



GW Law Faculty Publications & Other Works

Faculty Scholarship

2024

Why Sustainable Procurement? Read All About It

Steven L. Schooner

Follow this and additional works at: https://scholarship.law.gwu.edu/faculty_publications



Part of the [Law Commons](#)

This article appeared in the April 2024 issue of Contract Management magazine, published by the National Contract Management Association. Used with permission.

03 The Dynamics of Contract Lifecycle Management

32 Leveraging the SBIR Program

38 Navigating Change With Precision and Purpose

ISSUE THEME

THE CONTRACT LIFECYCLE

CONTRACT MANAGEMENT

www.ncmahq.org

APRIL 2024

Charlie E. Williams, Jr., President of PACE, Embracing the Twists and Turns of Contract Management

A Lifetime of **EXCELLENCE**



NCMA

NATIONAL CONTRACT MANAGEMENT ASSOCIATION®

CONNECTING TO
CREATE WHAT'S NEXT

Why Sustainable Procurement? Read All About It



BY STEVEN L. SCHOONER

Climate change represents “the biggest threat to security that modern humans have ever faced,”¹ and adopting more sustainable procurement practices offers our professional community a unique opportunity to be part of the solution.

Even with historic legislation such as the Inflation Reduction Act (IRA) and Infrastructure Investment and Jobs Act (IIJA),² it will take time for the federal government and its business partners to break longstanding habits and fully embrace sustainability as a critical element of the all-hands-on-deck efforts to mitigate climate change. And, unfortunately, the longer it takes for governments to recalibrate, the more urgent and drastic the necessary measures become.

When faced with daunting challenges, “[i]f we want better

thinkers in the business world, we have to build better readers.”³ Reading informs our thinking, which in turn leads to more meaningful conversations. And that’s important. In Katharine Hayhoe’s iconic TED Talk,⁴ she emphasizes that:

“One of the most important actions people can take to address global warming is to talk about it.... [P]ositive conversations about the climate can help people connect over shared values including [among others,] family [and] community.... In turn, this can help people think more deeply about how a changing climate affects who and what they care about, and support changes in beliefs and attitudes about global warming.”

But thoughtful conversations don’t happen without effort. Given the stakes involved in attempting to mitigate climate change, how complicated the nuances of

sustainable procurement can be, and the steep learning curve associated with everything from concepts and vocabulary⁵ to the greenhouse gas (GHG) protocol,⁶ a little background reading can’t hurt.

Fortunately, libraries and bookstores increasingly stock an ever-expanding range of nonfiction (and fiction) options that introduce readers to climate change. With an eye towards informing productive conversations across the federal acquisition community about sustainable procurement, this article suggests some reading which, of course, merely scratches the surface of this diverse body of work.

Knowledge Is Power ... and Critical to Change

Global warming increasingly dictates that we change the way we approach doing business. Rising tempera-

tures and sea levels, severe weather, droughts, natural disasters (including floods and fires), and population displacements dominate the news and impact the missions of most, if not all, federal agencies and instrumentalities.

Within the acquisition community, two high-profile proposed *Federal Acquisition Regulation (FAR)* rules,⁷ numerous underlying executive orders and memoranda,⁸ this monthly column,⁹ and a rapidly expanding catalog of anecdotes, case studies, and best practices signal that sustainable procurement will continue to become an increasingly significant component of our professional lives.

Yet experience teaches us that, both personally and professionally, change is difficult, uncomfortable, and doesn't happen in a vacuum. Given the enormity of the challenges and learning curve we face, it's naïve to think that anything published by the FAR Council, even if widely read, aggressively rolled out, and accompanied by extensive training, will promptly change the behavior of our large and diverse acquisition workforce. In short, federal policy changes alone will not change procurement practices.

