

13:59:58 From Claude Buettner to Everyone:

C: Climate Reanalyzer: <https://climatereanalyzer.org/>

14:00:58 From Claude Buettner to Everyone:

C: Cooling suits:

[https://www.google.com/search?q=cooling+suits&oq=co&gs\\_lcrp=EgZjaHJvbWUqBggAEEUYOzIGCAAQR Rg7MgYIARBFgdKyBggCEEUYOzITCAMQLhiDARjHARixAxjRAXiABDITCAQQLhiDARjHARixAxjRAXiABDIKCA UQABixAxjABDITCAYQLhiDARjHARixAxjRAXiABDIHCAcQLhiABDINCAgQABiDARixAxjABDIHCAkQABiPatIBD jg3MTk3OTg3MWowajE1qAIAsAIA&sourceid=chrome&ie=UTF-8](https://www.google.com/search?q=cooling+suits&oq=co&gs_lcrp=EgZjaHJvbWUqBggAEEUYOzIGCAAQR Rg7MgYIARBFgdKyBggCEEUYOzITCAMQLhiDARjHARixAxjRAXiABDITCAQQLhiDARjHARixAxjRAXiABDIKCA UQABixAxjABDITCAYQLhiDARjHARixAxjRAXiABDIHCAcQLhiABDINCAgQABiDARixAxjABDIHCAkQABiPatIBD jg3MTk3OTg3MWowajE1qAIAsAIA&sourceid=chrome&ie=UTF-8)

14:01:26 From Claude Buettner to Everyone:

C: Earth nullschool: <https://earth.nullschool.net/>

14:12:03 From Claude Buettner to Everyone:

C: Paul Beckwith suggested this James Hansen book:

[https://www.amazon.ca/Storms-My-Grandchildren-Catastrophe-Humanity-ebook/dp/B002Z8IWLO/ref=sr\\_1\\_1?crid=NY2M8M9DGC19&keywords=james+hansen+storms+of+our+grandchildren&qid=1688580654&srefix=storms+of+our+g%2Caps%2C116&sr=8-1](https://www.amazon.ca/Storms-My-Grandchildren-Catastrophe-Humanity-ebook/dp/B002Z8IWLO/ref=sr_1_1?crid=NY2M8M9DGC19&keywords=james+hansen+storms+of+our+grandchildren&qid=1688580654&srefix=storms+of+our+g%2Caps%2C116&sr=8-1)

14:15:51 From Peter MacKinnon uOttawa Engineering to Everyone:

C: Another early visionary on climate change was Stephen Schneider with his book The Genesis Strategy: Climate & Global Survival (1976 Plenum Press).

<https://www.amazon.ca/Genesis-Strategy-Climate-Global-Survival/dp/1461587581>

I worked with Steve when he was at the National Center for Atmospheric Research in Boulder.

14:21:03 From Claude Buettner to Everyone:

Wikipedia summary of Omega Block that Paul mentioned:

[https://en.wikipedia.org/wiki/Block\\_\(meteorology\)#Omega\\_blocks](https://en.wikipedia.org/wiki/Block_(meteorology)#Omega_blocks)

14:22:33 From Peter MacKinnon uOttawa Engineering to Everyone:

Q: Paul, what do you see as the implications of the changing climate to the Atlantic meridional overturning circulation (AMOC) over the course of this century and maybe beyond?

14:22:40 From John Meyer to Everyone:

Q: Studies supporting possibility of climate "whiplash"?

14:24:55 From Ted Manning to Everyone:

Q: Some time ago at IIASA we were seeking to spatially model not impossible futures, yielding maps of areas which might be able to support food production and or human habitation. Is this continuing and are there any outcomes where we can use as future ecosystems for human support?

14:25:18 From Jon Legg to Everyone:

Q: Paul, you have tried to give us a global view of the symptoms of climate change at its most dangerous. Are you aware of any collective and global means that governments could use to counter these symptoms?

14:26:42 From Claude Buettner to Everyone:

C: Paul mentioned the lake paper data was analyzed by Trifid Software:  
<https://www.trifidsoftware.com/trifidweb/index>

14:32:08 From Peter MacKinnon uOttawa Engineering to Everyone:

C: Biodiversity and associated collapse and ocean acidification, among others, are part of the concept of Planetary Limits/Boundaries.

14:33:28 From Mike Nickerson to Everyone:

“More Fun, Less Stuff.”

14:33:30 From Anitra Thorhaug to Everyone:

Q: Is there anything else in the Arabian Gulf Kingdoms than Oil which rules all the nations there?

