

References – 2050 – What’s It Gonna Be?

Chapter 1

1. World Wildlife Fund Living Planet Report 2020, <https://www.worldwildlife.org/publications/living-planet-report-2020>.
2. National Geographic, November, 2020, “Let’s Not Waste This Moment”, Robert Kunzig.
3. National Geographic, April, 2020, “The Mark of Humanity”, Irene Berman-Vaporis and Matthew W. Chwastyk.
4. “The Uninhabitable Earth: Life After Warming”, David Wallace-Wells, 2020, Tim Duggan Books.
5. “The Planet Has Lost Half Its Coral Reefs Since 1950”, Corryn Wetzel, <https://www.smithsonianmag.com/science-nature/the-planet-has-lost-half-of-coral-reefs-since-1950-180978701/>.
6. The Guardian, April 3, 2019, “Last time CO2 levels were this high, there were trees at the South Pole”, Damien Carrington, <https://www.theguardian.com/science/2019/apr/03/south-pole-tree-fossils-indicate-impact-of-climate-change>.
7. “Do the Earth’s Volcanoes Emit More CO2 Than Human Activity? No.”. <https://www.usgs.gov/programs/VHP/volcanoes-can-affect-climate>.
8. “Average concentration of carbon dioxide (CO₂) in the atmosphere, measured in parts per million (ppm)”, NOAA/ESRL, Bernhard Bereiter, Sarah Eggleston, Jochen Schmitt, Christoph Nehrbass-Ahles, Thomas F. Stocker, Hubertus Fischer, Sepp Kipfstuhl and Jerome Chappellaz. 2015. Revision of the EPICA Dome C CO₂ record from 800 to 600 kyr before present. Geophysical Research Letters. Doi: 10.1002/2014GL061957, <https://www.esrl.noaa.gov/gmd/ccgg/trends/data.html> .
9. Median Temperature Anomaly From 1961-1990 Average, Variable time span, 1850 – 2019, Data published by Met Office Hadley Centre, <https://www.metoffice.gov.uk/hadobs/hadcrut4/index.html>.
10. “Climate and Earth’s Energy Budget”, Rebecca Lindsey, January 4, 2009, <https://earthobservatory.nasa.gov/features/EnergyBalance>.
11. “How Exactly Does Carbon Dioxide Cause Global Warming?”, Sarah Fecht, February 25, 2021, <https://news.climate.columbia.edu/2021/02/25/carbon-dioxide-cause-global-warming/>
12. “Global CO₂ Emissions From Fossil Fuels and Land Use Change”, Our World in Data, <https://ourworldindata.org/co2-emissions?country=>.
13. “Plate Tectonics and Climate Change”, Robert M. DeConto, May 23, 2008, https://www.geo.umass.edu/climate/papers2/deconto_tectonics&climate.pdf.
14. “Milankovich Cycles and Carboniferous Climate”, Thomas J. Crowley, Kuor-Jier Joseph Yip, Steven K. Baum, June 18, 1993, <https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/93GL01119>.
15. “Milankovitch (Orbital) Cycles and Their Role in Earth's Climate”, Alan Buis, NASA’s Jet Propulsion Laboratory, February 27, 2020, [https://climate.nasa.gov/news/2948/milankovitch-orbital-cycles-and-their-role-in-earths-climate/#:~:text=Milankovitch%20\(Orbital\)%20Cycles%20and%20Their%20Role%20in%20Earth%27s%20Climate](https://climate.nasa.gov/news/2948/milankovitch-orbital-cycles-and-their-role-in-earths-climate/#:~:text=Milankovitch%20(Orbital)%20Cycles%20and%20Their%20Role%20in%20Earth%27s%20Climate).
16. “Albedo and Climate”, UCAR Center for Science Education, <https://scied.ucar.edu/learning-zone/how-climate-works/albedo-and-climate>.

17. "Using the current seasonal cycle to constrain snow albedo feedback in future climate change, Alex Hall and Xin Qu, Department of Atmospheric and Oceanic Sciences, University of California, Los Angeles, California, USA, Geophysical Research Letters, 2005.
http://people.atmos.ucla.edu/alexhall/publications/Hall/Hall_Qu_2005.pdf.

Chapter 2

1. "Population – Global: Evolution of Total Population, 1800 - 2000", April 29, 2015, Jonathan Fink-Jensen. <https://clio-infra.eu/Indicators/TotalPopulation.html>.
2. "World Population Prospects 2019", United Nations Department of Economic and Social Affairs Population Dynamics. <https://population.un.org/wpp/>.
3. Hannah Ritchie and Max Roser (2020) - "CO₂ and Greenhouse Gas Emissions". Published online at OurWorldInData.org. Retrieved from: <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>.
4. Global Carbon Project. (2021). Supplemental data of Global Carbon Project 2021 (1.0) [Data set]. Global Carbon Project. <https://doi.org/10.18160/gcp-2021>.
5. Andrew, Robbie M., & Peters, Glen P. (2021). The Global Carbon Project's fossil CO₂ emissions dataset [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.5569235>.
6. Population figures are sourced from Gapminder (v6), HYDE (v3.2), United Nations Population Division (2019). Links: <https://www.gapminder.org/data/documentation/gd003/>; <https://population.un.org/wpp/Download/Standard/Population/>; <https://dataportal.pbl.nl/downloads/HYDE/>.
7. Life Expectancy of the World Population, Worldometer, <https://www.worldometers.info/demographics/life-expectancy/>.
8. Infant Mortality by Country, 2022, World Population Review, <https://worldpopulationreview.com/country-rankings/infant-mortality-rate-by-country>.
9. "2020 - Global Report on Food Crises | World Food Programme". www.wfp.org. Retrieved 2021-12-20. <https://www.wfp.org/publications/2020-global-report-food-crises>.
10. "An Essay on the Principles of Population", Malthus, Thomas, originally published in 1798, Feather Trail Press, 2010.
11. "Population Bomb", Ehrlich, Paul R., 1968, Ballantine Books, a division of Random House.
12. "Welcome to the Monkey House", Vonnegut, Kurt, 1968, Delacorte Press.
13. "Saving Africa's Parks", David Quammen, National Geographic Magazine, December, 2019.
14. "The Money Trees: The role of corporate action in the fight against deforestation", CDP.net, <https://www.cdp.net/en/research/global-reports/the-money-trees>.
15. "Global Deforestation Rates and Statistics by Country", Global Forest Watch, <https://www.globalforestwatch.org>.
16. Whale ref HCN, 11/26/18, page 3
17. Salmon ref HCN, 9/16/19, "Why are so many gray whales dying?", Helen Santoro
18. "Vulnerable Bounty", Mathew W. Chwastyk, National Geographic, November, 2021.
19. "The Skagit River Reconsidered", Lester Black, High Country News, August, 2021.
20. High Country News, 9/4/17, "States restrict chinook fisheries", Elizabeth Shogren.

21. “A ubiquitous tire rubber–derived chemical induces acute mortality in coho salmon”, Zhenyu Tian, Interdisciplinary Arts and Sciences, University of Washington Tacoma, Tacoma, WA , SCIENCE, 3 Dec 2020, Vol 371, Issue 6525, pp. 185-189, <https://www.science.org/doi/10.1126/science.abd6951>
22. “Special Report – Global Warming of 1.5 °C”, The Intergovernmental Panel on Climate Change, <https://www.ipcc.ch/sr15/faq/faq-chapter-1/>.

Chapter 3

1. Bernet, Ross, “How Much Carbon Does a Tree Absorb?”, October 5, 2021, One Tree Planted, <https://onetreepanted.org/blogs/stories/ how-much-co2-does-a-tree-absorb>
2. “How much CO2 does a tree absorb?”, www.ecotree.green/en/how-much-CO2-does-a-tree-absorb
3. Stancil, Joanna Mounce, “The Power of One Tree – The Very Air We Breathe”, U. S. Forest Service in Forestry, June 3, 2019, www.usda.gov/media/blog/2015/03/17/power-one-tree-very-air-we-breathe-
4. Schildgen, Bob, “How Much Carbon Do Trees Really Store?”, Sierra Club, March 21, 2016, www.sierraclub.org/sierra/2016-2-march-april/ask_mr_green/how-much-carbon-do-trees-really-store
5. B10numb3r5 – The Database of useful biological numbers – Entered by Uri M. <https://bionumbers.hms.harvard.edu/bionumber.aspx?s=n&v=3&id=112912>
6. Jacobs, Jim, “California forests 80% to 600% denser than 150 years ago, UC researcher says biomass is one of the answers”, September 15, 2020. www.Gvwire.com/category/education/search
7. Fahey, Tom J., Professor of Ecology, Department of Natural Resources, Cornell University, as quoted in “Tree Power”, by Ray, C. Claiborne, December 3, 2012. <https://www.nytimes.com/2012/12/04/science/how-many-pounds-of-carbon-dioxide-does-our-forest-absorb.html>
8. “Perfecting a Stand – Density Index for Even-Aged Forests”, Reineke, L.H., Journal of Agricultural Research, Vol. 46, No. 7, 1933. www.fs.fed.us/psw/publications/cfres/cfres_1933_reineke001.pdf
9. “A Spatial Model of Tree Alpha Diversity and Tree Density for the Amazon”, ter Steege, Hans, et al, Biodiversity and Conservation, January, 2003. https://www.researchgate.net/publication/254774213_A_spatial_model_of_tree_alpha-diversity_and_tree_density_for_the_Amazon?enrichId=rgreq-9b949df860714f865df9b6fd41b9f448-XXX&enrichSource=Y292ZXJQYWdlOzI1NDc3NDIxMztBUzo2ODk5NDIzOTMwMTIyMjdAMTU0MTUwNjQ5MzUzNw%3D%3D&el=1_x_2&_esc=publicationCoverPdf
10. “Hyper dominance in the Amazonian Tree Flora”, ter Steege, et al, Science, October 21, 2013. Doi: 10.1126/science, 1243092.
11. Harris, N.L., Gibbs, D.A., Baccini, A. et al. Global maps of twenty-first century forest carbon fluxes. Nat. Clim. Chang. 11, 234–240 (2021). <https://doi.org/10.1038/s41558-020-00976-6>
12. “Half of the World’s Habitable Land is Used for Agriculture”, Ritchie, Hannah, Our World in Data, November 11, 2019. <https://ourworldindata.org/global-land-for-agriculture>

13. “When Fossil Fuels Run Out, What Then?”, MAHB Admin, May 23, 2019. <https://mahb.stanford.edu/library-item/fossil-fuels-run/#>
14. “Natural Gas Monthly”, December, 2021, U.S. Energy Information Administration. <https://www.eia.gov/naturalgas/monthly/#>
15. “Oil Left in the World”, March 23, 2022, Worldometer. <https://www.worldometers.info/oil/>
16. “Coal Explained – How Much Coal is Left?”, October 19, 2021, U.S. Energy Information Administration. <https://www.eia.gov/energyexplained/coal/how-much-coal-is-left.php#>
17. “Coal Left in the World”, March 23, 2022, Worldometer. <https://www.worldometers.info/coal/#>
18. “Greenhouse Gas Equivalencies Calculator – Calculations and References”, U.S. Environmental Protection Agency. <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references#>
19. “The Paris Agreement”, December 12, 2015, United Nations Framework Convention on Climate Change. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>
20. www.Whatwouldjuliedo.blog

Chapter 4

1. Malthus, Thomas, 1798, “An Essay on the Principles of Population”, Feather Trail Press, U.S.A.
2. Cafaro, Philip, and Crist, Eileen, 2012, “Life on the Brink”, University of Georgia Press, Athens and London.
3. Ehrlich, Paul, 1968, “The Population Bomb”, Ballantine Books, Random House, Inc., New York, Ballantine Books of Canada, Ltd., Toronto, Canada.
4. Hollingsworth, William G., 1996, “Ending the Explosion - Population Policies and Ethics for a Humane Future”, Seven Locks Press, Santa Ana, CA.
5. Seager, John, and Polansky, Lee S., Editors, 2016, “The Good Crisis – How Population Stabilization Can Foster a Healthy U.S. Economy”, Print Matters, Inc., U.S.A.
6. Population Connection, <https://populationconnection.org/>.
7. Planned Parenthood, <https://www.plannedparenthood.org/>.
8. Center for Biological Diversity, <https://www.biologicaldiversity.org/action/alerts/>.
9. Global Gag Rule, <https://globalgagrul.org/>.
10. “Hunger numbers stubbornly high for three consecutive years as global crises deepen: UN report”, World Health Organization Joint News Release, July 24, 2024, <https://www.who.int/news/item/24-07-2024-hunger-numbers-stubbornly-high-for-three-consecutive-years-as-global-crises-deepen--un-report>.
11. Living Planet Report 2024, World Wildlife Fund, <https://livingplanet.panda.org/living-planet-report-2024-key-messages/>.
12. “Progress for Eight Endangered Ocean Creatures”, Ellen Spooner, Smithsonian, <https://ocean.si.edu/ocean-life/marine-mammals/struggling-survive-chance-thrive>.
13. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection Agency, EPA 430-R-22-003. <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissionsand-sinks-1990-2020>
14. “How Many Earths? How Many Countries?”, <https://overshoot.footprintnetwork.org/how-many-earths-or-countries-do-we-need/>.

