**Climate Justice**

**Professor Daniel Kammen**

**ERG 1XX AC (CC# XXXXXX), 4 credits**

**A course intended to satify:**

American Cultures (application pending); Rauser College Diversity Offering; College in the Cloud

*Overview*

Climate change is transforming our world in ways we are only beginning to understand, and in many ways we cannot yet imagine. At the same time, COVID-19, biodiversity loss, loss of cultural diversity, and inequality worldwide are each, and via their interactions, are providing unwanted opportunities to experience and perhaps prepare for that changed local and global landscape humans are creating. One of emerging theoretical and practical frames in which to examine and understand this new world is that of the co-evolving lens of social and environmental justice (EJ).

In this course we will bring together the scholarship, scientific and engineering innovation, policy, literature and media, and activism around the interacting themes of climate change and social justice. Basic principles, theories, and lessons from practitioners, will all be combined to examine how climate change shapes society, how social justice movements shape our efforts to address these grand challenges of the 21st Century.

*Logistics*

This class will mix lecture and small-group discussion, with the interrogation of foundational texts, classics in each of the EJ and climate fields, with how these themes are represented in mainstream media and alternative forms of public expression and communication.

Lecture and sections will be balanced with ‘Field Engagements’, or practical laboratory sessions, where nodes of social and EJ activism will be examined and used to build experience with theoretical ideas. These opportunities to ‘lift the hood’ and see how these organizations work will be the basis of opportunities to interrogate the intersection of climate justice theory, practice, and policy, and to build a network of contacts in this rapidly evolving and expanding field. This will also be a chance to engage with the ‘direct voice’ of frontline organizations.

Students complete 2 of 3 field engagements in the first half of the course, and one of two in the second half.

*Required texts*:

Naomi Klein (2014) *This Changes Everything: Capitalism versus the Climate* (Simon & Schuster: New York).

Amartya Sen (2009) *The Idea of Justice* (Belknap Press of Harvard University Press, Cambridge, MA).

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| **W** | **Date** | **Lecturer** | **Lecture #/Topic** | **Field** |
| **1** | 1-19 | Kammen | **1 Overview of the climate–justice nexus**  No field engagement or section meetings [Week 1] |  |
| **2** | 1-26 | Kammen | **2** **Climate science, overview** |
| 1-28 | Team | 3 Overview of field engagement investigations & write-ups |
| **3** | 2-2 | Kammen | 4 **Theories of justice** |
| 2-4 | Team | 5 Field Engagement #1: The Ecology Center | **Engagement #1**  **Ecology Center** |
| **4** | 2-9 | Kammen | **6** **Localized climate impacts: communities on the frontlines** |
| 2-11 | Team | 7 Field Engagement #1: The Ecology Center |
| **5** | 2-16 | Kammen | **8** **Data science and environmental justice** |
| 2-18 | Team | 9 Field Engagement #2: Rosie the Riveter National Historical Park | **Engagement #2**  **Rosie Riveter** |
| **6** | 2-23 | Kammen | 1. **Race and climate impacts: disparities** |
| 2-25 | Team | 11 Field Engagement #2: Rosie the Riveter National Historical Park |
| **7** | 3-2 | Kammen | **12 Bringing it home: climate, race and housing** |
| 3-4 | Team | 13 Field Engagement #3: The Ella Baker Center | **Engagement #3**  **Ella Baker Ctr** |
| **8** | 3-9 | Kammen | **14 Climate change and economic opportunity** |
| 3-11 | Team | 15 Field Engagement #3: The Ella Baker Center |
| **9** | 3-16 | Kammen | **16 Climate refugees: internal and international** |
| 3-18 | **You** | **Midterm Exam /** No sections this week |  |
| **10** | 3-30 | Kammen | **18 Religion, faith, and climate justice** | **Engagement #4**  **CBE** |
| 4-1 | Team | 19 Field Engagement #4: Communities for a Better Environment |
| **11** | 4-6 | Kammen | **20 The Native American energy experience** |
| 4-8 | Team | 21 Field Engagement #4: Communities for a Better Environment |
| **12** | 4-13 | Google | **22 Energy and mining: coal, gas, rare-earths elements** | **Engagement #5**  **Grid Alternatives** |
| 4-15 | Team | 23 Field Engagement #5: Grid Alternatives |
| **13** | 4-20 | Kammen | **24 Agriculture, food-systems and equity in a changing climate** |
| 4-22 | Team | 25 Field Engagement #5: Grid Alternatives |
| **14** | 4-27 | Kammen | 26 **The Green New Deal and other approaches to new normal(s)** |  |
| 4-29 | Team | Review | |

**Weekly Assignments**

Week 1: **Overview of the climate–justice nexus**

*An exploration of the intersection of climate change and social justice through the diverse lenses of global pandemics, disparate interest groups, and differentially impacted communities, institutions, and minority groups worldwide.*

Short film (2:20)*Thank you, coronavirus*

Naomi Klein (2014) *This Changes Everything*, Introduction & Chapter 1, *Decade One: One way or another, everything changes,* & *The right is right: The revolutionary power of climate change*.