Consistent with the mantra "information is power," we understand that transparency – explaining *why* we need to change our behavior – is critical. Here, that's particularly vexing, "because members of the public do not know what scientists know, or think the way that scientists think. [As a result, t]hey predictably fail to take climate change as seriously as perfectly rational

risk-evaluators would."¹⁰

In addition to the books highlighted here, depending upon the focus of your agency or business, the market in which you buy or sell, or your interests, you may be drawn instead to samplers,¹¹ anthologies,¹² or books focused on a wide range of related topics, including defense and national security,¹³ the evolution of solar power,¹⁴ food and agriculture,¹⁵ waste and recycling,¹⁶ fashion,¹⁷ and even the economics of bicycle infrastructure.¹⁸

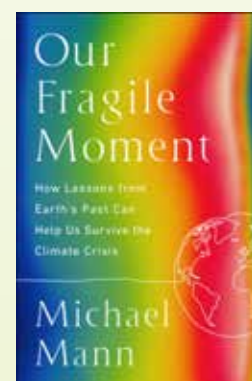
As you become more familiar with sustainable public procurement's role in mitigating climate change, don't be surprised if you find yourself intrigued by the evolving economics literature¹⁹ that acknowledges that climate change is a spectacular example of what economists refer to as "market failure"²⁰ and drives the debates around rethinking what *value for money* should mean to government customers and the federal source selection process.

Trust the Science

For one-stop shopping, the periodic reports of the Intergovernmental Panel on Climate Change (IPCC)²¹ represent the global gold standard of scientific consensus on all things related to climate change. Unfortunately, for most procurement professionals (and other mere mortals), these reports can be impenetrable (because, well, it's science) and couched in unfamiliar language. Fortunately, each report is accompanied by a far more accessible *Summary for Policymakers*²² that enables easy navigation to the more fulsome coverage, replete with citations to original sources.

Closer to home, the congressionally mandated *National Climate Assessment*, currently in its fifth iteration, represents a U.S.-based interagency effort to support decision-making related to climate change impacts, risks, and responses.²³ Intended to be user-friendly, or read rather than shelved, the *National Climate Assessment* also offers a limited series podcast and audiobook formats that introduce the report and the authors' perspectives.

For a less diagnostic and more thematic introduction to how we got here, consider Elizabeth Kolbert's Pulitzer Prize-winning book, *The Sixth Extinction: An Unnatural History*,²⁴ which offers a powerful and compelling exposition of the five prior periods during which life (in its various forms) on our planet became less common, and our current predicament, increasingly described as "the Anthropocene,"²⁵ in which species continue to disappear at staggering rates. Published nearly a decade ago, many readers may find *The Sixth Extinction* less current than other books suggested here, but they should not be surprised to find references to it in newer books.

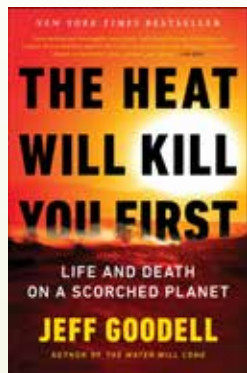


Michael Mann's *Our Fragile Moment*²⁶ offers a more current packaging of the basic narrative. Mann carefully explains

that human life, as we know about, is possible only within a relatively

narrow envelope of climate variability; and once temperatures exceed that range, our prospects become limited.²⁷ Despite Mann's well-deserved reputation in the community and the importance of his voice,²⁸ Mann's narrative isn't light reading, and many procurement professionals may find themselves derailed by the author's inclination to walk the reader through the scientific process, rather than merely focus on the research's conclusions and meaning. Fortunately, a wealth of similarly serious, but far more accessible, offerings are available.

The Heat Is the Problem



In late 2023, plenty of buzz accompanied Jeff Goodell's *The Heat Will Kill You First*,²⁹ which one reviewer aptly described as “a propulsive book, one to

be raced through. [That makes sense, because] the planet is burning, and we are running out of time.... A hotter world puts the most vulnerable at risk – the old, the sick, the poor.”³⁰

Goodell rejects sensitivities to communicate the stakes associated with temperature rising beyond “the Goldilocks Zone,” or conditions that are “just right” for humans and, more specifically, worker and agricultural productivity:

“Earth’s history is full of wild temperature swings, ... [b]ut for the last three million years or so, while humans evolved, the climate has

been relatively stable. Stable enough anyway, that our ancestors could migrate, adapt, and thrive.

“But those days may be over.... Extreme heat is remaking our planet into one in which large swaths may become inhospitable to human life.”

Therein lies the problem: “The harshest truth about life on a super-heated planet is this: as temperatures rise, a lot of living things will die, and that may include people you know and love.”³¹ Goodell does his best not to resort to fatalism, but his approach, a form of credible, informed scare tactics, is intended to shake readers (and governments and leaders) out of the complacency that has shaped our current trajectory.

