoby" <hjacoby@mit.edu>, "Alley, Richard B" <rba6@psu.edu>

Subject: And what if the President is wrong about climate risk?

Date: Fri, 3 Oct 2025 09:04:14 -0400

Importance: Normal

Attachments: Draft_Whither_fossil_fuels_Oct_3.docx; Whither_fossil_fuels_draft_10-2_HJ.docx

All,

Here is the piece that I have been working on highlighting the need for a hedge against fossil fuels. The work in progress has benefitted greatly from discussions and edits from Jake. I have accepted virtually all of his suggestions. For those for you interested in contributing to this, please work off of the October 3rd document, but I also include Jakes edits from October 2nd.

With best regards,

Rich

And what if the President is wrong about climate risk?

Richard Richels ...

Bottom Line Summary

It is imprudent economic policy to kill the low-carbon industries that provide the country with a hedge against a hostile future.

~~The article discusses the Trump administration's approach to energy policy, underscoring its prioritization of fossil fuel development and efforts to dismantle previous climate regulations. It highlights the administration's belief in minimizing government intervention in energy markets and skepticism toward climate science. The article warns that failure to hedge against fossil fuels undermines public health and long-term economic stability.~~

Despite the mounting fears raised by the worldwide scientific community and the growing realization that these concerns are well founded, the Trump Administration has embarked on an aggressive campaign to increase the nation's dependence on [fossil fuels](#). They justify this change in course with their [unwavering beliefs](#) that global warming is a hoax, energy markets should be free from government regulation, and that the marketplace will choose technologies and fuels that are in the public's best interest. This view, of course, is endorsed by industry allies who [rail against hedges that threaten its continued economic dominance](#) [fight against measures that might provide the country a hedge against an uncertain future.](#)

It is, therefore, no surprise that the administration's energy agenda is centered on two actions: [first, it is attempting to reverse](#) [ing](#) the previous [Endangerment Finding](#) that identified carbon dioxide ([CO₂CO₂](#)) as a public health hazard; [and second, it is acting to stymie the nascent development of domestic production and use of low-carbon energy sources. implementing measures that would hamstring the development of economic alternatives and by doing so, make it prohibitively expensive for future leadership to reverse reverse policies that strongly favor fossil fuel development](#) [course.](#)

The first action, the proposed rollback of the Endangerment Finding, has sparked significant public concern and will likely occupy center stage as the legal battle unfolds. The claim that [CO₂CO₂](#) poses no threat to public health is a tough stance to defend, given the overwhelming

Commented [HJ1]: Better a summary than a description or outline. For example, my quick version:

Even assuming the Administration's fossil energy goal, it is foolish economic policy to kill the low-carbon industries that provide the country with a hedge against an uncertain future.

Henry Jacoby
2025-10-02 13:26:00

scientific consensus and observable evidence. Yet, the Trump administration's "drill, baby, drill" policy remains firmly in place with the government maintaining that forgoing fossil fuels will cause grave harm to the nation's economic prosperity.

The social cost of carbon (SCC) provides valuable insights into the magnitude of the threat. It represents societal damages to human health and economic prosperity from emitting one additional ton of ~~CO2~~CO2 into the atmosphere. An influential analysis published in [Nature](#) placed the SCC at \$190 per metric ton in 2020. The analysis, used by the previous administration in support of its policies, is in stark contrast to the [negligible damages](#) touted by the present administration. According to a recent blue ribbon review by the [National Academies of Sciences, Medicine and Engineering](#), "the evidence for current and future harm to human health and welfare ... is beyond scientific dispute."

~~Clearly,~~ such findings [might](#) suggest [a reexamining-reexamination is in order of](#) the lens through which technology choice decisions are to be viewed. Ignoring the potential damages from fossil fuels may help accomplish the administration's goal of ~~increased dependence on domestic hydrocarbons~~[fossil energy dominance](#). However, [even if one accepts the Administration's goals \(which we don't\) it is bad economic policy to it-crush almost all domestic development of non-fossil sources of energy. They will leave the nation will be left](#) with an energy system ill-equipped to navigate a future fraught with uncertainty: ~~— perhaps making it prohibitively expensive for future leadership to reverse course.~~

If ~~we~~[the Administration](#) knew *for certain* that fossil fuels posed no threat to health and prosperity then placing all of our "eggs in one basket" would make some sense. But this is surely not the case. Consider the following scenario which should by no means be ruled out.

Suppose that the administration is successful in expanding dependence on fossil fuels. On the supply-side, producers are induced by direct and indirect financial incentives, scaling back environmental regulations, and opening up more public land for drilling and mining. [Firms attempting to supply solar, wind and battery technologies go out of business.](#) On the demand-side, lower taxes on fossil fuels, such as gasoline or emissions taxes, attract consumers to use more.

Further suppose that ~~the experts' fears~~[the increased climate damage projected by the science materializes](#). ~~For instance,~~[E](#)xtreme heat waves become the norm, wildfires and the ensuing

smoke cause substantial harm to life and limb, and the damage due to extreme floods, storms and droughts become a regular occurrence.

~~In this scenario, A t~~The domestic capital (physical and human) needed to mount a belated retreat to carbon-free alternatives ~~does not exist,~~ ~~may strand~~These goods must be imported, ~~and substantial investments in~~ fossil fuel-related plants, equipment and infrastructure ~~become stranded assets with~~ A angry taxpayers ~~are~~ left to pick up the bill.

Or, ~~if the cost is too high, the nation~~ ~~we~~ may hunker down and attempt to do what ~~we it can~~ ~~to can to~~ resist nature's assault.

~~Of course, the~~This dilemma might ~~have been~~ avoided ~~had if the~~ government ~~considered~~ ~~considers~~ full social costs in weighing the alternatives ~~but this was not to be~~. Hedging against such an eventuality by leaving the door open to a future where the economy is powered by increasing reliance on noncarbon alternatives will serve to help ensure U.S. competitiveness in both domestic and global energy markets. Limiting investments in emerging energy technologies will dampen our ability to compete in the next generation of energy solutions. Conversely, partnering with both developed and developing nations on clean energy initiatives would provide global market access and help U.S. companies to compete both at home and abroad.

It is ironic that a policy favoring fossil fuels, touted as essential for long-term prosperity, could in fact harm the nation's economy. The administration might be better served by encouraging a diversified energy mix that is more responsive to emerging threats. This approach would help mitigate the risks of climate change, balancing the dangers of acting too aggressively with those of doing too little. The focus should not be on choosing one energy technology forever, but on steering investments wisely over the next several years and preparing adaptable policies to accommodate rapid shifts if long-term uncertainties require them.

From: Benjamin Santer <bensanter1289@gmail.com>

To: Kristie L Ebi <krisebi@uw.edu>

Cc: "Alley, Richard B" <rba6@psu.edu>, Henry D Jacoby <hjacoby@mit.edu>, Richard Richels <richard.richels@gmail.com>, "Yohe, Gary" <gyohe@wesleyan.edu>, Bud Ward <wardbud@gmail.com>

Subject: Re: Waltz and Tango

Date: Sun, 5 Oct 2025 08:55:59 +0100

Importance: Normal

Dear Kris,

Many, many thanks for your kind words. This piece was prompted by some disinformation that the CO2 Coalition has been circulating. Sadly, the CO2 Coalition's disinformation was submitted to the EPA as a comment on the EPA's proposal to rescind the Endangerment Finding.

I should find out on Monday whether Scientific American has any interest in publishing "Waltz and Tango". I was told by Dan Vergano that Sci. Am. has pretty much shut down their "Opinion" section, so I'm not optimistic. I thought of trying Carbon Brief or The Conversation if Sci. Am. turns it down.

Best wishes from London,

Ben

On 10/5/25 2:31 AM, Kristie L Ebi wrote:

> Dear Ben:

>

> This is really excellent — and much needed. Thank you for writing this.

>

> Best wishes,

>

> Kris

>

> Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia

> National University and Umea University

> Professor, Center for Health and the Global Environment (CHanGE)

> University of Washington

> Seattle, WA 98195

> USA

> krisebi@uw.edu

> <http://globalchange.uw.edu>

>

> I live and work on the lands of the Coast Salish peoples, land that

> touches the shared waters of all tribes and bands within the Duwamish,

> Suquamish, Tulalip, and Muckleshoot nations.

>

>

>

>> On Oct 3, 2025, at 10:20 PM, Benjamin Santer

>> <bensanter1289@gmail.com> wrote:

>>

>> Dear Richard,

>>

>> Here's the next version of "Waltz and Tango". It's now fully
>> referenced. Based on your very helpful comments, the third paragraph
>> now includes information about CO2 acting as a feedback on Ice Age
>> timescales.

>>

>> Your comments in the Carbon Brief explainer on Ice Ages (which I've
>> now linked to) were terrific!

>>

>> With best wishes,

>>

>> Ben

>> On 10/3/25 5:58 PM, Alley, Richard B wrote:

>>> Great, Ben. Whether worth comment... the slow ice-age waltz
>>> beautifully demonstrates the major role of CO2, as you know. The
>>> early orbital ideas expected ice ages to move north to south to
>>> north because the precessional forcing was moving sunshine between
>>> the high-latitude south and then north and then south, so it was a
>>> surprise that the whole world cooled and then warmed, by an amount
>>> as well as a pattern that seemed inexplicable. The explanation,
>>> from ice-core records, was that CO2 shifted from the air into the
>>> deep ocean as the ice grew in the north, and back to the air as the
>>> ice melted in the north, and this globalized the signal. Estimates
>>> of the climate sensitivity from this ice-age waltz are generally
>>> similar to those from other techniques, and nobody has come up with
>>> any explanation of the full waltz that does not include a warming
>>> effect of atmospheric CO2. Hence, a story that seemingly started
>>> with no influence from CO2 actually validates our understanding
>>> beautifully. Best--Richard

>>>

>>> On 10/3/25, 12:45 PM, "Benjamin Santer" <bensanter1289@gmail.com
>>> <mailto:bensanter1289@gmail.com>> wrote:

>>>

>>>

>>> Dear folks,

>>>

>>>

>>> I thought you might be interested in the appended opinion piece. I just
>>> submitted it to Scientific American.

>>>

>>>

>>> With best wishes,

>>>

>>>

>>> Ben

>>>

>>>

>>>

>>

>> <Waltz_and_Tango3.docx>

>

From: Gary Yohe <gyohe@wesleyan.edu>

To: "richard.richels@gmail.com" <richard.richels@gmail.com>, "krisebi@uw.edu" <krisebi@uw.edu>, 'Ben Santer' <bensanter1289@gmail.com>, 'Bud Ward' <Wardbud@gmail.com>

Cc: 'Henry D Jacoby' <hjacoby@mit.edu>, "'Alley, Richard B'" <rba6@psu.edu>

Subject: Re: And what if the President is wrong about climate risk?

Date: Sun, 5 Oct 2025 20:29:03 +0000

Importance: Normal

Attachments: Draft_Whither_fossil_fuels_OCT_3_GY.docx

Rich:

Attached are my suggestions for your excellent piece on the OCT 3rd version as you requested.

Most are just verbiage edits for clarity and tone. A few, though, are about China and where it is going in international markets. I have been working on that, but many have beaten me to the punch with something stand alone. Adding to your text might supplement your argument that brings those recent events into play. Xi, for example, announced China's climate action plan to the UN in a zoom participation with more than 100 nations in an off-line meeting during the UN General Assembly. More than 90 nations immediately followed suit and all will coalesce as a block at the next COP in 6 weeks.

Do with this what you want. It is excellent without much more than fiddling here or there.

Gary

Gary W. Yohe
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and Environmental Studies
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238 Church Street
Middletown, CT 06459 USA

Office: 860-685-3658
Mobile: 860-803-8670
Web site: gyohe.faculty.wesleyan.edu

From: richard.richels@gmail.com <richard.richels@gmail.com>

Sent: Friday, October 3, 2025 9:04 AM

To: krisebi@uw.edu <krisebi@uw.edu>; 'Ben Santer' <bensanter1289@gmail.com>; 'Bud Ward' <Wardbud@gmail.com>; Gary Yohe <gyohe@wesleyan.edu>

Cc: 'Henry D Jacoby' <hjacoby@mit.edu>; 'Alley, Richard B' <rba6@psu.edu>

Subject: And what if the President is wrong about climate risk?

All,

Here is the piece that I have been working on highlighting the need for a hedge against fossil fuels. The work in progress has benefitted greatly from discussions and edits from Jake. I have accepted virtually all of his suggestions. For those for you interested in contributing to this, please work off of the October 3rd document, but I also include Jakes edits from October 2nd.

With best regards,

Rich



And what if the President is wrong about climate risk?

Richard Richels ...

Bottom Line

It is imprudent economic policy to kill the low-carbon industries that provide the country with a hedge against a hostile future.

Despite the mounting fears raised by the worldwide scientific community and the growing [public](#) realization that these concerns are well founded, the Trump Administration has embarked on an aggressive campaign to increase the nation's dependence on [fossil fuels](#). They justify this change in course with their [unwavering beliefs](#) that global warming is a hoax, [that](#) energy markets should be free from government regulation, and that the marketplace will choose technologies and fuels that are in the public's best interest. This view, of course, is endorsed by [his](#) industry allies- who fight against measures that might provide the country a hedge against an uncertain future.-

It is, therefore, no surprise that the administration's energy agenda is centered on two actions. First, it is attempting to reverse the previous [Endangerment Finding](#) that identified carbon dioxide (CO2) as a public health hazard. Second, it is acting to stymie the nascent development of domestic production and use of low-carbon energy sources.

The first action, the proposed rollback of the Endangerment Finding, has sparked significant public concern and will likely occupy center stage as ~~the~~ legal battles unfolds. The claim that CO2 poses no threat to public health is a tough stance to defend, given the overwhelming scientific consensus and observable evidence [to the contrary](#). Yet, the Trump administration's "drill, baby, drill" policy remains firmly in place with the government maintaining that forgoing fossil fuels will cause grave harm to the nation's economic prosperity.

The social cost of carbon (SCC) provides valuable insights into the magnitude of the threat. It represents societal damages to human health and economic prosperity from emitting one additional ton of CO2 into the atmosphere [at some point in time](#). An influential analysis published in [Nature](#) placed the SCC at \$190 per metric ton in 2020. The analysis, used by the previous administration in support of its policies, is in stark contrast to the [negligible damages](#) touted by the present administration. According to a recent blue ribbon review by the [National Academies of Sciences, Medicine and Engineering](#), "the evidence for current and future harm to human health and welfare ... is beyond scientific dispute."

Such findings might suggest a reexamination is in order of the lens through which technology choice decisions are to be viewed. Ignoring the potential damages from fossil fuels may help accomplish the administration's goal of fossil energy dominance, [of course](#). However, even if one accepts the Administration's goals (which we don't), it is bad economic policy to crush almost all domestic development of non-fossil sources of energy. The nation will be left with an energy system ill-equipped to navigate a future fraught with uncertainty – perhaps making it prohibitively expensive for future leadership to reverse course. [The national will also be left in the dark when it tries to supply energy to international energy wherein China's sales of new solar and wind technologies across the developed and developing world is moving into high gear.](#)

If the Administration knew *for certain* that fossil fuels posed no threat to health and prosperity [and that the rest of the world agreed](#), then placing all of our "eggs in one basket" would make some sense. But this is surely not the case. Consider the following scenario which should by no means be ruled out.

Suppose that the administration is successful in expanding U.S. dependence on fossil fuels. On the supply-side, producers have been~~are~~ successfully induced by direct and indirect financial incentives, scaling back environmental regulations, and opening up more public land for drilling and mining. Firms attempting to supply solar, wind and battery technologies have gone out of business because domestic demand has collapsed and their products are antiquated compared to the alternatives offered abroad. On the demand-side, lower taxes on fossil fuels, such as gasoline or emissions taxes, attract consumers to use more.

Further suppose that the increased climate damage projected by the science materializes. Extreme heat waves become the norm, wildfires and the ensuing smoke cause substantial harm to life and limb, and the damage due to extreme floods, storms and droughts become a regular occurrences.

In this scenario, the domestic capital (physical and human) needed to mount a belated retreat to carbon-free alternatives does not exist. These goods must be imported, and fossil fuel-related plants, equipment and infrastructure must become stranded assets. Angry taxpayers are left to pick up the bill and get nothing of value for their loyalty. Or, if the cost is too high, the nation may hunker down and attempt to do what it can to resist nature's assault.

This dilemma might be avoided if the government considers full social costs in weighing the alternatives. Hedging against such an eventuality by leaving the door open to a future where the economy is powered by increasing reliance on noncarbon alternatives will serve to help ensure U.S. competitiveness in both domestic and global energy markets. Limiting investments in emerging energy technologies will dampen our ability to compete in the next generation of energy solutions which are already on the way to being economically feasible. Conversely, partnering with both developed and developing nations on clean energy initiatives would provide global market access and help U.S. companies to compete both at home and abroad if China doesn't get there first.

It is ironic that a policy favoring fossil fuels, touted as essential for long-term prosperity by the current Administration, could in fact harm the nation's economy this year and for decades to come. The administration might be better served by encouraging a diversified energy mix that is more responsive to emerging threats – both natural and economic. This approach would help mitigate the risks of climate change by, balancing the dangers of acting too aggressively with those of doing too little. The focus should not be on choosing one energy technology forever,

but on steering investments wisely over the next several years and preparing adaptable policies to accommodate rapid shifts if long-term uncertainties require them.

From: Gary Yohe <gyohe@wesleyan.edu>

To: "richard.richels@gmail.com" <richard.richels@gmail.com>, "krisebi@uw.edu" <krisebi@uw.edu>, 'Ben Santer' <bensanter1289@gmail.com>, 'Bud Ward' <Wardbud@gmail.com>

Cc: 'Henry D Jacoby' <hjacoby@mit.edu>, "'Alley, Richard B'" <rba6@psu.edu>

Subject: Re: And what if the President is wrong about climate risk?

Date: Mon, 6 Oct 2025 03:21:59 +0000

Importance: Normal

Attachments: Elections_matter10.3.25_(HJ_BW_GY).docx

Bud:

Here are my ideas buried in some tracked suggestions.

Gary

Gary W. Yohe
Huffington Foundation Professor of Economics
and Environmental Studies
Wesleyan University
238 Church Street
Middletown, CT 06459 USA

Office: 860-685-3658
Mobile: 860-803-8670
Web site: gyohe.faculty.wesleyan.edu

From: Gary Yohe <gyohe@wesleyan.edu>

Sent: Sunday, October 5, 2025 4:29 PM

To: richard.richels@gmail.com <richard.richels@gmail.com>; krisebi@uw.edu <krisebi@uw.edu>; 'Ben Santer' <bensanter1289@gmail.com>; 'Bud Ward' <Wardbud@gmail.com>

Cc: 'Henry D Jacoby' <hjacoby@mit.edu>; 'Alley, Richard B' <rba6@psu.edu>

Subject: Re: And what if the President is wrong about climate risk?

Rich:

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From: richard.richels@gmail.com <richard.richels@gmail.com>

Sent: Friday, October 3, 2025 9:04 AM

To: krisebi@uw.edu <krisebi@uw.edu>; 'Ben Santer' <bensanter1289@gmail.com>; 'Bud Ward' <Wardbud@gmail.com>; Gary Yohe <gyohe@wesleyan.edu>

Cc: 'Henry D Jacoby' <hjacoby@mit.edu>; 'Alley, Richard B' <rba6@psu.edu>

Subject: And what if the President is wrong about climate risk?

All,

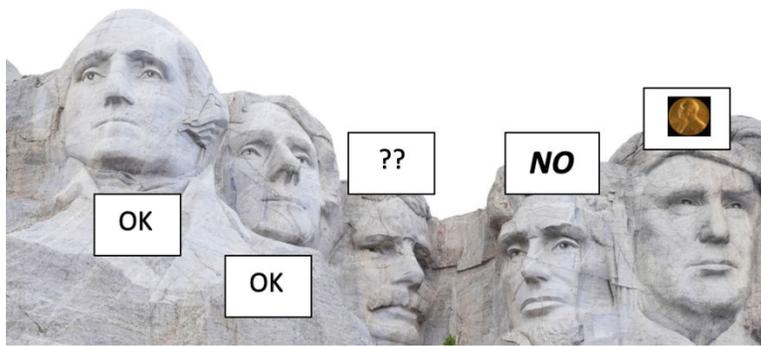
Here is the piece that I have been working on highlighting the need for a hedge against fossil fuels. The work in progress has benefitted greatly from discussions and edits from Jake. I have accepted virtually all of his suggestions. For those for you interested in contributing to this, please work off of the October 3rd document, but I also include Jakes edits from October 2nd.

With best regards,

Rich



or:



Too early to judge Trump's second term as 'consequential'? Probably not. But is that a good thing?

Historians often and understandably wait for years before finding a presidency to be 'consequential' or not so. Early Trump efforts suggest that assessment may be inevitable.

Elections have consequences.

It's a truism, though regardless of the office involved it is sometimes more and sometimes less significant than otherwise.

Take the presidency. All presidential elections seem to be really important in the days just before, the actual day, and the days just after. But some presidential terms are judged over time to have been more significant than others. Political and social historians, no surprise, have a term for this. Some presidencies, best judged only after some years have passed, are

determined to have been “consequential.” Few who have served in that rarified capacity would want to be viewed otherwise; but “consequential” is not always a good thing for the people.

~~But some are more, and others less, consequential than others.~~ Sometimes the judgment reflects the personality and/or, the character of the specific individual. Sometimes it’s more a matter of the handling of a key domestic issue. At other times, and especially during major wars, the historians’ judgments are based more on overseas considerations.

Weighing transformative legacy, not pros and cons

Historians like to say that they do best when they withhold their judgments on any one president until some time has passed since they served. That makes good sense.

Even more, historians like to point out that a thumbs-up or thumbs-down is **not** a reflection of the president’s popularity while in office or afterwards. N, nor is it a judgment on the merits of their policies or political leanings. What really matters is whether the office holders’ actions left a mark – a legacy ~~ies to be~~ judged to be transformative, for better or worse, over time.

Historians, mind you, don’t speak with just one uniform voice. That said, something of a consensus often emerges. George Washington, as the nation’s first president, is widely seen as a “foundational” president, and therefore clearly consequential. So too Franklin D. Roosevelt, Theodore Roosevelt, Thomas Jefferson, Harry Truman, Dwight D. Eisenhower, Woodrow Wilson, Lyndon Baines Johnson, Ronald Reagan, and Barack Obama, though each for different reasons.

On the other side of the coin we may find~~Along these lines,~~ Millard Fillmore, Franklin Pierce, James Buchanan, John Tyler, Chester Arthur, Rutherford Hayes, and Martin Van Buren, Benjamin Harrison, Warren Harding, Calvin Coolidge, and Gerald Ford who have impressed many historians as being **inconsequential**. (Given that nearly any president might be considered at least somewhat consequential, some historians default to using the term “~~forgettable~~” rather than the more extreme ~~the~~ “in’ word.

As suggested above, many will hold that it’s far too early to judge President Donald J. Trump on the consequentiality scale. But there’s no denying that the early money would place him on the “yes” trajectory. Perhaps even “very....”

A climate-consequential legacy appears a given

Given the range and depth of the wide-ranging political and social issues he so far has addressed by ~~(exercising~~ newly claimed authoritarian ~~his~~ powers?) in just the early months of

his second term, an eventual evaluation as his having been consequential appear to be increasingly likely. On climate change in particular and where we have some standing to make judgement, it appears that he is well on his way to being judged as highly consequential. And that applies to his actions affecting action on climate change on both a domestic and international scale.

Easy reversals of Trump climate actions unlikely

Some of Trump's more dramatic climate actions may may not leave substantial legacy. Remember how President Biden and Trump within hours of their inaugurations issued executive orders reversing the predecessor's climate change initiatives? An obvious example: Trump pulls the US from the Paris Climate Accord, Biden re-enters, and Trump exits again – all via executive orders.

But sSuch reversals and start-overs are not likley given the approach Trump II has taken in, for instance:

- ~~in~~ cutting Executive Branch agencies' scientific staffs and research funding ~~resources~~ and in eliminating ongoing science data collection initiatives long under way ~~at and~~ through a myriad federal agencies;
- ~~in~~ seeking to undercut previous administrations' regulations and legislative guidance authorizing research and the legislative provisions behind them;
- ~~in~~ grounding NASA and NOAA weather balloons and satellites; ~~;~~ and
- even attacking Supreme Court decisions~~holdings~~ (as with the endangerment decision undergirding EPA efforts to regulate carbon greenhouse gases).

The Trump II actions in many cases neuter the domestic vs. global consequentiality considerations because ~~And~~ they involve not only the specific actions, but also the ways they were done so that their ~~(destructive consequences could easily in ways unlikely to be impossible to easily reversed)~~ in time to make a difference.~~in which they were done.~~

If you were a betting person...

Similar musings could apply to~~concern~~ other of the president's targets, such as domestic legal, media, ~~and~~ university and scientific research institutional independence,~~s~~ or the ~~the~~ post-war international order. But we are not competent to make judgements in these domains. We write, though, because we are competent to opine that there is sufficient information for speculation just in his lasting impact on the future of the planet and the US role in it will cause lasting and consequential harm.

A “consequential” presidency, this second term taking everything into account? Officially, perhaps still too early and, again, **not** based entirely on the merits or shortcomings.

But at this stage, where would **you** put **your money** if you were a betting zperson? Keep in mind that you are making that bet every day you resist or applaud.