15. Hannah Ritchie and Max Roser (2019) - "Half of the world's habitable land is used for agriculture" Published online at OurWorldinData.org., <https://ourworldindata.org/global-land-for-agriculture>.
16. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection Agency, EPA 430-R-22-003, <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissionsand-sinks-1990-2020>.
17. My calcs in energy chapter with refs.
18. "Physical Geology", Charles C. Plummer, David McGeary, W.M. C. Brown Publishers, Debuqe, IA, 1988.
19. "The Long Walk Here", Gregory E. Williams, Create Space Publishing, Delaware, USA, 2018.
20. <https://www.cdc.gov/covid/about/index.html>
21. "Silent Spring", Rachel Carson, 1962, Houghton Mifflin Harcourt, New York, New York.

Chapter 5

1. Population Connection Oct 2015 p6 – "Planetary Health in the Anthropocene" – source: Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation-Lancet Commission on planetary health, July 16, 2015.
2. Discover Magazine, July/Aug 2017, "The Future of Food", by Katherine Mast.
3. 2018 State of Food Security and Nutrition in the World
4. U.N. report released in May, 2022, The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).
5. Population Connection, December, 2019, Editor's Note, Marian Starkey.
6. National Geographic, April, 2020, "The Case for Renewal", Emma Marris.
7. Discover Magazine, Nov/Dec, 2024, "T. Rex Dined on Huge, Plant-Eating Dinosaurs", Alex Orlando.
8. National Geographic, August, 2018, "Poisoning Africa", Edwin Dobb.
9. Population Connection, September, 2019, "President's Note", John Seager.
10. High Country News, 11/15/19, p3.
11. Discover Magazine, June, 2019, University of Washington, "Estimation of emigration, return migration and transit migration between all pairs of countries", proceedings of The National Academy of Sciences, 2019.
12. Population Connection – June, 2017.
13. National Geographic, August, 2019, "Walking With Migrants", Paul Salopek.
14. High Country News, 10/14/19, "California's forage wars", Debra Utacia Krol.
15. High Country News, 3/5/18, "An abandoned tradition", Debra Utica Krol.
16. High Country News, 10/14/19, "Severed Ties", Nick Estes.
17. United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019.
18. United Nations, 2021, Department of Economic and Social Affairs, Population Division. "Global Population Growth and Sustainable Development"
19. Dr. Peter Daszak, a disease ecologist and the President of EcoHealth Alliance, who examined the link in a 2008 study published in the Journal Nature.

20. Population Connection, September, 2021, “President’s Note”, John Seager.
21. “Future of the human climate niche”, Chi Xu, Timothy A. Kohler, Timothy M. Lenton and Marten Scheffer, May 4, 2020, 117 (21) 11350-11355, <https://doi.org/10.1073/pnas.1910114117>

Chapter 6

1. “Light of the Stars”, Adam Frank, astrophysicist, University of Rochester.
2. “Book of Hope: A Survival Guide for Trying Times”, Jane Goodall and Douglas Abrams.
3. Population Connection, June, 2018 – Stats - President’s Note – John Seager
4. Hannah Ritchie and Edouard Mathieu (2023) - “How many people die and how many are born each year?” Published online at OurWorldinData.org. Retrieved from: <https://ourworldindata.org/births-and-deaths>.
5. <https://www.gutmacher.org/report/adding-it-up-investing-in-sexual-reproductive-health-2019>.
6. United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision, Key Findings and Advance Tables. Working Paper No. ESA/P/WP/248.
7. “The Good Crisis”, John Seager and Lee S. Polansky, Editors, Copyright 2016 by Population Connection, Print Matters, Inc., U.S.A.
8. Population Connection, September, 2021, “The Declining American Birth Rate Could Actually Be Good for the Economy”, Hillary Hoffower.
9. “2024 Social Security Tax Limit”, Kathryn Flynn, August 9, 2024, <https://www.investopedia.com/2021-social-security-tax-limit-5116834>.
10. “Follow the Money Behind Anti-Abortion Laws”, Ciara Torres-Spelliscy, May 26, 2020, <https://www.brennancenter.org/our-work/analysis-opinion/follow-money-behind-anti-abortion-laws>.
11. <https://www.ippf.org/sites/default/files/2016-11/SDG%20and%20FP2020.pdf>.
12. <https://populationconnection.org/act/media-guide/> .
13. Population Connection, March, 2016, “Countries With Above-Replacement Rates”.
14. <https://www.waterforpeople.org/>.
15. Population Connection October, 2015, p 19, “The Blood Cries Out”.
16. “Family planning is helping women in Myanmar protect their health and families”, Si Thu Soe Moe, October 26, 2016, © UNFPA Myanmar, <https://www.unfpa.org/news/myanmar-family-planning-empowers-women-take-charge-their-health-futures> .
17. National Geographic, August, 2020, “Water Everywhere and Nowhere”, Paul Salopek.
18. <https://www.gunviolencearchive.org/>.
19. Population Connection, March, 2021, “Population and Peace”, sourced from Institute for Economics and Peace. Ecological Threat Register 2020: Understanding Ecological Threats, Resilience and Peace, Sydney, September 2020, https://www.visionofhumanity.org/wp-content/uploads/2020/10/ETR_2020_web-1.pdf.
20. National Geographic, April, 2021, “The Deadly Cost of Dirty Air”, Beth Gardiner.
21. Guxens M, Garcia-Esteban R, Giorgis-Allemand L, Fornis J, Badaloni C, Ballester, F, et. al. Air Pollution During Pregnancy and Childhood Cognitive and Psychomotor Development: Six European Birth Cohorts. *Epidemiology*. 2014 Jul 16.
22. Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Ballew, M., Goldberg, M., & Gustafson, A. (2018). Climate change in the American mind: December 2018. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.

23. Clayton, S., Manning, C. M., Krygsman, K., & Speiser, M. (2017). *Mental Health and Our Changing Climate: Impacts, Implications, and Guidance*. Washington, D.C.: American Psychological Association, and ecoAmerica.
24. Discover Magazine, May, 2021, "Let's Talk About Reef Grief", Marta Zaraska.
25. Michael Newton, "Journey of Souls", Llewellyn Publications, Woodbury, MN, 2019, p 268.

Chapter 7

1. High Country News, May, 2023, "Watching a species disappear", Ben Goldfarb
2. Geraldo Ceballos of the National Autonomous University of Mexico – species disappearing 100 times faster than without human impacts. Science Advances study.
3. Discover Magazine, May 2018, "The Animal Collective", Michael Stone.
4. *Half-Earth: Our Planet's Fight for Life*, Edward O. Wilson.
5. Hannah Ritchie (2022) - "There have been five mass extinctions in Earth's history" Published online at OurWorldinData.org. Retrieved from: '<https://ourworldindata.org/mass-extinctions>' [Online Resource].
6. World Wide Fund For Nature (WWF) Living Planet Index. September, 2020.
7. "We Are The Ark", Mary Reynolds, 2022, Timber Press, Inc., Portland, OR, ISBN 978-1-64326.
8. Population Connection, September, 2019, "President's Note", John Seager.
9. Population Connection, September, 2018, "First Comprehensive Global Biomass Study Stuns Science Community".
10. "First Comprehensive Global Biomass Study Stuns Science Community", June, 2018, Research Team From The Weizmann Institute of Technology, Proceedings of the National Academy of Sciences (PNAS). Editor of the study, Paul Falkowski.
11. https://github.com/milo-lab/biomass_distribution.
12. Population Connection, September, 2020, "In the News", Stacie Murphy.
13. "Environmental Correspondent – Case for Change", Fiona Harvey, 1/21/20 – www.theguardian.com.
14. High Country News, July, 2024, "Queen of the Grasslands", Priyanka Kumar.
15. National Geographic, September, 2024, "Welcome to Brown Bear Paradise", Acacia Johnson.
16. "Saving The Amazon's Giant Raptors", Rachel Nuwer, October, 2020, National Geographic.
17. High Country News, September, 2023, "The Blab of the Pave", Ben Goldfarb.
18. K A Sweet, B P Sweet, D G E Gomes, C D Francis, J R Barber, Natural and anthropogenic noise increase vigilance and decrease foraging behaviors in song sparrows, Behavioral Ecology, Volume 33, Issue 1, January/February 2022, Pages 288–297, <https://doi.org/10.1093/beheco/arab141>
19. <https://highways.dot.gov/federal-lands/wildlife-crossings>.
20. Discover, July/August, 2024, "Taking the High Road", John Riha.
21. "Wildlife–vehicle Collision Reduction Study: Best Practices Manual", M.P. Huijser, P. McGowen, A.P. Clevenger, and R. Ament, June, 2008, Federal Highway Administration, DTFH61-05-D-00018, page 126, <https://rosap.ntl.bts.gov/view/dot/48824>.
22. "Where is the remotest spot in the United States?", November 30, 2017, Owen Amos, BBC News, Washington, D.C., <https://www.bbc.com/news/world-us-canada-42104894>.

23. “A southern California freeway is a physical and social barrier to gene flow in carnivores”, Seth P D Riley 1, John P Pollinger, Raymond M Sauvajot, Eric C York, Cassity Bromley, Todd K Fuller, Robert K Wayne, *Mol Ecol*, 2006 Jun;15(7):1733-41. doi: 10.1111/j.1365-294X.2006.02907.x.
24. High Country News, January, 2020, “Crossing to Safety”, Ben Goldfarb.
25. High Country News, July, 2024, “The Tiny Bird that Could Save an Ecosystem”, Caroline Tracey.
26. “So Great, So Fragile”, Tim Folger, 2020, National Geographic.
27. “2021 Program Data Reports – Program Data Report G - 2021”, March 12, 2024, <https://www.aphis.usda.gov/wildlife-services/publications/pdr/2021>.
28. “Trade Secret”, CEFF 2025, Abraham Joffe, Director, Adam McKay, Executive Producer, 2025, Untitled Film Works, <https://www.tradesecretfilm.com/>
29. National Geographic, 2022, “Meerkats”, Thomas P. Peschak.
30. High Country News, 8/21/17, “Silent Summer”, Maya L. Kapoor.
31. “Australia’s 2019-2020 Bushfires: The Wildlife Toll – Interim Report”, Lily van Eeden, et. al., World Wide Fund for Nature, https://assets.wwf.org.au/image/upload/v1/website-media/resources/Animals_Impacted_Interim_Report_24072020_final.
32. National Geographic, April, 2023, “Seasons Out of Sync”, Craig Welch.
33. Discover, October, 2018, “Trending”, Lacy Schley.
34. National Geographic, April, 2022, “All for a Song”, Dina Fine Maron.
35. National Geographic, June, 2018, “The Humans of the Bird World”, Christine Dell’Amore.
36. “Inside New Zealand’s War on Invasive Mammals”, Kennedy Warne, National Geographic, January, 2025.
37. Sala, Enric, “The Nature of Nature – Why We Need the Wild”, 2020, National Geographic Partners, LLC, Washington, D.C.
38. Saremi, N.F., Supple, M.A., Byrne, A. et al. Puma genomes from North and South America provide insights into the genomic consequences of inbreeding. *Nat Commun* 10, 4769 (2019). <https://doi.org/10.1038/s41467-019-12741-1>

Chapter 8

1. <https://www.merriam-webster.com/dictionary/ecosystem>
2. “Half Earth: Our Planet’s Fight For Life”, EO Wilson, March 2016, Liveright Publishing Company, ISBN 1631490826.
3. World Wildlife Federation 2020 Living Planet index
4. Discover Magazine, December, 2019, “The Amazon”, Daniel Bastardo Blanco.
5. Discover Magazine, Dec 2015 p63 – “Up in Thin Air” Sarah Hewitt.
6. Mahon, M.B., Sack, A., Aleuy, O.A. et al. A meta-analysis on global change drivers and the risk of infectious disease. *Nature* 629, 830–836 (2024). <https://doi.org/10.1038/s41586-024-07380-6>.
7. “Biodiversity Loss: Detrimental to Your Health”, Nicolle Rager-Fuller, National Science Foundation, News Release 10-227, https://www.nsf.gov/news/news_images.jsp?cntn_id=118114&org=NSF.
8. National Geographic, July, 2021, “Viral Spillover”, Alberto Lucas Lopez.
9. “More than 75 percent decline over 27 years in total flying insect biomass in protected areas”, Caspar A. Hallmann, Martin Sorg, Eelke Jongejans, Henk Siepel, Nick Hofland, Heinz Schwan,

