MINNPOST

EARTH JOURNAL

New outlook on global warming: Best prepare for social collapse, and soon

By Ron Meador | 10/15/2018

REUTERS/Kathryn Hansen/NASA

One climate scientist predicts an ice-free arctic summer in the next few years.

Now that you've had a week to absorb the latest assessment of the Intergovernmental Panel on Climate Change — that we're about out of time to cut emissions by amounts that could make global warming somewhat manageable — I'd like to introduce you to Jem Bendell and his notion of Deep Adaptation.

"Like" isn't the right verb there, with its sense of preference and maybe even pleasure; maybe that was reflex. Reading and writing about Deep Adaptation has been painful from the start, and I would really rather be talking about anything else today. But I feel a certain responsibility toward Bendell's new research paper, which concludes that recent trends in key climate factors indicate we are headed for "near-term social collapse due to climate chaos."

By the near term, he means less than 10 years from now. By social collapse, he is speaking of unpredictable and interrelated breakdowns, in affluent as well as poor countries. And that's just the beginning: Over the following decades, Bendell sees climate disruption working longer-term injuries to governments, economies, social institutions, agriculture, industries — to civilization, you could say — on a continuum running from "inevitable collapse" to "probable catastrophe" to "possible extinction."

How do we "adapt" to that? By accepting that the world as we've known it is ending, he says, then beginning to envision whatever new one can be built on the ruins. (Also, by abandoning any misplaced notion that we can still avert disaster.)

This may come off as a radical pronouncement in a climate conversation where most everyone concerned with "solving the problem" — scientists, activists, policymakers, philanthropists — labors to find cause for hope, or at minimum an avenue for preventive action.

But even if radical, Bendell's paper is hardly irrational (although in places it is, for research prose, untypically personal and emotional). His scholarship is in sustainability, at the intersection of

environment and economics, and he has credentials: a Ph.D, a position at England's University of Cumbria, as well as industry experience, a CV that includes a bunch of papers in peer-reviewed journals (not including the one I'm discussing here; more on that later).

This new work has gone virtually unreported since Bendell self-published it at the end of July, though Bloomberg's Christopher Flavelle took notice and found that Bendell and his ideas are not without an academic following. And the paper's key point — that the velocity of climate change appears to have shifted so dramatically upward since 2014 that its progression is no longer "linear" — aligns with other mainstream research.

For instance, a paper published in August in the Proceedings of the National Academy of Sciences discussed data on various "self-reinforcing feedbacks" that seem capable of driving further, "nonlinear" warming of the atmosphere even if emissions are reduced (the melting of the planet's great ice sheets being a prime example). That work, which got more coverage than Bendell's, framed future risk as a series of "tipping points" leading to a "Hothouse Earth" scenario:

> This pathway would be propelled by strong, intrinsic, biogeophysical feedbacks difficult to influence by human actions, a pathway that could not be reversed, steered, or substantially slowed. Where such a threshold might be is uncertain, but it could be only decades ahead at a temperature rise of ~2.0°C above pre-industrial, and thus, it could be within the range of the Paris Accord temperature targets. The impacts of a Hothouse Earth pathway on human societies would likely be massive, sometimes abrupt, and undoubtedly disruptive.

The authors urged a concerted effort to predict and avert these "tipping points," returning the planet to a more hospitable pathway. But they spoke in only mild, general terms about what sort of adaptation would be necessary if such efforts fail.

The option that's left

Adaptation (or, sometimes, mitigation) has always been one of the three leading strategies to address global warming, but until recently it was rarely anyone's first choice.

Courtesy of University of Cumbria Institute for Leadership and Sustainability
Jem Bendell

The No. 1 option has always been to make large, global cuts in those emissions — an effort that, as the IPCC report makes clear, continues to fall far short of what's needed. Option No. 2 has been a grab bag of engineering fixes, like making the planet more reflective with a blanket of upper-atmosphere aerosols, or building giant machines to suck carbon dioxide back out of the air. These notions have been hugely expensive, highly risky, or both (and, not infrequently, fanciful).

Option No. 3, adaptation, has been mostly about making existing systems and infrastructure more resilient — improving the electric power grid, hardening structures against heat waves and storms,

making seawalls higher, expanding the wildfire buffer around vulnerable communities, tweaking the practices of industrial agriculture. Lately it has begun to include relocating communities displaced by coastal flooding.

But these approaches have been fundamentally about holding onto the familiar. Bendell says it's too late for that kind of thinking, because the world we know is so quickly disappearing. Key excerpts, lightly compressed and without footnotes:

> The warming Arctic has led to dramatic loss in sea ice, the average September extent of which has been decreasing at a rate of 13.2% per decade since 1980, so that over two-thirds of the ice cover has gone. This data is made more concerning by changes in sea ice volume, which is an indicator of resilience of the ice sheet to future warming and storms. It was at the lowest it has ever been in 2017, continuing a consistent downward trend.
>
> Given a reduction in the reflection of the sun's rays from the surface of white ice, an ice-free Arctic is predicted to increase warming globally by a substantial degree. Writing in 2014, scientists calculated this change is already equivalent to 25% of the direct forcing of temperature increase from CO_2 during the past 30 years. That means we could cut CO_2 emissions by 25% and it is already outweighed by the loss of the reflective power of Arctic sea ice. One of the most eminent climate scientists in the world, Peter Wadhams, believes an ice-free Arctic will occur one summer in the next few years and that it will likely increase by 50% the warming caused by the CO_2 produced by human activity.
>
> The observed phenomena, of actual temperatures and sea levels, are greater than what the climate models over the past decades were predicting for our current time. They are consistent with non-linear changes in our environment that then trigger uncontrollable impacts on human habitat and agriculture, with subsequent complex impacts on social, economic and political systems.