From: Benjamin Santer <bensanter1289@gmail.com>

To: Gary Yohe <gyohe@wesleyan.edu>, "richard.richels@gmail.com" <richard.richels@gmail.com>, "krisebi@uw.edu" <krisebi@uw.edu>, 'Bud Ward' <Wardbud@gmail.com>

Cc: 'Henry D Jacoby' <hjacoby@mit.edu>, "'Alley, Richard B'" <rba6@psu.edu>

Subject: Re: And what if the President is wrong about climate risk?

Date: Mon, 6 Oct 2025 17:40:39 +0100

Importance: Normal

Attachments: Draft_Whither_fossil_fuels_OCT_3_GY_BDS.docx

Dear Rich,

Here are my comments on "Whither Fossil Fuels?" I've put my comments on top of Gary's.

A slightly more scurrilous title might be: "W(h)ither Fossil Fuels?" Or "Fossil Fuels: Hedging Bets or Betting the Farm?"

Would it be worthwhile noting somewhere the decidedly non-level playing field for the soccer teams competing in the U.S. Energy Cup? Given government subsidies, fossil fuel teams ("Team Exxon", "Team Chevron", etc.) are playing with 1-2 additional players relative to "Team Wind", "Team Solar", and other teams not receiving multi-decadal government largesse.

Many thanks for writing this, Rich.

With kind regards,

Ben

On 10/5/25 9:29 PM, Gary Yohe wrote:

> Rich:

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> Most are just verbiage edits for clarity and tone. A few, though, are about China and where it is going in international markets. I have been working on that, but many have beaten me to the punch with something stand alone. Adding to your text might supplement your argument that brings those recent events into play. Xi, for example, announced China's climate action plan to the UN in a zoom participation with more than 100 nations in an off-line meeting during the UN General Assembly. More than 90 nations immediately followed suit and all will coalesce as a block at the next COP in 6 weeks.

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> *From:* richard.richels@gmail.com <richard.richels@gmail.com>
> *Sent:* Friday, October 3, 2025 9:04 AM
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> <bensanter1289@gmail.com>; 'Bud Ward' <Wardbud@gmail.com>; Gary Yohe
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> *Cc:* 'Henry D Jacoby' <hjacoby@mit.edu>; 'Alley, Richard B'
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> *Subject:* And what if the President is wrong about climate risk?

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> Rich



And what if the President is wrong about climate risk?

Richard Richels ...

Bottom Line

It is imprudent economic policy to kill the low-carbon industries that provide the country with a hedge against a hostile future.

~~Despite the mounting fears raised by~~ For decades, the worldwide scientific community ~~has~~ raised concerns regarding the reality and seriousness of human-caused climate change. ~~In spite of and~~ the growing public realization that these concerns are well founded, the Trump Administration has embarked on an aggressive campaign to increase the nation's dependence on fossil fuels – a course of action which would exacerbate the climate change problem. ~~They~~ Administration has justified this “drill baby drill” campaign ~~change in course by with~~ the claiming of unwavering beliefs that global warming is a hoax, ~~that~~ energy markets should be free from government regulation, and ~~that~~ the marketplace will unerringly choose technologies and fuels that are in the public's best interest. ~~These~~ views, of course, ~~are~~ endorsed by

~~Trump's his~~ industry allies- who fight against ~~all~~ measures that might provide the country ~~with~~ a hedge against an uncertain ~~climatic~~ future.-

It is, therefore, no surprise that the ~~A~~administration's energy agenda is centered on two actions. First, it is attempting to reverse the ~~2009previous~~ [Endangerment Finding](#) that identified carbon dioxide (CO₂) as a public health hazard. [The compelling science behind the Endangerment Finding the impacts has linked CO₂-driven warming to a variety of negative health outcomes, including air pollution, extreme heat and flooding, and vector-borne disease.](#) Second, ~~the~~ [Administration](#)it is acting to stymie the ~~nascent development of~~ domestic production and use of low-carbon energy sources. [even in deep-red states that have embraced large-scale deployment of these cost-effective alternatives to fossil fuels.](#)

The first action, the proposed rollback of the Endangerment Finding, has sparked significant public ~~and scientific~~ concern and will likely occupy center stage as ~~the~~ legal battles [continue to unfolds](#). The claim that CO₂ poses no threat to public health is a tough stance to defend, given the overwhelming scientific consensus and observable evidence ~~to the contrary~~ [\(see below\)](#). Yet, the Trump ~~A~~administration's "drill, baby, drill" policy remains firmly in place with the government maintaining that [reducing the use offorgoing](#) fossil fuels will cause grave harm to the nation's economic prosperity.

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~~Such findings might suggest a reexamination is in order of the lens through which technology choice decisions are to be viewed.~~ Ignoring the potential damages from fossil fuels ~~would of course may~~ help accomplish the ~~A~~administration's goal of fossil energy dominance, ~~of course~~. However, even if one accepts ~~this Administration's~~ goals (which we don't), ~~it's~~ bad economic policy to crush almost all domestic development of non-fossil sources of energy. The nation will

Commented [BS1]: The legal battles have already started - e.g., the NRDC/UCS lawsuit against Zeldin, the EPA, Chris Wright, the DOE, and the authors of the DOE report.
Benjamin Santer
2025-10-06 16:40:00

be left with an energy system ill-equipped to navigate a future fraught with uncertainty – perhaps making it prohibitively expensive for future leadership to reverse course. The U.S. national will also risks being left behind in the dark when it tries to supply energy to international markets. energy wherein China's sales of new, cheap solar and wind technologies across the developed and developing world is already moving into high gear. For example, even in the absence of government policy interventions, local solar energy generated with inexpensive Chinese solar panels is rapidly ratcheting up in Pakistan and other countries.

If the Trump Administration knew *for certain* that fossil fuels posed no threat to health and prosperity and that the rest of the world agreed, then placing all of our policy “eggs in one basket” would make some sense. But this is surely not the case. Consider, for example, the following scenario ~~which should by no means be ruled out~~.

Suppose that the Aadministration is successful in expanding U.S. dependence on fossil fuels. On the supply-side, producers have been are successfully induced to expand fossil fuel energy by direct and indirect financial incentives, scaling back environmental regulations, and opening up more public land for drilling and mining. In contrast, American companies Firms attempting to supply solar, wind and battery technologies are have hurting or even going ae out of business because of the Trump Administration's concerted efforts to discourage, defund, or even prohibit use of these technologies. In consequence, domestic demand for low carbon energy is declining, and home-grown has collapsed. And their low carbon energy products are becoming more expensive antiquated and less technologically advanced compared to the alternatives offered abroad. On the demand-side, lower taxes on fossil fuels, such as gasoline or emissions taxes, attract consumers to use more fossil fuel energy.

Let's fFurther suppose that the signal of increased climate damage projected by climate the science continues to emerge from the background “noise” of natural variability-materializes. Extreme heat waves become the new normal, wildfires and the ensuing smoke cause substantial harm to life and limb, and the damage due to extreme floods, storms and droughts ramps up become a regular occurrences.

In this scenario, the domestic capital (physical and human) needed to mount a belated retreat to carbon-free alternatives does not exist. These goods must be imported, and fossil fuel-related plants, equipment and infrastructure must become stranded assets. Angry taxpayers get nothing of value for their loyalty to fossil fuels – they are left to pick up the bill for the ever-increasing catastrophic climate damages and for betting on a losing, antiquated technology. and

Commented [BS2]:

<https://e360.yale.edu/features/pakistan-solar-boom#:~:text=Fed%20up%20with%20pricey%20electricity,the%20worst%20of%20those%20hikes.>
Benjamin Santer
2025-10-06 17:01:00

Commented [BS3]: Is this true?

Benjamin Santer
2025-10-06 17:08:00

~~get nothing of value for their loyalty. Or, if the cost is too high, the nation may hunker down and attempt to do what it can to resist nature's assault.~~

This dilemma might be avoided if the government considers full social costs of carbon (rather than an unrealistic near-zero SCC) in weighing ~~the~~ alternative energy policy choices. Hedging against serious and expensive climate damages means such an eventuality by leaving the policy door open to a future where the economy is powered by increasing reliance on non-carbon alternatives. Such a prudent hedging strategy will ~~serve to help to~~ ensure U.S. competitiveness in both domestic and global energy markets. Limiting investments in emerging energy technologies will dampen our ability to compete in the next generation of energy solutions. These solutions which are already well on their way to being economically feasible. Conversely, partnering with both developed and developing nations on clean energy initiatives ~~will~~ provide global market access and help U.S. companies to compete both at home and abroad ~~– if China doesn't corner the market get there first.~~

It is ironic that a policy favoring fossil fuels, touted as essential for long-term prosperity by the current Administration, is likely to ~~could in fact~~ harm the nation's economy this year and for decades to come – and the climate for centuries to come. The Trump Administration ~~would~~ might be far better served by encouraging a diversified energy mix that is more responsive to emerging threats ~~– both natural and economic.~~ This approach would help mitigate the risks of climate change by, balancing the dangers of acting too aggressively with those of doing too little. The focus should not be on choosing one energy technology forever, but on steering investments wisely over the next several years and preparing adaptable policies to accommodate rapid shifts if long-term unfolding changes in climate, technology, and geopolitics uncertainties require them.

From: Benjamin Santer <bensanter1289@gmail.com>

To: Bud Ward <wardbud@gmail.com>, Richard Richels <richard.richels@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>, "Kristie L. Ebi" <krisebi@uw.edu>, Richard Alley <rba6@psu.edu>, Henry D Jacoby <hjacoby@mit.edu>

Subject: Re: "Consequential" presidency column

Date: Tue, 7 Oct 2025 08:41:12 +0100

Importance: Normal

Attachments: Elections_matter10.3.25_(HJ_BW_GY_BDS).docx

Dear Bud,

Here are my comments on "Elections matter". I put them on top of Gary's comments...

Many thanks for writing this. It's good to look at the "consequentiality" of a Presidency through the lens of the impact of Presidential actions on climate science - and through the lens of the impact on our ability to continue studying Earth's climate system. I haven't read much about this "consequentiality" issue in other reporting on Trump's second term.

In your list of some of the long-term consequences of Trump's Presidency, I think it's worth mentioning the brain drain of U.S. scientists to other countries, as well as the decline in the number of international students wanting to study in the United States. These "human signals" are already painfully obvious. Sadly, they can't be easily reversed.

With best wishes,

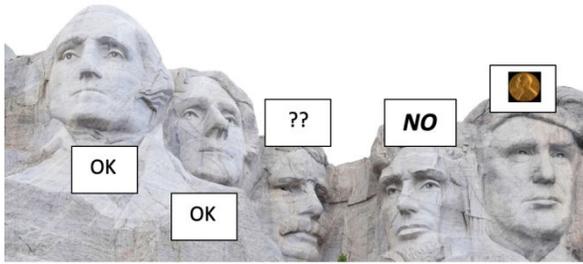
Ben

On 10/3/25 9:34 PM, Bud Ward wrote:

> Attached, reflecting input provided by Jake and open to edits,
> suggestions, from all as you see fit (and not screwing up an early
> fall weekend).
> Have at it, and don't be shy about "signing up" as a co-author if
> you're so inclined. Thanks. Bud
>
>
>
> --
> Bud Ward"
> P.O. 1317
> White Stone, Va. 22578-1317
> Cell: 703-307-0150
> EMAIL: wardbud@gmail.com



or:



Too early to judge Trump's second term as 'consequential'? Probably not. But is that a good thing?

Historians often and understandably wait for years before finding a presidency to be or not to be 'consequential' or not so. Early Trump's performance thus far efforts suggest that a 'consequential' assessment may be inevitable.

Elections have consequences.

It's a truism, though regardless of the office involved it is sometimes more and sometimes less significant than others.

Take the U.S. presidency. All presidential elections seem to be really important in the days just before, the actual day, and the days just after. But some presidential terms are judged over time to have been more significant than others. Political and social historians, no surprise, have a term for this. Some presidencies, best judged only after

Commented [BS1]: I don't quite understand this sentence. Might it be better to say something like this: "It's a truism, though the consequences are far more serious for some elections than for others".
Benjamin Santer
2025-10-06 17:59:00

some years have passed, are determined to have been “consequential.” Few who have served in that rarified capacity would want to be viewed otherwise; but “consequential” is not always a good outcome thing for the people who elected the President.

~~But some are more, and others less, consequential than others.~~ Sometimes the judgment of the historians reflects the personality and/or, the character of the specific individual. Sometimes it’s more a matter how the President of the handling of a key domestic or foreign policy issue. At other times, and especially during major wars, the historians’ judgments are based more on complex overseas considerations. Was the war just and necessary? Was the human and economic cost too great? Did the war have domestic support? Did military intervention do more harm than good?

Weighing transformative legacy, not pros and cons

Historians like to say that they do best when they withhold their judgments on any one president until some time has passed since they served. That makes good sense.

~~Even more,~~ historians also like to point out that a thumbs-up or thumbs-down in terms of whether a President’s term was ‘consequential’ is **not** a reflection of the president’s popularity while in office or afterwards. N, ~~nor is it~~ a judgment on the merits of a President’s their policies or political leanings. What really matters is whether the office holders’ actions left a mark – a legacy ~~ies to be judged~~ to be transformative, for better or worse, over time.

Historians, mind you, don’t speak with just one uniform voice. That said, something of a consensus often emerges. George Washington, as the nation’s first president, is widely seen as a “foundational” president, and therefore clearly consequential. The same judgement applies to ~~So too~~ Franklin D. Roosevelt, Theodore Roosevelt, Thomas Jefferson, Harry Truman, Dwight D. Eisenhower, Woodrow Wilson, Lyndon Baines Johnson, Ronald Reagan, and Barack Obama, though each for different reasons.

~~On the other side of the coin~~ are we may find ~~Along these lines,~~ Millard Fillmore, Franklin Pierce, James Buchanan, John Tyler, Chester Arthur, Rutherford Hayes, ~~and~~ Martin Van Buren, Benjamin Harrison, Warren Harding, Calvin Coolidge, and Gerald Ford, who have been deemed impressed many historians as being inconsequential by many historians. (Given that nearly any president might be considered at least somewhat consequential, some historians default to using the term “~~forgettable~~ ten” rather than the more extreme ~~the~~ “inconsequential” word.

As suggested above, many historians will hold that it’s far too early to judge President Donald J. Trump on the consequentiality scale. But there’s no denying that the early money would place him on the “yes consequential” trajectory. Perhaps even “very...”

A climate-consequential legacy appears a given

The first nine months of Trump's second term are noteworthy for ~~Given~~ the extraordinary range and depth of the ~~wide-ranging~~ political and social issues he ~~so far~~ has addressed, ~~generally by~~ (exercising ~~newly claimed authoritarian his~~ powers?) ~~in just the early months of his second term~~. An eventual evaluation as ~~his~~ having been a "consequential" President appear ~~to be increasingly~~ likely. On climate change in particular ~~– an issue and where we have some standing to make judgement –~~, it appears ~~that Trump~~ is well on his way to being judged ~~as~~ highly consequential. And that applies to his actions affecting action on climate change on both a domestic and international scale.

Easy reversals of Trump climate actions unlikely

Some of Trump's more dramatic climate actions may ~~may~~ not leave ~~an~~ ~~enduring~~ ~~substantial~~ legacy. Remember how Presidents Biden and Trump, within hours of their inaugurations, issued executive orders reversing the predecessor's climate change initiatives? An obvious example: Trump pulls the US from the Paris Climate Accord, Biden re-enters, and Trump exits again – all via executive orders.

~~But s~~Such reversals and start-overs are not likely given the approach Trump II has taken ~~in~~, ~~a number of different cases~~ ~~for instance~~:

- ~~in~~ ~~C~~utting Executive Branch agencies' scientific staffs and research funding ~~of~~ ~~Executive Branch agencies~~; ~~resources~~
- ~~and in~~ ~~E~~liminating ongoing science data collection initiatives long under way ~~at~~ ~~and~~ ~~at~~ ~~through~~ ~~a~~ ~~wide~~ ~~range~~ ~~of~~ ~~myriad~~ federal agencies;
- ~~in~~ ~~S~~seeking to undercut previous ~~A~~administrations' regulations and legislative guidance authorizing research, ~~and~~ the legislative provisions behind them;
- ~~Withholding~~ ~~hundreds~~ ~~of~~ ~~scientific~~ ~~grants~~ ~~that~~ ~~had~~ ~~already~~ ~~awarded~~;
- ~~Marking~~ ~~targeted~~ ~~reductions~~ ~~in~~ ~~force~~ ~~in~~ ~~critically~~ ~~important~~ ~~areas~~ ~~like~~ ~~climate~~ ~~modeling~~ ~~and~~ ~~climate~~ ~~monitoring~~;
- ~~in~~ ~~G~~rounding NASA and NOAA weather balloons and satellites; ~~and~~
- ~~Challenging~~ ~~even~~ ~~attacking~~ ~~prior~~ Supreme Court ~~decisions~~ ~~holdings~~ (as with the ~~2009~~ endangerment decision undergirding EPA efforts to regulate ~~carbon~~ greenhouse gases).

~~In many cases, t~~The Trump II actions ~~in many cases diminish~~ ~~neuter~~ the "domestic vs. global" consequentiality considerations. ~~Reducing monitoring capabilities, for example, has implications for efforts to understand the size and rate of climate change that~~

Commented [BS2]: Not sure what "the legislative provisions behind them" means.
Benjamin Santer
2025-10-07 08:03:00

transcend U.S. politics. Canceling existing and future satellite missions ~~because~~. And they involve not only the specific actions, but also the ways they were done so that their yields could break the evidentiary chain of critical measurements in carbon and methane pollution, temperature, rainfall, and many other observables. The ~~(destructive consequences of such actions could easily in ways unlikely to be impossible to easily reversed) in time to prevent significant data gaps make a difference in which they were done.~~

If you were a betting person...

Similar musings could ~~apply to concern~~ other of the president's targets, such as the independence of domestic legal, media, and university and scientific research institutions, al independence, s or the survival of the post-war international treaties and alliances order. But ~~we are not competent to make judgements in these domains. We write, though, because we are competent to opine that there is sufficient information for speculation just in Trump's presidency will cause lasting and consequential harm his to lasting impact on the climatic future of the planet, and to the US role in studying and protecting this future in it will cause lasting and consequential harm.~~

So is Trump's second term as President A "consequential" presidency, this second term taking everything mentioned above into account? Officially, perhaps, it is still too early to tell, and, again, not based entirely on the merits or shortcomings.

But at this stage, where would **you** put **your money** if you were a betting ~~z~~person? Keep in mind that you are making that bet every day you resist or applaud.

From: "richard.richels@gmail.com" <richard.richels@gmail.com>

To: "Henry D Jacoby" <hjacoby@mit.edu>

Cc: "Benjamin Santer" <bensanter1289@gmail.com>, "Gary Yohe" <gyohe@wesleyan.edu>, "Kristie L Ebi" <krisebi@uw.edu>, "Bud Ward" <Wardbud@gmail.com>

Subject: Latest Draft

Date: Wed, 8 Oct 2025 15:19:27 -0400

Importance: Normal

Attachments: Fossil_Fuels_-_Hedge_Our_Bets_or_Bet_the_Farm_.docx

Jake,

The attached draft includes the names of individuals who provided marked up text.

I did not hear from Kris or Bud on whether they wished to be included.

I am copying them, to let them know that they are more than welcome to sign on.

With best regards,

Rich



Fossil Fuels – Hedge Our Bets or Bet the Farm

Richard Richels, Henry Jacoby, Benjamin Santer

It is imprudent economic policy to kill the low-carbon industries that provide the country with a hedge against a hostile future.

For decades, the worldwide scientific community has raised concerns regarding the reality and seriousness of human-caused climate change. In spite of the growing public realization that these concerns are well founded, the Trump Administration has embarked on an aggressive campaign to increase the nation's dependence on [fossil fuels](#). It is a course of action which would exacerbate the climate change problem. The Administration has justified this “drill baby drill” campaign by claiming that global warming is a hoax, energy markets should be free from government regulation, and the marketplace will unerringly choose technologies and fuels that are in the public's best interest. These views, of course, are endorsed by Trump's industry allies who fight against all measures that might provide the country with a hedge against an uncertain climatic future.

It is, therefore, no surprise that the Administration's energy agenda is centered on two actions. First, it is attempting to reverse the 2009 [Endangerment Finding](#) (EF) that identified carbon dioxide (CO₂) as a public health hazard. The compelling science behind the EF the impacts linked CO₂-driven warming to a variety of negative health outcomes, including air pollution, extreme heat and flooding, and vector-borne disease. Second, the Administration is acting to stymie the domestic production and use of low-carbon energy sources.

The first action, the proposed rollback of the EF, has sparked significant public and scientific concern and will likely occupy center stage as legal battles continue to unfold. The claim that CO₂ poses no threat to public health is a tough stance to defend given the overwhelming scientific consensus and observable evidence to the contrary (see below). Yet, the Trump Administration's "drill, baby, drill" policy remains firmly in place with the government maintaining that reducing the use of fossil fuels will cause grave harm to the nation's economic prosperity.

The social cost of carbon (SCC) provides valuable insights into the magnitude of the climate change threat. It is an estimate, at a given point in time, of the societal damages to human health and economic prosperity that arise from emitting one additional ton of CO₂ into the atmosphere. An influential analysis published in [Nature](#) placed the SCC at \$190 per metric ton in 2020. The analysis, used by the Biden Administration in support of its climate policies, is in stark contrast to the [negligible damages](#) touted by the present Administration. The claim of an SCC value close to zero is untenable. For example, according to a recent blue ribbon review by the [National Academies of Sciences, Medicine and Engineering](#), "the evidence for current and future harm to human health and welfare ... is beyond scientific dispute."

Ignoring the potential damages from fossil fuels would of course help accomplish the Administration's goal of fossil energy dominance. However, even if one accepts this goal (which we don't), it's bad economic policy to crush almost all domestic development of non-fossil sources of energy. The nation will be left with an energy system ill-equipped to navigate a future fraught with uncertainty – perhaps making it prohibitively expensive for future leadership to reverse course.

The U.S. also risks being left behind when it tries to supply energy to international markets. China's sales of new, cheap solar and wind technologies across the developed and developing world is already moving into high gear. For example, even in the absence of government policy interventions, local solar energy generated with inexpensive Chinese solar panels is rapidly ratcheting up in [Pakistan and other countries](#).

If the Trump Administration knew *for certain* that fossil fuels posed no threat to health and prosperity, and that the rest of the world agreed, then placing all of our policy eggs in one basket would make some sense. But this is surely not the case. Consider, for example, the following scenario.

Suppose that the Administration is successful in expanding U.S. dependence on fossil fuels. On the supply-side, producers have been successfully induced to expand fossil fuel energy by direct and indirect financial incentives, scaling back environmental regulations, and opening up more public land for drilling and mining. In contrast, American companies attempting to supply solar, wind and battery technologies are hurting or even going out of business because of the Trump Administration's concerted efforts to discourage, defund, or even prohibit use of these technologies. In consequence, domestic demand for low carbon energy would be declining, and home-grown low carbon energy products are becoming more expensive and less technologically advanced compared to the alternatives offered abroad. On the demand side, lower taxes on fossil fuels, such as gasoline or emissions taxes, attract consumers to use more fossil fuel energy.

Let's further suppose that the signal of increased climate damage projected by climate science continues to emerge from the background "noise" of natural variability. Extreme heat waves become the new normal, wildfires and the ensuing smoke cause substantial harm to life and limb, and the damage due to extreme floods, storms and droughts ramps up.

In this scenario, the domestic capital (physical and human) needed to mount a belated retreat to carbon-free alternatives does not exist. These goods must be imported, and fossil fuel-related plants, equipment and infrastructure must become stranded assets. Angry taxpayers get nothing of value for their loyalty to fossil fuels – they are left to pick up the bill for the ever-increasing catastrophic climate damages and for betting on a losing, antiquated technology.

This dilemma might be avoided if the government considers full social costs of carbon (rather than an unrealistic near-zero SCC) in weighing alternative energy policy choices. Hedging against serious and expensive climate damages means leaving the policy door open to a future where the economy is powered by increasing reliance on non-carbon alternatives. Such a prudent hedging strategy will help to ensure U.S. competitiveness in both domestic and global energy markets. Limiting investments in emerging energy technologies will dampen our ability to compete in the next generation of energy solutions. These solutions are already well on their way to being economically feasible. Conversely, partnering with both developed and developing

nations on clean energy initiatives will provide global market access and help U.S. companies to compete both at home and abroad.

It is ironic that a policy favoring fossil fuels, touted as essential for long-term prosperity by the current Administration, is likely to harm the nation's economy for decades to come – and the climate for centuries to come. The Trump Administration would be far better served by encouraging a diversified energy mix that is more responsive to emerging threats – both natural and economic. This approach would help mitigate the risks of climate change by balancing the dangers of acting too aggressively with those of doing too little. The focus should not be on choosing one energy technology forever, but on steering investments wisely over the next several years and preparing adaptable policies to accommodate rapid shifts if unfolding changes in climate, technology, and geopolitics require them.

From: Bud Ward <wardbud@gmail.com>

To: Henry D Jacoby <hjacoby@mit.edu>, Benjamin Santer <bensanter1289@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>, Richard Richels <richard.richels@gmail.com>, "Kristie L. Ebi" <krisebi@uw.edu>, Richard Alley <rba6@psu.edu>, Bud Ward <wardbud@gmail.com>

Subject: Final (?) on consequential presidency column

Date: Wed, 8 Oct 2025 13:52:07 -0400

Importance: Normal

Attachments: Elections_matter_10.8.25--_To_Cafe_team).docx

Climate Cafe colleagues: The attached reflects all or most suggestions so far received from Ben, Gary, and (earlier) Jake. Remember that this is to be an explainer, educational and informative for lay climate-interested audiences. As such, it's - as Jake has noted -- "different" from most other Climate Cafe posts, but, borrowing from both Jake's and Ben's earlier comments, suitable and appropriate for our site.