- Werner Stenmans, Andreas Müller, Hubert Sumser, Thomas Hörren, Dave Goulson, Hans de Kroon, Published: October 18, 2017, <https://doi.org/10.1371/journal.pone.0185809>.
10. High Country News, May, 2023, “Watching a species disappear”, Ben Goldfarb.
 11. “About a third of all insect species are threatened with extinction”, Sanchez-Bayo, F. & Wyckhuys, K.A.G. (2019) Worldwide decline of the entomofauna: A review of its drivers. *Biological Conservation*, 232, 8-27. Doi: 10.1016/j.biocon.2019.01.020.
 12. “Fewer butterflies seen by community scientists across the warming and drying landscapes of the American West”, M. L. Forister, C. A. Halsch, C. C. Nice, J. A. Fordyce, T. E. Dilts, J. C. Oliver, K. L. Prudic, A. M. Shapiro, J. K. Wilson 7, and J. Glassberg, Authors Info & Affiliations, *Science*, 5 Mar 2021, Vol 371, Issue 6533, pp. 1042-1045, DOI: 10.1126/science.abe5585.
 13. High Country News, June, 2022, “Wildlife Welfare Check”, Jonathan Thompson.
 14. <https://rodaleinstitute.org/>.
 15. National Geographic, May, 2021, “The Bugs in the Trees”, Haley Cohen Gilliland.
 16. National Geographic, March, 2022, “The Cricket Catchers”, Halima Athumani.
 17. High Country News, 2/18/19, The Latest, Jodi Peterson.
 18. High Country News, October, 2023, “Where the wild bees are”, Sarah Trent.
 19. October, 2020, National Geographic, “Symbiosis – Bite makes plants flower”, Virginia Morell.
 20. High Country News, 3/18/19, “Commercial Honeybees threaten to displace Utah’s native bees”, Nick Bowlin
 21. High Country News, 4/16/18, “Heard Around the West”, Betsy Marston.
 22. <https://www.wwf.org.uk/learn/fascinating-facts/gorillas>.
 23. Kalema-Zikusoka G, Kock RA, Macfie EJ. Scabies in free-ranging mountain gorillas (*Gorilla beringei beringei*) in Bwindi Impenetrable National Park, Uganda. *Vet Rec.* 2002 Jan 5;150(1):12-5. doi: 10.1136/vr.150.1.12. PMID: 11817857.
 24. <https://www.fws.gov/story/coolest-mammals-earth>.
 25. https://www.biologicaldiversity.org/campaigns/bat_crisis_white-nose_syndrome/Q_and_A.html#
 26. Outside, Dec, 2019, “In the Land of Vanishing Giants”, Paul Kvinta.
 27. National Geographic, May, 2023, “The Elephant Next Door”, Srinath Perur.
 28. <https://tsavotrust.org/how-many-elephants-are-there-left-in-the-world>.
 29. May, 2022, National Geographic, “A Fragile Refuge for Forest Elephants”, Yudhijit Bhattacharjee.
 30. National Geographic, December, 2019, “Saving Africa’s Parks”, David Quammen.
 31. Rhino Population Graph, June 13, 2014, <https://ridingforrhinos.org/whyrhinos/rhino-population-graph/>.
 32. National Geographic, December, 2023, “Where Have All The Caribou Gone?”, Neil Shea.
 33. <https://www.nathab.com/know-before-you-go/us-national-parks/yellowstone/wildlife-guide/pronghorn/>.
 34. Ashley Montagu, excerpt from “Wilderness in a Changing World”, p125, Voices for the Wilderness, William Schwarz, editor, Ballantine Books, New York, 1970.
 35. “Silent Spring”, Rachael Carson, 1962, Mariner Books Classics, ISBN 0618249060.
 36. “Genius of Birds”, Jennifer Ackerman, 2017, Penguin Books, ISBN 0399563121 .
 37. High Country News, July, 2024, “Editor’s Note”, Jennifer Sahn.
 38. <https://www.stateofthebirds.org/2019/steep-declines/>.

39. National Geographic, September, 2019, “Silent Spring on the Farm”, Daisy Chung and Michael Greshko.
40. National Geographic, August, 2018, “The Backstory”, Jonathan Baillie.
41. National Geographic, October, 2019, “Cat vs. Bird: The Battle Lines”, Noah Strycker.
42. High Country News, 10/14/19, “For sage grouse, science can be fatal”, Helen Santoro.
43. National Geographic, September, 2019, “Poached for Its Horn, This Rare Bird Struggles to Survive”, Rachael Bale.
44. https://en.wikipedia.org/wiki/Indian_vulture_crisis
45. High Country News, April, 2024, “Managing Predators from the Sky”, Kylie Mohr.
46. Trail & Timberline, Golden, Colorado, Summer 2015.
47. www.livingwithwolves.org – accessed 8/7/21.
48. <https://polarbearsinternational.org/polar-bears-changing-arctic/polar-bear-facts/status/>.
49. National Geographic, December, 2019, “The Tigers Next Door”, Sharon Guynup.
50. National Geographic, April, 2022, “Up the Mountain, to a World Apart”, Mark Synnott.
51. High Country News, April, 2024, “Perilous Paths”, Christine Peterson.
52. <https://www.fws.gov/species/whooping-crane-grus-americana>.
53. National Geographic, April, 2024, “Going the Distance”, Rene Ebersole.
54. National Geographic, March, 2018, “Epic Migrations”, Yudhijit Bhattacharjee.
55. Discover Magazine, September, 2023, “Do Insects Have Feelings and Consciousness?”, Avery Hurt.

Chapter 9

1. “How Much of the Ocean Has Been Explored?”, National Oceanic AA, 2013, <https://oceanexplorer.noaa.gov/ocean-fact/explored/> .
2. National Geographic, September, 2024, “From the Editor”, Nathan Lump.
3. <https://www.gov.uk/government/news/uk-to-continue-global-leadership-on-marine-protection>
4. <https://marine-conservation.org/how-much-do-we-need>
5. September, 2020, National Geographic, “The Power of Protection”, Kennedy Warne
6. National Geographic, May, 2023, “5 Things Scuba Diving Taught Me”, Carrie Miller
7. National Geographic, July, 2019, “Preserving Earth’s Undersea Treasures”, Susan Goldeberg
8. National Geographic, May, 2021, “Planet Ocean”, Matthew W. Chwastyk.
9. World Wildlife Fund (2024) Living Planet Report 2024 – A System in Peril. WWF, Gland, Switzerland.
10. National Geographic, June, 2022, “An Undersea Splendor, Under Stress”, Kennedy Warne.
11. Confronting Florida’s Coral Collapse, Adam Voiland, 2023, <https://earthobservatory.nasa.gov/images/153304/confronting-floridas-coral-collapse>.
12. National Geographic, November, 2018, “A Crack in the World”, Craig Welch.
13. “The Power of Activism”, Steven Pasvolsky, Director, 2022, <https://www.thepowerofactivism.com/reviews> .
14. National Geographic, August, 2021, “Disappearing Sharks”, Monica Serrano and Sean McNaughton.
15. National Geographic, April, 2022, “The Weird Wonder of Seahorses”, Jennifer S. Holland.

16. National Geographic, October, 2020, “For This Species, Protection is Too Little, Too Late”, by Annie Roth.
17. “Cyanobacteria in Florida Waters”, Florida Fish and Wildlife Conservation Commissions, accessed 2/1/26, <https://myfwc.com/research/redtide/general/cyanobacteria/>
18. “Understanding the Spread of Sargassum in the Caribbean”, UNEP Caribbean Environment Programme, <https://www.unep.org/cep/resources/factsheet/understanding-spread-sargassum-caribbean>.
19. April, 2021, Los Angeles Times, “Boiling Point”, Sammy Roth.
20. “Marine Mammal Strandings in Southern California Prompt Harmful Algal Bloom Event Response”, sarah.pease@noaa.gov, <https://coastalscience.noaa.gov/news/marine-mammal-strandings-in-southern-california-prompt-harmful-algal-bloom-event-response/>
21. Outside Magazine, 9/10/19, “Cast-Away”, Rowan Jacobsen
22. <https://globalocean.noaa.gov/research/ocean-carbon-network>.
23. High Country News, September, 2017, “No Hoax”, Brian Calvert.
24. “Severe *Vibrio vulnificus* Infections in the United States Associated with Warming Coastal Waters”, Distributed via the CDC Health Alert Network, September 01, 2023, 12:30 PM ET, CDCHAN-00497, <https://www.cdc.gov/han/2023/han00497.html>
25. Discover Magazine, May, 2018, “The Crux, Rending”, Lacy Schley.
26. National Geographic, November, 2021, “Ocean Warming – More depth = less color”, Hicks Wogan.
27. Discover Magazine, Jan/Feb, 2024, “The Slowing of Deep-Sea Currents”, Robert Miller.
28. National Geographic, June, 2024, “Degrees of Change”, Brian Skerry.
29. Discover Magazine, November/December, 2021, “Sea Otters to the Rescue”, Chris Iovenko.
30. National Geographic, March, 2024, “Twilight Zone”, Helen Scales.
31. “NOAA confirms 4th global coral bleaching event”, John Leslie, Kim Rodgers, NOAA, 2023, <https://www.noaa.gov/news-release/noaa-confirms-4th-global-coral-bleaching-event>.
32. “Microplastic Ingestion By Scleractinian Corals”, N.M. Hall, K.L.E. Berry, L. Rintoul, M.O. Hoogenboom, *Journal Marine Biology*, DOI 10.1007/s00227-015-2619-7.
33. Lapointe, B.E., Brewton, R.A., Herren, L.W. et al. Nitrogen enrichment, altered stoichiometry, and coral reef decline at Looe Key, Florida Keys, USA: a 3-decade study. *Mar Biol* 166, 108 (2019). <https://doi.org/10.1007/s00227-019-3538-9>.

Chapter 10

1. “A massive decline in migratory fish populations”, <https://environmentamerica.org/updates/a-massive-decline-in-migratory-fish-populations>
2. “Quarter of world’s freshwater fish at risk of extinction, according to assessment”, Patrick Greenfield, Mon 11 Dec 2023.
3. “Estimate of incidence and cost of recreational waterborne illness on United States surface waters”, Stephanie DeFlorio-Barker, Coady Wing, Rachael M Jones, Samuel Dorevitch, *Environmental Health*, 2018 Jan 9;17:3. doi: 10.1186/s12940-017-0347-9.
4. “We Are The Ark”, Mary Reynolds, 2022, Timber Press, Inc., Portland, OR.

5. “Naegleria fowleri in Well Water”, Barbara Blair, Payal Sarkar, Kelly R Bright, Francine Marciano-Cabral, Charles P Gerba, Emerg Infect Dis. 2008 Sep; National Institutes of Health, 14(9):1499–1501. doi: 10.3201/eid1409.071076.
6. High Country News 8/3/15 – “On Life Support” by Laura Paskus.
7. High Country News, July, 2024, “Pollution knows no borders”, Kylie Mohr.
8. “‘Everything is dead’: Ukraine rushes to stem ecocide after river poisoning”, By Luke Harding and Artem Mazhulin in Slabyn, Ukraine, 10/1/24, The Guardian.
9. “So Great, So Fragile”, Tim Folger, National Geographic, December, 2020.
10. “National Lakes Assessment: The Fourth Collaborative Survey of Lakes in the United States – 2022”, Lareina Guenzel, et. al., <https://nationallakesassessment.epa.gov/webreport>.
11. “Drying Lakes”, Kenneth R. Weiss, National Geographic, March, 2018.
12. Convention on Wetlands. (2021). Global Wetland Outlook: Special Edition 2021. Gland, Switzerland: Secretariat of the Convention on Wetlands.
13. 3/21/16 – High Country News – p 3 – Paige Blankenbuehler.
14. National Geographic, January, 2024, “A Fragile Fabric of Living Things”, Natasha Daly.
15. “This Canadian river is now legally a person. It’s not the only one”, Chloe Berge, 4/15/22, National Geographic.
16. High Country News, 10/28/19, “The Klamath River now has the legal rights of a person”, Anna V. Smith.
17. High Country News, September, 2021, “Water and equity in the Klamath Basin”, Anna V. Smith.
18. National Geographic, Feb, 2024, “Innovator – Fernando Trujillo”, Cynthia Gorney.
19. National Geographic, October, 2024, “Dolphin Diplomacy”, Jordan Salama.
20. National Geographic, October, 2024, “Lessons in the Flooded Forest”, Joao Campos-Silva.

Chapter 12

1. “Public Land Statics 2021”, Volume 206, June 2022, BLM/OC/ST-22/003+1165, P-108-11.
2. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection Agency, EPA 430-R-22 003. <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissionsand-sinks-1990-2020>.
3. “IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas Inventories”, Prepared by the National Greenhouse Gas Inventories Programme, Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K. (eds). Published: IGES, Japan.
4. “Stewardship of Wetlands and Soils Has Climate Benefits”, Melanie Sturm, September 20, 2019, <https://www.Nrdc.org/bio/melanie-sturm/stewardship-wetlands-and-soils-has-climate-benefits>
5. National Geographic, April, 2020, “The Mark of Humanity”, Irene Berman-Vaporis and Matthew W. Chwastyk.
6. High Country News, August, 2023, “An antiquated law rules mining in the West”, Jonathan Thompson.
7. May, 2022, National Geographic, “Forests, For Life”, David Brindley.
8. “Environmental Correspondent – Case for Change”, Fiona Harvey, 1/21/20 – www.theguardian.com.
9. National Geographic, October, 2020, “Saving the Amazon’s Giant Raptors”, Rachel Nuwer.