As for the consequences:

> Already we see impacts on storm, drought and flood frequency and strength due to increased volatility from more energy in the atmosphere. Climate change has reduced growth in crop yields by 1-2 percent per decade over the past century. …
>
> In ten years prior to 2016 the Atlantic Ocean soaked up 50 percent more carbon dioxide than it did the previous decade, measurably speeding up the acidification of the ocean. This study is indicative of oceans worldwide, and the consequent acidification degrades the base of the marine food web, thereby reducing the ability of fish populations to reproduce themselves across the globe. Meanwhile, warming oceans are already reducing the population size of some fish species.

> Compounding these threats to human nutrition, in some regions we are witnessing an exponential rise in the spread of mosquito and tick-borne viruses as temperatures become more conducive to them.

Journal asks for brightening

Gloomy stuff, to be sure, but one would think also of interest to the professional readership of the Sustainable Accounting, Management and Policy Journal, where Bendell submitted his paper for review and publication. But the editors, he says, asked that he revise it to include "existing scholarship … on ecologically induced social collapse" at a global scale. He found that impossible; a literature review conducted in preparing his own paper hadn't found any such work (although I seem to recall plenty of work on collapse at local to regional scales, both modern and historical, and wonder why that wouldn't meet the journal's needs).

Also, they asked that he "not dishearten readers with the claim of 'inevitable near term social collapse,' " a request he rejected as "a form of censure" (maybe meaning censorship). This is an aspect he addresses in the paper itself:

> As researchers and reflective practitioners, we have an opportunity and obligation to not just do what is expected by our employers and the norms of our profession, but also to reflect on the relevance of our work within wider society. … It is a responsible act to communicate this analysis now and invite people to support each other, myself included, in exploring the implications, including the psychological and spiritual implications.
>
> This situation makes redundant the reformist approach to sustainable development and related fields of corporate sustainability that has underpinned the approach of many professionals. Instead, a new approach which explores how to reduce harm and not make matters worse is important to develop. In support of that challenging, and ultimately personal process, understanding a deep adaptation agenda may be useful.

"Deep adaptation agenda" appears to be Bendell's own coinage, and he has a three-part strategy in mind. It starts with that "resilience" component that everybody is already behind — seawalls and reinforced roofing, etc. — but veers away in advocating for a second stage of "relinquishment" (giving up treasured things that make climate chaos worse, like present-day living standards and homes that overlook the ocean).

And then a third: "restoration" of cultural values and practices "that our hydrocarbon-fuelled civilisation eroded":

> Examples include re-wilding landscapes, so they provide more ecological benefits and require less management, changing diets back to match the seasons, rediscovering non-

> electronically powered forms of play, and increased community-level productivity and support.

The necessity of ‘hope’

I don’t know why it should come as such a surprise and disappointment to learn that this journal insisted an author restate findings to be less “disheartening.” Science and scientific publishing should be above sugar-coating.

But then so should journalism, and over my four decades in the trade I have felt the same kind of pressure to search out and even amplify the hopeful note, the potential solution, the sign of progress, the thing going right instead of wrong, so as not to drive the readers to despair (or, more cynically, to another publication that’s less of a downer).

This morning I am wondering if the biggest failing of American media on climate change hasn’t been in giving too much credence to the denialist charlatans, but in raising too mild a challenge to assertions that, despite such heavy evidence to the contrary, there’s still room to maneuver this runaway truck away from the cliff.

I am not speaking here of MinnPost, not in the slightest. I’ve never felt any pro-hopefulness pressure from my editors here. But, honestly, if I had, it might well have been redundant, as I long ago got into a bad habit of applying it all by myself.

Not this morning.

* * *

Jem Bendell’s paper, “Deep Adaptation: A Map for Navigating Climate Tragedy,” can be downloaded here without charge.

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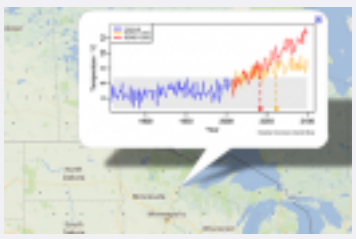

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In much of Minnesota that point is projected to arrive about 30 years from now — in 2042, give or take five years.

Related Tags: climate change

ABOUT THE AUTHOR:

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Ron Meador is a veteran journalist whose last decade in a 25-year stint at the Star Tribune involved writing editorials and columns with environment, energy and science subjects as his major concentration.

COMMENTS (2)

SUBMITTED BY PAT THOMPSON ON 10/15/2018 - 12:23 PM.

Ron, have you read Surviving the Future, Shaun Chamberlain’s condensation of David Flemming’s larger book Lean Logic? This sounds as though it would be a pair with that thinking.

LOG IN TO REPLY

SUBMITTED BY JOE SMITH ON 10/16/2018 - 09:19 AM.

Nah, I will wait to build my boat to ride out the rising oceans for a bit more. Mr. Meador uses the same folks and publications that predicted an oncoming ice age in the 70's. It's the sun and it's solar phases that impact weather, not human activity. Long before man, the earth had ice ages and heating periods. The only difference is there was no one to make money off the hysteria back then.

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