If you are so inclined and want to "sign up" as a contributor, please let Jake and/or me know. If not, certainly no problem. Thanks. Bud

--

Bud Ward
P.O. 1317
White Stone, Va. 22578-1317
Cell: 703-307-0150
EMAIL: wardbud@gmail.com

Too soon to judge Trump's second term as 'consequential'? Probably not

Historians often and understandably wait for years before finding a presidency to be – or not to be – 'consequential'. Trump's performance thus far suggest that a 'consequential' assessment may be inevitable

Elections have consequences.

It's a truism, though the consequences are more far-reaching for some elections than for others.

Take the U.S. presidency. All presidential elections seem to be really important in the days just before, the actual day, and the days just after. But some presidential terms are judged over time to have been more significant than others, more "consequential".

Political and social historians, no surprise, have a term for this, in fact use that very term.

Some presidencies, judged only after some years have passed, are determined to have been "consequential." Few who have served in that rarified capacity would want to be viewed otherwise; but "consequential" is not always the preferred outcome for the people who voted to elect the President.

Sometimes the judgment of the historians reflects the personality and/or the character of the specific individual. Sometimes it's more a matter of how the President handled a key domestic or foreign policy issue. At other times, and especially during major wars, the historians' judgments are based on complex considerations. Was the war just and necessary? Was the human and economic cost too great? Did the war have domestic support? What impacts did military intervention have?

Weighing transformative legacy, not pros and cons

Historians like to say that they do best when they withhold their judgments on any one president until some time has passed since they served. That makes good sense.

Historians also like to point out that a thumbs-up or thumbs-down in terms of whether a President's term was 'consequential' is **not** a reflection of the president's popularity while in office or afterwards. Nor is it a judgment on the merits, the pros and cons, of a President's policies or political leanings. What really matters is whether the office holders' actions left a mark – a legacy judged to be transformative, for better or worse, over time.

Historians, mind you, don't speak with just one uniform voice. That said, something of a consensus often emerges. George Washington, as the nation's first president, is widely seen as a "foundational" president, and therefore clearly consequential. The same judgment applies to Franklin D. Roosevelt, Theodore Roosevelt, Thomas Jefferson, Harry Truman, Dwight D. Eisenhower, Woodrow Wilson, Lyndon Baines Johnson, Ronald Reagan, and Barack Obama, though each for different reasons.

On the other side of the coin are Millard Fillmore, Franklin Pierce, James Buchanan, John Tyler, Chester Arthur, Rutherford B. Hayes, Martin Van Buren, Benjamin Harrison, Warren Harding, Calvin Coolidge, and Gerald R. Ford, who have been deemed **inconsequential** by many historians.

Given that nearly any president might be considered at least somewhat consequential, some historians default to using the term "forgettable" rather than the more harsh "in" word, "inconsequential"

As suggested above, some historians will hold that it's far too early to judge President Donald J. Trump on the consequentiality scale. But there's no denying that the early money would place him on the "consequential" trajectory. Perhaps even "very...."

A climate-consequential legacy appears a given

The first nine months of Trump's second term are noteworthy for the extraordinary range and depth of the political, cultural, and social changes he has sought and, in many cases, achieved. He's done so generally by exercising newly claimed presidential – and his critics consider authoritarian -- powers.

At this point, an eventual evaluation as having been a "consequential" President appears increasingly likely.

On climate change in particular – an issue on which this site's principals have some substantial claim to rendering an informed opinion – it appears that Trump is well on his way to being judged as highly consequential. And that applies to his actions affecting climate change research and mitigation on both a domestic and international scale.

Easy reversals of Trump climate actions unlikely

Some of Trump's more dramatic climate actions may not leave an enduring legacy. Remember how Presidents Biden and Trump, within hours of their inaugurations, issued executive orders reversing the predecessor's climate change initiatives? An obvious example: Trump pulls the US from the Paris Climate Accord, Biden re-enters, and Trump exits again – all via executive orders announced during their initial hours in office.

But such reversals and start-overs are unlikely in many cases given the approach Trump, in his second term in office, has taken in a number of different cases:

- cutting veteran scientific staffs and research funding of Executive Branch agencies;
- eliminating ongoing science and atmospheric data collection initiatives long under way at a wide range of federal agencies and university grantees;
- seeking to undercut previous Administrations' regulations and legislative guidance authorizing those efforts, and the statutory language used for years and even decades to justify the Executive branch actions;
- withholding or reversing hundreds of scientific grants already awarded, with devastating direct and indirect impacts leading to ongoing 'brain drain' of top scientists from the U.S. to overseas venues;
- marking targeted reductions in force in critically important areas like climate modeling and climate monitoring;
- grounding NASA and NOAA weather balloons and satellites; and
- challenging prior legislative and judicial decisions (as with the Supreme Court's 2009 "endangerment" decision undergirding federal efforts to regulate greenhouse gases).

In many cases, the Trump second-term actions diminish the "domestic vs. global" consequentiality considerations. Reducing monitoring capabilities, for example, has implications for efforts to understand the size and rate of climate change that transcend U.S. politics. Canceling existing and future satellite missions yields could break the evidentiary chain of critical measurements in carbon and methane pollution, temperature, rainfall and precipitation, and many other observable issues. The consequences of such actions, authoritative scientists fear, could be impossible to reverse in time to prevent significant data gaps.

If you were a betting person...

Similar musings could apply to other of the president's targets, such as the independence of domestic legal, media, and university scholarly and academic scientific research and communications, or the survival of post-World War II international treaties and alliances. Final judgments in those cases perhaps are best left to the dedicated professional disciplines closely monitoring each area.

So, is Trump's second term as President "consequential"? Officially, perhaps, it is still too early to tell.

But at this stage, where would **you** put **your money** if you were a betting person?

From: Benjamin Santer <bensanter1289@gmail.com>

To: Bud Ward <wardbud@gmail.com>, Henry D Jacoby <hjacoby@mit.edu>, Gary Yohe <gyohe@wesleyan.edu>, Richard Richels <richard.richels@gmail.com>, "Kristie L. Ebi" <krisebi@uw.edu>, Richard Alley <rba6@psu.edu>

Subject: Re: Final (?) on consequential presidency column

Date: Thu, 9 Oct 2025 07:42:24 -0700

Importance: Normal

Attachments: Elections_matter_10.8.25--_To_Cafe_team)BDS.docx

Dear Bud,

This looks good to me. I have just a few additional suggested changes...

With best wishes,

Ben

On 10/8/25 6:52 PM, Bud Ward wrote:

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- seeking to undercut previous Administrations' regulations and legislative guidance authorizing those efforts, and the statutory language used for years and even decades to justify the Executive branch actions;
- withholding or reversing hundreds of scientific grants already awarded to university grantees, with devastating direct and indirect impacts leading to ongoing "brain drain" of top scientists from the U.S. to overseas venues;
- marking targeted reductions in force in critically important areas like climate modeling and climate monitoring;
- grounding NASA and NOAA weather balloons and satellites; and
- challenging prior legislative and judicial decisions (as with the Supreme Court's 2009 "endangerment" decision undergirding federal efforts to regulate greenhouse gases).

In many cases, the Trump second-term actions diminish the "domestic vs. global" consequentiality considerations. Reducing monitoring capabilities, for example, has implications for efforts to understand the size and rate of climate change that transcend U.S. politics. Canceling existing and future satellite missions ~~yields~~ could break the evidentiary chain of critical measurements in carbon and methane pollution, temperature, rainfall and precipitation, and many other observable issues. The consequences of such actions, authoritative scientists fear, could be impossible to reverse in time to prevent significant data gaps.

If you were a betting person...

Similar musings could apply to other of the ~~P~~president's targets, such as ~~the independence of~~ domestic legal, media, and university scholarly and academic scientific research and communications. The independence of these targets from Presidential political interference is now imperiled, or Pthe survival of post-World War II international treaties and alliances are another target, and the very survival of these agreements is

Commented [BS1]: "university grantees" seems more appropriate below.
Benjamin Santer
2025-10-09 07:32:00

now uncertain.- Final judgments of Presidential “consequentiality” in these and other cases are perhaps ~~are~~ best left to the dedicated professional disciplines closely monitoring each area.

So, is Trump’s second term as President “consequential”? Officially, perhaps, it is still too early to tell.

But at this stage, where would **you** put **your money** if you were a betting person?

From: Joel Smith <joelbsmith.climate@gmail.com>

To: Michael Oppenheimer <omichael@princeton.edu>, Kristie L Ebi <krisebi@uw.edu>, Ian Burton <burtoni.ian@gmail.com>, "Yohe, Gary" <gyohe@wesleyan.edu>

Subject: Mike Wallace on his evolving views on seriousness of climate change

Date: Wed, 15 Oct 2025 08:45:20 -0600

Importance: Normal

Attachments: Wallace.M.2025.EvolvingViewsonClimateChange.pdf

Joel B. Smith
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Warming Worries of a Once-Doubtful Climate Scientist

Andy Revkin from Sustain What <revkin@substack.com>

Wed, Oct 15, 2025 at 7:14 AM

Reply-To: Andy Revkin from Sustain What

<reply+2wk7fm&32cgsa&&3a9a3472aa659670eebd0aa7e3ef3d09c05a8611fcb5b4a96ec6fda1a3a17e91@mg1.substack.com>

To: joelbsmith.climate@gmail.com

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Warming Worries of a Once-Doubtful Climate Scientist

Mike Wallace says reality is bad enough. Catastrophe-versus-hoax framing obscures the momentous dangers from unabated greenhouse-gas heating.

ANDY @REVKIN

OCT 15



[READ IN APP](#) ↗

Professor [John “Mike” Wallace](#), emeritus at the University of Washington after a decades-long career in weather and climate research, has been a vital [no-spin source of mine on climate change](#) and variability for decades.

He contributed to the recent [Andrew Dessler et al challenge to a report commissioned by Secretary of Energy Chris Wright](#) to “critically review” climate science and underpin the Trump administration’s effort to undo the Environmental Protection Agency’s endangerment finding (which underpins the agency’s power to regulate greenhouse gases).



Reviewing the Climate Science Critique Done for Team Trump

ANDY @REVKIN · SEP 3

[Read full story](#)

Wallace has written a career-spanning reflection on his evolving view of research on the human climate influence that I find well worth your time.

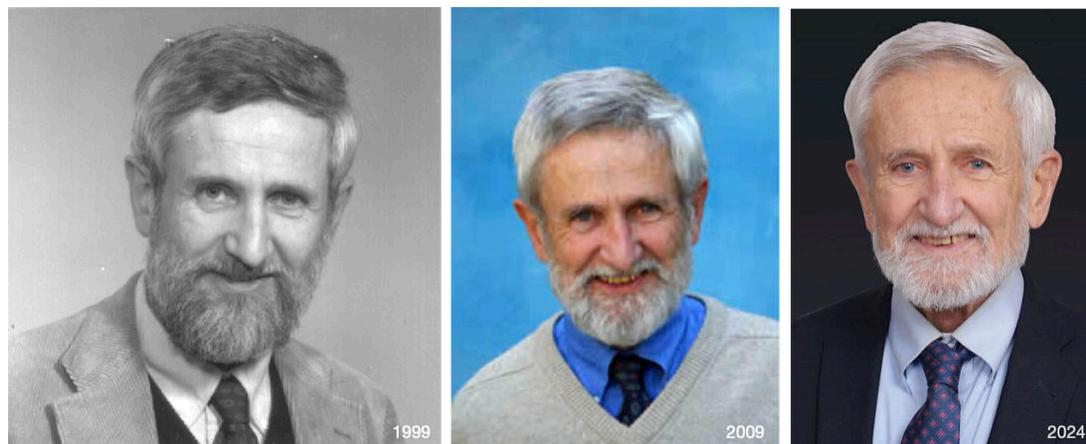
Here’s his core point to prime the pump:

I still wince when I hear colleagues, science reporters, and politicians overstating or oversimplifying the connections between extreme events and global warming, but their excesses don’t justify my refusing to acknowledge the imminence and the gravity of the impacts of the burning of fossil fuels.

Upgrade to paid

My evolving views on global warming

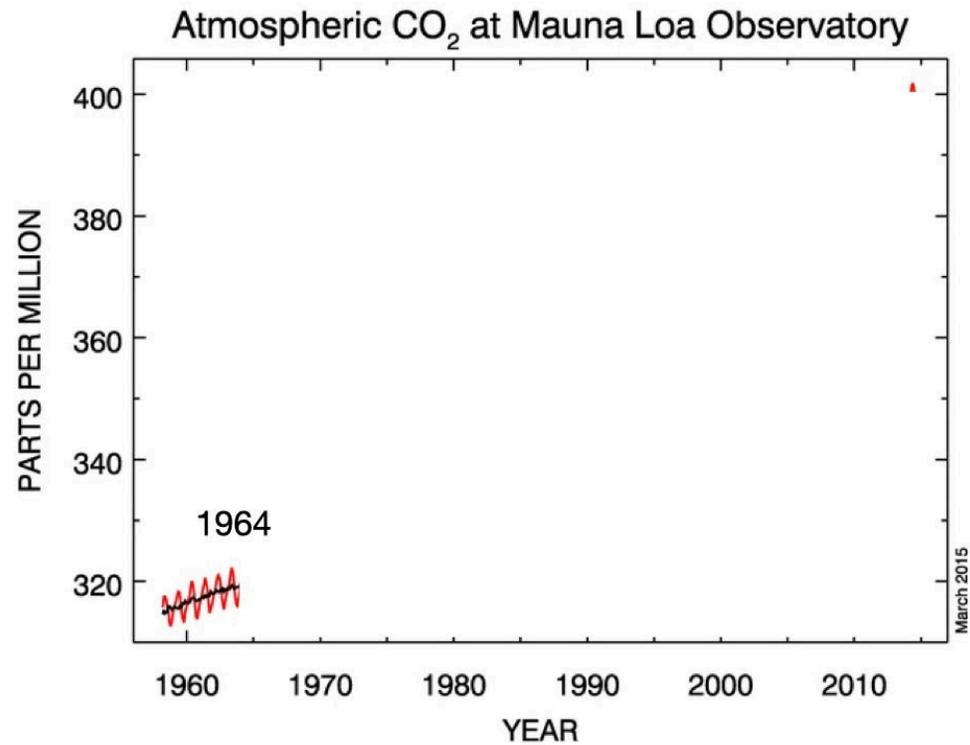
John M. Wallace, Professor Emeritus, Department of Atmospheric and Climate Science, University of Washington



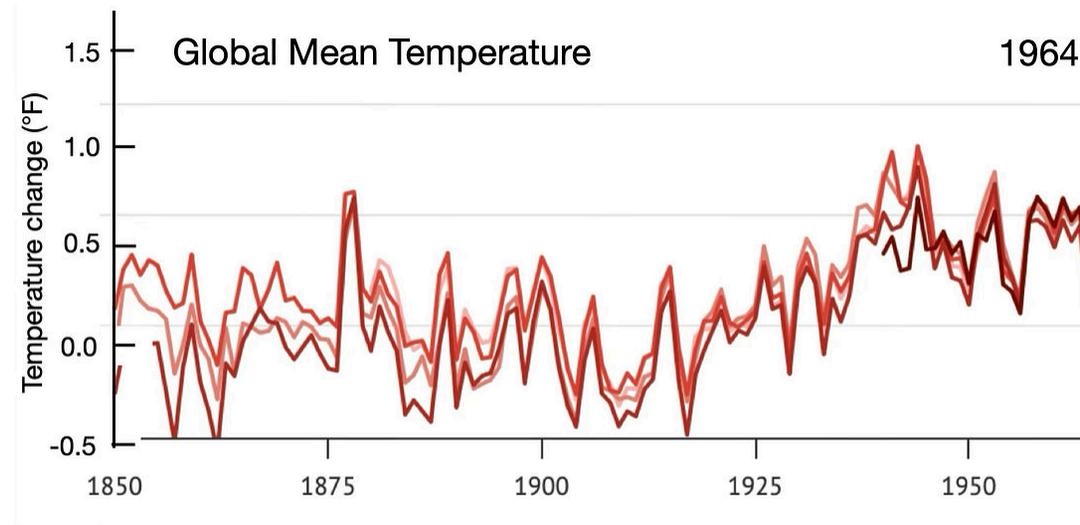
This essay is an outgrowth of my involvement in the scientific community's response to the recent [report of the Department of Energy's Climate Working Group](#). In the Foreword, Secretary Chris Wright notes, *"What I've found is that media coverage often distorts the science. Many people walk away with a view of climate change that is exaggerated or incomplete."* I agree, and I'd have responded positively if the Secretary had called upon me to help restore a sense of balance. Here's my take on it.

and devastating tornadoes that struck Flint Michigan and Worcester, Massachusetts a few days later.¹ Contrary to the expectations of the senators, the experts repeatedly denied the possibility that the tornadoes could have been human induced, arguing that the energy released by the explosion was “puny, in comparison to the awesome powers of nature”. (McBrien, 2019) A decade later, I invoked the same energetics argument in conversations with my father, (but to no avail).

In my studies at MIT I learned that there was, in fact, a way in which human activity could conceivably be changing our weather. In 1896, the Swedish physicist / chemist, Svante Arrhenius predicted that CO₂ released by the combustion of fossil fuels would build up in the atmosphere and enhance the greenhouse effect, which renders the Earth warmer than it would be in the absence of an atmosphere by blocking² some of the outgoing radiation emitted by the Earth's surface — in effect, acting as a blanket. He estimated that the Earth would warm by almost 10° F in response to a doubling of the atmospheric CO₂ concentration, but he had no idea of how long it would take for the concentration to build up to that level. To address this question, CO₂ monitoring was instituted at the observatory on Mauna Loa in 1958. When I was in graduate school, the record was less than 10 years long.



Based on the observations available at that time, it was believed that global mean temperature had risen by about half a degree Fahrenheit since the beginning of the 20th century, but that it had leveled off around 1940. I don't recall there being anything approaching a consensus as to why it had leveled off. I thought that both the warming and the leveling off were due to natural causes unrelated to the buildup of CO₂ in the atmosphere.

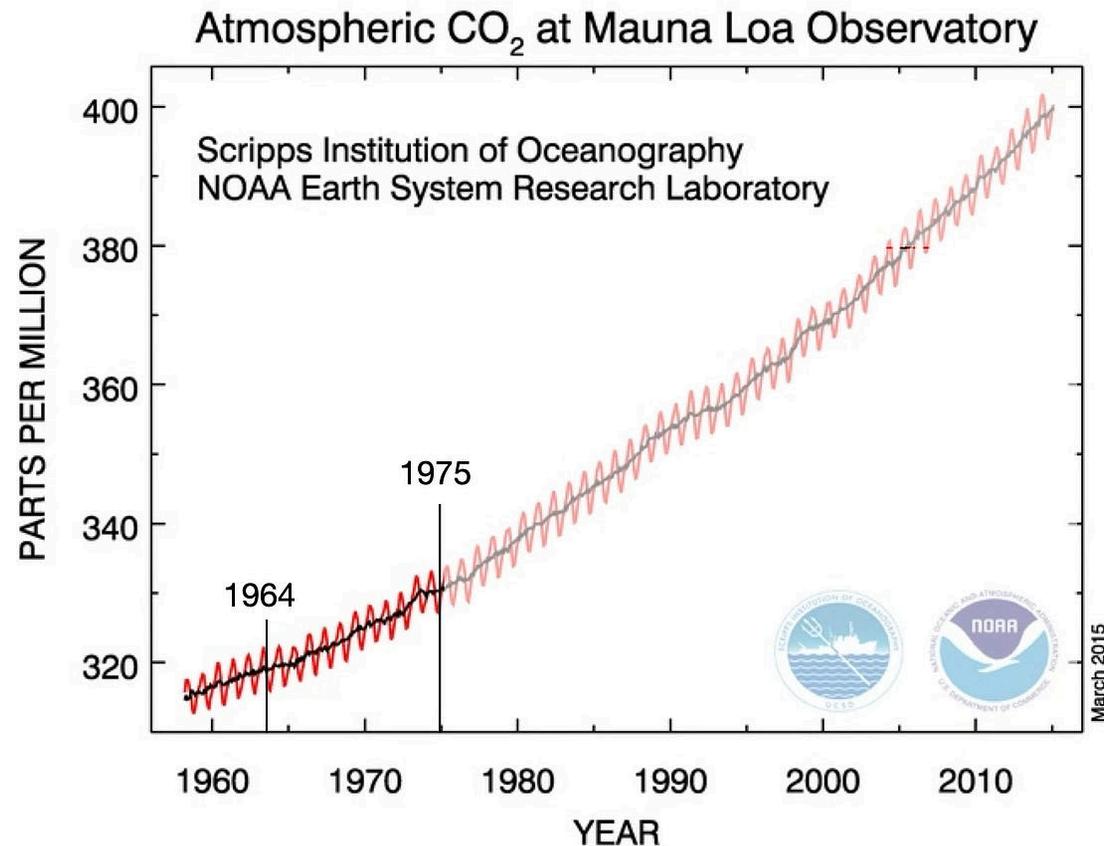


Adapted from Berkeley Earth

Around 1970, during my early years as a faculty member at the University of Washington, I remember conversations with visiting scientist, J. Murray Mitchell, on sabbatical leave from NOAA, who foresaw that human induced global warming was going to become a big issue. I couldn't understand why a scientist of his stature could get so taken up with this idea, given that the early 20th century global warming seemed so limited and had all but stopped 30 years ago. Mitchell had championed the idea, based on paleoclimatic evidence, that the emissions from large volcanic eruptions can cause significant cooling. This explanation did not appear to be applicable to the current situation, because the hiatus in the warming had not been marked by unusually large volcanic activity.

Not until well into the 1970s was it recognized that the lapse in the warming was probably due to the increasing concentrations of sulfate aerosols released by the combustion of coal, which renders the Earth more reflective of incoming solar energy.

In 1975, Wallace Broecker published a paper entitled, “***Climatic change: Are we on the brink of a pronounced global warming?***” in which he argued that the hiatus in the warming would, “within a decade or so, give way to a pronounced warming induced by carbon dioxide.” One of the cornerstones of Broecker’s argument was the 17 year-long Mauna Loa record, which revealed the inexorable rising trend in atmospheric CO₂ concentrations.



[The Trump administration’s proposed budget would eliminate nearly all climate research and ***could shut down the Mauna Loa carbon dioxide***

[monitoring project.](#)]

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That year Peter Hobbs and I were in the final stages of the writing our textbook, [Atmosphere Science an Introductory Survey](#). By that time, I was well aware of the trend in CO₂ but nevertheless, I chose to portray the Earth's climate as unchanging. Fortunately, there were others in the field who appreciated its significance much more than I did. By the end of the decade, "climate change" and "global warming" had become household words. The historic [Charney Report](#), issued by the US National Research Council in 1979, predicted that Earth would warm by between 3 and 8°F in response to a doubling of the atmospheric CO₂ concentration and laid out a strategy for obtaining more refined estimates.

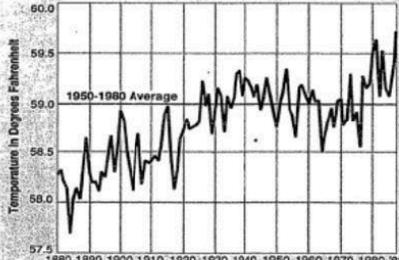
By 1988, the renewed warming that Broecker and others had been anticipating was clearly evident. On a hot, muggy day in June, James Hansen delivered a forceful testimony in Senate hearings in which he addressed the question of whether the greenhouse effect was already large enough to affect the probability of extreme events, such as the summer heat wave that was currently in progress. He concluded his assessment with the statement. *"I believe that this change in the frequency of hot summers is large enough to be noticeable to the average person. So, we have already reached a point that the greenhouse effect is important. It may also have important implications other than for creature comforts."* I remember feeling that Hansen was premature, by at least a few decades, in sounding the alarm.

"All the News
That's Fit to Print"

The New York Times

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Global Warming Has Begun, Expert Tells Senate



Global Warming: Greenhouse Effect?
Average global temperatures through the first five months of 1988. As a baseline, scientists use the global average from 1950 to 1980.
Source: James E. Hansen and Sergey Lebedeff

Sharp Cut in Burning of Fossil Fuels Is Urged to Battle Shift in Climate

By PHILIP SHABECOFF
Special to The New York Times

WASHINGTON, June 23 — The earth has been warmer in the first five months of this year than in any comparable period since measurements began 130 years ago, and the higher temperatures can now be attributed to a long-expected global warming trend linked to pollution, a space agency scientist reported today.

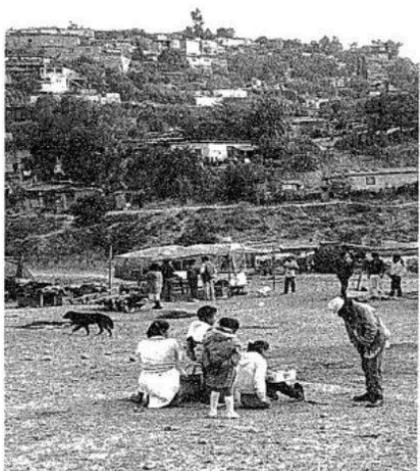
Until now, scientists have been cautious about attributing rising global temperatures of recent years to the predicted global warming caused by pollutants in the atmosphere, known as the "greenhouse effect." But today Dr. James E. Hansen of the National Aeronautics and Space Administration told a Congressional committee that it was 99 percent certain that the warming trend was not a natural variation but was caused by a buildup of carbon dioxide and other artificial gases in the atmosphere.