10. National Geographic, May, 2022, “Rainforests – A Delicate Balance (Map)”, Sources: Sassan Saatchi and others, One Earth, July 2021; Viviana Zalles and Matthew C. Hansen, University of Maryland; Monica L. Noon and Others, Nature Sustainability, November 2021; Olga Danylo and others, Scientific Data, March, 2021; Lui Aragao, Nature, 2012; Nasa: Intact Forest Landscapes; World Database on Protected Areas; Openstreetmap; Resolve Ecoregions 2017; Firms. National Geographic contributors: Graphics Editor: Jason Treat; Map Editors: Martin Gamache and Soren Walljasper; GIS and data analysis: Theodore Sickly; Research: Kelsey Nowakowski, Taryn Salinas, and Elizabeth Atalay; Text: Eve Conant; Illustration: Daisy Chung; Map Edit: Scott Zillmer; Copy Edit: Cindy Leitner; Design: Elaine Bradley.
11. High Country News, December, 2022, “The disappearing sagebrush sea”, Sarah Trent.
12. High Country News – 6/25/18 – “Oregon’s Biggest Carbon Polluter? Timber.” Carl Segerstrom.
13. “The Issue With Tissue”, Documentary Film, Michael Zelniker, Writer, Director, and Producer, Filmoption International 2021, 3401 St-Antoine West, Westmount, Quebec, Canada, H3Z 1X1.
14. “Rampant Groundwater Pumping Has Changed the Tilt of Earth’s Axis”, Davide Castelvechi, June 23, 2023, Scientific American, <https://www.scientificamerican.com/article/rampant-groundwater-pumping-has-changed-the-tilt-of-earths-axis/>
15. “Short-lived pause in Central California subsidence after heavy winter precipitation of 2017”, Kyle D. Murray, Rowena B. Lohman, 8/29/18, Science Advances, Vol. 4, Issue 8, DOI: 10.1126/sciadv.aar81.
16. “Land Subsidence and Earth Fissures in Arizona”, Arizona Land Subsidence Group (ALSG), December, 2007, Contributed Report CR-07-C, Arizona Geological Survey.
17. High Country News, April, 2020, “As temperatures rise, Arizona sinks”, Jonathan Thompson.
18. Tulane University. "New Orleans is sinking—and so are its \$15 billion flood defenses." ScienceDaily. ScienceDaily, 28 June 2025. www.sciencedaily.com/releases/2025/06/250627234122.htm .
19. High Country News, 9/4/17, “Busting the Big One”, Krista Langlois.
20. Discover Magazine, November, 2020, “20 Things You Didn’t Know About Wilderness”, Jonathon Keats.
21. High Country News, May, 2022, “54 Million ‘Failing’ Acres”, Kylie Mohr.
22. Plowright, R.K., Ahmed, A.N., Coulson, T. et al. Ecological countermeasures to prevent pathogen spillover and subsequent pandemics. Nat Commun 15, 2577 (2024). <https://doi.org/10.1038/s41467-024-46151-9>.
23. High Country News, November, 2022, “Connecting habitat from the ground up”, Jodi Hilty and Kelly Zenkewich.
24. High Country News, June, 2022, “We’re on a planet here!”, Jon Christensen interview with Kim Stanley Robinson.
25. “Nature’s Best Hope”, Douglas W. Tallamy, 2019, Timber Press, Inc., Portland, OR, ISBN 978-60469-900-5.
26. “Half-Earth Project – Half the Earth for the Rest of Life”, Dennis Liu, 11/4/22, Healing Nature’s Wounds, <https://rewilding.org/e-o-wilson-biodiversity-foundation-implementing-the-half-earth-project/>
27. National Geographic, November, 2024, “Inside the Bold Quest to Rewild Europe”, Isabella Tree.
28. May, 2022, National Geographic, “The Future of Forests”, Craig Welch.

29. National Geographic, July, 2019, “A Great Forest Shrinks, and Lives are Washed Away”, Peter Schwartzstein.
30. High Country News, June, 2021, “The Fire Next Time”, Carl Segerstrom.
31. High Country News, August, 2022, “Forever Fire Season”, Jonathan Thompson.
32. May, 2022, National Geographic, “The Future of Forests”, Craig Welch.
33. “Wildfire smoke impacts lake ecosystems”, Mary Jade Farruggia, et. al., 2024 June, Global Change Biology, 30(6):e17367. doi: 10.1111/gcb.17367.
34. “Smoke-weather interaction affects extreme wildfires in diverse coastal regions”, Huang et al., Science 379, 457–461 (2023) 3 February 2023.
35. Discover Magazine, May/June, 2022, “Living with Fire”, Julie Cart.

Chapter 13

1. World Bank Group Data Bank, Metadata Glossary, SH.H2O.SMDW.ZS, <https://databank.worldbank.org/metadataglossary/world-development-indicators/series/SH.H2O.SMDW.ZS>.
2. Discover Magazine, January/February, 2019, “Tech”, Stephen Ornes.
3. “Mapping safe drinking water use in low- and middle-income countries”, Esther E. Greenwood, August 15, 2024, Science, Vol 385, Issue 6710, pp. 784-790, DOI: 10.1126/science.adh9578.
4. United Nations Sustainable Development Goals – 6. Clean Water and Sanitation, <https://www.un.org/sustainabledevelopment/water-and-sanitation/>.
5. “Closing the Water Access Gap in the United States – A National Action Plan”, Zoe Roller, Stephen Gasteyer, Accessed February, 2025, Dig Deep and U.S. Water Alliance, <https://www.digdeep.org/close-the-water-gap> .
6. <https://www.worldwatercouncil.org/en/water-crisis>.
7. Attari SZ, Poinsatte-Jones K, Hinton K. Perceptions of water systems. Judgment and Decision Making. 2017;12(3):314-327. doi:10.1017/S193029750000591X.
8. Water Environment Foundation Magazine, December, 2011, “Small Changes Add Up to Big Savings”, Philip N. Loud.
9. “California Water 101”, <https://www.watereducation.org/photo-gallery/california-water-101>.
10. “China to pump rivers 800 miles north”, Tim Radford, November, 2002, The Guardian, <https://www.theguardian.com/world/2002/nov/27/china.timradford>.
11. “Water Affordability Needs Assessment: Report to Congress”, December, 2024, EPA 830-R-24-015.
12. “How Much You Spend Each Year on Coffee, Gas, Christmas, Pets, Beer, and More”, Brad Tuttle, January 23, 2012, Time Magazine.
13. “Utility Bills 101: Average Costs of Utility Bills by State”, Stephanie Minasian-Koncewicz, May 2, 2024, <https://www.thisoldhouse.com/moving/utility-bills-101>.
14. Qian N, Gao X, Lang X, Deng H, Bratu TM, Chen Q, Stapleton P, Yan B, Min W. Rapid single-particle chemical imaging of nanoplastics by SRS microscopy. Proc Natl Acad Sci U S A. 2024 Jan 16;121(3):e2300582121. doi: 10.1073/pnas.2300582121. Epub 2024 Jan 8. PMID: 38190543; PMCID: PMC10801917.

15. "No Plastic in Nature: Assessing Plastic Ingestion from Nature to People," published in June by the World Wildlife Federation based on research by Thava Palanisami at University of Newcastle, Australia.
16. High Country News, 2/22/16 p3, "Worth of Water", by Zoe Meyers.
17. "Major cities are running out of water. A new World Water Day report says it could worsen global conflict", Li Cohen, March 22, 2024, CBS News, <https://www.cbsnews.com/news/major-cities-are-running-out-of-water-a-new-report-for-world-water-day-says/>
18. Discover Magazine, Jan/Feb, 2020, "Environment and Climate", Katherine Mast.
19. Water Consumption Statistics, Irrigreen, <https://irrigreen.com/pages/water-consumption-statistics>.
20. Unesco UN World Water Development Report, Statistics, February 26, 2024, <https://www.unesco.org/reports/wwdr/en/2024>.
21. Dieter, C.A., Maupin, M.A., Caldwell, R.R., Harris, M.A., Ivahnenko, T.I., Lovelace, J.K., Barber, N.L., and Linsey, K.S., 2018, Estimated use of water in the United States in 2015: U.S. Geological Survey Circular 1441, 65 p., <https://doi.org/10.3133/cir1441>.
22. USGS Database - 2015 water-use withdrawals by category, <https://www.usgs.gov/media/images/2015-water-use-withdrawals-category>.
23. <https://water.org/>.
24. <https://www.denverwater.org/your-water/water-supply-and-planning/water-use>.
25. <http://www.epa.gov/watersense/>.

Chapter 14

1. "Report Card For America's Infrastructure – 2021 - Wastewater", <https://infrastructurereportcard.org/cat-item/wastewater-infrastructure>.
2. "Country-level and gridded estimates of wastewater production, collection, treatment and reuse," Earth System Science Data, Vol. 13, No. 2, bit.ly/global-wastewater.
3. www.watersworthit.org
4. Arzbaeher, C., K. Parmenter, R. Ehrhard, and J. Murphy. 2013. Electricity Use and Management in the Municipal Water Supply and Wastewater Industries. Palo Alto, CA: Electric Power Research Institute and Water Research Foundation. <http://www.waterrf.org/PublicReportLibrary/4454.pdf>.
5. New York State Energy Research and Development Authority 2008. Statewide Assessment of Energy Use by the Municipal Water and Wastewater Sector: Final Report. Albany, NY.
6. "Self Sufficient Wastewater Treatment - Sharing Denmark's Sustainability Blueprint", William Steel, March 1, 2017, Water World, <https://www.waterworld.com/wastewater-treatment/article/16201138/self-sufficient-wastewater-treatment-sharing-denmarks-sustainability-blueprint>.
7. "The Greatest Story Never Told", Ron Alexander, April, 2019, WE&T, Water Environment Federation.
8. "Driving Nutrient Recovery Technology", Mikita K. Browning, Robert A. Bocarro, Quinton T. Fletcher, et al., September, 2019, WE&T, Water Environment Federation.

9. "The Clean Water Act and Biosolids: A 45-year Chronological Review of Biosolids Land Application Research in Colorado," *Journal of Environmental Quality*, Vol. 51, Issue 5, bit.ly/WETbiosolids-review.
10. "Food Waste Co-digestion at WRRF's", Carol Adaire Jones, March, 2020, WE&T, Water Environment Federation.
11. "Tapping the potential of wastewater for a sustainable future", Beth Burmahl, October 11, 2022, Press Release, Argonne National Laboratory, <https://www.anl.gov/article/tapping-the-potential-of-wastewater-for-a-sustainable-future>.
12. Discover Magazine, Nov, 2012, "Earth, Wind and Water", Eric A. Powell.
13. "The Heat is On", Justin Jacques, September, 2021, WE&T, Water Environment Federation.
14. Brian E. Lapointe, Laura W. Herren, Armelle L. Paule, "Septic systems contribute to nutrient pollution and harmful algal blooms in the St. Lucie Estuary", *Southeast Florida, USA, Harmful Algae*, Volume 70, 2017, Pages 1-22, ISSN 1568-9883, <https://doi.org/10.1016/j.hal.2017.09.005>.
15. Kay, P., Hiscoe, R., Moberley, I. et al. Wastewater treatment plants as a source of microplastics in river catchments. *Environ Sci Pollut Res* 25, 20264–20267 (2018). <https://doi.org/10.1007/s11356-018-2070-7>.
16. Giustra M, Sinesi G, Spina F, De Santes B, Morelli L, Barbieri L, Garbujo S, Galli P, Prospero D, Colombo M. Microplastics in Cosmetics: Open Questions and Sustainable Opportunities. *ChemSusChem*. 2024 Nov 25;17(22):e202401065. doi: 10.1002/cssc.202401065. Epub 2024 Sep 24. PMID: 39222323; PMCID: PMC11587687.
17. 11/20/20 – Virtual RMWC – PFAS and Microplastics – Biosolids – Cayla Cook, MS, Carollo's microplastics lead, and Tanja (re PFAS).
18. "Microplastics are inside us all. What does that mean for our health?", Bridget Balch, June 27, 2024, American Association of Medical Colleges, <https://www.aamc.org/news/microplastics-are-inside-us-all-what-does-mean-our-health>.
19. "The Potential Impact of Nano- and Microplastics on Human Health: Understanding Human Health Risks", Ewa Winiarska, Marek Jutel, Magdalena Zemelka-Wiacek, *Environmental Research*, Volume 251, Part 2, 15 June 2024, 118535, <https://doi.org/10.1016/j.envres.2024.118535>
20. Elizabeth Royte, "We Know Plastic Is Harming Marine Life. What About Us?," *National Geographic*, June 2018.
21. "Personal Care and Cosmetic Products as a Potential Source of Environmental contamination by Microplastics in a Densely Populated Asian City", Saidu M. Bashir, Sam Kimko, Chu-Wa Mak, et. al., 03 June 2021, *Frontiers in Marine Science*, Marine Pollution, Volume 8 – 2021, <https://doi.org/10.3389/fmars.2021.683482>.
22. "First nationwide study shows the environmental costs of contact lenses", Nikai Salcido, August 23, 2018, <https://news.asu.edu/content/first-nationwide-study-shows-environmental-costs-contact-lenses>
23. "Per- and Polyfluoroalkyl Substances (PFAS)", 1/3/25, U.S. Food and Drug Administration, <https://www.fda.gov/food/environmental-contaminants-food/and-polyfluoroalkyl-substances-pfas>.
24. <https://comptox.epa.gov/dashboard/chemical-lists/PFASSTRUCT>.
25. Lewis RC, Johns LE, Meeker JD. 2015. Serum Biomarkers of Exposure to Perfluoroalkyl Substances in Relation to Serum Testosterone and Measures of Thyroid Function among Adults

- and Adolescents from NHANES 2011â “2012. *Int J Environ Res Public Health*. 12(6): 6098â “6114.
26. “Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)”, National Institute of Environmental Health Sciences, <https://www.niehs.nih.gov/health/topics/agents/pfc>.
 27. “Fish in Puget Sound”, from the journal “Environmental Pollution”, Betsy Marston, 3/21/16, High Country News, p28.
 28. “As more opioids go down the drain, scientists are tracking them in the environment”, Alexandra A. Taylor, April 21, 2019, *Chemical and Engineering News*, Volume 97, Issue 16.
 29. “Development of an opioid self-administration assay to study drug seeking in zebrafish”, Gabriel D. Bossé, Randall T. Peterson, 2017, *Behavioural Brain Research*, Volume 335, Pages 158-166, ISSN 0166-4328, <https://doi.org/10.1016/j.bbr.2017.08.001>.
 30. National Association of Clean Water Agencies, “Controlling Nutrient Loadings to US Waterways: An Urban Perspective”, 2011.
 31. Neethling, Reardon, HDR Engineering, “When do the Costs of Wastewater Treatment Outweigh the Benefits of Nutrient Removal?”, WERF, 2011.
 32. “Fixing the EPA’s Clean Water Problem”, Mark Gibson, *Water Innovations*, May, 2017.
 33. <http://www.iowapolicyproject.org/2011research/110622-wetlands.html>.
 34. “Iowa Nutrient Reduction Strategy”, Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources, May, 2013. Released November, 2012.

