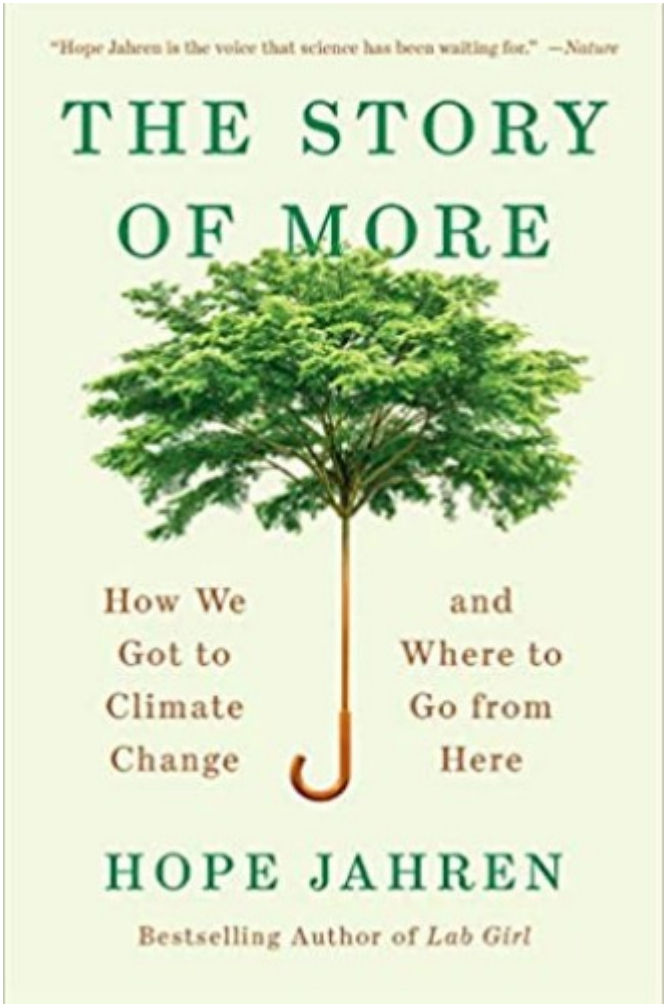
A book on climate change that’s neither preachy nor hopeless

Raised on a farm, scientist Hope Jahren offers clear, concise, and credible explanations.

by David A. Hoekema in the May 19, 2021 issue

In Review



The Story of More

How We Got to Climate Change and Where to Go from Here

by Hope Jahren
Vintage Books
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Readers of the *Christian Century* are unlikely to dismiss climate change worries as socialist propaganda. But we all have neighbors who are unconvinced. “Go ahead and drive a Prius, eat only veggies, stop using straws, and install solar panels,” they say, “if it makes you feel good. But weather changes all the time, and scientists don’t agree on why. Coal plants are way cleaner than they used to be, anyway. Can I give you a lift to the corner store in my Hummer?”

If you’re looking for a book to recommend during the drive, Hope Jahren’s is a good choice. She invites readers on a breezy but well-documented tour of the major systems, both natural and cultural, that are in grave danger because of climate change. Her short book, heavy on facts and light on preaching, reviews what we know, and what we don’t know yet, about the challenges of the Anthropocene era (although she never uses that term). She focuses on the culture of more, more, more which we have embraced in the developed world and on how making do with less could bring us better food, cleaner air and water, and happier lives.

Jahren is a Minnesota farm girl and a research scientist. Both identities are evident in her account of dinner party conversations where, in between bites of prosciutto, others decry the horrors of animal slaughter. The farm girl responds that the gigantic hog processing plant in her hometown provides steady jobs and affordable pork chops—and its slaughter protocols were designed by animal welfare specialists.

Then the scientist adds that our voracious appetite for meat causes deforestation, water and air pollution, and misuse of grain crops, to say nothing of diabetes and coronary disease. We pour a billion tons of grain into the feed trough to get 10 percent of that back as meat—and three times as much manure. Jahren doesn’t ask us to stop eating meat, however. If we cut back by half, each American consuming two instead of four pounds a week, we would have cleaner arteries, smaller waists, and 15 percent more grain for people to eat.

A geochemist who has held research and teaching posts in Hawaii and Norway, Jahren has retained a trait that’s not generally encouraged in graduate education: humility. Again and again, after citing authoritative studies of a particular environmental challenge, she adds: remember, these are scientists, and they might

be wrong. “All human beings are a lot better at describing what is happening than at predicting what will happen,” she writes. “Somewhere along the way, however, we began to hope that scientists were different—that they could be right all the time. And because they’re not, we kind of stopped listening.”

Population projections are an instructive case in point. Aristotle worried that the world might soon go hungry. By medieval times, when the population had doubled, church authorities warned that the earth’s capacity would soon be exhausted. By 1800, when population had doubled again, economist Thomas Malthus “took overpopulation neuroses to the next level” with dire predictions of imminent starvation. Today the population has increased sevenfold, but there would be enough food for all if we were to waste less and share more.