An Impact Lasting Centuries

Dr. Hansen, a leading expert on climate change, said in an interview that there was no "magic number" that showed when the greenhouse effect was actually starting to cause changes in climate and weather. But he added, "It is time to stop waffling so much and

Drought Raising Food Prices; Inflation Effect Seems Minor

By ROBERT D. HERSEY JR.
Special to The New York Times

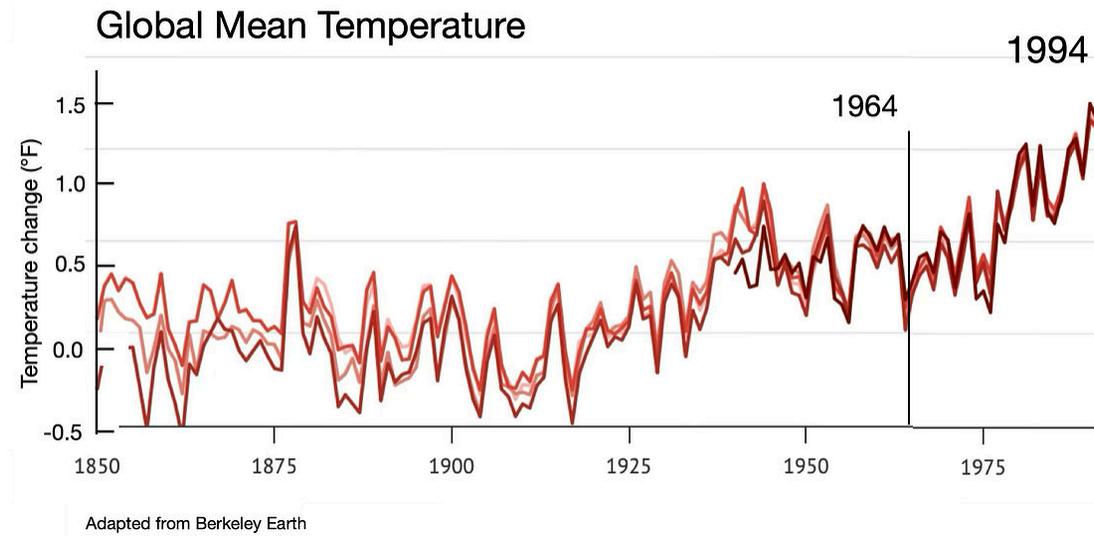


The New York Times/Larry Rabiner

Cañon Zapata in Tijuana, Mexico, the busiest illegal crossing point.

[June 24, 1988 New York Times article](#)

1988 was also the year in which the Intergovernmental Panel on Climate Change (IPCC) was established. I was invited to serve as a member, but I declined because I knew it would require a big time commitment. I felt that I was already spending too much time on the road while serving on national committees.



By the mid 1990s, the global mean temperature had risen enough to convince me that human induced global warming had resumed, and with something of a vengeance. However, I still couldn't imagine that the impacts would become discernible (much less, serious) within my lifetime. In 1994, James Baker, who was then the NOAA administrator, arranged for a group of scientists to have breakfast with Vice President Al Gore. As I recall, at the meeting, Gore spoke about the disastrous flooding that had occurred along the Missouri and Mississippi rivers the previous year, linking it to El Niño, and in turn, linking the El Niño to global warming. I was taken aback by his simplistic explanation. There was the opportunity only for a very brief conversation with him at the meeting, so I drafted a follow-up letter, which contained the paragraph (lightly edited for clarity):

Over the past year or two, I have been impressed with how effectively the right wing has been able to capitalize upon even the slightest exaggerations of environmental threats, to support their contention that the entire environmental crisis is a hoax. They seem particularly keen to

discredit the greenhouse warming hypothesis, partly because the stakes are so high and partly, I think, because they sense that this is the issue on which environmental advocates are most vulnerable. This vulnerability stems from the fact that (1) a convincing case cannot be made that the extreme events (like last year's floods) that have been observed thus far are beyond the range of the natural variability of the climate system, and (2) most model-based warming scenarios do not predict enough warming, on average during summer in temperate latitudes, to seriously disrupt the quality of life until well into the 21st century.....

I never finished my letter to Gore. I can't recall exactly why, but I think I must've become preoccupied with teaching or with research projects. I envisioned that vice presidents must have more important things to do than read letters from academics advising them on what they should and shouldn't say, so my not finishing it would not be a great loss. I might have been wrong about that. In any case, this unfinished letter serves as a useful reference point in my evolving thinking about human-induced climate change. I was going to include an additional paragraph urging him not to make global warming the flagship of his environmental agenda for fear that it would weaken its appeal. I believed then, as I do now, that other critical issues such as the declining availability of fresh water, deteriorating topsoil, the loss of biodiversity, and the declining effectiveness of antibiotics also need to be addressed.

The two messages in the letter that I intended to send to Gore were recurring themes in my op-ed pieces and newspaper interviews over the course of the next 20 years. In an interview published in the [Columbia Law Review \(2009\)](#), I urged journalists to beware of creating false conflicts and to resist the

temptation to overreach when discussing the link between global warming and extreme events. In an interview in the [Seattle Times \(2009\)](#), I recalled my encounter with vice president Gore. Inspired by the [Rockstrom et al. \(2009\)](#) article on planetary boundaries and by an extended visit to rural India, I wrote an op ed piece stressing the multiple facets of the impending global environmental crisis, published in [EOS \(2012\)](#).

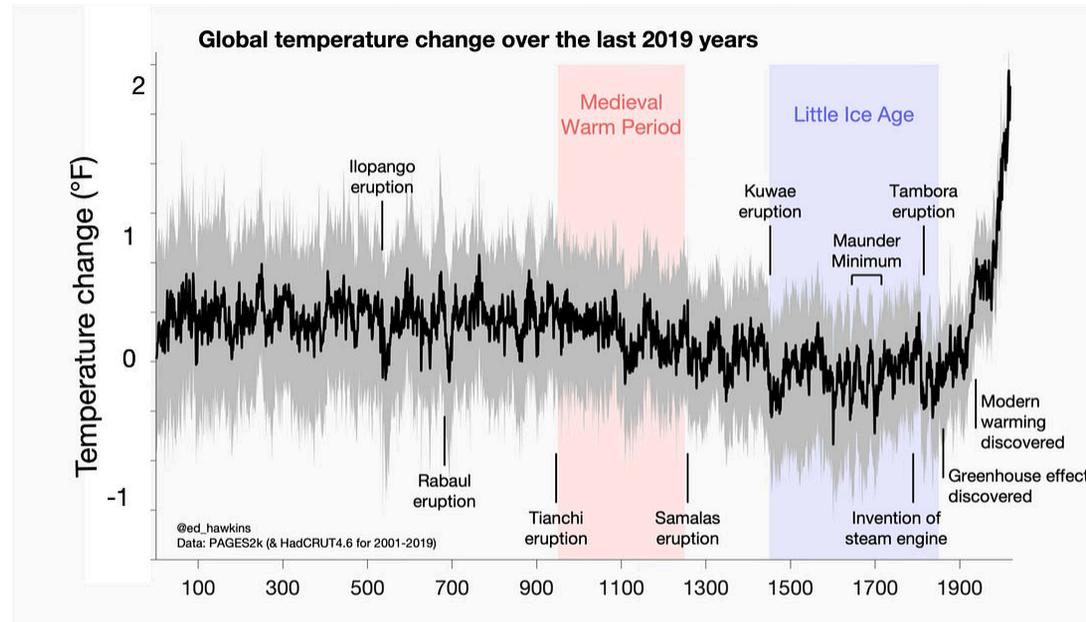
In January 2014, the eastern United States experienced a widely publicized cold air outbreak. Some of my colleagues attributed the record-breaking cold temperatures to an exaggerated meandering of the wintertime polar vortex as it weakens under the influence of global warming. The news media seemed captivated by the idea that global warming could lead to extreme cold, as in the plot of the box office hit, [The Day After Tomorrow](#). Out of concern that the publicity generated by this story would be exploited by global warming critics, I co-authored a letter published in [Science \(2014\)](#), in which we argued that the cold wave was most likely a manifestation of natural variability, not global warming. The controversy is nicely summed up in the article in the [Washington Post \(2014\)](#) entitled, "Scientists: Don't make 'extreme cold' the centerpiece of the global warming argument". I also published an op ed piece about it in the Los Angeles Times.

[Andy Revkin: Also listen to my interview on the NPR show On the Media - [Sucked Into the Polar Vortex](#).]

When I drafted my letter to Gore, a major source of controversy concerning global mean temperature trends was the disparity between observations of the trend in surface air temperature and the mean temperature of the troposphere [deduced from observations of the Earth's emission of microwave radiation](#). The observations from space indicated that the troposphere was

not warming in tandem with the Earth's surface. I chaired a committee of the [National Research Council \(2000\)](#) that was called upon to try to reconcile the disparity between the surface and upper air observations. We did not succeed. The answer to this puzzle was not forthcoming until 2004, when it was discovered by my colleagues at the University of Washington that the microwave sensors on the satellites were not measuring quite what we thought they were. The layer of the atmosphere that they sensed included a segment of the lower stratosphere, which was cooling in accordance with the theoretical expectations. When the temperature time series derived from the microwave sensors was corrected to remove the bias introduced by the stratospheric cooling, it exhibited a warming trend consistent with the surface observations and with theoretical expectations of how the atmosphere should respond to the buildup of greenhouse gases. ([Fu et al., 2004](#)).

Another contentious issue was the so called [hockey stick curve](#) depicting the gradual downward trend in global mean temperature from the Medieval Warm Period about 1000 years ago that persisted up until the late 19th century, followed by rapid warming in response to the buildup of greenhouse gases that dwarfs the prior cooling trend. The time series of global mean temperature upon which the curve was based had been constructed on the basis of tree ring and other paleoclimatic proxy evidence.



This persuasive graphic was a frequent target of climate skeptics, who claimed that the uncertainties inherent in the proxy evidence swamp the “hockey stick signal”. Congress called upon the [National Research Council \(2006\)](#) to evaluate the uncertainties inherent in the proxy evidence. The committee, on which I served, reaffirmed that the shape of the curve was essentially correct, albeit that the uncertainties prior to 400 years ago were somewhat larger than acknowledged. I came away from this experience with a deeper appreciation of the importance of proxy data in providing a long-term perspective on global warming.

As time went on, I incorporated more about global warming into the courses that I was teaching. In the second edition of the [Wallace and Hobbs](#) textbook, published in 2006, we described climate as time varying and we devoted an entire section to global warming. In presenting this material, I placed greater

emphasis upon fundamental physical principles that can be validated on the basis of observations than predictions based on climate models. My reticence about relying heavily on models reflected my limited understanding of their intricate inner workings: I was reluctant to base my arguments on evidence that I wasn't capable of explaining in depth. Without relying on climate models, I had to limit myself to short term projections of climate change based upon simple extrapolation of the current trends, and in this essay, I've limited myself to discussing current impacts.

From someday to realtime

Up until my retirement in 2012, I still viewed the impacts of global warming as far off in the future. In talking with the students about them, I still framed the conversation more in terms of what their children and grandchildren would experience than what they would experience directly.

My own research was on the periphery of the science relating to climate change. I studied patterns of climate variability, such as El Niño, the Pacific Decadal Oscillation, and the annular modes. It's well established that tropical sea surface temperature fluctuations associated with El Niño are strong enough to modulate global mean temperature. The signatures of El Niño and the other patterns are clearly discernible in the record of global mean temperature, but only as minor embroidery. Adjusting the global mean temperature time series to remove this "dynamically induced" component of the variability smooths out some of the minor bumps in the rate of warming, but it has no effect upon the net warming or upon the duration of the mid-20th-century hiatus. Nor does adjusting the record to remove the short intervals of cooling that have been observed following major volcanic eruptions, [\(Thompson et al., 2009\)](#). And we know that the Sun cannot have been

responsible for the warming since the 1970s, because space-based measurements dating back to 1979 indicate that its energy output hasn't changed, apart from a very weak 11-year period oscillation in phase with the sunspot cycle. The only plausible explanation for the salient features in the record of global mean temperature from 1880 onward is that they are a response to the time-varying emissions of greenhouse gases and aerosols.

I'm more open to the idea that trends in the frequency of El Niño or other anomalous circulation patterns could play a role in shaping the local response to the buildup of greenhouse gases, but given the limited length of the observational record, distinguishing between human induced and naturally occurring variability of the atmospheric circulation is challenging. I recall writing a paper linking climatic trends in many areas of the Northern Hemisphere to a trend toward a strengthening of the westerlies at subpolar latitudes. The westerlies had been getting stronger for almost 20 years, but as soon as we published the papers, they began to weaken.

Local extremes amid global heating

The impacts of human-induced climate change are most clearly evident during extreme events. Much of the research funded by the National Science Foundation and other government agencies has been directed toward an understanding of how global warming affects their recurrence times and severity. Though I don't disagree with this policy, I've continued to frame my own studies in terms of changes in the means, because the impacts of global warming upon the ground hydrology and the biosphere are determined by the entire frequency distribution of temperature, not just by heat waves.

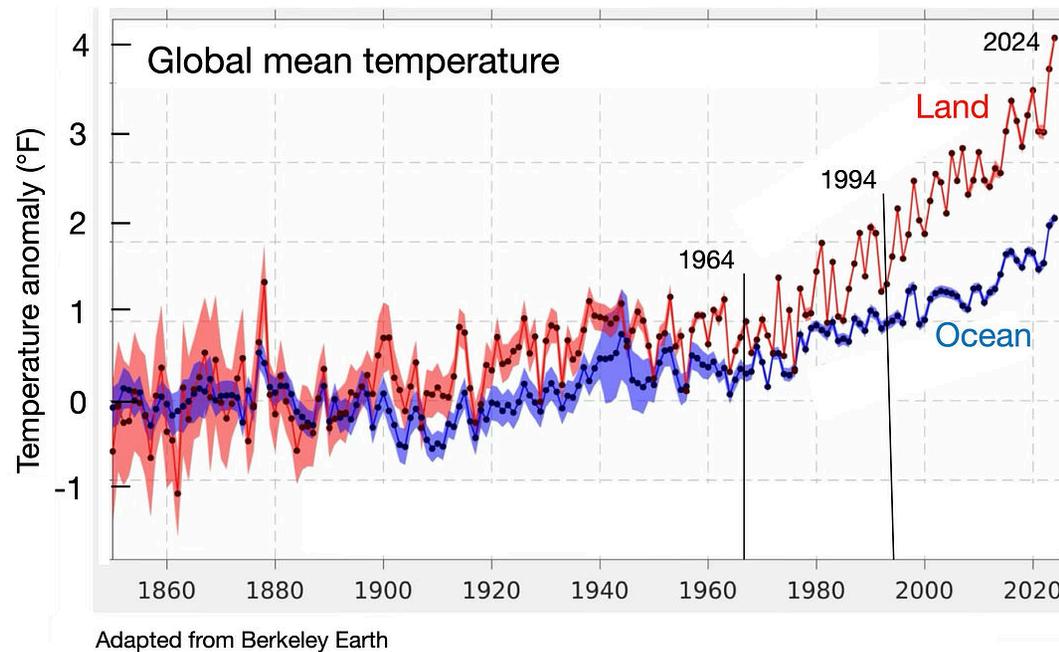
I trust that a better understanding of how the mean is changing will lead to a better understanding of how the extremes are changing. For example, just as rising tide lifts all boats, rising global mean temperature renders heat waves more severe. Because a warmer atmosphere can hold more water vapor, flood events are becoming more extreme, and hurricanes, which derive their kinetic energy from the latent heat released when water vapor condenses, are becoming more intense.

More exhaustive studies of probability distributions may be warranted in some instances, but I don't believe they should be the standard of proof for establishing that global warming affects extreme events. A third, albeit less scientific reason for not emphasizing extreme events is my concern that attribution is tricky, and even the slightest exaggeration feeds the narrative of the climate skeptics, who portray the scientific community as repeatedly "crying wolf". Arguments based on changes in the mean temperature are more difficult to counter with rhetorical arguments, and in the end, they lead to the same conclusions.

What turned out wrong

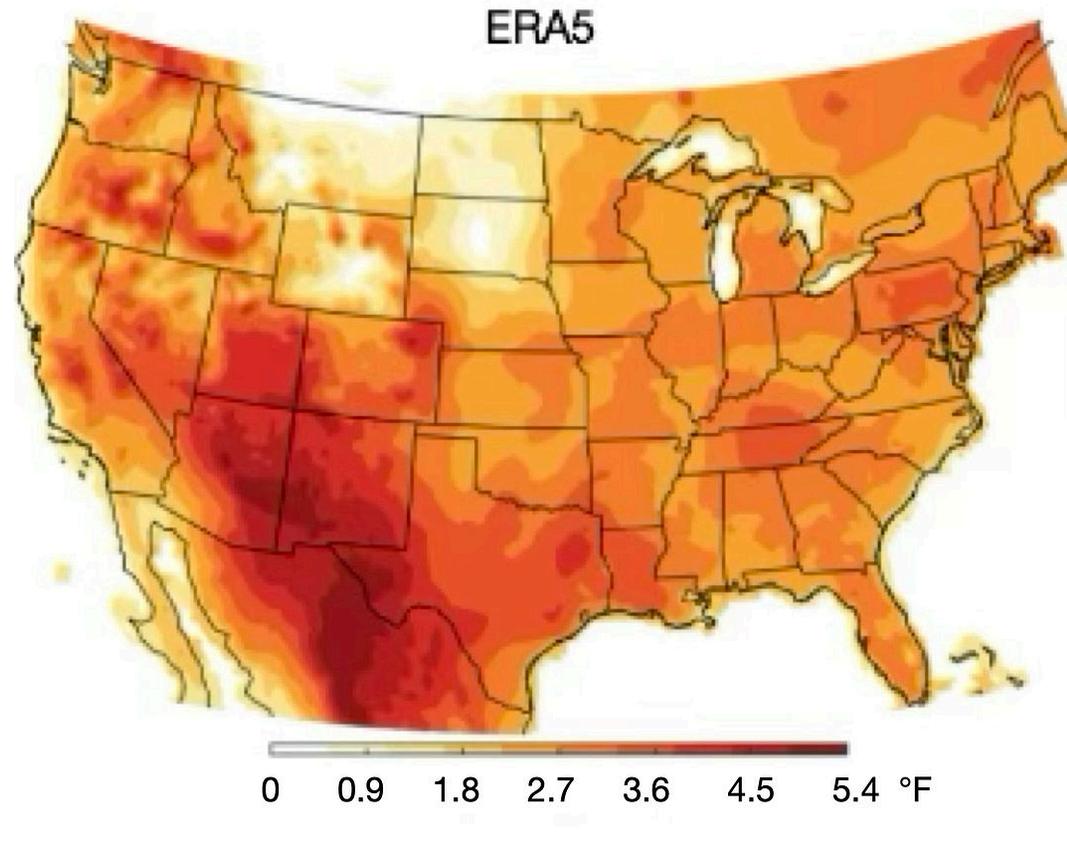
Fast-forward to 2025. As I reread the unsent letter to Vice President Gore that I drafted about 30 years ago, I think I was right in urging him to distance himself from exaggerated claims and oversimplified explanations relating to the impacts of global warming, and to take a more holistic approach in his efforts to publicize the looming environmental crisis. However, my final sentence — *"Most model-based warming scenarios do not predict enough warming, on average, during summer in temperate latitudes, to seriously disrupt the quality of life until well into the 21st century..."* — has proven to be

dead wrong. Back at that time I didn't realize how much faster the continents would warm than the oceans.



The models were predicting it, but I was reluctant to believe anything that I couldn't see in the observations, and at that time, the spatial pattern of the warming was not all that clear. Globally averaged, land has warmed by almost 3°F over the past 50 years. Over the western United States, Europe and the Middle East, the warming is ALMOST 5° F.

1975-2024 May-September ERA5



Courtesy of Chan Pang Ng

Warming and water

Global warming is already affecting hundreds of millions of people worldwide through its impacts on ground hydrology. The declining accessibility to abundant fresh water has come to be seen as a critical global environmental issue in its own right, and it's exacerbated by global warming. For example, in the western US, where temperatures have risen by about 3-5°F since the 1970s, rates of evaporation have increased by about 15 percent, inducing

increased aridity by altering the balance between evaporation and precipitation.

Global warming is also shrinking winter snowpack. The combination of reduced water supply and increased water demand is resulting in substantial reductions in summer stream flows in the Colorado, Columbia, and Merced Rivers and in the western part of the Missouri River system. Lake levels in the Great Basin are dropping; Lake Mead is down to 30 percent capacity; wells are drying up in California's Central Valley. Millions of westerners who used to take it for granted that they would always enjoy a plentiful supply of fresh water are worried, and with good reason.

Mountain glaciers and ice fields are shrinking rapidly and at an accelerating rate. The more striking example is the Alps, which have lost one third of their mass in just the past 20 years.



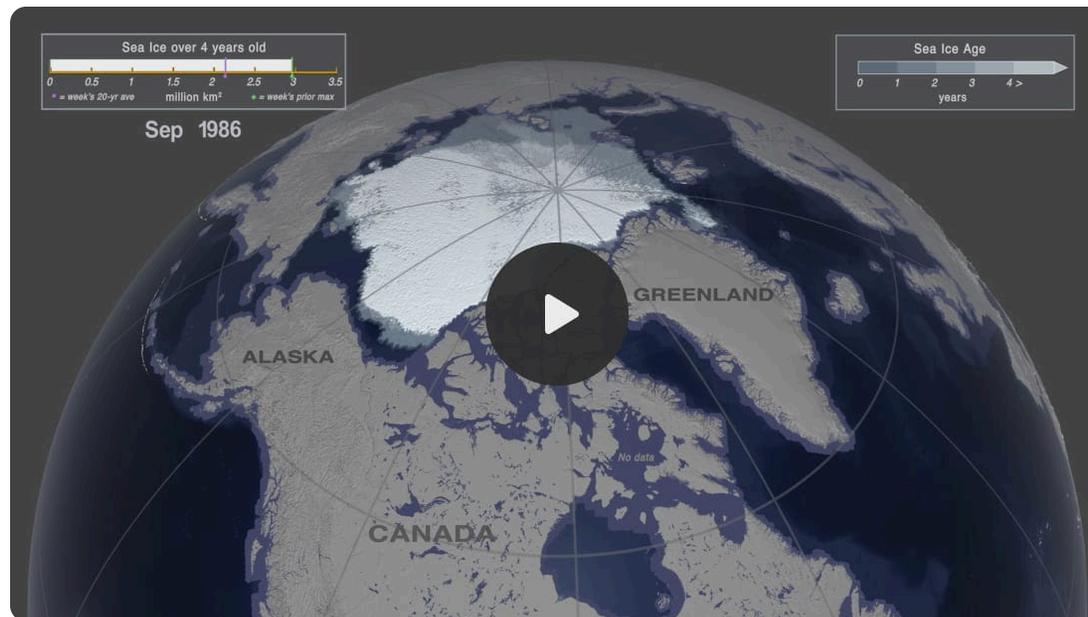
The Aletsch Glacier in 1979, 1991 and 2002. From [Andy Revkin's Substack post on his 1995 reporting on the melting](#)

[Alps](#). ([Creative Commons](#))

The Himalayas, a dependable source of summer stream flows in densely populated areas of Asia are also losing mass at an alarming rate. Declining access to fresh water is already reducing agricultural productivity in parts of the world, and the problem is compounded by the reduction in the yield of cereal grain crops as the temperature warms with sensitivities ranging as high as a 5 percent loss per degree Fahrenheit (for maize). [Zhao et al. \(2017\)](#)

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The rapidity of some of the changes is remarkable. In 1975-76, the ice in the central Arctic was thick enough during summer to mount year-round field expeditions with cargo planes and other heavy equipment, organized by my colleagues at the University of Washington. By 2010 the ice-covered area during August was down to about 40 percent of what it had been, and much of what remains is thin, first year ice. Robust, year-round, multi-year ice has never returned.