An earlier, widely read effort to shake readers out of their complacency and shock the public into taking seriously the threats associated with climate change was David Wallace-Wells’ *The Uninhabitable Earth*.³² The book-length version of Wallace-Wells’ terrifying 2017 viral article “frightened the life out of everyone who read it. [The book] is even more remorseless in ... delineat[ing] what the not nearly distant enough future probably holds...”³³ Forewarned is forearmed.

Every single scientist I know is freaked out by the steep increase in carbon dioxide of the last fifty years. But we are more freaked out by the fact that our governments are not as freaked out about it as we are.
– Hope Jahren: *The Story of More*

For a less jarring introduction, consider Hope Jahren’s elegantly crafted *The Story of More*.³⁴ Jahren’s narrative artfully and seamlessly

blends science, statistics, and history into an informative package that many may find less hopeless or paralyzing than, say, Goodell or Wallace-Wells. No, Jahren doesn’t sugarcoat the challenges, but a good indicia of the book’s popular reception is that a subsequent version was adapted for young adults.³⁵

The Power of Stories

Contract Management magazine readers may recall Netflix’s allegorical, darkly comedic, 2021 end-of-the-year blockbuster, *Don’t Look Up*.³⁶ Record-breaking viewership was great news for the movie’s producers and proponents, including many scientists, who hoped the movie would raise awareness of, stimulate action regarding, and inject urgency into efforts to address the climate crisis.³⁷ And while it’s easy to be dismissive of this type of big-screen satire, or, frankly, fiction, it’s a mistake to underestimate its efficacy or potential impact.

Change management and pedagogical experience remind us that storytelling (and effective use anecdote, example, and case study) has greater impact than in-depth study of text, memorization, or straightforward direction.

Moreover, researchers assert that reading fiction increases empathy, which is incredibly important in persuading federal acquisition professionals, as well as their private sector partners, to change behavior or question the status quo for the sake of others (whether abroad, in Africa or India, or, here in the United States, in a rapidly expanding number of vulnerable communities) or for the benefit of our children and

grandchildren.³⁸

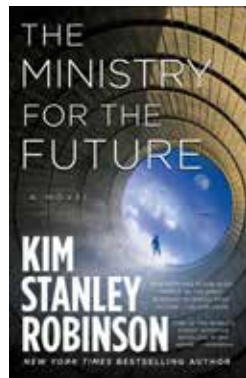
Christine Seifert, in the article, “The Case for Reading Fiction,” in the *Harvard Business Review*, explained:

“[W]e may be assuming that reading for knowledge is the best reason to pick up a book. Research, however, suggests that reading fiction may provide far more important benefits than nonfiction. For example, reading fiction predicts increased social acuity and a sharper ability to comprehend other people’s motivations. Reading nonfiction might certainly be valuable for collecting knowledge, [but] it does little to develop EQ, a far more elusive goal.”³⁹

To that end, two dramatically different, but deadly serious, science fiction titles frequently appear on climate change reading lists. *The Collapse of Western Civilization: A View from the Future*, written by science historians, Naomi Oreskes and Erik M. Conway, packs a powerful punch in a hundred pocket-sized pages.⁴⁰ With clear and stark prose, the authors fast forward less than a century to predict a sadly dystopian, and far less pleasant, yet altogether *predictable*, future if our governments and markets continue to delay taking more aggressive actions to reduce greenhouse gas emissions.

A more recent alternative is Kim Stanley Robinson’s celebrated novel, *The Ministry for the Future*.⁴¹ Robinson’s work may be more character-driven than Oreskes and Conway’s, but it was eerily prescient in opening with a devastating heat wave in India.⁴² Indeed, “[a]t the [2021] United Nations’ climate summit[,] Robinson was treated as a quasi-celebrity. He met with diplomats, ecologists and business leaders, and made the

case for implementing some of the ambitious ideas in his fiction....”⁴³



lines of “doom and hope,”⁴⁴ with Katharine Hayhoe’s *Saving Us*⁴⁵ topping most “hoper” reading lists. Not surprisingly, the fiction shelf gravitates towards the doom and dystopia side of things. But if a little science or speculative fiction whets your appetite to learn more, then a little action, color, and character won’t hurt.