14:35:13 From Anitra Thorhaug to Everyone:

Q: What is the time scale in which we have a window of opportunity for biological carbon dioxide and methane removal?

14:42:31 From Geoff Strong to Everyone:

Q: Estimates suggest that the amount of CO<sub>2</sub> returned to the atmosphere from Canada's wildfires up to end June is equal to Canada's total annual output of CO<sub>2</sub> emissions. Is this an opportunity for FFs to say, "burning FFs are not the cause of global warming"?

14:43:36 From Claude Buettner to Everyone:

C: Grace Satellite program: <https://www.jpl.nasa.gov/missions/gravity-recovery-and-climate-experiment-grace>

14:43:59 From Peter MacKinnon uOttawa Engineering to Everyone:

C: There are underground fires burning in the Smoking Hills in the NWT. Discovered by Franklin, the fires have been burning for centuries:

[https://en.wikipedia.org/wiki/Smoking\\_Hills#:~:text=The%20Smoking%20Hills%20are%20located,them%20on%20his%201826%20expeditions.](https://en.wikipedia.org/wiki/Smoking_Hills#:~:text=The%20Smoking%20Hills%20are%20located,them%20on%20his%201826%20expeditions.)

14:52:37 From Michael Dowd, postdoom.com to Everyone:

Excellent presentation, Paul! Thank you!!

14:55:01 From Claude Buettner to Everyone:

Replying to "Excellent presentati..."



15:01:22 From Samrat Bharadwaj to Everyone:

C: People have been "dropping in the streets" for a while now [in the global South]. Just saying. Now it is hitting up the global North.

15:02:03 From John Meyer to Everyone:

C: The tragedy of our predicament is that if we re-allocate military resources to "save the planet" Russia will take Europe. Germany is having to spend an extra \$200 billion on its military to bring its capability up to levels needed to fend off Russia.

15:02:21 From Samrat Bharadwaj to Everyone:

Amazing Powerful Presentation. Kudos To Paul Beckwith 🍌🍌🍌🍌 Grounded !!

15:04:14 From Jean and Dave Dougherty CACOR to Everyone:

Replying to "C: there are undergr..."

C: Hundreds of forest fires since early May have generated nearly 600 million tonnes of CO<sub>2</sub>, equivalent to 88 percent of the country's total greenhouse gas emissions from all sources in 2021, the Copernicus Atmosphere Monitoring Service (CAMS) reported.

<https://www.msn.com/en-gb/news/world/canada-wildfire-co2-emissions-hit-record-high-in-first-six-months-of-this-year/ar-AA1d849d>

15:04:29 From Michael Dowd, postdoom.com to Everyone:

C: If we have dozens of examples of previous civilizations collapsing and NEVER being able to slow, stop, or reverse it, and if technology and the market are the main drivers of collapse and ecocide, why can't we accept the obvious: we're in a time of global hospice. I recommend giving up belief in Santa Claus (geo-techno-fixes) and then live with the end in mind, with loving kindness and gratitude in our hearts, and with the truth on our lips. Just sayin... :-) ❤️

15:04:40 From Claude Buettner to Everyone:

Q: ClimateWorks Foundation only works through Journalists and "partners" per their Meida page: <https://www.climateworks.org/media-center/>

Are they useful in getting the truth of the dire situation we are in out into the public or are they helping suppress the extent of the situation, possibly for the laudable reason of preventing panic?

15:05:31 From Jean and Dave Dougherty CACOR to Everyone:

Oh, boy. Ocean fertilization. What could go wrong?

15:06:22 From Samrat Bharadwaj to Everyone:

C: A country's total greenhouse gas emissions from all sources in 2021 🤖🤖 Gaia's Revenge. Speeding it up perhaps...

15:06:30 From Claude Buettner to Everyone:

Replying to "Oh, boy. Ocean fert..."

C: That will be a different kind of tipping point to show that the world has turned desperate.

15:07:03 From Michael Dowd, postdoom.com to Everyone:

Replying to "Oh, boy. Ocean fert..."

C: All hopes of "societal tipping points" are utter hopium delusion.

15:07:39 From Peter MacKinnon uOttawa Engineering to Everyone:

Q: Paul, what about solar geoengineering versus ocean geoengineering?

15:08:13 From Michael Dowd, postdoom.com to Everyone:

It can't be done, Anitra. There are NO solutions to our predicament—ecological overshoot.