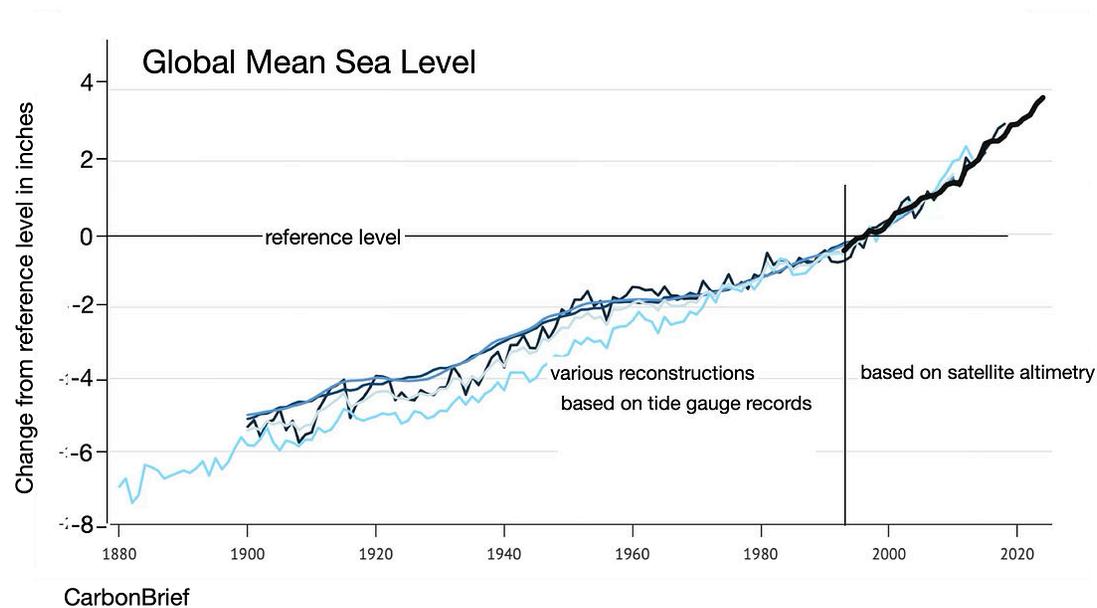


The demise of the thicker, multi year ice is documented in this [NASA visualization](#), which shows the age of the Arctic sea ice as it evolves from 1984 to 2019. Younger, thinner sea ice, or first-year ice, is rendered in a dark shade of blue while the ice that is four years old or older is shown as white. A graph displayed in the upper left corner quantifies the area covered sea ice 4 or more years old in millions of square kilometers. In the early frames of the video, thick, multi-year ice covers most of the Arctic, but as time progresses, it retreats. From 2009 onward, only a thin strip remains along the coastline of the Canadian archipelago.

Rising seas

Global warming is attended by a rise in global sea level. Based on the 32-year-long record of satellite altimetry measurements, we know that global mean sea level is rising at a rate of about an inch every six years, more than double the rate of rise during the 20th century, and the rate of rise is

continuing to accelerate as the oceans continue to warm and melt-water from the continental ice sheets accumulates in the oceans.



Rising mean sea level exacerbates the risk of coastal flooding and increases the infiltration of saline water into estuaries and wetlands. The most vulnerable crop land in the delta of the Ganges and Brahmaputra rivers in Bangladesh is already being abandoned and it is estimated that by 2050, 15 percent of the present inhabitants — on the order of 20 million people — could be displaced. In the U.S., premiums on flood insurance policies in low lying coastal cities like Miami are skyrocketing.

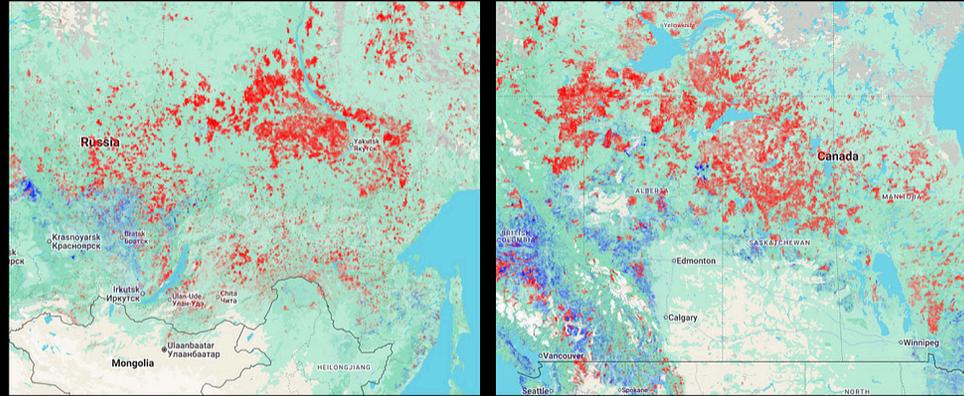
Forests on fire



A wildfire near Flin Flon, Manitoba in May 2025. Wildfires are on the scale are not unprecedented, but they are becoming more frequent. (Manitoba Government photo)

Back in the 1990s, few if any climate scientists expressed concerns that an increase in wildfires would be among the most serious impacts of global warming. It was not until 1997 that it became possible to monitor wildfires on global basis from space and it was not until recently that the record became long enough to provide a basis for estimating trends. I got interested in this issue because I've had the impression that wildfires within the state of Washington are becoming much more frequent than they were in the late 20th century. Satellite observations confirm this impression.

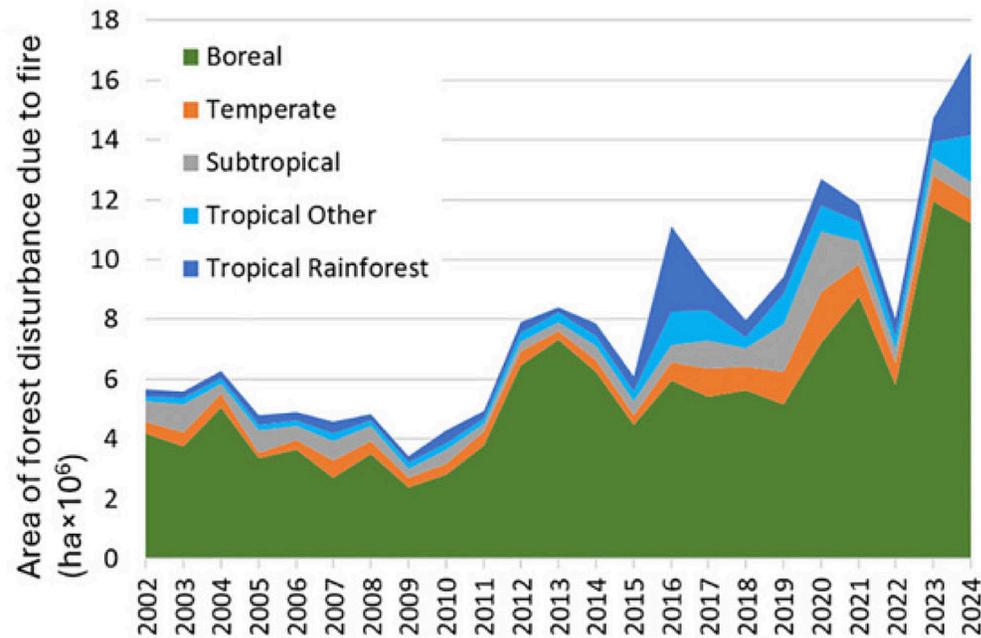
Snapshots of Forest Loss to Fire – Canada and Siberia (2000 – 2024)



From Google Earth Engine - Tyukavina et al. (2022) Global trends of forest loss due to fire, 2001-2019. *Frontiers in Remote Sensing* (updated through 2024)

revkin.substack.com

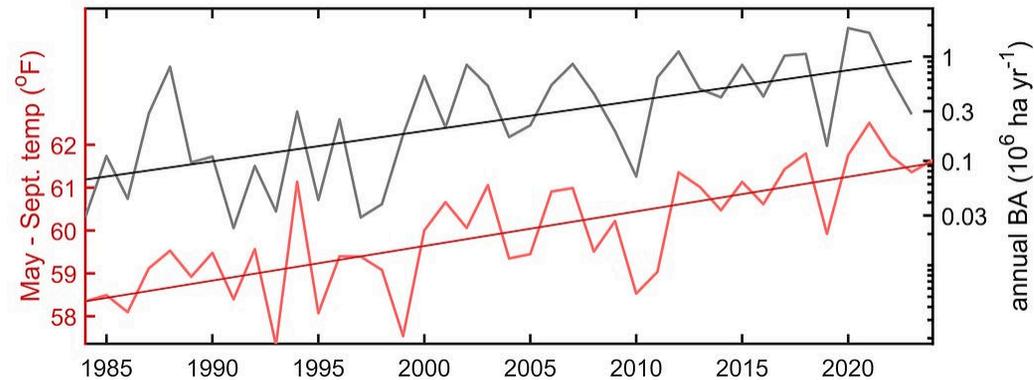
In the boreal forests of Siberia and Canada and the forests of the western US, the area burned per year has roughly tripled over the past 25 years. Longer time series created by merging ground-based records with the satellite observations indicate that over the western US the annual area burned has increased by about an order of magnitude since the 1970s.



From [Unprecedentedly high global forest disturbance due to fire in 2023 and 2024](#), Potapov et al, PNAS

The increase in wildfires is widely attributed to increasing dryness in response to the rising summer temperatures over these regions. I was initially skeptical of this idea, but upon a more careful reading of literature along with our own analysis of the data, I've gained a deeper appreciation of the importance of aridity in mediating wildfire activity and of the remarkable sensitivity of the forest landscape to incremental temperature changes. I recognize that overly aggressive fire suppression practices in the western US during the 20th century have increased the fuel loading, rendering today's fires more intense than they would otherwise be. But I can't understand how the history of fire suppression practices, which date back to the 1880s, could be responsible for the recent sudden increase in wildfire activity. Nor could

past fire suppression practices account for the equally dramatic increase in burned area over the boreal forests since the advent of space-based monitoring of fires.³



Burned area (BA) over the western US as a function of time compiled from ground-based records (MTBS) prior to 2000, sensors carried aboard satellites (MODIS) thereafter, shown together with surface air temperature. Courtesy of Chan-Pang Ng. The BA record is described in [Abatzoglou et al. \(2021\)](#).

Thirty years ago, I was hopeful the world economy could be decarbonized in time to avert its most damaging impacts. I didn't foresee how much carbon emissions were going to increase over the next few decades and how rapidly global mean temperatures would rise in response. Nor did I anticipate how much faster the surface air temperatures would rise over land than over the oceans. I was aware of the multiple lines of evidence in the paleoclimate record that demonstrate the exquisite sensitivity of the biosphere to small changes in global mean temperature, but I hadn't made the connection with what's happening today. I didn't realize how fast things can change and how

suddenly new issues can emerge. I'm less confident now than I was 30 years ago in my ability to predict what nature has in store for us.

Like many of my contemporaries in the field, my views on human induced global warming have evolved over the course of my career, as the evidence becomes more and more convincing. I still wince when I hear colleagues, science reporters, and politicians overstating or oversimplifying the connections between extreme events and global warming, but their excesses don't justify my refusing to acknowledge the imminence and the gravity of the impacts of the burning of fossil fuels. In the long run, what matters is what's happening: not what people are saying about it, and **you don't need to be a charter member of the IPCC** to comprehend what's happening.

[2]

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Afterword from Andy

Once again, please weigh in with questions and reactions in the open comment thread.

Leave a comment

Mike Wallace told me this in 2007, and I still agree:

“Global warming is real, it’s serious, but it’s just one of many global challenges that we’re facing,” said John M. Wallace, a climatologist at the University of Washington. “I portray it as part of a broader problem of environmental stewardship — preserving a livable planet with abundant resources for future generations.”

- 1 *My father and I watched the thunderstorm that spawned the Worcester tornado pass over our house in western Massachusetts. It was the most awesome sky that either of us had ever seen.*
- 2 *Strictly speaking, by absorbing and re-emitting some of the radiation emitted by the Earth’s surface, where half the re-emitted radiation from each infinitesimally thin layer is downward.*
- 3 Burned area in the illustration here is based on the MTBS dataset that appears in Abatzoglou et al: [Increasing Synchronous Fire Danger in Forests of the Western United States](#).

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COMMENT



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 Start writing

From: "West, Jason" <jjwest@email.unc.edu>

To: Kristie L Ebi <krisebi@uw.edu>

Subject: Fw: DOE climate report response working group information

Date: Tue, 5 Aug 2025 12:36:18 +0000

Importance: Normal

Hi Kris

I hope you're doing well!

I imagine you have thoughts on the new DOE climate report being used to challenge the endangerment finding.

Andy Dessler is organizing a response (see below). The document has sections on temperature and health and the crop nutrition response to climate, and I think you'd be good to contribute to the response.

If you have time in the next month, would you sign up?

Thanks

Jason West

From: Andrew Dessler <adessler@tamu.edu>

Sent: Monday, August 4, 2025 5:24 PM

Subject: Re: DOE climate report response working group information

[You don't often get email from adessler@tamu.edu. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

Howdy! Quick reminder to sign up for topics at the link below (and thanks to those of you who already signed up). I'd like to get authors assigned to most topics by early tomorrow. There are some topics with no one, so if you think you can contribute to that, that would be great. Let me know if you have any questions. Thanks again!

Link to sign up:

https://docs.google.com/spreadsheets/d/1_7UeX9xIEEnQzxK4jim4EF5KCBSrImE-d2O3MTth7fC0/edit?usp=sharing

On Sun, Aug 3, 2025 at 12:15 PM Andrew Dessler <adessler@tamu.edu> wrote:

>

> Howdy! I'm emailing you because you signed up for the effort to write

> a response to the DOE climate working group report

> (<https://www.energy.gov/topics/climate>). This email provides an

> update.

>

> Here are the important things to know:

> 1) The window to submit comments for the DOE report closes Sept. 2 (we

> also plan on submitting a modified version to the EPA; the deadline

> for that is Sept. 15). This means we need a first draft in about 2

> weeks. So the good news is that this will not be a long and drawn out
> process.

>
> 2) We had around 70 people sign up, which is fantastic. This is more
> good news: it means that no one person need do too much. If a
> significant fraction of those 70 write 1-3 pages, then we're in great
> shape. And hopefully you authors have sufficient expertise in their
> areas that you can write without doing much research.

>
> 3) We now need people to sign up for topics. I briefly thought about
> assigning people to tasks, but quickly decided it was better to let
> everyone decide what to work on. So I've put a sign up sheet here:
> https://docs.google.com/spreadsheets/d/1_7UeX9xIEnQzxK4jim4EF5KCBSrImE-d2O3MTth7fC0/edit?usp=sharing
> Please go there and put your name and email next to topics you want to
> write on. You're welcome to sign up for as many sections as you want.
> If you've changed your mind and no longer want to contribute, that's
> fine, just don't sign up for any topics.

>
> The sign-up process needs to be done by Monday night. Late Monday, I
> will finalize the writing groups for each topic and contact each group
> individually. So please sign up by then.

>
> It would be great to have a few people on each topic, so if you can't
> decide between two categories, sign up for ones that have fewer
> authors.

>
> Ideally, the groups would work together as an IPCC-like writing team,
> and if that's possible, that would be excellent. However, given that
> we need to receive drafts in two weeks, there may be no practical way
> to coordinate a single writing team on each topic. In that case,
> everyone can just write their own document and we will make efforts to
> combine them into one when we receive them. We'll have to play this
> by ear.

>
> Ultimately, the most important thing is that we get these arguments
> into the public record. It doesn't really matter if points are
> duplicated, sections don't smoothly fit together, or if the overall
> narrative of the document doesn't flow particularly smoothly.

>
> I've been talking to a few people with regulatory experience and will
> have more to tell you about what points to emphasize when I email you
> on Tuesday.

>
> One other thing: Please be careful about what you put in email. Do
> not assume what you write will remain private. That's particularly
> true of anything sent to me.

>
> Again, thanks for volunteering. One thing that every policymaker and
> those adjacent tell me is that these comments are crucially important
> for supporting the science of climate change, which many of us have
> literally spent our lives working on.

>
> If you have questions or ideas to make this process work better,
> please email me.

>
> I look forward to working with you over the next few weeks.
> Andy Dessler

>
> --
> Andrew Dessler
> Professor of Atmospheric Sciences
> Director, Texas Center for Extreme Weather
> Texas A&M University
> adessler@tamu.edu
> website: <https://artsci.tamu.edu/atmos-science/contact/profiles/andrew-dessler.html>

--
Andrew Dessler
Professor of Atmospheric Sciences
Director, Texas Center for Extreme Weather
Texas A&M University
adessler@tamu.edu
website: <https://artsci.tamu.edu/atmos-science/contact/profiles/andrew-dessler.html>

From: Stephen Morrison <SMorriso@csis.org>

To: Kristie L Ebi <krisebi@uw.edu>

Cc: Caitlin Noe <CNoe@csis.org>, Katherine Bliss <KBliss@csis.org>

Subject: Alliance report on extreme heat

Date: Fri, 24 Oct 2025 14:10:49 +0000

Importance: Normal

Attachments: DRAFT_CSIS_Climate_and_Health_Working_Group_Report_Three_Steps_to_Protect_America_Against_Extreme_Heat_10.16.25_(002).pdf

Hi Kris

I do not know what happened, that you did not receive the report. Apologies. It is attached here. Love to have you as a signatory if you are comfortable.

Best Steve

From: Kristie Ebi <krisebi@uw.edu>

To: Rachel Cleetus <RCleetus@ucs.org>

Subject: Re: Endangerment Finding expert sign-on letter

Date: Mon, 7 Jul 2025 15:37:22 -0700

Importance: Normal

Attachments: kle_Endangerment_Finding_Letter.docx

Dear Rachel:

Thanks; it is a busy time.

A few edits and comments to make the letter clearer and more accurate. Please let me know if there are any questions.

Best wishes,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Jul 7, 2025, at 2:31 AM, Rachel Cleetus <RCleetus@ucs.org> wrote:

Dear Kris, just reupping this for your attention. Thank you again for taking a look.

An update on timing: the EPA has sent the proposal to the OMB on 6/30 so we expect that it will be public within a couple of weeks, so we're trying to make sure the letter is buttoned down now so we can get it in wide circulation as soon as we see the proposal.

Best,
Rachel

From: Rachel Cleetus <RCleetus@ucs.org>

Sent: Monday, June 30, 2025 11:29 AM

To: Kristie L Ebi <krisebi@uw.edu>

Subject: RE: Endangerment Finding expert sign-on letter

Thank you so much, Kris—much appreciated!

Best,
Rachel

From: Kristie L Ebi <krisebi@uw.edu>
Sent: Monday, June 30, 2025 11:27 AM
To: Rachel Cleetus <RCleetus@ucs.org>
Subject: Re: Endangerment Finding expert sign-on letter

Dear Rachel:

Apologies for the slow response — I ran an 80-person international workshop last week and am now digging out my inbox. I will read and get back to you tomorrow.

Best wishes,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Jun 23, 2025, at 4:16 PM, Rachel Cleetus <RCleetus@ucs.org> wrote:

Dear Kris, I hope you are keeping well. I am writing to ask if you would consider being an anchor signer for the attached letter defending the EPA's Endangerment Finding for greenhouse gases.

As you probably know, we're expecting to see a proposal from the EPA soon (likely sometime in July) that will seek to undermine or overturn this Finding. Once the proposal is out, UCS is planning to circulate this letter for sign-on by climate scientists, public health experts and economists. Ahead of that, we wanted to have a core group of signers on board—and you immediately came to mind. I hope you think the letter is in good shape—although if there are any red flag edits you'd like to propose, those are most welcome. (If you could get them to me by the end of the week or early the next, that would be great.)

Please let me know what you think, and please hold the letter confidential for now. Once we see the proposal, we might want to make a few tweaks but I am hopeful that the core content is in good shape. If you have recommendations for other public health experts who might want to sign, please let me know and we can add them to the list for the broader sign-on.

Best,

Rachel

<Endangerment Finding Letter.docx>

Administrator Zeldin,

We strenuously object to your recently proposed reconsideration of the Environmental Protection Agency's (EPA's) bedrock 2009 Endangerment Finding ~~that, which~~ established the harms caused by heat-trapping emissions, and the Cause or Contribute Finding ~~that, which~~ links these harms to the sources of pollution contributing to emissions.^{1,2} As climate scientists, public health experts, and economists, we can attest to the indisputable scientific evidence of human-caused climate change, its harmful impacts on people's health and well-being, and the devastating costs it is imposing on communities across the nation and around the world. Any attempt to undermine or weaken these Findings, as well as the critical regulations linked to them, would be contrary to science and the public interest.

The EPA's authority and obligation to regulate heat-trapping emissions is firmly established in law and science, following from the 2007 Supreme Court *Mass v. EPA* decision ~~which that~~ determined that heat-trapping emissions are pollutants under the Clean Air Act and the EPA's subsequent Endangerment Finding for Greenhouse Gases and Cause or Contribute Findings.^{3,4} Efforts now to evade that ~~responsibility~~ will contribute to worsening and costly climate impacts and consequent harms to people's lives and livelihoods.

The science on climate change and its consequences was unequivocal in 2009. Since that time, it has become even more dire and compelling.⁵ Several recent authoritative syntheses of the latest science underscore this, including the US Fifth National Climate Assessment (NCA),⁶ The Intergovernmental Panel on Climate Change Sixth Assessment Report (IPCC),⁷ and the 2024 Lancet Countdown Report on Climate and Health.⁸ The latest science, backed by thousands of independent, peer-reviewed scientific studies conducted by scientists in the United States and across the world, expands and deepens our understanding of several dimensions of climate impacts and its consequences for people:

Climate change poses severe harms to human health and well-being. These harms include higher rates of heat-related morbidity and mortality; increased transmission and geographic spread of certain infectious diseases; increases in poor air quality days; increased risks to pregnant people and their babies; higher rates of heart and lung diseases; and worsening

¹ <https://www.epa.gov/newsreleases/trump-epa-kicks-formal-reconsideration-endangerment-finding-agency-partners>

² Environmental Protection Agency, Endangerment and cause or contribute findings for greenhouse gases under section 202(a) of the Clean Air Act. *Fed. Regist.* **74**, 66495–66546 (2009). These original findings were made in the context of motor vehicles and have subsequently been extended to other sources of heat-trapping emissions. [check for legal accuracy]

³ <https://supreme.justia.com/cases/federal/us/549/497/>

⁴ Environmental Protection Agency, Endangerment and cause or contribute findings for greenhouse gases under section 202(a) of the Clean Air Act. *Fed. Regist.* **74**, 66495–66546 (2009). <https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a>

⁵ Philip B. Duffy *et al.* Strengthened scientific support for the Endangerment Finding for atmospheric greenhouse gases. *Science* **363**, eaat5982(2019). DOI:[10.1126/science.aat5982](https://doi.org/10.1126/science.aat5982)

⁶ USGCRP, 2023: *Fifth National Climate Assessment*. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. <https://doi.org/10.7930/NCA5.2023>

⁷ IPCC, 2023: *Climate Change 2023: Synthesis Report*. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 35-115, doi: [10.59327/IPCC/AR6-9789291691647](https://doi.org/10.59327/IPCC/AR6-9789291691647).

⁸ The 2024 report of the *Lancet* Countdown on health and climate change: facing record-breaking threats from delayed action. Romanello, Marina *et al.* *The Lancet*, Volume 404, Issue 10465, 1847 – 1896.

Commented [KE1]: authority?
Kristie Ebi
2025-07-07 15:09:00

Commented [KE2]: first, should be were;
second, what exactly was unequivocal?
Kristie Ebi
2025-07-07 15:12:00

Commented [KE3]: what is dire? Science isn't
dire
Kristie Ebi
2025-07-07 15:13:00

Commented [JM4]: The different style in this
paragraph from the other two stands out – I'd
make them equivalent. Which I think means
turning this into key points with citations, not
direct quotes.
Julie McNamara
2025-06-23 15:44:00

Commented [KE5]: depending on what you
mean, you could be challenged on this. This is
true for ozone and pollen concentrations?
Kristie Ebi
2025-07-07 15:25:00

mental health.^{9,10,11} Climate-fueled extreme events can also affect food and water [safety and security](#) and contribute to forced displacement of people.¹² [Compounding harms can arise](#) ~~when~~ [when](#) communities are hit hard or repeatedly, or face multiple climate hazards, ~~that can~~ [compound harms](#). Populations that are more vulnerable due to health status or socioeconomic factors, or that are marginalized due to systemic factors, often face disproportionate health burdens from [extreme events and](#) climate change.

Climate attribution science firmly establishes how much climate change is increasing the likelihood of extreme events. The field of attribution science has advanced significantly in the last ten years, with a large peer reviewed literature that demonstrates and quantifies the climate contribution to different kinds of specific extreme weather events, including heatwaves, floods, wildfires and rapidly intensifying storms.^{13,14,15,16,17} There is also a growing literature on attribution of extreme events and other climate impacts, such as ocean acidification and sea level rise, to the heat-trapping emissions from major fossil fuel companies and cement manufacturers.^{18,19}

The economic toll of climate change is rising. The EPA's peer-reviewed 2023 estimates for the social cost of greenhouse gases demonstrate the significant economic harms of climate change and the benefits of reducing these emissions.^{20,21} Data from the National Oceanic and Atmospheric Administration (NOAA) show that billion-dollar disasters in the United States are on the rise, driven by a combination of climate factors and increased development in disaster-prone [areas](#).²² A recent US Department of Treasury report found that climate hazards pose a threat to US household finances, including through loss of income and benefits, business interruptions, damage to property, and increased costs of goods and services, and that these types of

Commented [KE6]: except those data are no longer collected
Kristie Ebi
2025-07-07 15:27:00

⁹ Lancet 2024.

¹⁰ USGCRP 2023.

¹¹ Clayton, S., Manning, C. M., Speiser, M., & Hill, A. N. 2021. Mental Health and Our Changing Climate: Impacts, Inequities, Responses. Washington, D.C.: American Psychological Association, and ecoAmerica.

¹² IPCC 2023.

¹³ National Academies of Sciences, Engineering, and Medicine. 2016. *Attribution of Extreme Weather Events in the Context of Climate Change*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/21852>.

¹⁴ Philip, S., Kew, S., van Oldenborgh, G. J., Otto, F., Vautard, R., van der Wiel, K., King, A., Lott, F., Arrighi, J., Singh, R., and van Aalst, M.: A protocol for probabilistic extreme event attribution analyses, *Adv. Stat. Clim. Meteorol. Oceanogr.*, 6, 177–203, <https://doi.org/10.5194/ascmo-6-177-2020>, 2020.