So Many Books, So Little Time

Confronted with a myriad of competing demands, priorities, policy initiatives, and compliance requirements, buyers and sellers in the U.S. federal procurement marketplace may be forgiven for being unfamiliar with, and being slow to adopt, evolving best practices and global trends in sustainable procurement.⁴⁶

The absence of major changes to the FAR or clear signals from leaders that adapting to and mitigating climate change is mission critical reinforces the status quo. Most procurement professionals simply have not been told that stemming climate change represents an institutional imperative that requires them to rethink the familiar emphasis on low purchase prices, speed, and,

A word of caution: the scientific and advocacy camps increasingly divide climate change literature and advocacy along the

of course, compliance with statutory and regulatory mandates. As a result, sustainability rarely plays a dominant role in acquisition planning.

Contractors, meanwhile, respond to government requirements and focus on evaluation factors and rubrics. Business as usual continues apace.

But change is coming. For example, the pending FAR cases will accelerate the process of federal buyers and sellers integrating sustainability considerations into procurement decision-making. And expect more legislation, regulation, and policy guidance to follow. For now, however, significant opportunities exist within current federal regulations and policy to affect change, and the burden to stimulate innovation falls upon us, individually, and collectively, as a community of procurement professionals.

What better place to start than with a good book? So, take the plunge, grab a book, read it, think about it, and share it with a colleague or friend and NCMA’s Sustainable Procurement Community of Practice. We look forward to continuing the conversation. **CM**

Steven L. Schooner is the Jeffrey & Martha Kohn Senior Associate Dean for Academic Affairs, and Nash & Cibinic Professor of Government Procurement Law, at The George Washington University Law School. He previously served in the Office of Federal Procurement Policy (OFPP). He is a member of the NCMA Board of Advisors, a Certified Professional Contract Manager™ (CPCM™), and received the NCMA Charles A. Dana Distinguished Service Award in 2012. He and his father, Murray, were NCMA’s first father-and-son Fellows.