Chapter 15

1. “Merchants of Doubt”, Naomi Oreskes and Erik M. Conway, 2010, Bloomsbury Press, New York, ISBN: HB: 978-1-59691-610-4.
2. https://en.wikipedia.org/wiki/Intergovernmental_Panel_on_Climate_Change.
3. https://en.wikipedia.org/wiki/2021_United_Nations_Climate_Change_Conference.
4. https://en.wikipedia.org/wiki/Paris_Agreement.
5. IPCC report issued in October, 2018.
6. <https://unfccc.int/news/cop26-update-to-the-ndc-synthesis-report>.
7. https://unfccc.int/sites/default/files/english_paris_agreement.pdf.
8. National Geographic, September, 2019, “The Thaw Speeds Up”, Jason Treat, Matthew W. Chwastyk, and Ryan Williams, NGM Staff.
9. “Rapid Atlantification along the Fram Strait at the beginning of the 20th century”, Francesco Muschitiello, *Science Advances*, 11/24/21, DOI: 10.1126/sciadv.abj2946.
10. “Arctic Sea Ice Minimum Extent”, <https://climate.nasa.gov/vital-signs/arctic-sea-ice>.
11. Shepherd, A., Ivins, E., Rignot, E., Smith, B., van den Broeke, M., Velicogna, I., Whitehouse, P., Briggs, K., Joughin, I., Krinner, G., Nowicki, S., Payne, T., Scambos, T., Schlegel, N., Geruo, A., Agosta, C., Ahlstrøm, A., Babonis, G., Barletta, V. R., ... Team, T. IMBIE. (2020). Mass balance of the Greenland Ice Sheet from 1992 to 2018. *Nature*, 579, 233-239. <https://doi.org/10.1038/s41586-019-1855-2>.
12. “Contemporary ice sheet thinning drives subglacial groundwater exfiltration with potential feedbacks on glacier flow”, Alexander A. Robel, Shi J. Sim, Colin Meyer, Matthew R. Siegfried, and Chloe D. Gustafson, *Science Advances*, 18 Aug 2023, Vol 9, Issue 33, DOI: 10.1126/sciadv.adh3693.
13. “Global Tipping Points – Report 2023”, Timothy M. Lenton, Report Lead, University of Exeter, <https://report-2023.global-tipping-points.org/>.

14. National Geographic, December, 2024, “The New Stars of Polar Science”, Lois Parshley.
15. “Exceptionally Warm and Prolonged Flow of Warm Deep Water Toward the Filchner-Ronne Ice Shelf in 2017”, Svenja Ryan, Hartmut H. Hellmer, Markus Janout, Elin Darelius, Lucie Vignes, Michael Schröder, *Geophysical Research Letters*, Vol. 47, Issue 13, 16 July 2020, <https://doi.org/10.1029/2020GL088119>.
16. National Geographic, September, 2019, “Open for Business”, Riley D. Champine.
17. “Glacial Lake Outburst Floods Threaten Millions Globally”, Caroline Taylor, Tom R. Robinson, J. Rachel Carr, Matthew Westoby, *Nature Communications*, 2023 Feb. 7;14:487. doi: 10.1038/s41467-023-36033-x, <https://pmc.ncbi.nlm.nih.gov/articles/PMC9905510>.
18. National Geographic, July, 2021, “Too Hot to Live”, Elizabeth Royte.
19. High Country News, May, 2023, “Climate change is changing public health”, Kylie Mohr.
20. “Cholera”, World Health Organization, 5 December, 2024, <https://www.who.int/news-room/fact-sheets/detail/cholera>.
21. “Sea Level Changes – Observations From Space”, NASA, <https://sealevel.nasa.gov/faq/13/how-long-have-sea-levels-been-rising-how-does-recent-sea-level-rise-compare-to-that-over-the-previous>
22. National Geographic, December, 2021, “Speed”, Michael Greshko.
23. “Warning of a forthcoming collapse of the Atlantic meridional overturning circulation”, Peter Ditlevsen, Susanne Ditlevsen, *Nature Communications*, 14, 4254 (2023), <https://doi.org/10.1038/s41467-023-39810-w>.
24. Befus, K.M., Barnard, P.L., Hoover, D.J. et al. Increasing threat of coastal groundwater hazards from sea-level rise in California. *Nat. Clim. Chang.* 10, 946–952 (2020). <https://doi.org/10.1038/s41558-020-0874-1>.
25. Ohenhen, L.O., Shirzaei, M., Ojha, C. et al. Disappearing cities on US coasts. *Nature* 627, 108–115 (2024). <https://doi.org/10.1038/s41586-024-07038-3>
26. Kristina Hill, Daniella Hirschfeld, Caroline Stanhope Lindquist, et al. Rising coastal groundwater as a result of sea-level rise will influence contaminated coastal sites and underground infrastructure. *ESS Open Archive*. May 25, 2023. DOI: 10.22541/essoar.168500245.55690018/v1.
27. Corringham, T.W., McCarthy, J., Shulgina, T. et al. Climate change contributions to future atmospheric river flood damages in the western United States. *Sci Rep* 12, 13747 (2022). <https://doi.org/10.1038/s41598-022-15474-2>.
28. “The growing inadequacy of an open-ended Saffir–Simpson hurricane wind scale in a warming world”, Michael F. Wehner and James P. Kossin, February 5, 2024, *Proceedings of the National Academy of Sciences*, 121 (7) e2308901121, <https://doi.org/10.1073/pnas.2308901121>.
29. High Country News, September, 2020, “Over Heated”, Jessica Kutz.
30. “Future Temperature-Related Deaths in the U.S.: The Impact of Climate Change, Demographics, and Adaptation”, Jangho Lee, Andrew E. Dessler, 15 August 2023, *Geohealth*, <https://doi.org/10.1029/2023GH000799>.

Chapter 16

1. <https://worldpopulationreview.com/country-rankings/carbon-footprint-by-country>
2. <https://www.worldometers.info/co2-emissions/>, Sources: Emission Database for Global Atmospheric Research (EDGAR), CO2 Emissions from Fuel Combustion (EIA), World Population Prospects: The 2020 Revision (United Nations Population Division).

3. Onsite Sewage Treatment Program in the Water Resources Center at the University of Minnesota, Sara Heger, May 15, 2020.
4. <https://www.iea.org/topics/transport>
5. https://edgar.jrc.ec.europa.eu/report_2021
6. <https://www.iea.org/reports/the-future-of-cooling>
7. <https://tradingeconomics.com/united-states/exports-of-goods-and-services-percent-of-gdp-wb-data.html>
8. <https://wits.worldbank.org/CountryProfile/en/USA>
9. <https://op.europa.eu/en/publication-detail/-/publication/45c88a84-2d65-11ec-bd8e-01aa75ed71a1/language-en>
10. <https://www.modernghana.com/news/1047066/3-reasons-ghana-is-still-not-a-developed-country.html>
11. <https://borgenproject.org/top-10-facts-about-living-conditions-in-ghana/>
12. <https://www.concern.org.uk/news/we-suffer-lot-why-life-so-hard-burundi>
13. <https://www.wfp.org/countries/burundi>
14. e CIA World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/geos/ps.html>.
15. https://prdrse4all.spc.int/system/files/palau_energy_efficiency_action_plan.pdf
16. <https://www.nrel.gov/docs/fy15osti/64291.pdf>
17. <http://www.spc.int/edd/en/download/finish/11-reports/654-palau-energycountry-profile>.
18. <https://blog.keatschinese.com/6-types-of-main-transportation-when-you-live-in-china/>
19. <https://www.chinadiscovery.com/travel-guide/transportation.html>
20. https://en.wikipedia.org/wiki/Transport_in_the_United_Kingdom
21. https://www.researchgate.net/figure/Urban-sprawl-index-in-OECD-metropolitan-areas-average-by-country-2000-2006_fig4_306029837
22. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection Agency, EPA 430-R-22-003. <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissions-and-sinks-1990-2020>.
23. “Manufacturing Energy and Carbon Footprints (2018 MECS)”, December, 2021, U.S. DOE, https://www.energy.gov/eere/iedo/manufacturing-energy-and-carbon-footprints-2018-mecs?nrg_redirect=458016.
24. U.S. Geological Survey, 2022, Mineral commodity summaries 2022: U.S. Geological Survey, 202 p., <https://doi.org/10.3133/mcs2022>.
25. <https://pubs.usgs.gov/periodicals/mcs2020/mcs2020-gypsum.pdf>
26. <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/glass-material-specific-data>
27. <https://www.statista.com/statistics/700260/glass-bottles-and-containers-production-volume-worldwide/>

Chapter 17

1. “Pesticides”, National Institute of Environmental Health Sciences, Health and Education, <https://www.niehs.nih.gov/health/topics/agents/pesticides>

2. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection, Agency, EPA 430-R-22-003, <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissionsand-sinks-1990-2020>.
3. "Farming on the Wild Side", Nancy J. Hayden and John P. Hayden, 2019, Chelsea Green Publishing, White River Junction, VT.
4. "Grow Your Soil!", Diane Miessler, 2020, Storey Publishing, North Adams, MA, www.storey.com.
5. "The Nature of Nature", Enric Sala, 2020, National Geographic Partners, LLC, Washington, D.C..
6. "We Are The Ark", Mary Reynolds, 2022, Timber Press, Inc., Portland, OR, ISBN 978-1-64326-178-2.
7. <https://rodaleinstitute.org/> .
8. "What if We Get It Right?", Ayana Elizabeth Johnson, 2024, One World, New York, ISBN 978-0-593-22936-1.
9. G. Eshel, A.I. Flamholz, A. Shepon, & R. Milo, US grass-fed beef is as carbon intensive as industrial beef and ≈10-fold more intensive than common protein-dense alternatives, Proc. Natl. Acad. Sci. U.S.A. 122 (12) e2404329122, <https://doi.org/10.1073/pnas.2404329122> (2025).
10. Martin MJ, Thottathil SE, Newman TB. Antibiotics Overuse in Animal Agriculture: A Call to Action for Health Care Providers. Am J Public Health. 2015 Dec;105(12):2409-10. doi: 10.2105/AJPH.2015.302870. Epub 2015 Oct 15. PMID: 26469675; PMCID: PMC4638249.
11. "This Land", Christopher Ketcham, 2019, Viking, Penguin Random House, LLC, New York, ISBN 9780735220980.
12. High Country News – 2/4/19 – "Road-killed cuisine for the Anthropocene", Ella Jacobson.
13. National Geographic, September, 2021, "Eating the Problem", Eve Conant.
14. Law, N., L., Bank, and M. Grove, 2004, Nitrogen input from residential lawn care practices in suburban watersheds in Baltimore County, MD. Journal of Environmental Planning and Management 47(5):737-55.
15. Environmental Protection Agency, 2008, Sustainable Landscaping, MidAtlantic Region, <http://www.epa.gov/reg3esd1/garden/presentation.htm>.
16. "Ingredients", George Zaidan, 2020, Dutton, Penguin Random House, LLC, U.S.A., ISBN 9781524744274.
17. Source - <https://www.sucden.com/en/products-and-activities/sugar/process-flowcharts/>
18. "Grain Brain", David Perlmutter, M.D. with Kristin Loberg, 2013, Little, brown and Company, Hachette Book Group, New York, New York, ISBN 978-0-316-23480-1.
19. "The Dandelion Celebration: A Guide to Unexpected Cuisine", Peter A. Gail, 1994, Goosefoot Acres PR, ISBN 10: 1879863510.
20. High Country News, 11/25/19, "Aerial Spraying Provokes Calls or Local Control", Carl Segerstrom.
21. "[Antimicrobial Resistance](#)," World Health Organization, October 13, 2020.
22. "Food: Material-Specific Data", <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>.
23. U.S. Department of Agriculture, Food Waste FAQ's, <https://www.usda.gov/about-food/food-safety/food-loss-and-waste/food-waste-faqs> .