¹⁵ <https://www.ametsoc.org/ams/publications/special-collections/explaining-extreme-events-from-a-climate-perspective-ams-special-collection/>

¹⁶ <https://www.worldweatherattribution.org/event-papers/>

¹⁷ <https://www.ucs.org/sites/default/files/attach/2018/06/extreme-weather-Appendix-A2.pdf>

¹⁸ Sadai, Shaina, Carly Phillips, and Delta Merner. 2025. Tracing the Tides: How Major Carbon Producers Drive Sea Level Rise and Climate Injustice. Cambridge, MA. Union of Concerned Scientists. <https://doi.org/10.47923/2025.15818>

¹⁹ Kristina A Dahl *et al* 2023 *Environ. Res. Lett.* 18 064011DOI 10.1088/1748-9326/acbce8

²⁰ <https://www.epa.gov/environmental-economics/scghg>

²¹ The damage costs of an additional ton of carbon dioxide emitted in 2025 are estimated to be \$212 (in 2020 dollars, assuming a 2% discount rate). See table A.5.1 (Annual Unrounded SC-CO₂, SC-CH₄, and SC-N₂O Values, 2020-2080) in: EPA, 2023. EPA Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances. https://www.epa.gov/system/files/documents/2023-12/epa_scghg_2023_report_final.pdf

²² According to NOAA, 'The total cost of U.S. billion-dollar disasters over the last 5 years (2020-2024) is \$746.7 billion, with a 5-year annual cost average of \$149.3 billion. This 5-year cost average is more than double the 45-year (1980-2024) annual cost average of \$64.8 billion for all of the billion-dollar disaster events.' (All data adjusted for inflation). NOAA. 2024. An active year of U.S. billion-dollar weather and climate disasters. <https://www.climate.gov/news-features/blogs/beyond-data/2024-active-year-us-billion-dollar-weather-and-climate-disasters>

financial strains disproportionately harm low-income households.²³ Another recent Treasury report highlights the impacts of climate change on US insurance markets, and found that consumers living in zip codes most exposed to climate **perils-hazards** are paying premiums that are on average 82 percent higher than those in the lowest climate risk zip codes.²⁴

Mischaracterizing these scientific facts—as well as ignoring the painful reality of people's experiences—**as a means** to impede EPA regulations to limit heat-trapping emissions will harm people and our economy.

Climate change requires collective national and global action because it is caused by heat-trapping emissions building up and persisting in the atmosphere. The combined rising atmospheric concentrations of the six main greenhouse gases noted in the Endangerment Finding—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)—exert warming effects that in turn drive accelerating climate impacts.²⁵ Limiting harmful impacts to human health and well-being, now and in the future, will require cutting these emissions across sources. Robust action from the United States, a leading contributor to global heat-trapping emissions,²⁶ is crucial to meeting global climate goals to curtail the worst impacts of climate change.

The world stands on the cusp of breaching the 1.5°C (2.7°F) mark, the global average temperature increase above pre-industrial levels that scientists have long warned about.^{27,28} Already today, communities across the nation are dealing with devastating and costly climate impacts **that, which** are set to worsen **as global warming accelerates**. Humanity's window to act to stave off some of the worst impacts of climate change is fast closing; any further delay is harmful and costly.

We urge you to stop dismantling critical climate regulations and attempting to evade responsibility by **fueling** disinformation about climate science and impacts. Instead, we call on you to act with urgency to **help** address this pressing challenge by limiting heat-trapping **emissions from major pollution sources throughout the economy under EPA's purview**. People across the nation are relying on the EPA to fulfill its mission to protect public health and the environment.

Commented [JM7]: This is a good strong straightforward paragraph. I'd consider moving this toward top, even if it means swapping location with one of the others up there on details of EF.
Julie McNamara
2025-06-23 15:58:00

Commented [KE8]: with additional climate change
Kristie Ebi
2025-07-07 15:31:00

Commented [KE9]: not a good verb to use -- maybe supporting?
Kristie Ebi
2025-07-07 15:32:00

Commented [JM10]: This is okay, but if cut, would be much stronger close.
Julie McNamara
2025-06-23 16:00:00

Commented [KE11R10]: agree
Kristie Ebi
2025-07-07 15:33:00

²³ U.S. Department of the Treasury. 2023. The Impact of Climate Change on American Household Finances. https://home.treasury.gov/system/files/136/Climate_Change_Household_Finances.pdf

²⁴ According to the report: "From 2018 to 2022, consumers living in the 20 percent of ZIP Codes with the highest expected annual losses to buildings from climate-related perils paid \$2,321 in [yearly] premiums on average, 82 percent more than those in the 20 percent lowest climate-risk ZIP Codes. Also: Consumers in the highest risk ZIP Codes faced higher policy nonrenewal rates, with average nonrenewal rates about 80 percent higher than those in the lowest risk ZIP Codes." U.S. Department of the Treasury. 2025. Analyses of U.S. Homeowners Insurance Markets, 2018-2022: Climate-Related Risks and Other Factors.

https://home.treasury.gov/system/files/311/Analyses_of_US_Homeowners_Insurance_Markets_2018-2022_Climate-Related_Risks_and_Other_Factors_0.pdf

²⁵ Alongside the atmospheric build-up of heat-trapping emissions, carbon dioxide is also being absorbed by the oceans, causing ocean acidification and consequent negative impacts on marine life.

²⁶ The United States is the second largest contributor to annual heat-trapping emissions and the largest contributor to these emissions on a historical basis.

²⁷ World Meteorological Organization (WMO). 2025. Decadal Climate Update (2025-2029)

²⁸ Bevacqua, E., Schleussner, C.F. & Zscheischler, J. A year above 1.5 °C signals that Earth is most probably within the 20-year period that will reach the Paris Agreement limit. *Nat. Clim. Chang.* **15**, 262–265 (2025).

<https://doi.org/10.1038/s41558-025-02246-9>

From: "Kristie L Ebi" <krisebi@uw.edu>

To: Rachel Cleetus <RCleetus@ucs.org>

Subject: Re: Endangerment Finding expert sign-on letter

Date: Tue, 8 Jul 2025 05:03:29 -0700

Importance: Normal

Dear Rachel:

Thank you for spearheading the effort — it will be important.

Best,

Kris

Kristie L. Ebi, Ph.D., MPH
Center for Health and the Global Environment
University of Washington
Seattle WA 98109
USA

On Jul 8, 2025, at 3:29 AM, Rachel Cleetus <RCleetus@ucs.org> wrote:

Thank you so much, Kris—very helpful edits!

I will keep you posted once the proposal is public and we push this letter into wide circulation. Really appreciate your early support for this effort!

Best,
Rachel

From: Kristie L Ebi <krisebi@uw.edu>

Sent: Monday, July 7, 2025 6:38 PM

To: Rachel Cleetus <RCleetus@ucs.org>

Subject: Re: Endangerment Finding expert sign-on letter

Dear Rachel:

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Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
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Best,
Rachel

From: Rachel Cleetus <RCleetus@ucs.org>
Sent: Monday, June 30, 2025 11:29 AM
To: Kristie L Ebi <krisebi@uw.edu>
Subject: RE: Endangerment Finding expert sign-on letter

Thank you so much, Kris—much appreciated!

Best,
Rachel

From: Kristie L Ebi <krisebi@uw.edu>
Sent: Monday, June 30, 2025 11:27 AM
To: Rachel Cleetus <RCleetus@ucs.org>
Subject: Re: Endangerment Finding expert sign-on letter

Dear Rachel:

Apologies for the slow response — I ran an 80-person international workshop last week and am now digging out my inbox. I will read and get back to you tomorrow.

Best wishes,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA

krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Jun 23, 2025, at 4:16 PM, Rachel Cleetus <RCleetus@ucs.org> wrote:

Dear Kris, I hope you are keeping well. I am writing to ask if you would consider being an anchor signer for the attached letter defending the EPA's Endangerment Finding for greenhouse gases.

As you probably know, we're expecting to see a proposal from the EPA soon (likely sometime in July) that will seek to undermine or overturn this Finding. Once the proposal is out, UCS is planning to circulate this letter for sign-on by climate scientists, public health experts and economists. Ahead of that, we wanted to have a core group of signers on board—and you immediately came to mind. I hope you think the letter is in good shape—although if there are any red flag edits you'd like to propose, those are most welcome. (If you could get them to me by the end of the week or early the next, that would be great.)

Please let me know what you think, and please hold the letter confidential for now. Once we see the proposal, we might want to make a few tweaks but I am hopeful that the core content is in good shape. If you have recommendations for other public health experts who might want to sign, please let me know and we can add them to the list for the broader sign-on.

Best,
Rachel

<Endangerment Finding Letter.docx>

From: Kristie Ebi <krisebi@uw.edu>

To: Yasna Palmeiro Silva <palmeiro@uw.edu>

Cc: "Jeremy J. Hess" <jjhess@uw.edu>, Marci Burden <mburden@uw.edu>

Subject: Re: updates proposal GF

Date: Tue, 29 Jul 2025 21:13:43 -0700

Importance: Normal

Dear Yasna:

Thank you; this is very helpful. I will review tomorrow (I was reviewing responses to the endangerment finding tonight).

Tomorrow, we will have more text coming in on Kenya at least. People have added documents to the Google folder that I have yet to incorporate into the proposal. So if you, Haemin, or Cordy have time tomorrow, it would be very helpful to look at the new material to see what could be usefully added to the proposal. I suspect that documents will have more detail than we want to include in addition to useful text.

Happy to discuss tomorrow.

Best,

Kris

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On Jul 29, 2025, at 6:20 PM, Yasna Palmeiro Silva <palmeiro@uw.edu> wrote:

Dear Kris, Jeremy, Marci

A quick update on the proposal
I've checked the document, and you'll find my tracked changes.

I added some ideas to connect the current paragraphs and introduced some bits mimicking the language in the call. Using AI, I also added some information for the team, highlighting Kris and Jeremy, as the proposal weights quite a lot this section. I also added more people but was unsure about who should be added here.

Re the methods and "examples", I also included some ideas and added what experts sent. However, I'm not quite sure whether some texts are actually well suited for what's being proposed. Maybe I misunderstood some general ideas.

As all is tracked, please feel free to accept/reject.

Happy to check anything else and/or have a quick chat if you want.

Thanks so much.

Best

yasna

Yasna Palmeiro Silva

Postdoctoral Researcher

Center for Health and the Global Environment

Department of Global Health

Hans Rosling Center | 3980 15th Ave NE | Seattle, WA 98105

<Outlook-rfkqkud0.png>

Please note I work flexible hours so I may send emails outside of work hours, but I do not expect a reply outside of your working hours.

From: "Kristie L Ebi" <krisebi@uw.edu>

To: Joel Smith <joelbsmith.climate@gmail.com>

Subject: Re: Richard Tol's take on DOE report

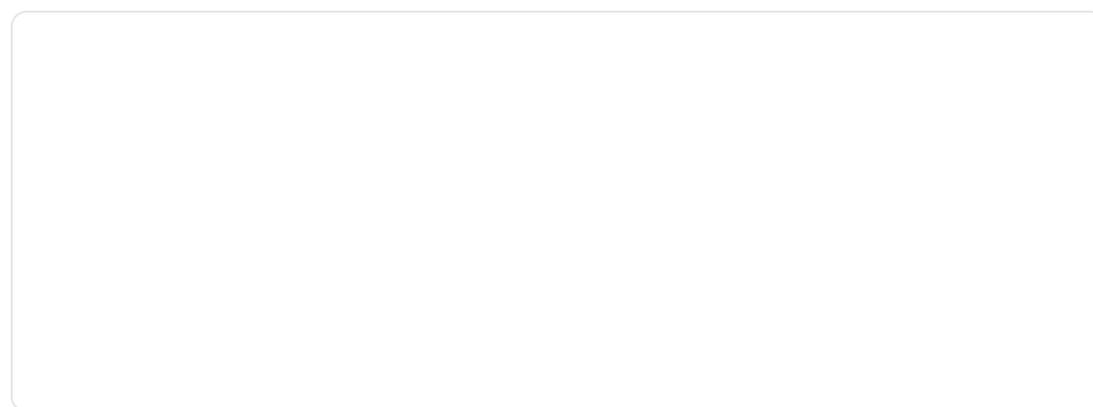
Date: Thu, 31 Jul 2025 10:40:41 -0700

Importance: Normal

Thanks Joel — interesting. K
Kristie L Ebi, PhD, MPH
Professor, Center for Health and the Global Environment
University of Washington
Seattle WA 98105
USA

On Jul 31, 2025, at 4:46 AM, Joel Smith <joelbsmith.climate@gmail.com> wrote:

(thanks to Andy Revkin)



Tol's post is entitled "**Is climate change dangerous?**"

His opening line is:

Yes, it is.

There is a long debate in the literature about the extent of the impacts of climate change but no one doubts that people will get hurt. The uncertainty about climate change impacts is large, which in itself is a reason to worry, and most would say the uncertainty is skewed the wrong way: Negative surprises are more likely than positive surprises (of equal size). If President Obama had asked me to write his Endangerment Finding I would have given him two words: “well duh”.

The Trump Administration wants to overturn this. The EPA published a legal document. The EPA argues that “GHGs [...] impact[] public health and welfare only indirectly and not by its mere presence in the ambient air”. That is true. Carbon dioxide (CO₂) is not toxic. Your lungs are full of it. We worry about CO₂ because it changes the climate, an indirect effect.

We often worry about indirect effects. As Einstein noted, it is not the fall that kills you, it is the sudden stop. Pushing someone off a building only indirectly kills them.

The EPA does not take issue with characterizing nitrogen dioxide (NO₂) and sulphur dioxide (SO₂) as air pollutants, even though these gases too affect public health and welfare only indirectly, after being transformed into nitric acid (HNO₃) and sulphuric acid (H₂SO₄), respectively.

My legally trained friends tell me that the law is impartial. If a line of argument holds for two substances (NO₂ and SO₂) then it also holds for a third (CO₂).

Their conclusion that “poor countries” are “likely to benefit” is again not backed up with references. Tol (2024), the only reference in the paragraph, concludes the opposite.

Tol then turns to the report by Spencer, Christy, McKittrick, Koonin and Curry, focusing on a section relying on his scholarship:

Their conclusion that “poor countries” are “likely to benefit” is again not backed up with references. Tol (2024), the only reference in the paragraph, concludes the opposite.

Here’s the cited Tol paper and a key section of the abstract:

Tol, Richard S.J. (2024) A meta-analysis of the total economic impact of climate change. *Energy Policy* 185 113922 <https://doi.org/10.1016/j.enpol.2023.113922>

Earlier meta-analyses of the economic impact of [climate change](#) are updated with more data, with three new results: (1) The central estimate of the economic impact of [global warming](#) is always negative. (2) The confidence interval about the estimates is much wider. (3) Elicitation methods are most pessimistic, [econometric](#) studies most optimistic. Two previous results remain: (4) The uncertainty about the impact is skewed towards negative surprises. (5) Poorer countries are much more vulnerable than richer ones. A meta-analysis of the impact of weather shocks reveals that studies, which relate economic growth to temperature levels, cannot agree on the sign of the impact whereas studies, which make economic growth a function of temperature change do agree on the sign but differ an order of magnitude in effect size. The former studies posit that climate change has a permanent effect on economic growth, the latter that the effect is transient.

Joel B. Smith
Climate Vulnerability and Adaptation Researcher
1402 Oakleaf Circle
Boulder CO 80304 USA
e-mail: joelbsmith.climate@gmail.com
Tel: 1-303-249-2204

From: Kristie Ebi <krisebi@uw.edu>

To: "Alley, Richard B" <rba6@psu.edu>

Cc: "richard.richels@gmail.com" <richard.richels@gmail.com>, Henry D Jacoby <hjacoby@mit.edu>, Ben Santer <bensanter1289@gmail.com>, Bud Ward <wardbud@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>

Subject: Re: Response to recent edits

Date: Sun, 3 Aug 2025 08:53:20 -0700

Importance: Normal

Dear Richard:

Leo Hickman (Carbon Brief) is organizing responses as well. It would be better if this was more efficient

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
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On Aug 3, 2025, at 6:16 AM, Alley, Richard B <rba6@psu.edu> wrote:

Folks—There is some discussion at Penn State about a possibly organized response to the Anti-Endangerment-Finding “report” from Christy et al. at DOE. At this point, do you know if there are organized efforts to debunk this with formal filing at DOE? (AGU, or...) Chasing down a lot of the nonsense in a Gish Gallop like this one is a lot of work, and it might be more efficient to support other comments rather than trying to generate new ones. Thanks for any thoughts. Best—Richard

From: "richard.richels@gmail.com" <richard.richels@gmail.com>

Date: Sunday, August 3, 2025 at 8:50 AM

To: 'Henry D Jacoby' <hjacoby@mit.edu>

Cc: Richard Alley <rba6@psu.edu>, 'Ben Santer' <bensanter1289@gmail.com>, 'Bud Ward' <wardbud@gmail.com>, 'Gary Yohe' <gyohe@wesleyan.edu>, "'Kristie L. Ebi'" <krisebi@uw.edu>

Subject: Response to recent edits

Dear Jake,

Attached are my responses to you last edits. As usual, I found them to be right on target. Thank you.

I am circulating this version to the group to provide all with the opportunity to weigh in.

With best regards,

Rich

From: Kristie Ebi <krisebi@uw.edu>

To: Jason West <jjwest@email.unc.edu>

Subject: Re: DOE climate report response working group information

Date: Tue, 5 Aug 2025 06:11:03 -0700

Importance: Normal

Hi Jason:

I thought I did sign up. Is my name not there? There have been so many requests to sign up... I already wrote the response on CO2 and nutrient density.

I looked at the heat — it's based on Gasparrini's papers. I think there are fundamental issues that Antonio will not acknowledge. He doesn't care is the problem. Happy to discuss how to address.

Best wishes,

Kris

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On Aug 5, 2025, at 5:36 AM, West, Jason <jjwest@email.unc.edu> wrote:

Hi Kris

I hope you're doing well!

I imagine you have thoughts on the new DOE climate report being used to challenge the endangerment finding.

Andy Dessler is organizing a response (see below). The document has sections on temperature and health and the crop nutrition response to climate, and I think you'd be good to contribute to the response.

If you have time in the next month, would you sign up?

Thanks

Jason West

From: Andrew Dessler <adessler@tamu.edu>
Sent: Monday, August 4, 2025 5:24 PM
Subject: Re: DOE climate report response working group information

[You don't often get email from adessler@tamu.edu. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

Howdy! Quick reminder to sign up for topics at the link below (and thanks to those of you who already signed up). I'd like to get authors assigned to most topics by early tomorrow. There are some topics with no one, so if you think you can contribute to that, that would be great. Let me know if you have any questions. Thanks again!

Link to sign up:

https://docs.google.com/spreadsheets/d/1_7UeX9xIEnQzxK4jim4EF5KCBSrImE-d2O3MTth7fC0/edit?usp=sharing

On Sun, Aug 3, 2025 at 12:15 PM Andrew Dessler <adessler@tamu.edu> wrote:

>
> Howdy! I'm emailing you because you signed up for the effort to write
> a response to the DOE climate working group report
> (<https://www.energy.gov/topics/climate>). This email provides an
> update.
>
> Here are the important things to know:
> 1) The window to submit comments for the DOE report closes Sept. 2 (we
> also plan on submitting a modified version to the EPA; the deadline
> for that is Sept. 15). This means we need a first draft in about 2
> weeks. So the good news is that this will not be a long and drawn out
> process.
>
> 2) We had around 70 people sign up, which is fantastic. This is more
> good news: it means that no one person need do too much. If a
> significant fraction of those 70 write 1-3 pages, then we're in great
> shape. And hopefully you authors have sufficient expertise in their
> areas that you can write without doing much research.
>
> 3) We now need people to sign up for topics. I briefly thought about
> assigning people to tasks, but quickly decided it was better to let
> everyone decide what to work on. So I've put a sign up sheet here:
> https://docs.google.com/spreadsheets/d/1_7UeX9xIEnQzxK4jim4EF5KCBSrImE-d2O3MTth7fC0/edit?usp=sharing
> Please go there and put your name and email next to topics you want to
> write on. You're welcome to sign up for as many sections as you want.
> If you've changed your mind and no longer want to contribute, that's
> fine, just don't sign up for any topics.
>
> The sign-up process needs to be done by Monday night. Late Monday, I
> will finalize the writing groups for each topic and contact each group
> individually. So please sign up by then.
>
> It would be great to have a few people on each topic, so if you can't
> decide between two categories, sign up for ones that have fewer
> authors.
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> Ideally, the groups would work together as an IPCC-like writing team,
> and if that's possible, that would be excellent. However, given that
> we need to receive drafts in two weeks, there may be no practical way
> to coordinate a single writing team on each topic. In that case,
> everyone can just write their own document and we will make efforts to
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> into the public record. It doesn't really matter if points are
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> narrative of the document doesn't flow particularly smoothly.
>
> I've been talking to a few people with regulatory experience and will
> have more to tell you about what points to emphasize when I email you
> on Tuesday.
>
> One other thing: Please be careful about what you put in email. Do
> not assume what you write will remain private. That's particularly
> true of anything sent to me.
>
> Again, thanks for volunteering. One thing that every policymaker and
> those adjacent tell me is that these comments are crucially important
> for supporting the science of climate change, which many of us have
> literally spent our lives working on.
>
> If you have questions or ideas to make this process work better,
> please email me.
>
> I look forward to working with you over the next few weeks.
> Andy Dessler
>
> --
> Andrew Dessler
> Professor of Atmospheric Sciences
> Director, Texas Center for Extreme Weather
> Texas A&M University
> adessler@tamu.edu
> website: <https://artsci.tamu.edu/atmos-science/contact/profiles/andrew-dessler.html>

--
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website: <https://artsci.tamu.edu/atmos-science/contact/profiles/andrew-dessler.html>

From: Kristie Ebi <krisebi@uw.edu>

To: Jason West <jjwest@email.unc.edu>

Subject: Re: DOE climate report response working group information

Date: Tue, 5 Aug 2025 06:46:57 -0700

Importance: Normal

Hi Jason:

Weird. I know I put my name down; I remember the form. I just added my name again.

Yes on talking about heat and health.

I already wrote out my responses for 9.4. Should I email those in?

Best wishes,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
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On Aug 5, 2025, at 6:16 AM, West, Jason <jjwest@email.unc.edu> wrote:

Kris

I don't see your name on the signup sheet below.

I'd be happy to talk about the heat and health sometime.

Jason West

From: Kristie L Ebi <krisebi@uw.edu>

Sent: Tuesday, August 5, 2025 9:11 AM

To: West, Jason <jjwest@email.unc.edu>

Subject: Re: DOE climate report response working group information

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> Andrew Dessler
> Professor of Atmospheric Sciences
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> Texas A&M University
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> website: <https://artsci.tamu.edu/atmos-science/contact/profiles/andrew-dessler.html>

--
Andrew Dessler
Professor of Atmospheric Sciences
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Texas A&M University
adessler@tamu.edu
website: <https://artsci.tamu.edu/atmos-science/contact/profiles/andrew-dessler.html>

From: Kristie L Ebi <krisebi@uw.edu>

To: Antonio Gasparrini <Antonio.Gasparrini@lshtm.ac.uk>

Cc: Andy Haines <Andy.Haines@lshtm.ac.uk>

Subject: Re: DOE report features Antonio's research in section 10.3.1

Date: Thu, 7 Aug 2025 12:12:18 -0700

Importance: Normal

Attachments: DOE_Section_9.4_Ebi_Neumann_7Aug2025.docx

Dear Antonio:

Thank you. I would encourage you to provide a response to include in at least one of the responses to the DOE report; it will be helpful for the US and for other countries choosing to go this route. There is another group, organized by Andy Dessler at TAMU. I copy most of a message from him below. It seems to be a larger and more organized effort. If you're interested, the link for sign up is in the text from Andy.

Writing a commentary based on the response would be helpful to the larger scientific community.

If it helps, I attach what I worked on with a colleague about the DOE section on CO2 and nutrient density, to show format and level of detail. Andy is happy with it.

I downloaded some papers that indicate the problem of hypothermia is small in the US. Hypothermia deaths have been increasing in the US, presumably because of the very frigid winters that now seem to alternate between North America and Europe. One estimate is that 0.06% of winter season deaths are from hypothermia, if I remember correctly from reading while participating in a meeting. Anyway, I can write something on this if that would be helpful.

@Andy: having your expertise in writing for a particularly challenging audience would be helpful. Thank you.

All the best,

Kris

Here are the important things to know:

1) The window to submit comments for the DOE report closes Sept. 2 (we also plan on submitting a modified version to the EPA; the deadline for that is Sept. 15). This means we need a first draft in about 2 weeks. So the good news is that this will not be a long and drawn out process.

2) We had around 70 people sign up, which is fantastic. This is more good news: it means that no one person need do too much. If a

significant fraction of those 70 write 1-3 pages, then we're in great shape. And hopefully you authors have sufficient expertise in their areas that you can write without doing much research.