ENDNOTES

- 1 United Nations, *Press Release: Climate Change 'Biggest Threat Modern Humans Have Ever Faced', World-Renowned Naturalist Tells Security Council, Calls for Greater Global Cooperation* (quoting David Attenborough before the UN Security Council, Feb. 23, 2021), <https://press.un.org/en/2021/sc14445.doc.htm>.
- 2 Public Law 117-169 (August 16, 2022), Public Law No. 117-58 (November 15, 2021).
- 3 Cognitive scientist Maryanne Wolf, quoted in Christine Seifert, *The Case for Reading Fiction*, Harvard Business Review (March 06, 2020), <https://hbr.org/2020/03/the-case-for-reading-fiction>.
- 4 Katharine Hayhoe, TED Talk, *The most important thing you can do to fight climate change: talk about it* (Nov. 2018), https://www.ted.com/talks/katharine_hayhoe_the_most_important_thing_you_can_do_to_fight_climate_change_talk_about_it; see also Matthew Ballew, et al., *Who is Most Likely to Talk About Climate Change?* Climate Note (Yale, May 18, 2023), <https://climatecommunication.yale.edu/publications/who-is-most-likely-to-talk-about-climate-change/>.
- 5 See generally, Steven L. Schooner & Evan Matsuda, *Sustainable Procurement: Building Vocabulary To Accelerate The Federal Procurement Conversation*, Briefing Papers No. 21-10 (Thomson Reuters, 2d Series, Sept. 2021), available at <https://ssrn.com/abstract=3943341>.
- 6 See generally, U.S. EPA, *Greenhouse Gas (GHG) Emissions and Removals*, <https://www.epa.gov/ghgemissions>; U.S. EPA, *GHG Inventory Development Process and Guidance*, <https://www.epa.gov/climateleadership/ghg-inventory-development-process-and-guidance>; *Greenhouse Gas Protocol*, <https://ghgprotocol.org/about-us>.
- 7 Federal Acquisition Regulation: Sustainable Procurement, 88 Fed. Reg. 51672 (Aug. 3, 2023), <https://www.federalregister.gov/documents/2023/08/03/2023-16012/federal-acquisition-regulation-sustainable-procurement>; Federal Acquisition Regulation: Disclosure of Greenhouse Gas Emissions and Climate-Related Financial Risk, 87 Fed. Reg. 68312 (Nov. 14, 2022), <https://www.federalregister.gov/documents/2022/11/14/2022-24569/federal-acquisition-regulation-disclosure-of-greenhouse-gas-emissions-and-climate-related-financial>.
- 8 Among the six Biden Administration Executive Orders, the basis is established by EO 14008, "Tackling the Climate Crisis at Home and Abroad." The first two FAR Cases derive from EO 14030, "Climate Related Financial Risk." See these and other related executive policy documents at the Office of the Federal Chief Sustainability Officer, Council on Environmental Quality, Policy and Resources & Guidance: <https://www.sustainability.gov/policy.html> and <https://www.sustainability.gov/resources.html>.
- 9 This article is part of the series: "Driving Climate Action Through Federal Procurement Practices." See Polly Hall, Tim Cooke & Steven Schooner, *Leveraging the Federal Government's Buying Power to Mitigate Climate Change*, 63 Contract Management 40 (December 2023), <https://ssrn.com/abstract=4652748>.
- 10 Dan M. Kahan, Maggie Wittlin, Ellen Peters, et al., *The Tragedy of the Risk-Perception Commons: Culture Conflict, Rationality Conflict, and Climate Change* (2011), Yale Law & Economics Research Paper No. 435, <https://ssrn.com/abstract=1871503>, <http://dx.doi.org/10.2139/ssrn.1871503>. That phenomenon is exacerbated by a steady stream of misinformation and political polarization, which distracts from and stifles meaningful discussion. See John Cook, *Cranky Uncle vs. Climate Change: How to Understand and Respond to Climate Science Deniers* (Citadel 2020) (featuring, with cameos and caricatures, many of the authors highlighted in this article), <https://www.kensingtonbooks.com/9780806540276/cranky-uncle-vs-climate-change/>.
- 11 I recommend the inspired UK-published collection introducing the classics and visionary thinkers spanning "art, literature, food and gardening, technology, economics, politics, and ethics...." *Green Ideas Slipcase* (Penguin Classics, 2021, Boxed Set) <https://www.penguin.co.uk/books/447238/green-ideas-slipcase-by-various/9780241548721>.
- 12 Two popular options include: Ayana Elizabeth Johnson & Katharine K. Wilkinson, *All We Can Save: Truth, Courage, and Solutions for the Climate Crisis* (Penguin, 2021), <https://www.penguinrandomhouse.com/books/645808/all-we-can-save-by-edited-by-ayana-elizabeth-johnson-and-katharine-k-wilkinson/>; and Greta Thunberg, *The Climate Book: The Facts and the Solutions* (Penguin, 2023), <https://www.penguinrandomhouse.com/books/709837/the-climate-book-by-greta-thunberg/>.