24. "Scraps, Wilt and Weeds", Mads Refslund and Tama Matsuoka Wong, 2017, Grand Central Life & Style, Hachette Book Group, ISBN 978-1-4555-3615-3.
25. <https://denverfoodrescue.org/>
26. "Dive", Jeremy Seifert, <https://divethefilm.com/>
27. Poore, J., & Nemecek, T. (2018). Reducing food's environmental impacts through producers and consumers. *Science*, 360(6392), 987-992. – processed by Our World in Data, <https://ourworldindata.org/grapher/food-emissions-supply-chain>
28. <https://www.nrdc.org/experts/lena-brook/organic-agriculture-helps-solve-climate-change>
29. Discover Magazine, May, 2018, "One Big Fat Truth", Tamar Haspel.
30. National Center for Health Statistics, "Obesity and Overweight", <http://www.cdc.gov/nchs/fastats/obesity-overweight.htm>
31. "The Average American Ate (Literally) A Ton This Year", NPR The Salt, Allison Aubrey, December 31, 2011, <https://www.npr.org/sections/thesalt/2011/12/31/144478009/the-average-american-ate-literally-a-ton-this-year>
32. "The China Study", T. Colin Campbell and Thomas M. Campbell II, 2016, BenBella Books, Inc., Dallas, TX, ISBN 1-932100-38-5.
33. Anderson, RN, "Deaths: leading causes for 2000." *National Vital Statistics Reports* 50 (16) (2002).
34. Starfield B. "Is U.S. health really the best in the world?", *JAMA* 284 (2000): 483 – 485.
35. "Daily Recommended Values (DRV's) - Food Components", U.S. Food and Drug Administration, <https://www.fda.gov/media/99059/download>
36. "Serving Up Better Health", American Institute for Cancer Research, <https://www.aicr.org/cancer-prevention/healthy-eating/>
37. Outside Magazine, April 2018, p52, "Your Brain on Food", Nick Heil.
38. Centers for Disease Control and Prevention. "Childhood obesity facts", 2015, August 27, <https://www.cdc.gov/healthyschools/obesity/facts.htm>.
39. Williams G., "The heavy price of losing weight." *U.S. News and World Report*, 2013, January 2, <http://money.usnews.com/money/personal-finance/articles/2013/01/02/the-heavy-price-of-losing-weight>.
40. Outside Magazine, March, 2017, p 50, Nick Heil, Body Work.
41. "The Case Against Sugar", Gary Taubes, 2016, Knopf, ISBN 10: 0307701646.
42. "Soda Politics" by Marion Nestle, Oxford University Press, 2015, ISBN 10: 0190263431.
43. "Vitamin E Fact Sheet for Consumers", National Institutes of Health, Office of Dietary Supplements, <https://ods.od.nih.gov/pdf/factsheets/vitamine-consumer.pdf> .
44. www.badfood35.com
45. Robert Lustig, University of California at San Francisco, <https://robertlustig.com/sugar-science/> .
46. Outside Magazine, December, 2020, "So Long, and Thanks for All the Fish", Rowan Jacobsen.
47. "The Outlaw Ocean", Ian Urbina, Vintage Books, 2019, A Division Penguin Random House, LLC, New York, www.theoutlawocean.com.
48. National Geographic, July, 2025, "How David Attenborough holds on to Hope", Brian Resnick.
49. National Geographic, January, 2023, "Red, White, and Blue Zones", Dan Buettner.

50. "The Building Blocks of Health", J. Joseph Speidel, M.D., M.P.H., 2020, J.J. Webster Publishing, Foster City, CA, ISBN 9781952762000.
51. National Geographic, March, 2024, "Living With Dementia", Claudia Kalb.
52. Discover Magazine, Jan/Feb, 2024, "FDA Approves Controversial New Alzheimer's Drug", Kenneth Miller.
53. "Clean", Alejandro Junger, 2009, HarperCollins, New York, NY, ISBN 978-0-06-173432-5.
54. www.greenamerica.org/climate-victory-gardening-101.
55. Source: American Academy of Neurology - recent study of almost 1,000 participants of the Memory and Aging Project links eating leafy greens with reduced cognitive decline.
56. University of California School of Public Health's Wellness Letter (February, 1990).
57. "Eating on the Wild Side", Jo Robinson, 2014, Little, Brown, Spark, U.S.A., ISBN 10: 0316227935
58. "In Defense of Food – An Eater's Manifesto", Michael Pollan, 2009, Penguin Books, ISBN 10: 0143114964.

Chapter 18

1. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection Agency, EPA 430-R-22-003. <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissionsand-sinks-1990-2020> .
2. <https://www.usgbc.org/guide-LEED-certification> .
3. https://www.iccsafe.org/wp-content/uploads/ICC_Leading_Way_to_Energy_Efficiency.pdf .

Chapter 19

1. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection Agency, EPA 430-R-22-003. <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissions-and-sinks-1990-2020> .
2. <https://co.my.xcelenergy.com/s/renewable>
3. <https://www.eia.gov/energyexplained/electricity/use-of-electricity.php>
4. <https://www.energy.gov/eere/buildings/articles/energy-efficient-home-improvement-credit-insulation-and-air-sealing>
5. "Cooling and Heating Load Calculation Manual", William Rudoy and Joseph F. Cuba, Prepared by The American Society of Heating, Refrigerating and Air-Conditioning Engineers under contract H-2303 for the U.S. Department of Housing and Urban Development, 1977.
6. <https://corporate.my.xcelenergy.com/s/energy/renewable-development-fund>
7. <https://www.epa.gov/vcs/energy-star>
8. <https://www.swenergy.org/>
9. <https://www.cres-energy.org/>
10. <https://www.newenergycolorado.org/>
11. <https://core.coop/my-cooperative/renewables/>

12. [https://historicalectiondata.coloradosos.gov/search?gf=e&e\[0\]=32](https://historicalectiondata.coloradosos.gov/search?gf=e&e[0]=32)
13. <https://www.cohoalaw.com/covenant-enforcement/new-legislation-supports-homeowner-use-of-alternative-energy-devices/>
14. <https://www.wpr.org/news/how-utility-company-fought-keep-two-colorado-towns-hooked-fossil-fuels>
15. High Country News, November, 2021, “Radioactive Neighbors”, Jessica Douglas.
16. High Country News, August, 2021, “Climate change wreaks havoc on the grid”, Jonathan Thompson.

Chapter 20

1. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection Agency, EPA 430-R-22-003. <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissions-and-sinks-1990-2020>.
2. www.zipcar.com
3. <https://onetreepanted.org>
4. <https://populationconnection.org>
5. <https://www.energy.gov/eere/vehicles/articles/fotw-1230-march-21-2022-more-half-all-daily-trips-were-less-three-miles-2021>
6. <https://www.census.gov/topics/employment/commuting/guidance/acs-1yr.html>
7. <https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle#burning>
8. <https://www.fueleconomy.gov/feg/>
9. High Country News, February, 2022, “Electric vehicles drive up demand for ‘green metals’”, Jonathan Thompson.

Chapter 21

1. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection Agency, EPA 430-R-22-003. <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissions-and-sinks-1990-2020>.
2. High Country News, March, 2022, “Tech Wreck”, Jonathan Thompson.
3. Prasanna, Ashreeta, Kevin McCabe, Ben Sigrin, and Nate Blair. Storage Futures Study: Distributed Solar and Storage Outlook: Methodology and Scenarios. Golden, CO: National Renewable Energy Laboratory. NREL/TP-7A40-79790. <https://www.nrel.gov/docs/fy21osti/79790.pdf>
4. Max J. Krause, Katherine E. Bronstein, Estimating national sludge generation and disposal from US drinking water and wastewater treatment plants, Journal of Cleaner Production, Volume 453, 2024, 142121, ISSN 0959-6526, <https://doi.org/10.1016/j.jclepro.2024.142121>. (<https://www.sciencedirect.com/science/article/pii/S0959652624015695>).

5. <https://www.usgbc.org/guide-LEED-certification>

Chapter 22

1. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection Agency, EPA 430-R-22-003. <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissions-and-sinks-1990-2020>. <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/guide-facts-and-figures-report-about>
2. “The Future of Packaging – From Linear to Circular”, by Tom Szaky, CEO of TerraCycle.
3. US Census Bureau, “US and World Population Clock,” <https://www.census.gov/popclock> (accessed May 8, 2018).
4. Daniel Hoornweg and Perinaz Bhada-Tata, “What a Waste: A Global Review of Solid Waste Management,” World Bank urban development series, knowledge paper no. 15, March 2012, <https://openknowledge.worldbank.org/handle/10986/17388>, 83 (accessed May 8, 2018).
5. <https://pelacase.com/blogs/news/how-much-plastic-is-in-your-bathroom>
6. Smithers Pira, “Packaging Material Outlooks – Towards a \$1 Trillion Milestone in 2020,” February 2016, <https://www.smitherspira.com/resources/2016/february/global-packaging-material-outlooks> (accessed May 10, 2018).
7. <https://shop.terracycle.com/>
8. <https://www.ridwell.com/>
9. https://www.energy.gov/eere/iedo/manufacturing-energy-and-carbon-footprints-2018-mecs?nrg_redirect=458016
10. “Throwaway Plastics Has Corrupted Us”, Saabira Chaudhuri, September 6, 2025, Guest Essay, New York Times.
11. <https://www.usgs.gov/centers/national-minerals-information-center/lime-statistics-and-information>
12. www.pubs.usgs.gov/periodicals/mcs2022/mcs2022.pdf
13. https://www1.eere.energy.gov/manufacturing/resources/mining/pdfs/mining_bandwidth.pdf
14. www.pubs.usgs.gov/periodicals/mcs2022/mcs2022.pdf
15. <https://bioresources.cnr.ncsu.edu/resources/life-cycle-carbon-footprint-analysis-of-pulp-and-paper-grades-in-the-united-states-using-production-line-based-data-and-integration/>
16. https://www.energy.gov/sites/default/files/2021-12/2018_mecs_forest_products_energy_carbon_footprint_0.pdf
17. <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/glass-material-specific-data>
18. <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/aluminum-material-specific-data>
19. <https://www.epa.gov/facts-and-figures-about-material-specific-data>
20. <https://habitablefuture.org/resources/the-illusion-of-plastics-recycling-neither-just-nor-circular/>
21. <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>

22. <https://natural-resources.canada.ca/forest-forestry/insects-disturbances/deforestation-canada-key-myths-facts>
23. Discover Magazine, May, 2018, “The Crux Trending”, Lacy Schley.
24. www.terracycleglobalfoundation.org
25. Wang, Y., Okochi, H., Tani, Y. et al. Airborne hydrophilic microplastics in cloud water at high altitudes and their role in cloud formation. *Environ Chem Lett* 21, 3055–3062 (2023).
<https://doi.org/10.1007/s10311-023-01626-x> .
26. National Geographic, July, 2023, “Trailblazers” – Imogen Napper, Marine scientist
27. High Levels of Microplastics in the Arctic Sea Ice Alga *Melosira arctica*, a Vector to Ice-Associated and Benthic Food Webs, Melanie Bergmann, Steve Allen, Thomas Krumpfen, and Deonie Allen, *Environmental Science & Technology* 2023 57 (17), 6799-6807, DOI: 10.1021/acs.est.2c08010.
28. Rocky Mountain National Park, a 2019 study by the United States Geological Service, Greg Wetherbee from the Denver-based USGS Hydrologic Networks Branch.
29. Eriksen M, Cowger W, Erdle LM, Coffin S, Villarrubia-Gómez P, Moore CJ, et al. (2023) A growing plastic smog, now estimated to be over 170 trillion plastic particles afloat in the world’s oceans—Urgent solutions required. *PLoS ONE* 18(3): e0281596,
<https://doi.org/10.1371/journal.pone.0281596> .
30. “Team Spots Nanoplastics in the Ocean For the First Time”, Karla Cruise, University of Notre Dame, February 5, 2024, <https://www.futurity.org/nanoplastics-oceans-3175282-2>.
31. Cox KD, Covernton GA, Davies HL, Dower JF, Juanes F, Dudas SE. Human Consumption of Microplastics. *Environ Sci Technol*. 2019 Jun 18;53(12):7068-7074. doi: 10.1021/acs.est.9b01517. Epub 2019 Jun 5. Erratum in: *Environ Sci Technol*. 2020 Sep 1;54(17):10974. doi: 10.1021/acs.est.0c04032. PMID: 31184127.
32. Discover Magazine, May/June, 2024, “Are Microplastics Harming our Health?”, Sophia Quaglia.
33. www.americanbeverage.org.
34. National Geographic, June, 2018, “Plastic”, Laura Parker.
35. “Biodegradable Plastics and Marine Litter: Misconceptions, concerns and impacts on marine environments”, UN Environment Programme, 11 December 2015,
<https://www.unep.org/resources/report/biodegradable-plastics-and-marine-litter-misconceptions-concerns-and-impacts>.
36. National Geographic, May, 2019, “Little Pieces, Big Problems”, Laura Parker.
37. “Production, Use and Fate of All Plastics Ever Made”, *Science Advances*, 2017.
38. National Geographic, June, 2018, “The Plastic Apocalypse”, Susan Goldberg.
39. National Geographic, December, 2019, “Our Addiction to Plastic”, Hannah Whitaker.
40. Outside Magazine, December, 2018, “Emma Cohen”, Megan Michelson.
41. www.terracycle.com.
42. "[White Paper: Textile Recovery in the U.S.](#)" Resource Recycling Systems, June 30, 2020.
43. “Fast Fashion Leads to New Recycling Effort”, Saabira Chaudhuri,
44. National Geographic, Sept, 2021, “Explore: PPE Where it Shouldn’t Be”, Annie Roth.