3) We now need people to sign up for topics. I briefly thought about assigning people to tasks, but quickly decided it was better to let everyone decide what to work on. So I've put a sign up sheet here:

[https://urldefense.com/v3/___https://docs.google.com/spreadsheets/d/1_7UeX9xIEnQzxK4jim4EF5KCBSrImE-d2O3MTth7fC0/edit?usp=sharing__;!KwNVnqRv!AjDKeN9uCdzwliPm4h5KgCb1tMw00DPcCDNBCVfJBmygnVs6NOy3crr_lfhJx47dYd7DtHKk2Y2OLjQ\\$](https://urldefense.com/v3/___https://docs.google.com/spreadsheets/d/1_7UeX9xIEnQzxK4jim4EF5KCBSrImE-d2O3MTth7fC0/edit?usp=sharing__;!KwNVnqRv!AjDKeN9uCdzwliPm4h5KgCb1tMw00DPcCDNBCVfJBmygnVs6NOy3crr_lfhJx47dYd7DtHKk2Y2OLjQ$)

Please go there and put your name and email next to topics you want to write on.

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
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On Aug 7, 2025, at 10:44 AM, Antonio Gasparrini <Antonio.Gasparrini@lshtm.ac.uk> wrote:

Dear Kris,

Thanks for reaching out.

Indeed, I have been contacted by several people, including Associated Press and Carbon Brief, to comment on the report, in particular about the reporting and citation of our work. In addition, several MCC colleagues has gotten in touch, with some suggestions to write a commentary or some kind of rebuttal, trying to address the most outrageous statements.

I will send an email around later tonight, including all the colleagues who can be interested in contributing.

Feel free then to reply and suggest any strategy and action.

Best

-AG

From: Kristie L Ebi <krisebi@uw.edu>

Date: Thursday, 7 August 2025 at 05:46

To: Andrew Haines <Andy.Haines@lshtm.ac.uk>, Antonio Gasparri
<Antonio.Gasparri@lshtm.ac.uk>

Subject: DOE report features Antonio's research in section 10.3.1

Dear Antonio and Andy:

I'm sure you've heard about the efforts by USEPA and DOE to void the endangerment finding made by EPA in 2009 that carbon dioxide and methane pose a threat to public health and welfare; this is the legal basis for regulating these emissions in the US.

DOE released a report last week written by well-known climate skeptics (attached). There are multiple efforts to respond to the accuracy of the report, including media such as Associated Press, Carbon Brief, a collaboration of over 70 scientists led by Prof Andrew Dessler at TAMU, and undoubtedly others.

The report uses Antonio's research and other citations to conclude that rising temperatures will result in a net saving of lives.

Please let me know if you would like to engage in responding to the claims and to answer the questions of whether your research was misrepresented and, if so, why/how. If yes, then I will put you in touch with Dessler and Carbon Brief.

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

From: Kristie Ebi <krisebi@uw.edu>

To: Antonio Gasparrini <antonio.gasparrini@lshtm.ac.uk>

Cc: Andy Haines <andy.haines@lshtm.ac.uk>

Subject: Instructions on how to format comments

Date: Fri, 8 Aug 2025 00:29:31 -0700

Importance: Normal

Hi Antonio:

This just in on how to format responses.

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

Begin forwarded message:

From: Andrew Dessler <adessler@tamu.edu>

Subject: update on DOE response effort

Date: August 7, 2025 at 7:26:21 PM PDT

To: undisclosed-recipients;

Howdy and thanks again for your interest in writing a response to the DOE climate report. Here is an update.

Sorry if you receive this twice — some people listed different email addresses on the different forms so you're getting messages at both places. If you don't want to receive these messages anymore, just let me know and I'll remove you from the list.

Now down to business. The DOE comment portal has these instructions: *Any comments provided must reference the relevant page in the CWG Report. If a comment addresses a table or figure, that cross-reference should be provided. To assist DOE's review of submitted comments, for each comment, please indicate a comment type from the following list: editorial; technical; reference; or other.*

I asked chatGPT to break this down and you can see what it said here: <https://chatgpt.com/share/68954df9-24c0-8004-869b-28a74fb358b2>. In any event, as you write your section, please make sure to follow these

instructions. If you don't, you give them the ability to say that we didn't follow instructions and ignore your comments.

I've had discussions with lawyers and other policy experts over the last few days and they basically confirm what everyone thought we should emphasize:

- Demonstrate how DOE report cherry-picks data and papers while ignoring broader climate science evidence
- Document how the report misuses and misrepresents the studies that are cited
- Document that these are "zombie arguments" already debated and resolved in some cases 30 years ago
- Of particular value is having authors of misquoted studies document that

As a reminder, here is the spreadsheet with the sections for everyone: https://docs.google.com/spreadsheets/d/1_7UeX9xIEnQzxK4jim4EF5KCBSrImE-d2O3MTth7fC0/edit?usp=sharing

Hopefully people have gotten together with the others who volunteered for the same section and are writing the section together. If, for whatever reason, you can't do that, don't worry! Just write the section by yourself. As I've said before, the goal here is not to write a tiny IPCC report but to just get the points into the public record in any form we can.

Also, please follow a few simple formatting rules. First, put the names of everyone who contributed to your section below the title. Second, put a short synopsis of the points you're responding to at the top of the section, so your comments have some context. Third, let's consistently refer to the DOE report as the "DOE CWG report". Finally, follow the DOE requirements listed above. Other than that, go hog wild!

When your section is ready for a larger review, you can upload it here: https://drive.google.com/drive/folders/12u0UnpNaNOkq_U6U8oxYUh4SKFDcngZ7?usp=sharing. I put a draft of a section I'm working on there, just FYI.

OK, on to another important development: The NASEM has launched a fast-track review of the science of the endangerment finding:

<https://www.nationalacademies.org/news/2025/08/national-academies-launch-fast-track-review-of-latest-evidence-for-whether-greenhouse-gas-emissions-endanger-public-health-and-welfare>

I don't know what their remit is and I don't think this should cause us to alter our plans.

However, I think we CAN help them: they're asking for comments, with a deadline of Aug. 27. I think it makes sense to submit whatever we have to them by that date.

All of this means that we really need to stick to our deadline of Aug. 18 for first drafts from all of you.

As always, feel free to reach out to me with questions/comments/suggestions. Look for another update from me early next week.

Thanks, Andy Dessler

--

Andrew Dessler
Professor of Atmospheric Sciences
Director, Texas Center for Extreme Weather
Texas A&M University

adessler@tamu.edu

website: <https://artsci.tamu.edu/atmos-science/contact/profiles/andrew-dessler.html>

From: Kristie Ebi <krisebi@uw.edu>

To: "richard.richels@gmail.com" <richard.richels@gmail.com>

Cc: Henry D Jacoby <hjacoby@mit.edu>

Subject: Re: Scorching reality

Date: Sat, 9 Aug 2025 02:25:07 -0700

Importance: Normal

Attachments: kle_Draft_of_Scorching_realities_with_multiple_edits_accepted_april_6_rr_KE_HJ_rrHJ_8-1rr8-3HJ_rr-8-8.docx; Jay_HeatExtremes_CoolingStrategies_2021.pdf

Dear Rich:

This looks great — I added some health perspectives. I would be honored to be a coauthor. Please let me know if anything is unclear.

Best wishes,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHAnGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Aug 8, 2025, at 1:50 PM, richard.richels@gmail.com wrote:

Hi Kris,

We are in the process of completing the heatwave piece for Climate Café and are hoping that you will take one more look from the public health perspective and suggest changes that you feel are necessary. Hopefully, the public health literature is correctly characterized and attributed but will await your judgement.

I hope that you are willing to be a coauthor.

With best regards,

Rich

From: Henry D Jacoby <hjacoby@mit.edu>

Sent: Friday, August 8, 2025 12:52 PM

To: richard.richels@gmail.com

Subject: Re: Scorching reality

Rich,

I think this looks good and I am happy to sign on. Attached is the draft with a few additional edits you might consider. All are minor—mainly smoothing and suggestions for a different word in a few places.

So you can easily find my edits, I accepted the previous changes and worked with a clean copy. On my “accepting all” the Comments remain, and I inserted a comment on one and added a question in another, new one.

All the best,
Jake

<Draft of Scorching realities with multiple edits accepted april 6 rr KE HJ rrHJ 8-1rr8-3HJ rr-8-8.docx>



A scorching reality: increasingly punishing heatwaves

Abstract

Fossil fuel emissions are dramatically altering both average temperature and weather variability. If greenhouse gas emissions are not significantly cut, dangerous temperature rises will persist. Delaying action will cause lasting harm and economic loss. This discussion describes the nature of the threat and the challenges that must be addressed **in-order** for the Nation to mitigate risks to its wellbeing.

Commented [KE1]: I suggest dropping weather because it may not be clear why weather is mentioned
 Kristie Ebi
 2025-08-09 01:52:00

The heatwaves laying siege to the U.S. population are [worsening](#). According to the National Weather Service, they are the [leading weather-related cause of death](#) in the U.S., rivaling that of hurricanes, floods and tornadoes combined. If you doubt the seriousness of the record-breaking extremes [reported in the media](#), you only need to go outside and observe for yourself—but be sure to wear appropriate [clothing, including](#) footwear. Here we discuss why these extreme events are happening, and what to expect if we continue to bury our heads in the sand, progressively losing the options for lessening the pain and suffering they bring.

We should not be surprised at these prolonged series of days of abnormally high temperatures. They are a natural knock-on effect of the way greenhouse emissions are changing average conditions on a planet with [noisy](#) weather. -The higher the atmospheric CO₂ concentrations, the greater the average global temperature, as shown in Figure 1, and [this increase in the average temperature has a dramatic effect on extreme weather conditions—including](#) [what we perceive as](#) heatwaves.

[That](#) effect is illustrated in Figure 2, which shows probability curves for a system with high variability, such as the weather. The top panel shows how an increase in the average or mean temperature magnifies the probability of extremes (the shaded areas under the curves). Unfortunately, that is not the only effect of the warming. It also [increases the variability of the weather](#). That effect is illustrated in the middle panel, where the probability of extremes is higher under the curve with the greater variability. And, of course, we are experiencing the combined effect, shown in the bottom panel.

The human-forced warming driving this increase in extreme weather, including the increase in blistering heat, will not stop until emissions of CO₂ and other greenhouse gases approach zero and no longer produce more atmospheric build-up. Unfortunately, global emissions continue apace, contributing to a rising atmospheric CO₂ concentration along the path in Figure 1. An increase in global average temperature, [so-alsoand](#) in heatwaves, surely will follow.

Commented [KE2]: increasingly chaotic?
Kristie Ebi
2025-08-09 01:58:00

Commented [KE3]: suggest deleting
Kristie Ebi
2025-08-09 01:59:00

Commented [KE4]: This?
Kristie Ebi
2025-08-09 01:59:00

And the harm that comes with these heatwaves? They are conventionally summarized in two categories. We look first at market damages – those that show up in national income accounts. Then we will turn to non-market damages – losses to life and limb, ecosystems and other amenities where assigning a dollar value is much more difficult and contentious.

For example, the Atlantic Council studied the way that heatwaves can alter economic activity, with a focus on worker productivity . Not surprisingly, it found productivity losses highest in sectors where work is outdoors, such as agriculture and construction, or in a poorly-conditioned indoor environment. It estimateds current annual losses at \$100 billion and projects that, without ameliorative action, they will worsen over time, doubling by 2030 and more than quadrupling by midcentury in the absence of ameliorative action. The study was purposely conservative in that it excludeds other factors such as the effects of extreme heat on tourism, infrastructure, healthcare costs, and energy facilities.

Of course, the effect of heatwaves on the U.S. economy extends beyond the punishment of those who work in heat sensitive jobs. They also raise healthcare costs. The U.S. healthcare sector, already strained by an aging population, will be further stressed in a world of rising periods of extreme temperature. Increases in heatwaves will interact with other effects of rising average temperatures such as deteriorating air quality, and the spread of vector borne diseases (e.g., dengue fever, malaria, Lyme disease, and West Nile virus)—creating even more demands on the already overtaxed health system.

The U.S. agriculture sector, representing roughly 5.5% of GDP and 10% of exports, will also experience rising costs due to reduced crop yields and impacts on livestock. A recent study sponsored by the European Central Bank portends worse to come. It found that rising temperatures could increase annual food inflation by up to 3.2% percentage points per year and overall inflation by up to 1.2% percentage points per year by 2035.

And, of course, there are the economic effects on the electricity sector where heatwaves can significantly spike customer cooling demands, reduce the efficiency of power plants, and limit the capacity of transmission lines.

These pressures on the system will lead to more frequent interruptions in electricity supply, will amplifying the ensuing pain and suffering.

Commented [HDJ5]: Add citation here?
Henry D Jacoby
2025-08-02 14:37:00

Commented [RR6R5]: done
Richard Richels
2025-08-03 07:38:00

Which brings us to the non-market damage of heatwaves and its most dramatic component: human mortality and morbidity. After showing no sustained increase in the early years of the present century, the Center for Disease Control (C.D.C.) reported U.S. annual fatalities to have quadrupled over the most recent decade with the number of heat-related deaths rising from approximately 400 to 1,700 in 2024. This figure is acknowledged to be a significant underestimate.

This human toll contrasts sharply with the 47,000 fatalities reported by the E.U. during its 2023 heatwave. Of course, one explanation for the difference is the air conditioning gap between the two regions— 20% of E.U. households vs. 90% in the U.S.—but there are other differences among the two. For example, researchers have long argued that the reliance of the C.D.C. on death certificates leads to serious underreporting of fatalities. When subjected to Using the more rigorous-comprehensive statistical analysis applies in the E.U., U.S. excess fatalities at the start of the century may be-have been as high as 10,000 annually. Other factors contributing to the E.U.'s higher numbers include a larger population and different timing and severity if heat events.

Even with less-lower mortality than in the E.U., the rise in U.S. heat rate-related fatalities is ominous. Moreover, studies show that rolling power brownouts during extreme heat waves are significantly increasing the risk -of deaths. The combination of high temperatures and power outages can more than double the number of heat-related deaths compared to heat-waves alone. Not only must Thus adaptation must include a wide range of options to heat stress, including the costs more-intensive use-of-of air conditioning, where needed, but and also the costs of preventing the investments in infrastructure to reduce urban heat islands and to guard against disastrous electrical blackouts.

Population aging is increasing the numbers of people at risk during heatwaves, which means the healthcare system also must And, with the persistent possibility that required cooling needs will still fall short, what then? Must not the health care system be adapted to for the concomitant rise in heat illnesses. ? All-of-†This is to suggests the threat of ever mushrooming adaptation costs. E.U. studies emphasize the need for both strong mitigation

Commented [HJ7]: Here would be a place to introduce the role of air conditioning—who has it or not, and why.

Henry D Jacoby
2025-07-24 14:03:00

Commented [RR8R7]: Ok
Richard Richels
2025-07-29 13:11:00

Commented [RR9R7]: See next paragraph.
Richard Richels
2025-08-03 08:16:00

Commented [HDJ10]: Do we know that the EU estimates are based on statistics of excess death?
Also, perhaps cite Hsiang and others who made this estimate?

Henry D Jacoby
2025-08-08 12:20:00

Commented [RR11R10]: See attached reference
Richard Richels
2025-08-08 15:51:00

Commented [KE12]: can cite Jay et al. Lancet 2021 – I can send the paper if you need it

Kristie Ebi
2025-08-09 02:11:00

Commented [KE13]: font is different for some reason

Kristie Ebi
2025-08-09 02:14:00

[and adaptation measures](#) for European cities to decrease their temperature-related mortality burden.

Stopping the march to ever increasing heatwaves will not be easy, and failure to take account of the inertia in the socioeconomic system risks grossly underestimating the challenges ahead and the costs of failure. Moreover, [although](#) the speed of [changeover](#) to less carbon polluting fuels can be accelerated, the transition will face [mounting resistance from fossil fuel owners and those beholden to them](#). If the present Administration is successful in its attempts to increase [dependence](#) on fossil fuels, it will be [unwittingly committing](#) to a continued exponential and unfathomable threat to life and livelihood.

Of course, Americans are not likely to remain wedded to such denialism if the streets continue to buckle under their very feet and they spend more time in cooling centers. -But if we wait too long, equivocating about what to do, we will be locked into much avoidable pain and [suffering](#).

Commented [HDJ14]: The reference to the groundhog is off base. It is about the science, not opposition to emissions control. Got a better reference?

Henry D Jacoby
2025-08-02 15:14:00

Commented [RR15R14]: Better reference?
Richard Richels
2025-08-03 08:12:00

Commented [HDJ16R14]: I don't think it needs one. On second look I think the groundhog is OK.

Henry D Jacoby
2025-08-08 12:26:00

Commented [RR17R14]: The groundhog returneth!
Richard Richels
2025-08-08 16:31:00

Commented [KE18]: is changeover one or two words?

Kristie Ebi
2025-08-09 02:16:00

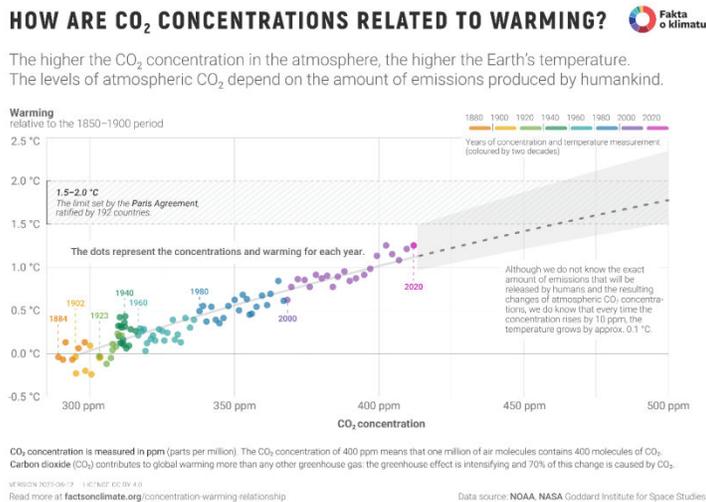
Commented [KE19]: Because they are doing this intentionally, I'm not sure this is "unwittingly"

Kristie Ebi
2025-08-09 02:18:00

Commented [KE20]: you mentioned footwear at the beginning -- do you want to return to that?

Kristie Ebi
2025-08-09 02:21:00

Figure 1. CO₂ Concentrations and mean global warming



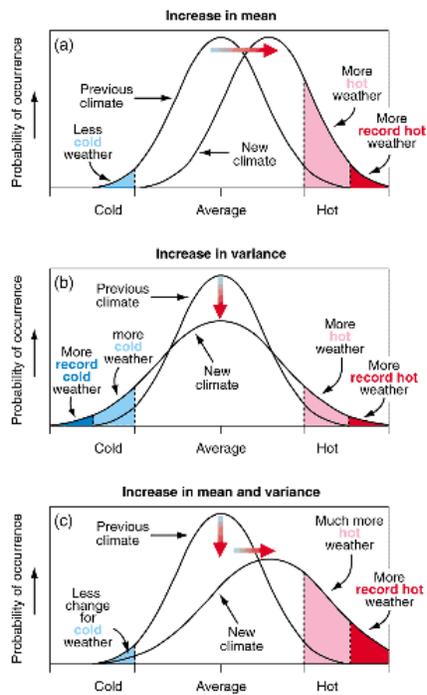


Figure 2. Schematic showing the effect on extreme temperatures when (a) the mean temperature increases, (b) the variance increases, and (c) when both the mean and variance increase for a normal distribution of temperature. <https://archive.ipcc.ch/ipccreports/tar/wg1/fig2-32.htm>

From: Kristie Ebi <krisebi@uw.edu>

To: Edmond Totin <edmond.totin@gmail.com>

Subject: Re: UNELD-Africa Review Protocol

Date: Mon, 11 Aug 2025 15:55:21 -0700

Importance: Normal

Hi Edmond:

I would like to help. I've been sucked into the endangerment issue, but hope to extract myself soon.

Best wishes,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Aug 11, 2025, at 3:21 PM, Edmond Totin <edmond.totin@gmail.com> wrote:

Thanks, Kris - That's right. The search retrieved 1476 papers, and the first step will be screening abstracts to include or exclude. I can add your name to the UNELD-Health team if you have time and are willing to do so. Please let me know.

Edmond

On Mon, 11 Aug 2025 at 16:19, Kristie L Ebi <krisebi@uw.edu> wrote:

Dear Edmond:

My apologies for being late, again. As expected, the protocol is thoughtful and well written; congratulations.

My only comment is to consider writing a protocol for deciding whether a paper actually focuses on climate change. The health literature is full of papers claiming to be about climate change but that actually focus on weather. It's a growing problem with reviews that mix weather and climate change; the conclusions are not clear.

Best wishes,

Kris

On Jul 23, 2025, at 7:34 AM, Edmond Totin <edmond.totin@gmail.com> wrote:

Dear All, [here](#) is the first draft of the review protocol that Nfamara and I have suggested for your input and feedback.

We would be pleased to receive your feedback by next week, **Wednesday 30 July**. After that, we will finalise the draft and begin the review within each Working Group Team.

Thanks,

Edmond and Nfamara

From: Kristie Ebi <krisebi@uw.edu>

To: Marci Burden <mburden@uw.edu>, "Jeremy J. Hess" <jjhess@uw.edu>

Subject: You should know about this

Date: Wed, 20 Aug 2025 18:21:32 -0700

Importance: Normal

Hi Marci and Jeremy:

You know I've spent a lot of time writing a rebuttal to various sections of the DOE report supporting voiding the endangerment finding. I'm part of the team of about 80-90 scientists that Andy Dessler (Texas A&M put together). Our rebuttal also will be uploaded to the DOE website and to the NASEM call for information. Anyway, this just in.

[https://urldefense.com/v3/___https://www.eenews.net/articles/trump-team-readies-more-attacks-on-mainstream-climate-science/__;!!K-Hz7m0Vt54!lqA9pZquJDJWY_pNI8YwVIMQAjk-veu2zhlxiUwwe7KJ-E_9-j4_f5t-r6VNoIR_TpVrAPFDmmSJEUVcjmBFBg\\$](https://urldefense.com/v3/___https://www.eenews.net/articles/trump-team-readies-more-attacks-on-mainstream-climate-science/__;!!K-Hz7m0Vt54!lqA9pZquJDJWY_pNI8YwVIMQAjk-veu2zhlxiUwwe7KJ-E_9-j4_f5t-r6VNoIR_TpVrAPFDmmSJEUVcjmBFBg$)

I doubt they will bother to come after me — they will go after Ben Santer (they already have) and others. But you should know.

Kris

From: Kristie Ebi <krisebi@uw.edu>

To: "Yeager, Ray" <ray.yeager@louisville.edu>

Cc: "Weuve, Jennifer" <jweuve@bu.edu>, "George.Thurston@nyulangone.org" <George.Thurston@nyulangone.org>

Subject: Re: NASEM -- FW: Request for input: fast-track study on greenhouse gas emissions and health -- deadline is AUGUST 27, 2025 at 11:59 ET

Date: Fri, 22 Aug 2025 16:38:22 -0700

Importance: Normal

Dear Jennifer:

I am one of the nearly 100 scientists who provided comments on the DOE report through an effort organized by Andy Dessler at Texas A&M. Those comments are with an editor for finalization. They will then be uploaded to the DOE website and submitted to NASEM.

There is a format required for the comments to be considered. They need to give the page number and statement from the DOE CWG report, an indication of whether the statement requires editing, or is misleading or an error, followed by a comment, and then a specific recommendation of how the statement needs to be changed to be consistent with the science.

Happy to discuss further.

Best wishes,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Aug 22, 2025, at 8:51 AM, Yeager, Ray <ray.yeager@louisville.edu> wrote:

Thanks, Jennifer!

ALA is making a big push on this too. I have already alerted the NAC PC and my climate colleagues to help spread the word. I wonder if it would make sense to have the link posted across the ISEE socials?

Best,
Ray

From: Weuve, Jennifer <jweuve@bu.edu>

Sent: Friday, August 22, 2025 8:46 AM

To: krisebi@uw.edu; Yeager, Ray <ray.yeager@louisville.edu>; George.Thurston@nyulangone.org

Subject: FW: NASEM -- FW: Request for input: fast-track study on greenhouse gas emissions and health -- deadline is AUGUST 27, 2025 at 11:59 ET

CAUTION: This email originated from outside of our organization. Do not click links, open attachments, or respond unless you recognize the sender's email address and know the contents are safe.

Dear ISEE Colleagues,

This NASEM notice below, re: the health effects of greenhouse gasses, showed up on a listserv I follow. I reached out to Barbara Hoffman about appropriate folks at ISEE who might be interested in orchestrating a response (if they aren't already), and she directed to you.

Happy to pitch in as needed.

In solidarity,
Jennifer

From: spiritof1848@googlegroups.com <spiritof1848@googlegroups.com> **On Behalf Of** Krieger, Nancy
Sent: Thursday, August 21, 2025 2:21 PM
To: 1848 (spiritof1848@googlegroups.com) <spiritof1848@googlegroups.com>
Cc: Krieger, Nancy <nkrieger@hsph.harvard.edu>
Subject: [spiritof1848] NASEM -- FW: Request for input: fast-track study on greenhouse gas emissions and health -- deadline is AUGUST 27, 2025 at 11:59 ET

fyi – for those on you on the listserv with relevant knowledge & resources re environmental justice & climate justice that can respond to this request from NASEM, please be aware of this opportunity to contribute – mindful that the EPA under the current administration is seeking to negate the possibility of its regulating greenhouse gases ...

DEADLINE TO SUBMIT MATERIALS: WED, AUG 27, 2025 AT 11:59 ET

From: NASEM Health and Medicine <HMDnews-list@nationalacademies.org>
Sent: Thursday, August 21, 2025 2:01 PM
Subject: Request for input: fast-track study on greenhouse gas emissions and health

REQUEST FOR INPUT FROM DIVISION OF EARTH AND LIFE SCIENCES

Anthropogenic Greenhouse Gases and US Climate: Evidence and Impacts

The Division of Earth and Life Sciences (DELS) of the National Academies of Sciences, Engineering, and Medicine invites input to inform a new study reviewing the latest scientific evidence on whether greenhouse gas emissions are reasonably anticipated to endanger public health and welfare in the U.S.