- 13 In addition to Michael T. Klare, *All Hell Breaking Loose: The Pentagon's Perspective on Climate Change* (Metropolitan, 2019), <https://us.macmillan.com/books/9781627792486/allhellbreakingloose>; consider two more academic offerings: Joshua W. Busby, *States and Nature: The Effects of Climate Change on Security* (Cambridge University, 2022), <https://www.cambridge.org/core/books/states-and-nature/898ABA2AA3E3874AF3B57A1D887421C0>, and Neta C. Crawford, *The Pentagon, Climate Change, and War: Charting the Rise and Fall of U.S. Military Emissions* (MIT Press, 2022), <https://mitpress.mit.edu/9780262047487/the-pentagon-climate-change-and-war/>. See also, DODIG-2024-030, *Audit of Environmental Threats to Naval Dry Docks* (Nov. 29, 2023), <https://media.defense.gov/2023/Dec/01/2003350143-1/1/1/DODIG-2024-030%20SECURE.PDF>; DODIG-2023-061, *Audit of Military Department Climate Change Assessments and Adaptation Plans in the Southeastern Continental United States* (Mar. 30, 2023), <https://media.defense.gov/2023/Mar/30/2003190028-1/1/1/DODIG-2023-061.PDF>; and, for more on our coasts' futures, see Elizabeth Rush, *Rising: Dispatches From the New American Shore* (Milkweed, 2019), <https://milkweed.org/book/rising>.
- 14 Andy Bowman, *The West Texas Power Plant That Saved the World: Energy, Capitalism, and Climate Change* (Revised and Expanded Edition, Texas Tech University, 2023), <https://www.ttpress.org/9781682831861/the-west-texas-power-plant-that-saved-the-world/>.
- 15 George Monbiot, *Regenesi: Feeding the World Without Devouring the Planet* (Penguin Books, 2022), <https://www.penguinrandomhouse.com/books/645538/regenesi-by-george-monbiot/>; see also Chloe Waterman, Rachel Clark & Steven L. Schooner, *Food Procurement: An Essential Ingredient to Mitigating Climate Change and Enhancing Public Health*, 64 Contract Management 50 (February 2024), <https://ssrn.com/abstract=4714848>.
- 16 Jennie Romer, *Can I Recycle This? A Guide to Better Recycling and How to Reduce Single-Use Plastics* (Penguin, 2021), <https://www.penguinrandomhouse.com/books/639336/can-i-recycle-this-by-jennie-romer-illustrated-by-christie-young/>.
- 17 Lily Cole, *Who Cares Wins: How to Protect the Planet You Love: A Thousand Ways to Solve the Climate Crisis: From Tech-utopia to Indigenous Wisdom* (Penguin, 2021), <https://www.penguin.co.uk/books/305695/who-cares-wins-by-cole-lily/9780241309148>.
- 18 Elly Blue, *Bikenomics: How Bicycling Can Save the Economy* (Microcosm, 2016), <https://microcosmpublishing.com/catalog/books/4418>. Don't assume this only works in Holland, the cycling infrastructure mecca. As of 2022, "[c]ycles made up a greater proportion of traffic than cars and private hire vehicles counted on [London] streets...." Carlton Reid, *Cycles Outnumber Cars In City Of London*, Forbes (Jul. 11, 2023), <https://www.forbes.com/sites/carltonreid/2023/07/11/cycles-now-outnumber-cars-in-city-of-london/>.
- 19 My favorite is Kate Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist* (Chelsea Green Publishing, 2018), <https://www.chelseagreengreen.com/product/doughnut-economics-paperback/>; see also Mariana Mazzucato, *Mission Economy: A Moonshot Guide to Changing Capitalism* (Harper Business, 2023), <https://www.harpercollins.com/products/mission-economy-mariana-mazzucato>. For more conventional advocacy of carbon taxes, see Shi-Ling Hsu, *Capitalism and the Environment: A Proposal to Save the Planet* (Cambridge University, 2021), <https://www.cambridge.org/core/books/abs/capitalism-and-the-environment/capitalism-and-the-environment/ABB2BA13030CB46700C51868413B7A98>; Jean Tirole, *Economics for the Common Good*, Chapter 8 (Princeton University, 2019), <https://press.princeton.edu/books/paperback/9780691192253/economics-for-the-common-good>.
- 20 Grantham Research Institute and Duncan Clark, *Why do economists describe climate change as a 'market failure'?*, The Guardian (May 21, 2012), <https://www.theguardian.com/environment/2012/may/21/economists-climate-change-market-failure>. "[F]or all the talk of a green recovery and building back better, the grown-ups are still failing the [Greta] Thunberg test [for whether the grown-ups have really started to take climate change seriously: have the emissions started to fall? So long as they go on rising, anything else is just Blah, blah, blah....]" Dougald Hine, *At Work in the Ruins: Finding Our Place in the Time of Science, Climate Change, Pandemics and All the Other Emergencies* (Chelsea