45. "Aircraft Cabin Waste Recycling Guide", Sue Hodnett, Environmental Advisor, Manchester Airport, 2018, <https://www.sustainableaviation.co.uk/wp-content/uploads/2018/06/Aircraft-Cabin-Waste-Recycling-Guide1.pdf>.
46. www.Copirg.org , 8/22/20.
47. "Are Coffee Cups Full of Opportunity?", Brian Taylor, May 4, 2022, <https://www.recyclingtoday.com/news/paper-coffee-cup-recycling-sorting-pulping-usa>
48. www.41pounds.org
49. <https://foodprint.org/blog/are-plastic-bag-bans-working/>
50. https://en.wikipedia.org/wiki/Plastic_bag_bans_in_the_United_States
51. National Geographic, June, 2018, "How we can stem the tide", Laura Parker.
52. National Geographic, March, 2020, "The End of Trash", Robert Kunzig.

Chapter 23

1. SelectUSA Textiles Industry, International Trade Administration, <https://www.trade.gov/selectusa-textiles-industry> (accessed 9/24/25).
2. "2024 State of the U.S. Textile Industry", Norman Chapman, July 18, 2024, <https://www.textileworld.com/textile-world/2024/07/2024-state-of-the-u-s-textile-industry/>
3. "Fashion's Desert Graveyard", John Bartlett, April, 2024, National Geographic.
4. "How Often Should You Replace Your Pillows?", Lauren Fountain, May, 2023, <https://www.sleepfoundation.org/best-pillows/how-often-should-you-replace-your-pillows>
5. "How Often Should You Change Your Toothbrush?", <https://www.colgate.com/en-in/oral-health/brushing-and-flossing/how-often-should-you-change-your-toothbrush-0114>
6. EPA (2022) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. U.S. Environmental Protection Agency, EPA 430-R-22-003. <https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissionsand-sinks-1990-2020>
7. "Do I Need This?", Documentary, Kate Schermerhorn, 2022, Luna Park Productions, <https://beyondchron.org/>
8. "Shopping, Dopamine and Anticipation", Susan Weinschenk, Ph.D., October 22, 2015, Psychology Today, <https://www.psychologytoday.com/us/blog/brain-wise/201510/shopping-dopamine-and-anticipation>
9. <https://www.repaircafe.org/en/visit/>
10. "How to Fix Damn Near Everything", Franklynn Peterson, 1996, Random House U.S.A., Inc.
11. <https://frame.work/about>
12. <https://pirg.org/campaigns/right-to-repair>
13. "Fighting for consumer rights to repair our own electronic devices," Jay Woodruff, April 28, 2020, Fast Company.
14. <https://wits.worldbank.org/trade/comtrade/en/country/USA/year/2020/tradeflow/imports/partner/ALL/product/730711>
15. <https://www.census.gov/foreign-trade/schedules/b/2020/index.html>

Chapter 24

1. “Can Capitalism Curb Climate Change?”, Carl Segerstrom, 4/29/19, High Country News.
2. “2025 GenZ and Millennial Survey – Growth and the Pursuit of Money, Meaning and Well-Being”, Elizabeth Faber, Accessed 2/20/26, <https://www.deloitte.com/global/en/issues/work/genz-millennial-survey.html> .
3. “Sustainable Signals – New Data From The Individual Investor”, 2017, Morgan Stanley Institute for Sustainable Investing, https://www.morganstanley.com/pub/content/dam/msdotcom/ideas/sustainable-signals/pdf/Sustainable_Signals_Whitepaper.pdf
4. <https://betterworldshopper.org>
5. “Small Business Saturday”, Verity Noble, 11/29/25, Letter from Nude Foods.
6. Kazemi Z, Aboutaleb E, Shahsavani A, Kermani M, Kazemi Z. Evaluation of pollutants in perfumes, colognes and health effects on the consumer: a systematic review. J Environ Health Sci Eng. 2022 Feb 3;20(1):589-598. doi: 10.1007/s40201-021-00783-x. PMID: 35669814; PMCID: PMC9163252.
7. “Skip the Antibacterial Soap; Use Plain Soap and Water”, 12/12/24, U.S. Food and Drug Administration, <https://www.fda.gov/consumers/consumer-updates/skip-antibacterial-soap-use-plain-soap-and-water> .
8. “United States Air Freshener Market, By Region, Competition, Forecast & Opportunities, 2020-2030F”, January, 2025, TechSci Research, ID: 5977593, <https://www.researchandmarkets.com/report/united-states-air-fresheners-market>
9. www.chemistrycachet.com
10. National Geographic, June, 2022, “Planet Possible”, Christina Nunez.
11. www.cdc.gov/zika
12. OxfordLanguages, 2025, Oxford University Press, <https://languages.oup.com/google-dictionary-en/>
13. “The Better World Handbook”, Ellis Jones, Ross Haenfler and Brett Johnson, 2001, New Society Publishers, BC, Canada, ISBN 0865714428.
14. “The Better World Shopping Guide”, Ellis Jones, 2017, New Society Publishers, BC, Canada, ISBN 9780865718623.
15. “What if We Get it Right?”, Ayana Elizabeth Johnson, 2024, One World, New York, ISBN 978-0-593-22936-1.
16. “The Net Zero Transition: What it Would Cost, What it Could Bring”, <https://www.mckinsey.com/capabilities/sustainability/our-insights/the-net-zero-transition-what-it-would-cost-what-it-could-bring#/> .
17. Jason Hickel is Lecturer, London School of Economics and Political Science. This article was originally published on The Conversation.
18. “Outlaw Ocean”, Ian Urbina, 2020, Vintage Book, Division of Penguin Random House LLC, New York, ISBN 978-1-101-97237-3.
19. <https://wallethub.com/edu/most-least-green-cities/16246>
20. January 18, 2025, “Letter from an American”, Heather Cox Richardson.
21. High Country News 6/25/18 – Paul Larmer in Editor’s note – In Sept, 2012.
22. Heather Cox Richardson, 11/25/24, “Letters from an American.
23. Wikipedia, <https://en.wikipedia.org/wiki/PFAS>

24. "LA City Attorney Hydee Feldstein Soto Announces \$35 Million Settlement with Monsanto Company", Posted 10/11/24, Hydee Feldstein Soto, LA City Attorney, Official Website of the City of Los Angeles, <https://cityattorney.lacity.gov/updates/la-city-attorney-hydee-feldstein-soto-announces-35-million-settlement-monsanto-company>
25. CoPIRG, Colorado Public Interest Research Group, Summer 2019, Vol. 34, No. 3, <https://copirg.org/newsletters>
26. Carey Gillam, "Revealed: Monsanto predicted crop system would damage US farms," The Guardian, March 30, 2020.
27. Carey Gillam, "Revealed: Monsanto predicted crop system would damage US farms," The Guardian, March 30, 2020.
28. Patricia Cohen, "Roundup Maker to Pay \$10 Billion to Settle Cancer Suits," The New York Times, June 24, 2020.
29. Reuters staff, "[Mexico to phase out use of herbicide glyphosate](#)," Reuters, August 12, 2020.
30. Carey Gillam, "[Revealed: Monsanto owner and US officials pressured Mexico to drop glyphosate ban](#)," The Guardian, February 16, 2021.
31. Carey Gillam, "[I Won a Historic Lawsuit, But May Not Live to Get the Money](#)," TIME, November 21, 2020.
32. Bill Chappell, "[Bayer To Pay More Than \\$10 Billion To Resolve Cancer Lawsuits Over Weedkiller Roundup](#)," NPR, June 24, 2020.
33. High Country News, 11/25/19, "Forever Mines", Mark Olalde.
34. "Merchants of Doubt", Naomi Oreskes and Erik M. Conway, 2010, Bloomsbury Press, New York, NY, ISBN 9781608193943.
35. "Confessions of an Economic Hit Man", John Perkins, 2004, Berrett-Koehler Publishers, Inc., San Francisco, CA, ISBN 1576753018.
36. Wikipedia, <https://en.wikipedia.org/wiki/Corporatocracy>
37. High Country News, 9/17/18, hcne.ws/no-consequences, Jodi Peterson.
38. "Superfund Lead Sites", Missouri Department of Natural Resources, accessed 12/5/25, <https://dnr.mo.gov/waste-recycling/sites-regulated-facilities/superfund/lead>
39. High Country News 5/16/16 – West Coast cities sue Monsanto to pay for chemical clean-up, Sarah Gilmer.
40. "Orphaned Wells Program Annual Report to Congress", November, 2025, Infrastructure Investment and Jobs Act Section 40601, Prepared by the Orphaned Wells Program Office, U.S. Department of the Interior, <https://www.doi.gov/sites/default/files/documents/2025-11/fy-2025-orphaned-wells-congressional-report.pdf>
41. High Country News, 12/10/18, "No Fix for Our Nuclear Past", Heather Hansman.
42. "AWWA Statement of Proposed PFAS Drinking Water Standards", Press Release, March 14, 2023, American Water Works, <https://www.awwa.org/AWWA-Articles/awwa-statement-on-proposed-pfas-drinking-water-standards>
43. <https://actionnetwork.org/groups/stand-up-to-factory-farms>
44. "Dow Chemical to Pay \$77 Million to Restore Michigan Habitats", Matt Reynolds, 11/8/19, Courthouse News Service, <https://www.courthousenews.com/dow-chemical-to-pay-77-million-to-restore-michigan-habitats/>
45. <https://www.lathrogpm.com/team/allyson-cunningham/>
46. "US faces almost daily hazardous chemical accidents, research suggests", Carey Gillam, 11/9/23, The Guardian, <https://www.theguardian.com/us-news/2023/nov/09/how-many-chemical-accidents-spills-explosion>
47. <https://pirg.org/colorado/>

48. "Pollution and health: a progress update", Fuller, Richard et al., The Lancet Planetary Health, Volume 6, Issue 6, e535 - e547. [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(22\)00090-0/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(22)00090-0/fulltext)
49. EPA PFAS Chemical Lists, accessed 2/12/26, <https://www.lathrogpm.com/team/allyson-cunningham/>
50. Report: Up to 110 Million Americans Could Have PFAS-Contaminated Drinking Water, May 22, 2018, Environmental Working Group, <https://www.ewg.org/research/report-110-million-americans-could-have-pfas-contaminated-drinking-water>
51. PFASs from ski wax bioaccumulate at Nordic resort, 11/6/19, American Chemical Society, <https://www.sciencedaily.com/releases/2019/11/191106085449.htm>
52. "McDonalds: 10 Facts You Didn't Know About The Big Mac," The Recipe, September 5, 2019.
53. "Potentially Hazardous Chemicals Are Found in Fast-Food Packaging, a New Report Finds," Consumer Reports, August 6, 2020.
54. "Potentially Hazardous Chemicals Are Found in Fast-Food Packaging, a New Report Finds," Consumer Reports, August 6, 2020.
55. "Toxic PFAS Fallout Found Near Incinerator In Upstate New York," The Intercept, April 28, 2020.
56. "Increasing Accumulation of Perfluorocarboxylate Contaminants Revealed in an Antarctic Firn Core (1958–2017)," Environmental Science & Technology, July 2022, bit.ly/WETantarctica.
57. https://www.ewg.org/interactive-maps/pfas_in_wildlife2/map/
58. "These four foods are high in pesticides – reducing your exposure is possible", June 11, 2025, Environmental Working Group, <https://www.ewg.org/foodnews/five-lesser-known-foods-high-in-pesticides.php>
59. Eric Lipton, "E.P.A. Chief, Rejecting Agency's Science, Chooses Not to Ban Insecticide," The New York Times, March 29, 2017.
60. Rebecca Beitsch, "EPA questions science linking widely used pesticide to brain damage in children," The Hill, September 22, 2020.
61. "Occurrence of Neonicotinoid Insecticides in Finished Drinking Water and Fate During Drinking Water Treatment", Environmental Science & Technology Letters, 2017, vol. 100, p 168 – 173, [goo.gl/i5Au6F](https://doi.org/10.1039/C6EM00168A). University of Iowa (Iowa City) and USGS researchers.
62. High Country News 3/4/19 – "Dead pine trees drive new herbicide rules in Oregon", Carl Segerstrom.

Chapter 25

1. "Doughnut Economics", Kate Raworth, 2017, Chelsea Green Publishing, White River Junction, VT, ISBN 9781603587969.
2. "Leaded – The Poisoning of Idaho's Silver Valley", Michael C. Mix, 2016, Oregon State University Press, OR.
3. Population Connection, September, 2021, "In The News", Stacie Murphy.
4. Jason Hickel, The Ecologist
5. Wilkinson, R. and Pickett, K., 2014, "The Spirit Level authors: why society is more unequal than ever", The Guardian, March 9, 2014, <https://www.theguardian.com/commentisfree/2014/mar/09/society-unequal-the-spirit-level>
6. National Geographic, November, 2020, "How a Virus and Social Unrest Became a Test of our Humanity", Phillip Morris.

