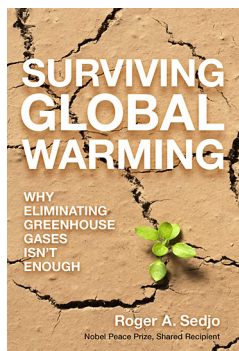


## OTHER

**Surviving Global Warming: Why Eliminating Greenhouse Gases Isn't Enough**

By Roger A. Sedjo. 2019. Prometheus Books. 245 pages, 24.00 USD, Cloth, 22.50 USD, E-book.

Dr. Roger Sedjo is a Senior Fellow Emeritus at the environmental think tank Resources for the Future in Washington, DC. He specializes in forestry and policy, holds several honorary degrees, awards, and fellowships, and shared the 2007 Nobel Peace Prize for his work on the Intergovernmental Panel on Climate Change (IPCC) Climate Assessments. Despite these qualifications, I struggled through this book.



The core argument is straightforward: climate change is inevitable and will have dramatic, unavoidable impacts on human society. Even our most ambitious mitigation solutions will not stop this inevitability, so we must invest in adaptation solutions. For anyone engaged in the climate change conversation, this is not a new idea: most government climate change strategies in Canada recommend both mitigation and adaptation measures. Climate change adaptation is not controversial, so I am puzzled by Dr. Sedjo's insistence that to justify adaptation efforts, he must discredit the need for mitigation.

Sedjo dedicates the first third of the book to scrutinizing what he calls "Al Gore's theory of global warming" (Chapter 1, Al Gore and the Greenhouse Gas Theory: Plan A), that is, the theory that recent climate change has been caused by increases in greenhouse gas (GHG) emissions from humans. He seems to think that if he can convince the reader that the climate is changing at least in part from natural causes, then the reader will also be convinced that mitigation is a waste of time: if GHG emissions are not the entire problem, GHG reduction cannot be the whole solution. I cannot help but recall Joel Pett's well-known political cartoon from 2009 depicting delegates at a climate summit: "What if it's a big hoax and we create a better world for nothing?"

In order to cast doubt on "Gore's theory", the author spends quite a bit of time discussing evidence of natural climate change, including the existence of the medieval warming period in the climate record and the role of solar cycles (see Chapter 2, Natural Climate Change: GHG's Are Not the Whole Answer). He writes that "solar energy is not currently viewed as a major contributor to today's warming by the

IPCC. However, solar factors are still not yet well understood" (p. 37). Out of curiosity, I googled "Is the sun causing climate change?" The first result, from the National Aeronautics and Space Administration (NASA), starts off this way: "No. The Sun can influence the Earth's climate, but it isn't responsible for the warming trend we've seen over the past few decades" (National Aeronautics and Space Administration 2020). Around this point I started to lose patience for his deep-dives into the medieval warming period and frustrating lack of understanding when it comes to basic climate science, for example: "How rapidly will land-based glaciers melt, and will future snows offset much of that melting?" (p. 18). (The answer is no—warming temperatures will offset any possible increases in snowfall because the melting will outpace the rate of accumulation [National Snow & Ice Data Centre 2020].) There is so much repetition of the same poorly referenced material that I often had the disorienting feeling that I had read the same paragraph multiple times.

The bulk of the book—Chapters 4 through 8—is dedicated to "Plan B: The Adaptation Solution". Some of Sedjo's ideas are reasonable: for example, he writes about the importance of coastal habitat protection to buffer sea level rise (p. 103). But as an ecologist, I find many of his ideas disturbing. In his discussion on the relative albedos of different surface types, he writes: "So, Mother Nature being complicated, those who are cutting down the Amazon rainforest could be seen by some as countering global warming instead of aggravating" (p. 153). I'm still not clear if that is supposed to be a joke or not.

The section on geoengineering (Chapter 5) is a litany of potential projects that sound rather extreme: carbon capture and storage, seeding the atmosphere with sulphur dioxide, or "moderating the atmosphere with calcium carbonate particles" (p. 145). This insistence on adaptation over mitigation confuses me, because, even from a strictly economic viewpoint, minimizing our GHG emissions now will make adaptation in the future cheaper because there will be less carbon in the atmosphere. The only answer I came up with is a fear of the drastic changes that must occur to transition away from a fossil fuel economy.

In the final pages, Sedjo states that natural gas could be the remarkable solution that we need; it's a bit anti-climactic. Even Sedjo admits that "in the long term, it is only a part of a more environmentally friendly energy transition. The question is: a transi-

tion to what?” (p. 208). Now *that* sounds like the first line of a book that we need today.

### Literature Cited

**National Aeronautics and Space Administration.** 2020. Is the sun causing global warming? Accessed 2 April 2020. <https://climate.nasa.gov/faq/14/is-the-sun-causing->

[global-warming/](#).

**National Snow & Ice Data Center.** 2020. Quick facts on ice sheets. Accessed 2 April 2020. <https://nsidc.org/cryosphere/quickfacts/icesheets.html>.

EMMA BOCKING  
Halifax, NS, Canada

©The author. This work is freely available under the Creative Commons Attribution 4.0 International license (CC BY 4.0).