- Green, 2023), <https://www.chelseagreen.com/product/at-work-in-the-ruins/>.
- 21 Intergovernmental Panel on Climate Change (IPCC), AR6 Synthesis Report: Climate Change 2023, <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>. The IPCC “is the United Nations body for assessing the science related to climate change.” Its reports address “the state of scientific, technical and socio-economic knowledge on climate change, its impacts and future risks, and options for reducing the rate at which climate change is taking place.” <https://www.ipcc.ch/>; *About the IPCC*, <https://www.ipcc.ch/about/>.
 - 22 Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report: Summary for Policymakers* (2023) A3, available at https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf.
 - 23 U.S. Global Change Research Program, *Fifth National Climate Assessment* (2023), <https://doi.org/10.7930/NCA5.2023>, <https://nca2023.globalchange.gov/>; <https://globalchange.gov/our-work/fifth-national-climate-assessment>.
 - 24 Elizabeth Kolbert, *The Sixth Extinction: An Unnatural History* (Picador, 2015), <https://us.macmillan.com/books/9781250062185/> thesixthextinction; The Pulitzer Prizes, *2015 Pulitzer Prize Winner in General Nonfiction*, <https://www.pulitzer.org/winners/elizabeth-kolbert>.
 - 25 “[Paul] Crutzen championed the term ‘Anthropocene’ to describe what he regarded as a new epoch, characterized by human dominance of biological, chemical and geological processes on Earth.” Jos Lelieveld, *Paul J. Crutzen (1933–2021): Ozone Nobel Prizewinner Who Coined the Term Anthropocene*, *Nature* (Feb. 24, 2021), <https://www.nature.com/articles/d41586-021-00479-0>; Susan Solomon, *Paul J. Crutzen (1933–2021)*, *Science* (Feb. 26, 2021), <https://science.sciencemag.org/content/371/6532/892.full>; Paul J. Crutzen & Eugene F. Stoermer, *The ‘Anthropocene’*, 41 *Glob. Change Newsl.*, 17 (2000), <https://www.degruyter.com/document/doi/10.12987/9780300188479-041/html>.
 - 26 Michael E. Mann, *Our Fragile Moment: How Lessons from Earth’s Past Can Help Us Survive the Climate Crisis* (Hachette, 2023), <https://www.hachettebookgroup.com/titles/michael-e-mann/our-fragile-moment/9781541702899/>.
 - 27 Both Mann and Kolbert disabuse readers of the fallacy that the goal is “saving the planet.” Planet Earth will do just fine without us, as it did long before humans walked on two feet. Conversely, mitigating climate change is necessary for humans to comfortably inhabit the planet.
 - 28 “Michael E. Mann has been a central figure in the battle for the environment since the ‘hockey stick’ graph made him a target for climate change deniers 25 years ago.” JoAnn Greco, *Mann in the Middle*, *Penn. Gazette* (Jun 23, 2023), <https://thepenngazette.com/mann-in-the-middle/>. Also consider Mann’s eye-opening call to arms, Michael E. Mann, *The New Climate War: The Fight to Take Back Our Planet* (Hachette, 2022, including a lengthy Epilogue not in the original, 2020 edition), <https://www.hachettebookgroup.com/titles/michael-e-mann/the-new-climate-war/9781541758216/>.
 - 29 Jeff Goodell, *The Heat Will Kill You First* (Little Brown, 2023), <https://www.hachettebookgroup.com/titles/jeff-goodell/the-heat-will-kill-you-first/9780316497572/>.
 - 30 Jennifer Szalai, *Extreme Heat Is Here to Stay. Why Are We Not More Afraid?*, *NY Times* (June 29, 2023), <https://www.nytimes.com/2023/06/29/books/review/the-heat-will-kill-you-first-jeff-goodell.html>.
 - 31 Goodell, *The Heat Will Kill You First* at 18.
 - 32 David Wallace-Wells, *The Uninhabitable Earth: Life After Warming* (Crown, 2020), <https://www.penguinrandomhouse.com/books/586541/the-uninhabitable-earth-by-david-wallace-wells/>.
 - 33 Mark O’Connell, *The Uninhabitable Earth by David Wallace-Wells review – our terrifying future*, *The Guardian* (Feb. 27, 2019), <https://www.theguardian.com/books/2019/feb/27/the-uninhabitable-earth-review-david-wallace-wells>. Similarly, see Mike Berners-Lee, *There Is No Planet B: A Handbook for the Make or Break Years* (Cambridge University, Updated Edition, 2021), <https://www.cambridge.org/core/books/there-is-no-planet-b/0F6CDB5C3EB53F9954E2853FEF41EC9C>.