7. <https://www.voanews.com/a/oxfam-85-wealthiest-people-own-as-much-as-half-the-worlds-population/1834307.html>
8. "The Wealth Abyss", Jonathan Thompson, December, 2021, High Country News.
9. "The Top 1% of Americans Have Taken \$50 Trillion From the Bottom 90%—And That's Made the U.S. Less Secure", Nick Hanauer, 9/14/2020, <https://time.com/5888024/50-trillion-income-inequality-america>
10. "The Ultra-Rich Are Spending a Fortune to Live in Extreme Privacy", Arian Campo-Flores, 11/15/25, https://www.wsj.com/lifestyle/travel/the-ultrarich-are-spending-a-fortune-to-live-in-extreme-privacy-3f400e55?mod=hp_lead_pos7
11. Wikipedia, https://en.wikipedia.org/wiki/Supply-side_economics
12. "Letter From An American", Heather Cox Richardson, 3/18/24.
13. Mishel, L. and Shierholz, H., 2013, "A Decade of Flat Wages, EPI Briefing Paper no. 365, Washington, DC: Economic Policy Institute, <http://www.epi.org/files/2013/BP365.pdf>
14. <https://blogs.lse.ac.uk/inequalities/2024/11/19/billionaire-pollutocrats-are-driving-the-climate-crisis/>
15. "Carbon Inequality Kills: Why curbing the excessive emissions of an elite few can create a sustainable planet for all", Mira Alestig, Nafkote Dabi, Abha Jeurkar and Alex Maitland, Oxfam International October 2024, Oxfam GB, Oxfam House, John Smith Drive, Cowley, Oxford, OX4 2JY, UK, DOI: 10.21201/2024.000039. <https://policy-practice.oxfam.org/resources/carbon-inequality-kills-why-curbing-the-excessive-emissions-of-an-elite-few-can-621656/>
16. https://en.wikipedia.org/wiki/Darren_Woods
17. "Letter From An American", Heather Cox Richardson, 11/21/23.
18. "This Changes Everything", Naomi Klein, 2014, Simon & Schuster, NY, ISBN 978-1-4516-9739-1.
19. Discover Magazine, Jan/Feb, 2022, "Alzheimer's Drug Approval Sparks a Firestorm", Kenneth Miller.
20. High Country News, May, 2024, "Cattle Country", Jonathan Thompson.
21. High Country News, November, 2020, "Food Forward", Carl Segerstrom.
22. "Livestock Use on Public Lands in the Western USA Exacerbates Climate Change: Implications for Climate Change Mitigation and Adaptation", J. Boone Kauffman, Robert L. Beschta, Peter M. Lacy, Marc Liverman, Environmental Management (2022) 69:1137–1152, <https://doi.org/10.1007/s00267-022-01633-8>
23. United States Department of Interior, Bureau of Land Management, (BLM) (2003a) Lakeview resource management plan and record of decision. USDI Bureau of Land Management, Lakeview, OR., 319., https://archive.org/details/lakeviewresource00unkn_1
24. "2022 National Survey of Fishing, Hunting and Wildlife Watching Shows Economic Contribution of \$395 Billion to US Economy", 10/12/23, <https://www.fishwildlife.org/landing/blog/2022-national-survey-fishing-hunting-and-wildlife-watching-shows-economic-contribution-395-billion-us-economy>
25. "Cattle and Beef – Statistics and Information", Russell Knight, contact, July 2,2025, USDA Economic Research Service, <https://www.ers.usda.gov/topics/animal-products/cattle-beef/statistics-information>
26. United States Billion Dollar Disaster Events, CPI adjusted, <https://www.ncei.noaa.gov/access/billions/time-series>
27. Xingying Huang, Daniel L. Swain ,Climate change is increasing the risk of a California megaflood.Sci. Adv.8,eabq0995(2022).DOI:10.1126/sciadv.abq0995, <https://www.science.org/doi/10.1126/sciadv.abq0995>

28. "U.S. Spending Bill to Grant \$40 Billion in Fossil Fuel Subsidies", Molly Taft, 9/16/25, E360 Digest, Yale School of the Environment, <https://e360.yale.edu/digest/republican-spending-bill-fossil-fuel-subsidies>
29. "What if We Get it Right?", Ayana Elizabeth Johnson, 2024, One World, NY. ISBN 978-0-593-22936-1
30. "The Nature of Nature", Enric Sala, 2020, National Geographic, LLC, Washington, D.C..
31. "Letter from an American", 10/18/24, Heather Cox Richardson.
32. "Letter from an American", 11/14/24, Heather Cox Richardson.
33. "Letter from an American", 11/30/25, Heather Cox Richardson,.
34. "Letter from an American", 10/23/25, Heather Cox Richardson,.
35. Murphy, S., Burch, D. and Clalpp, J. (2012) "Cereal Secrets: the world's largest grain traders and global agriculture", Oxfam Research Reports, Oxford: Oxfam International, available at <https://www.oxfam.org/sites/www.oxfam.org/files/rr-cereal-secrets-grain-traders-agriculture-30082012-en.pdf>.
36. "Factsheet: Committee for a Constructive Tomorrow," ExxonSecrets.org, Greenpeace USA, <http://www.exxonsecrets.org>
37. Suzanne Goldenberg, "Secret Funding Helped Build Vast Network of Climate Denial Thinktanks," Guardian, February 14, 2013.
38. <https://www.opensecrets.org/federal-lobbying/sectors/summary?id=A>
39. <https://www.salary.com/research/executive-compensation/archer-daniels-midland-co-executive-salary>
40. "Natural Capitalism", Paul Hawken, Amory Lovins and L. Hunter Lovins, 1999, Hachette Book Group USA, NY, ISBN 978-0-316-35300-7.
41. <https://www.sciencedirect.com/science/article/abs/pii/S0959378014000685>
42. <https://www.esvd.net/>
43. https://home.treasury.gov/system/files/136/Table_3-Outlays-by-Agency-2024.pdf
44. "Crusading Against the Health Hazards of Plastics", Leonardo Trasande, New York University Langone Health, <https://nyulangone.org/news/crusading-against-health-hazards-plastics> .
45. "The Power of Activism", Steven Pasvolsky, 2023, <https://www.thepowerofactivism.com/>
46. <https://ourworldindata.org/plastic-pollution>
47. "Here Comes the Sun", Bill McKibben, 2025, W. W. Norton and Company, Inc., New York, NY. ISBN 978-1-324-10623-4.
48. Economic Research Service using USDA, Agricultural Research Service, 1977–1978 Nationwide Food Consumption Survey data, and 1989–1991, 1994–1996, and 1998 Continuing Survey of Food Intakes by Individuals data, <https://www.ers.usda.gov/data-products/food-consumption-nutrient-intakes-and-diet-quality>
49. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2003–2004, 2005–2006, 2007–2008, 2009–2010, 2011–2012, 2013–2014, 2015–2016.
50. "2017–2018 What We Eat in America, National Health and Nutrition Examination Survey data".
51. U.S. Department of Agriculture and U.S. Department of Health and Human Services, Dietary Guidelines for Americans, 2020–2025, 9th Edition (December 2020).
52. "Frequently Asked Questions for Industry on Nutrition Facts Labeling Requirements", U.S. Food and Drug Administration Fact Sheet, <https://www.fda.gov/media/99059/download>
53. "FoodData Central – Food Details, USDA, Agricultural Research Service, <https://fdc.nal.usda.gov/food-details/2710826/nutrients>
54. "Adding up the Costs and Benefits of Investing in Sexual and Reproductive Health", Singh S. Darroch JE and Ashford LS, New York, Guttmacher Institute 2014.
55. https://en.wikipedia.org/wiki/Genuine_progress_indicator

56. 15th Annual Solar Jobs Census 2024, November, 2025, Interstate Renewable Energy Council, <https://irecusa.org/census-solar-job-trends/>
57. National Geographic, November, 2020, “Let’s Not Waste This Moment”, Robert Kunzig.
58. High Country News – 5/14/18 – “Recreation is redefining the value of the West’s public lands”, by Kate Schimel and Brooke Warren.
59. Heinrich Boll Foundation, 2012, “Energy transition: environmental taxation”, <http://energytransition.de/2012/10/environmental-taxation/>
60. Caspar L. Donnison and Roger D. Aines, “California’s Cap-and-Trade Explained: Balancing Growth with Climate Stringency”, June 2025, Lawrence Livermore National Laboratory Report, LLNL-TR-2006290.
61. https://en.wikipedia.org/wiki/Stern_Review
62. Evaluating Boston Harbor Cleanup – An Ecosystem Valuation Approach, Di Jin, et al, Front. Mar. Sci., 16 December 2018, Sec. Marine Affairs and Policy, Volume 5 – 2018, <https://doi.org/10.3389/fmars.2018.00478> .
63. https://www.conservation.cam.ac.uk/files/waldron_report_30_by_30_publish.pdf
64. https://en.wikipedia.org/wiki/Fossil_fuel_divestment
65. "Divestment Commitments". www.Gofossilfree.org

Chapter 26

1. https://en.wikipedia.org/wiki/Separation_of_church_and_state_in_the_United_States
2. <https://www.ncronline.org/news/vatican/dont-breed-rabbits-was-pope-francis-breaking-new-ground-birth-control>
3. <https://en.wikipedia.org/wiki/Oligarchy>
4. <https://dictionary.cambridge.org/us/dictionary/english/liberalism>
5. <https://politicalscienceblog.com/what-is-conservatism/>
6. <https://en.wikipedia.org/wiki/Neoliberalism>
7. <https://en.wikipedia.org/wiki/Socialism>
8. <https://en.wikipedia.org/wiki/Communism>
9. <https://en.wikipedia.org/wiki/Fascism>
10. <https://en.wikipedia.org/wiki/Dictatorship>
11. League of Conservation Voters Congressional Scorecard, <https://www.lcv.org/congressional-scorecard/members-of-congress/>
12. High Country News, 3/29/18 – Big oil in Wyoming.
13. “Doughnut Economics”, Kate Raworth, 2017, Chelsea Green Publishing, White River Junction, VT, ISBN 9781603587969.
14. “Letter from an American”, Heather Cox Richardson, 10/1/24.
15. “Letter from an American”, Heather Cox Richardson, 12/27/23.
16. “Letter from an American”, Heather Cox Richardson, 2/25/26.
17. “What if We Get it Right?”, Ayana Elizabeth Johnson, 2024, One World, NY. ISBN 978-0-593-22936-1.
18. “Streamlining Solar Permitting With SolarApp+”, U.S. Department of Energy, <https://www.energy.gov/eere/solar/streamlining-solar-permitting-solarapp>
19. Anna Papp, Kimberly L. Oremus ,Plastic bag bans and fees reduce harmful bag litter on shorelines.Science388,eadp9274(2025).DOI:10.1126/science.adp9274, <https://www.science.org/doi/10.1126/science.adp9274>

20. Action Item: Discussion and Possible Endorsement of Recommendations to Address Plastic Pollution in California’s Coastal and Marine Ecosystems, Staff Recommendation, February 16, 2021, Holly Wyer, Program Manager, https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20210216/Item_4_Plastic_Pollution_Recommendations_Staff_Rec_Revised_and_Endorsed_FINAL_20210323.pdf
21. “The Selling of the President”, Joe McGinniss, 1970, Pocket Books, Indiana University, 0671780360, 9780671780364.

Chapter 27

1. HCN, July, 2025, “Finding community in a world of wounds”, Bethany Kaylor.
2. “New APA Poll Reveals That Americans are Increasingly Anxious About Climate Change’s Impact on Planet, Mental Health”, Erin Conners, Media Contact, October 21, 2020, <https://www.psychiatry.org/News-room/News-Releases/climate-poll-2020>
3. “Climate emotions, thoughts, and plans among US adolescents and young adults: a cross-sectional descriptive survey and analysis by political party identification and self-reported exposure to severe weather events”, Lewandowski, R Eric et al., The Lancet Planetary Health, Volume 8, Issue 11, e879 - e893, [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(24\)00229-8/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(24)00229-8/fulltext)
4. “What if We Get it Right?”, Ayana Elizabeth Johnson, 2024, One World, NY. ISBN 978-0-593-22936-1.
5. Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Goddard, E., Carman, J., Verner, M., Myers, T., Ettinger, J., Fine, J., Richards, E., Goldberg, M., & Marlon, J. (2025). Climate Change in the American Mind: Beliefs & Attitudes, Spring 2025. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication. <https://climatecommunication.yale.edu/publications/climate-change-in-the-american-mind-beliefs-attitudes-spring-2025/>
6. Discover Magazine, November, 2019, “The Manhattan Project for Depression”, Linda Marsa.
7. Discover, Jul/Aug, 2022, “Redefining Suicide”, Timothy Meinck.
8. “The Selfish Society”, Sue Gerhardt, 2010, London, Simon & Schuster.
9. “Let My People Go Surfing”, Yvon Chouinard, 2006, Penguin Books, New York, New York, ISBN 978-0-14-303783-5.
10. “How an Early Oil Industry Study Became Key in Climate Lawsuits”, Beth Gardiner, November 30, 2022, Yale School of the Environment, <https://e360.yale.edu/features/climate-lawsuits-oil-industry-research>
11. May/June, 2022, Outside, “The Siege of the Amarula”, Alex Perry.
12. “Nature’s Best Hope”, page 82, Doug Tallamy, 2019, Timber Press, Inc., Portland, Oregon, ISBN 978-1-60469 – 900-5.
13. “State of the world, 1998 : a Worldwatch Institute report on progress toward a sustainable society”, Brown, Lester, Norton, New York, 1998, ISBN 0393317277.
14. “Farming on the Wild Side”, Nancy J. Hayden and John P. Hayden, August, 2019, Chelsea Green Publishing, Vermont, www.chelseagreen.com.
15. HCN, May, 2025, “Behavior change is society change”, Ruxandra Guidi.