The committee conducting the study will focus on evidence gathered by the scientific community since 2009 — when the U.S. Environmental Protection Agency first declared greenhouse gas emissions a danger to public health. Any conclusions in the committee's report will describe supporting evidence, the level of confidence in a conclusion, and areas of disagreement or unknowns.

We encourage you to submit peer-reviewed articles, white papers, technical reports, or other comments relevant to the committee's charge. Submissions to this Request for Information will be considered by the committee in preparing its report, however the committee will not provide responses to individual comments. All submissions will be accessible as part of the public record for this project.

The deadline for submitting information is Wednesday, August 27 at 11:59 PM ET. General comments about the study can also be submitted through our main [project input portal](#).

<image001.png>

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Posted from the Spiritof1848 Listserv WWW.SPIRITOF1848.ORG #Spiritof1848

If you've been forwarded this email & want to subscribe, go to this Google Form: <https://bit.ly/spiritof1848-form>

We welcome posts on social justice & public health that DIRECTLY address and make explicit the links between social justice & public health AND provide information (e.g., conferences, jobs, publications), substantive queries, or comments.

Posts NOT allowed & leading to removal from listserv after 4 private warnings:

- * posts not EXPLICITLY connecting social justice & public health
- * posts with attachments

Posts NOT allowed & leading to IMMEDIATE REMOVAL from listserv:

- * clickable links with no explanatory text
- * anonymous posts
- * solicitation of donations
- * petitions requesting replies to listserv (vs. to sender or website)
- * violation of the Spirit of 1848 anti-harassment policy.

Contact listserv owner for questions/problems: 1848.spirit@gmail.com.

You received this message because you are subscribed to the Google Groups "Spirit of 1848" group.

To unsubscribe from this group and stop receiving emails from it, send an email to spiritof1848+unsubscribe@googlegroups.com.

To view this discussion

visit <https://groups.google.com/d/msgid/spiritof1848/BYAPR07MB79738EAE3C2E3FE51F9DF7D6FC32A%40BYAPR07MB7973.namprd07.prod.outlook.com>.

From: Kristie L Ebi <krisebi@uw.edu>

To: Jonathan Patz <jonpatz2025@gmail.com>

Cc: Caitlin Warlick-Short <caitlin.warlickshort@gmail.com>, Jenny Bratburd <bratburdj@gmail.com>, Limaye, Vijay <vlimaye@nrdc.org>, Nicholas Mailloux <nicholas.mailloux@gmail.com>, Howard Frumkin <hfrumkin@gmail.com>, "Jonathan.buonocore@gmail.com" <Jonathan.buonocore@gmail.com>

Subject: Re: IMPORTANT & Time-Sensitive: EPA Endangerment Finding Repeal and Vehicle Standards Public Comment

Date: Sat, 23 Aug 2025 08:35:33 -0700

Importance: Normal

Thank you for doing that. Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctor Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

Royal Society Wolfson Visiting Fellow
University of East Anglia
United Kingdom

Helmholtz International Fellow
Climate Service Center Germany (GERICS)
Helmholtz-Zentrum Hereon
Hamburg, Germany

I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Aug 23, 2025 at 8:14 AM -0700, Jonathan Patz <jonpatz2025@gmail.com>, wrote:

Kris,

We have sent them our last public comment and link to all the PDFs. We won't have a full draft on this next common until ~Sept 8.

Jonathan

On Fri, Aug 22, 2025 at 2:45 PM Kristie L Ebi <krisebi@uw.edu> wrote:

Dear Jonathan:

Are you going to upload to the NASEM call for comments / papers for their fast track review? It could be quite useful for them to have.

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
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On Aug 22, 2025, at 10:19 AM, Jonathan Patz <jonpatz2025@gmail.com> wrote:

Dear Colleagues,

As promised we have a few updates for you. Importantly, the deadline for public comments has been extended until September 22, 2025, thankfully, giving us a bit more time to get this together and circulate for signatures.

We also have a detailed outline of the comment. We are not sharing a public link, but if you would like to access to review and provide feedback or support with writing you can request access via [this link](#). If you would just like to review the final comment and sign on later that is just fine and we will be in touch in early-mid September.

Thanks again for your interest in addressing this key issue and we look forward to further engagement over the next few weeks.

Best,
Jonathan Patz (and team)

Jonathan Patz, MD, MPH
jonpatz2025@gmail.com

=====

Aug 12, 2025 (from Caitlin Warlick-Short)

Subject: EPA Endangerment Finding Repeal & Vehicle Standards Public Comment

Dear Colleagues,

Thank you again for your contributions to our last [public comment](#) on EPA's proposed power plant emissions rollbacks. Our team has started digging through EPA's proposed repeal of the Endangerment Finding and a recent DOE report on climate science that EPA relies on. As we prepare to draft comments in response to EPA, we are consulting with several trusted environmental lawyers about the most critical

scientific questions for us to address in our next comment. **We wanted to share a few brief updates about this effort, and flag several opportunities to engage with us in this work:**

1. [NASEM has launched a fast-track review](#) on greenhouse gases and human health risks. Susan Anenberg (GW) has been tapped to contribute to this effort (as we expect others in this group have also), and as such, will not be able to lead our health science expert group for this comment as planned. Instead, Jonathan Patz and our Climate Solutions for Health team at UW will take the lead on the health science commenting effort (see #2 below)

You can [submit studies for NASEM](#) to consider by August 27, 2025 at 11:59pm ET.

2. With support from our partners with environmental law perspective, we have identified six areas of focus to address in our public comment on EPA's proposal (see below). We are spending some time digging through the details in each of these areas and assessing potential other areas of concern. Below are the six areas along with the relevant documents. If you'd like to review or share your own perspectives or reflections with the team, please reply to this email and we would be happy to include you in the early stages of comment outlining and drafting.

Documents for review:

- [EPA Endangerment Finding Reconsideration Proposal](#) (comments due [here](#) by 9/15)
 - [EPA Draft Regulatory Impact Analysis](#) for the reconsideration proposal
- [DOE Climate Science Report](#) (comments due [here](#) by 9/2 - note, this report does not engage with climate-health science)

Critical focus areas for comment to EPA:

- **Climate Change Endangers Health** – While not specifically addressed in the reconsideration proposal, this will be our central critical message to deliver.
- **Scientific Uncertainty** – The reconsideration mischaracterizes current scientific consensus on climate change in terms of observed impacts and future forecasts.
- **Grouping Pollutants** – The reconsideration contends that EPA should not regulate greenhouse gases as a group, even though the Clean Air Act authorizes the agency to do so in other settings (e.g., fine particulate matter).
- **Pollutant Sources** – The reconsideration claims that individual pollutant sources from different classes of motor vehicles are each insignificant rather than addressing them collectively.

- **Local vs. Global Pollution** – The reconsideration claims that global issues are not EPA domain, despite the agency’s recognized authority to regulate other internationally-transported pollutants such as ground-level ozone and PM.
 - **Co-benefits and Economic Effects** – The costs and benefits considered in the reconsideration proposal and Regulatory Impact Analysis are extremely narrow and fail to consider health co-benefits of GHG reductions as well as climate-related economic damages, including those to human health.
3. We are working on a health science comment outline to organize these arguments, which **we will share next week with this group for feedback and additional contributions**. We will also certainly be including much of the content and context from our previous comment, but updated to address the critical argument frameworks above. **Please feel free to add resources related to the 5 points above on our [Resources and References shared document](#).**
4. Comment Review and Sign-On – once our draft comment is developed, we would like to engage you and other expert health scientists for review in late August/early September. We will share the final draft comment for sign-on before the 9/15 deadline.

We’ll be in touch next week with an update on the draft comment outline and timeline/next steps for drafting and review. If you have any questions in the meantime, please feel free to reach out by replying-all to this email which will keep our whole team in the loop.

Best regards,
Caitlin

--
Caitlin Warlick-Short, M.S.
Digital Design & Media Consulting
caitlin.warlickshort@gmail.com
574-238-6170

[she/her/hers - pronouns matter](#)
cshort2@wisc.edu | WARF 626
University of Wisconsin–Madison

Research Program Coordinator | Center for Health, Energy, & Environmental Research (CHEER)
Department of Population Health Sciences, School of Medicine & Public Health

Outreach Specialist | Climate Solutions for Health Lab
Nelson Institute, Center for Sustainability and the Global Environment (SAGE)

<image.png> <image.png>
One attachment • Scanned by Gmail

--
Jonathan Patz, MD, MPH
jonpatz2025@gmail.com

From: Kristie Ebi <krisebi@uw.edu>

To: Joel Smith <joelbsmith.climate@gmail.com>

Cc: Michael Oppenheimer <omichael@princeton.edu>, Gary Yohe <gyohe@wesleyan.edu>, Ian Burton <burtoni.ian@gmail.com>

Subject: Re: Comments to NASEM Panel

Date: Tue, 26 Aug 2025 07:54:52 -0700

Importance: Normal

Dear Joel:

This is very useful; thank you. This is an important submission.

I heard from Dessler that his submission (on behalf of 70 scientists) is nearly 450 pages.

Thanks,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
University of Washington
Seattle, WA 98195
USA
krisebi@uw.edu
<http://globalchange.uw.edu>

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On Aug 26, 2025, at 5:35 AM, Joel Smith <joelbsmith.climate@gmail.com> wrote:

Hi Friends

Pure FYI. For years I have kept a bibliography of climate change literature that I thought was interesting. It's mainly on climate change science, impacts and adaptation, but also has some on mitigation.

I mainly use it when drafting articles or other research work.

With the NASEM rapid review on whether climate change endangers human health or the environment, I plowed through the 262 pages to select recent literature that I thought would be most relevant. Our friend Anand P gave me the idea that perhaps the most useful literature is the IPCC burning embers assessments since 2001. That shows that in the eyes of the assessment community, the thresholds for "dangerous" impacts have been lowered over the years.

What I just submitted is in the attachment.

yours

Joel

Joel B. Smith

Climate Vulnerability and Adaptation Researcher

1402 Oakleaf Circle

Boulder CO 80304 USA

e-mail: joelbsmith.climate@gmail.com

Tel: 1-303-249-2204

<NASEM Endangerment Assessment_SuggestedLiterature_JoelBSmith.docx>

From: "Kristie L Ebi" <krisebi@uw.edu>

To: "Joel Smith" <joelbsmith.climate@gmail.com>

Subject: Re: Comments to NASEM Panel

Date: Wed, 27 Aug 2025 13:10:00 -0000

Importance: Normal

Both

Kristie L. Ebi, Ph.D., MPH
Professor, Center for Health and the Global Environment
University of Washington
Seattle WA 98195
USA

From: Joel Smith <joelbsmith.climate@gmail.com>

Sent: Wednesday, August 27, 2025 4:24:55 AM

To: Kristie L Ebi <krisebi@uw.edu>

Subject: Re: Comments to NASEM Panel

Is Dessler submitting comments to NASEM or DOE?

On Tue, Aug 26, 2025 at 10:55 AM Kristie L Ebi <krisebi@uw.edu> wrote:

Dear Joel:

This is very useful; thank you. This is an important submission.

I heard from Dessler that his submission (on behalf of 70 scientists) is nearly 450 pages.

Thanks,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)

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I mainly use it when drafting articles or other research work.

With the NASEM rapid review on whether climate change endangers human health or the environment, I plowed through the 262 pages to select recent literature that I thought would be most relevant. Our friend Anand P gave me the idea that perhaps the most useful literature is the IPCC burning embers assessments since 2001. That shows that in the eyes of the assessment community, the thresholds for "dangerous" impacts have been lowered over the years.

What I just submitted is in the attachment.

yours

Joel
Joel B. Smith
Climate Vulnerability and Adaptation Researcher
[1402 Oakleaf Circle](#)
[Boulder CO 80304 USA](#)
e-mail: joelbsmith.climate@gmail.com
Tel: 1-303-249-2204

<NASEM Endangerment Assessment_SuggestedLiterature_JoelBSmith.docx>

From: Kristie Ebi <krisebi@uw.edu>

To: James Colborn <jcolborn@impactnexus.africa>

Cc: Jorge Quevedo <jquevedo@impactnexus.africa>

Subject: Re: Trimmed section C2

Date: Wed, 27 Aug 2025 19:16:19 -0700

Importance: Normal

Attachments: SA_GCF_27Aug_clean_kle.docx

Hi James:

Great job!

A few suggestions from me, including moving some of the mentions of the PPF. C2 has 15 words to spare.

Please let me know if there are questions — and good luck with the upload.

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
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On Aug 27, 2025, at 5:19 PM, James Colborn <jcolborn@impactnexus.africa> wrote:

Hi Kris,

As promised attached is an updated version of the CN, where I've managed to get section C2 below the 1000 word limit. I also tried to highlight areas where we can reference evidence gaps that we intend to fill through the PPF (which was DBSA's specific request/recommendation), though in adding this into the executive summary I pushed that over the word limit.

Thanks in advance for any thoughts you have,
James

From: Kristie L Ebi <krisebi@uw.edu>
Date: Wednesday, August 27, 2025 at 5:27 PM
To: James Colborn <jcolborn@impactnexus.africa>
Cc: Jorge Quevedo <jquevedo@impactnexus.africa>
Subject: Re: Trimmed section C2

Dear James:

Interesting on using an online tool so people can't get around the word limit.

I suggest working on the previous version, seeing how many words can be eliminated. Light on details will raise more questions to address, so getting in what is possible would be better. Do you want me to work on any of the sections?

Best,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
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On Aug 26, 2025, at 8:54 PM, James Colborn <jcolborn@impactnexus.africa> wrote:

Hi both,

Given our hard cap on word limits with the online GCF application I ran section C2 through ChatGPT to see what it would look like. I think its quite light on details so my initial thought would be to go back through the previous version and cut manually and decide what more can move to the annex, but perhaps this level of detail (or lack thereof), is to be expected given the word limit?

Jorge its probably best to stick with the previous version I shared for Anban's review so he can review the full technical components of the work plans, then just ensure we maintain the key components in the final trimmed version?

Open to any other suggestions, and thanks.

James

<C2_trimmed.docx>

<SA_GCF_27Aug_clean.docx>

From: Kristie Ebi <krisebi@uw.edu>

To: Bud Ward <wardbud@gmail.com>

Cc: Henry D Jacoby <hjacoby@mit.edu>, Richard Alley <rba6@psu.edu>, Ben Santer <bensanter1289@gmail.com>, Richard Richels <richard.richels@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>

Subject: Re: pdf

Date: Mon, 8 Sep 2025 09:38:26 -0700

Importance: Normal

Hi Bud:

About 25+ health people have a response, organized by Howie Frumkin. It will be submitted soon — I'll share when I have a copy.

Thanks,

Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
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On Sep 8, 2025, at 9:09 AM, Bud Ward <wardbud@gmail.com> wrote:

...and this from Naomi...

----- Forwarded message -----

From: **Oreskes, Naomi** <oreskes@fas.harvard.edu>

Date: Mon, Sep 8, 2025 at 11:35 AM

Subject: Re: pdf

To: Bud Ward <wardbud@gmail.com>

Good stuff.

Also good to remind people to comment on the proposed EPA

revision of the endangerment finding. Esp if people can speak to health dangers.

Online portal: The EPA's preferred method for receiving comments is through the federal eRulemaking portal at [regulations.gov](https://www.regulations.gov).

- Search for the docket number: **EPA-HQ-OAR-2025-0194**.

<https://www.regulations.gov/commenton/EPA-HQ-OAR-2025-0194-0093>

Naomi Oreskes

Henry Charles Lea Professor of the History of Science

Affiliated Professor of Earth and Planetary Sciences

<image001.jpg>

From: Bud Ward <wardbud@gmail.com>
Date: Monday, September 8, 2025 at 11:19 AM
To: Bud Ward <wardbud@gmail.com>
Subject: Fwd: pdf

Resending, as some were unable to open the earlier attachment, below as a pdf.

A Substack Climate Cafe site I work with has posted an open letter, below, to climate scientists, urging more to speak out

in defense of their own and their colleagues' decades of important work establishing the vast body of peer-reviewed

climate science. (We're well aware of the hesitancy of many given legitimate concerns about retribution toward themselves,

their colleagues, and their research institutions and employers, be they universities or otherwise).

We salute the more than 80 leading scientists who this past week criticized the Energy Department's August flawed report.

Looking ahead, with an EPA rulemaking moving toward canceling the Endangerment Decision that the DOE report was

written to support, still many more authoritative climate scientists must go public in defense of their own and their colleagues'

peer-reviewed research and findings.

We hope you will consider reposting the open letter on social media and on web sites and share it with colleagues,

professional science societies, other science interests, and the public generally.

--

Bud Ward
P.O. 1317
White Stone, Va. 22578-1317
Cell: 703-307-0150
EMAIL: wardbud@gmail.com

--

Bud Ward
P.O. 1317
White Stone, Va. 22578-1317
Cell: 703-307-0150
EMAIL: wardbud@gmail.com

From: Kristie Ebi <krisebi@uw.edu>
To: Bud Ward <wardbud@gmail.com>
Subject: Re: pdf
Date: Mon, 8 Sep 2025 14:00:17 -0700
Importance: Normal

Thanks Bud. WA PSR is very active; I spoke with them a couple of times. Best, Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
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<http://globalchange.uw.edu>

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On Sep 8, 2025, at 10:39 AM, Bud Ward <wardbud@gmail.com> wrote:

Kris: Sharing this with you from Bob Berley gien Wa connection, etc. Bud

----- Forwarded message -----

From: <rberley@comcast.net>
Date: Mon, Sep 8, 2025 at 1:33 PM
Subject: RE: pdf
To: Bud Ward <wardbud@gmail.com>

Hey Bud:

Good to see this, you, heavy lifting, etc.

I've moved off CPA-NA to work with WA Physicians for Social Responsibility on a project trying to describe prodromal climate distress .. eg, what he are deeply enmeshed in right not that's influencing so much of the craziness.

Can I make a suggestion? With all the distrust of everyone, everywhere, make a note of how science (writ large) is responsible for pretty much everything people interact with all day .. food, materials, gadgets, transportation, etc., etc. "From the people who brought you .. EVERYTHING!" .. science wouldn't be so successful if it didn't have some basis in reality, so there has to be kernels of truth worth paying attention to. The focus on what's not trustworthy has totally obscured how the method and careful research produces results that are largely (and don't have to be perfectly) robust.

Take care ..

Bob

Love this life. Do not be daunted by the enormity of the world's grief. Do justly, now. Love mercy, now. Walk humbly now. The day is short, the task is great, the wages are paltry and the matter is pressing. You are not obligated to complete the work but neither are you free to abandon it.

The Talmud

*The mind is its own place, and in itself
can make a Heav'n of Hell, a Hell of Heav'n*

J. Milton, "Paradise Lost"

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Robert A. Berley, Ph.D., C.G.P., F.A.G.P.A.
1314 NE 43rd St., #214
Seattle, WA 98105

From: Bud Ward <wardbud@gmail.com>
Sent: Monday, September 8, 2025 8:16 AM
To: Bud Ward <wardbud@gmail.com>
Subject: Fwd: pdf

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A Substack Climate Cafe site I work with has posted an open letter, below, to climate scientists, urging more to speak out

in defense of their own and their colleagues' decades of important work establishing the vast body of peer-reviewed

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We hope you will consider reposting the open letter on social media and on web sites and share it with colleagues,

professional science societies, other science interests, and the public generally.

--

Bud Ward
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Cell: 703-307-0150
EMAIL: wardbud@gmail.com

--

Bud Ward
P.O. 1317
White Stone, Va. 22578-1317
Cell: 703-307-0150
EMAIL: wardbud@gmail.com

From: Kristie Ebi <krisebi@uw.edu>

To: Henry D Jacoby <hjacob@mit.edu>

Cc: "Alley, Richard B" <rba6@psu.edu>, Ben Santer <bensanter1289@gmail.com>, Bud Ward <Wardbud@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>, Richard Richels <richard.richels@gmail.com>

Subject: Re: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

Date: Tue, 16 Sep 2025 15:53:56 -0700

Importance: Normal

There is a study. You will find out tomorrow that I was a reviewer. My comments were due on the 6th, so this was a fast turnaround. As you know, I won't know until tomorrow the extent to which my comments were addressed — and don't know the other comments. I'm going to tune in out of curiosity. Kris

Kristie L. Ebi, Ph.D., MPH; honorary doctorate of science Australia National University and Umea University
Professor, Center for Health and the Global Environment (CHanGE)
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I live and work on the lands of the Coast Salish peoples, land that touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations.

On Sep 16, 2025, at 3:18 PM, Henry D Jacoby <hjacob@mit.edu> wrote:

OOPS! I mean announce 20 hours before the release. Means no study?
Jake

From: Henry D Jacoby <hjacob@mit.edu>

Date: Tuesday, September 16, 2025 at 5:48 PM

To: Alley, Richard B <rba6@psu.edu>, Ben Santer <bensanter1289@gmail.com>, 'Bud Ward' <Wardbud@gmail.com>, Gary Yohe <gyohe@wesleyan.edu>, Krisebi@uw.edu<krisebi@uw.edu>, Richard Richels <richard.richels@gmail.com>

Subject: FW: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

Friends,

In case you haven't seen it elsewhere, see below the note from a colleague, Arthur Lee, who is on the NASEM committee. Odd that they announce two days before the event. I have a conflict and can't watch. I hope one or more of us can.

Jake

From: Arthur Lee <alee7900166@gmail.com>

Date: Tuesday, September 16, 2025 at 5:36 PM

To: Guest Arthur Lee [Arthur Lee, Emeritus Fellow] <alee7900166@gmail.com>

Cc: Guest Arthur Lee [Arthur Lee, Emeritus Fellow] <alee7900166@gmail.com>

Subject: Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

Colleagues:

FYI. Developments here in the U.S.

Arthur Lee

Public Release: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare

I am forwarding this announcement to you from the National Academies of Sciences, Engineering, and Medicine. A virtual event will be held on Wednesday, 17 September, 1 pm Eastern (Noon Central, 11 am Pacific). [Register via this page](#). I am a member of the authoring committee of the subject report.

"The National Academies of Sciences, Engineering, and Medicine invites you to a public webinar to discuss its new report, Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare. This study reviews the latest scientific evidence on whether greenhouse gas emissions are reasonably anticipated to endanger public health and welfare in the United States. The report will be posted online at 12:00 p.m. EDT on Wednesday, September 17, 2025. The public briefing will be held at 1:00 p.m. EDT. Members of the report's authoring committee will share the major conclusions of the report, followed by a Q&A.

This event will be held in a virtual setting, available to attend online on the event webpage. Please register today to receive email updates as they become available. If you are unable to attend, the video recording will be posted in the days following the briefing. "

Arthur Lee

Chevron Fellow Emeritus

Mobile: (925) 389-0361

Email: alee7900166@gmail.com

[NotebookLM overview of Arthur Lee](#)

Chevron 'Day in the Life of' video: <https://youtu.be/mhbjJPXi3Zw>

[Stanford University guest lecture](#) 13 February 2023

Music: [Art Elle Quartet - Topic - YouTube](#)

Music: [Art Elle Quartet - Apple Music](#)

Music: [Art Elle Quartet | Spotify](#)

[Arthur Lee | LinkedIn](#)

[Nobel Peace Prize IPCC recognition](#)

From: "Kristie L Ebi" <krisebi@uw.edu>

To: Joel Smith <joelbsmith.climate@gmail.com>

Subject: Fwd: Link to our submitted Public Comment on the Endangerment Finding

Date: Thu, 25 Sep 2025 05:29:05 +0900

Importance: Normal

FYI

Kristie L Ebi, PhD, MPH
Professor, Center for Health and the Global Environment
University of Washington
Seattle WA 98105
USA

Begin forwarded message:

From: Jonathan Patz <jonpatz2025@gmail.com>

Date: September 24, 2025 at 10:52:41 PM GMT+9

Cc: Caitlin Warlick-Short <caitlin.warlickshort@gmail.com>, Jenny Bratburd <bratburdj@gmail.com>, Nicholas Mailloux <nicholas.mailloux@gmail.com>, Jordan Fischbach <jordan.fischbach2@gmail.com>, Howard Frumkin <hfrumkin@gmail.com>, Jon Levy <jonlevy10@gmail.com>, "Limaye, Vijay" <vlimaye@nrdc.org>

Subject: **Link to our submitted Public Comment on the Endangerment Finding**

Dear Colleagues,

We are pleased to share this [direct link to the PDF of our final submitted public comment](#), sent on Monday. We'd also like to express our deepest gratitude to dozens of you who provided important text, comments, edits and references to the draft document, making this as strong as it could be. Also thanks to the 114 of you who read and signed on to our compilation of the scientific evidence in response to EPA's proposed rule change. And to others, you're valued for the work you are doing in this field.

[This link](#) takes you to both the Comment file and References file with PDFs of all studies cited.

There are now so many of us working in this area of climate change and health. Since we've convened as an Expert Working Group (and should expand to include other scientists in this space) in this current anti-science period, we think it's important to keep this group together so that our collective action might move policy forward for sustainable public health and wellbeing. So we'll keep in touch with you on the next steps we are planning.

With the utmost gratitude to you.
Thanks so incredibly much!

Jonathan Patz (and team)
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