 - 34 Hope Jahren, *The Story of More: How We Got to Climate Change and Where to Go From Here* (Vintage, 2020), <https://www.penguinrandomhouse.com/books/575671/the-story-of-more-by-hope-jahren/>.
 - 35 Hope Jahren, *The Story of More (Adapted for Young Adults): How We Got to Climate Change and Where to Go From Here* (Ember, 2022), <https://www.penguinrandomhouse.com/books/672523/the-story-of-more-adapted-for-young-adults-by-hope-jahren/>. Don’t be surprised if your children or grandchildren have already read it.
 - 36 *Don’t Look Up* (Netflix, 2021), <https://www.imdb.com/title/tt11286314/>.
 - 37 Cara Buckley, *Don’t Just Watch: Team Behind ‘Don’t Look Up’ Urges Climate Action*, *NY Times* (Jan. 11, 2022), <https://www.nytimes.com/2022/01/11/climate/dont-look-up-climate.html>.
 - 38 Don’t hesitate to talk to your children about climate change. You may find they’re far more anxious than you’d expect. See, generally, Britt Wray, *Generation Dread: Finding Purpose in an Age of Eco-Anxiety* (Penguin, 2023), <https://www.penguinrandomhouse.ca/books/647141/generation-dread-by-britt-wray/9780735280724>; Caroline Hickman, et al., *Climate Anxiety in Children and Young People and Their Beliefs About Government Responses to Climate Change: a Global Survey*, 5 *The Lancet E863* (Dec. 2021), [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(21\)00278-3/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(21)00278-3/fulltext).
 - 39 Christine Seifert, *The Case for Reading Fiction*, *Harvard Business Review* (March 06, 2020), <https://hbr.org/2020/03/the-case-for-reading-fiction>; see also, P. Matthijs Baal & Martijn Velkamp, *How Does Fiction Reading Influence Empathy? An Experimental Investigation on the Role of Emotional Transportation*, *PLoS One*. 2013; 8(1), e55341, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3559433/>.
 - 40 Naomi Oreskes & Erik M. Conway, *The Collapse of Western Civilization: A View from the Future* (Columbia University, 2014) <https://cup.columbia.edu/book/the-collapse-of-western-civilization/9780231169547>.
 - 41 Kim Stanley Robinson, *The Ministry for the Future* (Orbit, 2020), <https://www.hachettebookgroup.com/titles/kim-stanley-robinson/the-ministry-for-the-future/9780316300162/>.
 - 42 Olivia Rosane, *Deadly Heat Wave in India and Pakistan was 30x More Likely Due to Climate Change, Scientists Say*, *World Economic Forum* (Jun. 7, 2022), <https://www.weforum.org/agenda/2022/06/deadly-heat-wave-in-india-and-pakistan-was-30x-more-likely-due-to-climate-change-scientists-say/>; Rebecca Onion, *I Can’t Stop Thinking About the First Chapter of This Climate Change Novel*, *Slate* (Aug. 16, 2021), <https://slate.com/technology/2021/08/ministry-for-the-future-first-chapter-kim-stanley-robinson-interview.html>.
 - 43 Alexandra Alter, *A Sci-Fi Writer Returns to Earth: ‘The Real Story Is the One Facing Us,’* *New York Times* (May 11, 2022), <https://www.nytimes.com/2022/05/11/books/kim-stanley-robinson-sci-fi.html>.
 - 44 Rebecca Solnit, *We Can’t Afford to be Climate Doomers*, *The Guardian* (July 26, 2023), <https://www.theguardian.com/commentisfree/2023/jul/26/we-cant-afford-to-be-climate-doomers>; Shannon Osaka, *Why Climate ‘Doomers’ are Replacing Climate ‘Deniers’*, *Washington Post* (May 24, 2023), <https://www.washingtonpost.com/climate-environment/2023/03/24/climate-doomers-ipcc-un-report/>.
 - 45 Katharine Hayhoe, *Saving Us: A Climate Scientist’s Case for Hope and Healing in a Divided World* (Atria/One Signal, 2022), <https://www.simonandschuster.com/books/Saving-Us/Katharine-Hayhoe/9781982143848>.
 - 46 See, generally, Willem Janssen & Roberto Caranta, *Mandatory Sustainability Requirements in EU Public Procurement Law: Reflections on a Paradigm Shift* (Hart, 2023), <https://www.bloomsbury.com/us/mandatory-sustainability-requirements-in-eu-public-procurement-law-9781509963973/>; United Nations Environment Programme (UNEP), *Sustainable Public Procurement: 2022 Global Review* (Parts I and II), (December 16, 2022) <https://www.oneplanetnetwork.org/knowledge-centre/resources/sustainable-public-procurement-2022-global-review-parts-i-and-ii>.