Where some see modern agriculture as a pact with the devil, Jahren’s perspective is more nuanced. Much of the world would be starving today, she argues, without improved crop varieties and increased yields. Around the globe, agricultural acreage has increased only slightly in recent generations, but we harvest three times as much. A field of corn or soybeans that produced 100 bushels a century ago now yields 400.

How was this achieved? “World usage of fertilizer has tripled since 1969, and the global capacity for irrigation has almost doubled; we are feeding and watering our fields more lavishly than ever, and our crops are loving it. Unfortunately, these luxurious conditions have also excited the attention of certain agricultural undesirables.” Pesticides keep these intruders—insects, fungi, and destructive bacteria—under control. Global use is 5 million tons around the world each year, more than a pound per person. All these chemicals build up in our bodies, especially those of farmworkers, with unknown long-term effects.

Then should we do all our shopping in the organic aisle? Here the farm girl takes the microphone again. Organic farming, with minimal tilling and fewer chemicals, is unquestionably better for the soil. But it is more expensive, with no detectable nutritional advantages. Appealing as it sounds, Jahren advises, organic produce will remain “a parallel boutique system of agriculture that is approachable by very few.”

Efficiency at turning crops into meat and milk has also improved enormously. Animals are better fed, healthier, and quicker to mature. Compared to 50 years ago, we slaughter half as many cattle and milk 3 million fewer cows, yet twice as much

meat and milk goes to market. But at what cost? One-third of the world's fresh water is used for raising and slaughtering animals. Two-thirds of all the antibiotics produced in the United States are fed to animals, "ostensibly to promote growth and decrease mortality, though studies have shown that they don't work for either."

We are not going to persuade all 7 billion people on earth to be vegetarians. But we can replace the "story of more" with the "story of less." We need to eat less meat, use less plant food to produce meat and fish, drive less, and use less electricity. Jahren provides diverse examples. Global production of salmon has increased exponentially, for example, from 13,000 tons a year in the 1970s to 3 million tons today. But most of it comes from huge cages in coastal waters, where 15 pounds of harvested ocean fish, processed into feed pellets, produce one pound of fish for consumption—and five more pounds of waste flowing back into the sea. Restoring depleted fishing grounds will require not only limits on ocean catch but also better ways to feed farmed fish.

Our diet is also sweeter than ever before, thanks to the invention of high-fructose corn syrup in the 1970s to address a sugar shortage and a corn surplus. Today it accounts for 10 percent of the calories we consume. "It is not clear that HFCS is worse for your diet than table sugar," Jahren comments, but both are "worse for you than eating nothing."

To assess the waste that our farming and food systems produce—sanitary waste from our toilets and spoiled food from delayed shipments and forgotten refrigerator drawers—Jahren enlists the expertise of her brother, a sanitation worker. Then she turns to the sources and uses of energy, highlighting the relentless demands of the developed world and the unmet needs of the rest. If everyone received an equal share of the energy produced worldwide today, "each person's energy use could be equal to the average consumed by people living in Switzerland during the 1960s."

In the realm of energy, as in that of food, Jahren concludes, "all of the want and suffering in the world—*all* of it—arises not from the earth's inability to produce but from our inability to share." The imperative to share seems to be a self-evident moral principle for Jahren. Her extensive appendix highlights a wealth of global data sources but does not suggest any philosophical or theological sources that could deepen her analysis.

In discussing energy production and use, Jahren again tempers idealism with pragmatism. Burning coal poisons the air, and oil and gas reserves are being depleted. But where can we go from here? Hydropower is clean but not available everywhere. Solar and wind generation keeps growing, and its costs keep dropping. But these sources produce only 5 percent of global energy today, and it will be a generation or two before we can live without electricity from nuclear and fossil fuel sources. An all-renewable global energy system, she concludes, is “unfortunately a pipe dream.”

Jahren considers the global effects of the story of more in a series of chapters on air pollution, higher temperatures, melting ice, rising waters, and species extinction. All are results, direct or indirect, of our most urgent and immediate threat: global warming from atmospheric carbon. She writes, “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.”

All the same, Jahren cautions, exaggerated claims that catastrophe is imminent—that it’s time for panic, not discussion—only provide grist for the mill of climate skeptics.

Jahren suggests some practical steps to reduce energy use: carpool, buy only food you know you will use, turn thermostats down in winter and up in summer, avoid single-use plastic, and so forth. She implies (but does not state) that we should also demand accountability from our leaders. If we work to address climate issues not only in our own households but also in the House and Senate, we can take steps toward “a *transformative* approach to energy use,” a new understanding of “what energy is for,” in order to “transform our individual—and then our collective—practices of how energy is used.”

To put these issues in a larger context, we need to turn to other writers. Wendell Berry, Bill McKibben, Elizabeth Kolbert, and Norman Wirzba come to mind. But to get a conversation going, *The Story of More*—reliable and readable, light in tone but serious in intent—may be just the book to give to that skeptical neighbor.