15:08:37 From Claude Buettner to Everyone:

Replying to "Oh, boy. Ocean fert..."

C: @Michael Dowd, postdoom.com 👍

15:09:57 From Geoff Strong to Everyone:

C: To add to Anitra's question about timeline, you first must have data on how fast (amounts) of carbon can be sequestered by the plant you are discussing.

15:10:53 From Peter MacKinnon uOttawa Engineering to Everyone:

Q: You have not mentioned human population, so what do you see as the ultimate carrying capacity in terms of total population?

15:10:54 From Claude Buettner to Everyone:

Replying to "It can't be done, An..."

C: 👍

15:13:47 From Claude Buettner to Everyone:

Q: The BIG move is to stop burning any fossil hydrocarbon and deal with the consequences with equity. What are the odds that that will happen?

15:13:49 From Michael Dowd, postdoom.com to Everyone:

C: GALLOWS HUMOR IS VITAL!! Here's my folder of some two hundred cartoons:  
<https://www.dropbox.com/scl/fo/rggchc7zo9copt2ht8azf/h?rlkey=5ik4prc24972var9aqbcstcoo&dl=0>

15:14:18 From Claude Buettner to Everyone:

Replying to "GALLOWS HUMOR IS VIT..."

C: I love these! Make your bookmarks!

15:14:21 From Samrat Bharadwaj to Everyone:

C: It's like every leader in the world, is in favor of infinite growth. That is the basis of centralized power and rule. Without that, they can never justify their existence and power.

15:15:17 From Anders Wijkman to Everyone:

C: Another problem with economists is that they seem to believe that money can substitute for nature.

15:16:10 From Peter Meincke to Everyone:

C: The threat of nuclear war is greater than ever. It has been shown that it would lead to cooling.

15:16:58 From Claude Buettner to Everyone:

C: My opinion is that proxy war in Ukraine is an early food war to decide whether that grain will be shipped east or west.

15:18:12 From Claude Buettner to Everyone:

Replying to "The threat of nuclea..."

C: ...and therefore may be tried as an act of desperate geoengineering?

15:19:43 From Samrat Bharadwaj to Everyone:

C: @Anders Wijkman ❤️

15:20:28 From Peter MacKinnon uOttawa Engineering to Everyone:

C: Nuclear Winter is the outcome as per the comment about nuclear war. I worked on that concept with Steve Schneider!

15:24:10 From Jean and Dave Dougherty CACOR to Everyone:

I have been publishing climate fiction (clifi) and nonfiction. The Great Disruption series and Do Yourself a Favour.

Cli-fi [https://www.amazon.ca/gp/product/B0B445Z2TC?ref=dbs\\_p\\_mng\\_rwt\\_ser\\_shvlr&storeType=ebooks](https://www.amazon.ca/gp/product/B0B445Z2TC?ref=dbs_p_mng_rwt_ser_shvlr&storeType=ebooks)

Nonfiction <https://www.amazon.ca/Do-Yourself-Favour-Lightly-Better-ebook/dp/B0BP6GTC78/>

15:27:07 From Jean and Dave Dougherty CACOR to Everyone:

C: Canada has a huge number of volunteer firefighters.

<https://www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/Fact-sheets/CanadianFireDepartmentFactSheet.pdf>

15:28:38 From Peter MacKinnon uOttawa Engineering to Everyone:

C: Thanks, Paul. I'll need to sign off shortly.

15:30:30 From Jean and Dave Dougherty CACOR to Everyone:

Paleogene thermal maximum.

<https://www.nature.com/articles/s41561-018-0199-0>

15:32:06 From Anitra Thorhaug to Everyone:

C: Sorry. Next meeting calling. There is a disconnect between comprehension of the physical and the biological solutions in the discussion.

15:33:19 From Samrat Bharadwaj to Everyone:

C: Thanks again so much for the presentation, Paul. Thanks CACOR yet again. Best Wishes! Have to prepare dinner (21:40 here). Have a good week ahead 🍷 Till Next Time Adios!

15:37:52 From Jean and Dave Dougherty CACOR to Everyone:

C: Runaway train...throw off all loose items...hope we don't crash.

Climate change...geoengineering, electrification, and carbon capture...hope we don't crash.

Oops.

15:38:29 From Claude Buettner to Everyone:

Replying to "Runaway train...thro..."

C: 😄 Wheeee!

15:45:57 From Jon Legg to Everyone:

Great discussion after a great presentation! Must leave!

15:46:40 From Mike Nickerson to Everyone:

Thanks everyone. Have to go.