Week 2: **Climate science, overview**

*Update on the ever-changing climate science, and the latest data on how regional and community-specific impacts vary around the planet.*

IPCC (2018) Summary for Policymakers. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. Cambridge University Press. 24 pages.

https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15\_SPM\_version\_report\_LR.pdf

Week 3: **Theories of justice**

*What are our theoretical tools and frames of understanding for how rights, distribute justice, and both impacts and responsibilities vary in the face of systemic environmental [climate] change? An intellectual dialog between Amartya Sen and John Rawls on the theory of justice and fairness.*

David Miller, “Justice” The Stanford Encyclopedia of Philosoph*y https://plato.stanford.edu/entries/justice/*

Amartya Sen Section I, *The Demands of Justice* and Section V, *Public Reasoning and Democracy* [Long readings]

# The Libertarian Climate Conundrum, https://skepticalscience.com/Libertarian-Climate-Conundrum.html

Week 4: **Localized climate impacts: communities on the frontlines**

*Climate change is highly localized in its impacts. Interconnections between poverty, race, gender, and economic opportunity all amplify the impacts of climate change today, and as we forecast the evolution of environmental degradation. Units of analysis focused on individuals and households often prioritize the affluent and entitled, whereas theories of community engagement often highlight the needs and risks to the poorest and most marginalized segments of society.*

Garrett Hardin (1968) “The tragedy of the commons,” *Science,* **162,** 1243 -1248.

Fekret Berkes, D. Feeny, B. J. McCay & J. M. Acheson (1989) “The benefits of the commons” *Nature*, 340, 91–93.

Defining environmental justice communities: Using CalEnviroScreen in State Policy

<https://medium.com/@cejapower/defining-environmental-justice-communities-using-calenviroscreen-in-state-policy-4d1f350b3207>

Week 5: **Data science and environmental justice**

*The evolution of our fossil-fuel based economies are associated with a tremendous expansion in the global economy, as well as massive accumulation of wealth. This process has had dramatic and differential impacts across socioeconomic and ethnic groups worldwide. Efforts to implement renewable energy have also been plagued by racial and ethnic disparities.*

Union of Concerned Scientists (2016) *The Hidden Costs of Fossil Fuels*

<https://www.ucsusa.org/resources/hidden-costs-fossil-fuels>

Sunter, Deborah, Castellanos, Sergio, and Daniel M Kammen (2019) “Disparities in rooftop photovoltaics deployment in the United States by race and ethnicity,“ *Nature Sustainability*, **2**, 71 – 76.

John Wihbey (2015) *Understanding the social cost of carbon – and connecting it to our lives*

https://www.yaleclimateconnections.org/2015/02/understanding-the-social-cost-of-carbon-and-connecting-it-to-our-lives/

Week 6: **Race and climate impacts: disparities**

*Environmental injustice has specific costs, which are often non-monetary, or can be poorly captured by the tools we have today.*

Lara Cushing, Rachel Morello-Frosch, Madeline Wander, Manuel Pastor (2015) “[The Haves, the Have-Nots, and the Health of Everyone: The Relationship Between Social Inequality and Environmental Quality](https://www.annualreviews.org/doi/abs/10.1146/annurev-publhealth-031914-122646)“, *Annual Review of Public Health*, **36:1**, 193-209.

https://www.annualreviews.org/doi/pdf/10.1146/annurev-publhealth-031914-122646

Senay Habtezion (2020) *Overview of the linkages between gender and climate change*

*https://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/PB1-AP-Overview-Gender-and-climate-change.pdf*

Sen, Amartya Section II.8, *Rationality and Other People*

Week 7: **Bringing it home: climate, race and housing**

*Our most basic needs and decisions dictate how we interact both socially, ethically, with climate. Without a comprehensive framework that ties our decisions around housing , food, finance, and jobs to a climate justice narrative, it will be difficult to make the needed changes to our society and economy.*

Wiener, Scott and Daniel M Kammen (2019) “For U. S. cities, housing policy is climate policy”, *The New York Times,* March 25, 2019.

Naomi Klein, Chapter 4, *Planning and Banning: Slapping the Invisible Hand, Building a Movement*

Week 8: **Climate change and economic opportunity**

*Jobs have been a battleground topic for left-right politics for decades. The climate-justice space, however, present a new vision of jobs and economic transition due to the high-employment potential of green, just, jobs.*

Danyelle Solomon, Connor Maxwell, and Abril Castro (2019) *Systematic Inequality and Economic Opportunity*. Center for American Progress

<https://www.americanprogress.org/issues/race/reports/2019/08/07/472910/systematic-inequality-economic-opportunity/>

Naomi Klein, Chapter 3, *Public and Paid For: Overcoming the Ideological Blocks to the Next Economy*

Week 9: **Climate refugees: internal and international**

*1 in 100 people on the planet are climate refugees, internally or internationally today. The most vulnerable, most marginalized are the early wave of climate refugees. Climate, COVID-19, fires, droughts, all amplify social injustice on a stressed planet.*

[Frey Lindsay](https://www.forbes.com/sites/freylindsay/) (2020) *In Moria Detention Center, Refugees Fear The ‘Catastrophe’ of a Coronavirus Outbreak*

https://www.forbes.com/sites/freylindsay/2020/04/08/in-moria-detention-center-refugees-fear-the-catastrophe-of-a-coronavirus-outbreak/#7762bcf93197

Week 10: **Religion, faith, and climate justice**

*Many voices were absent in the initial rise of the environmental movement. One of those is that of religion and faith, which is now increasingly part of the dialog.*

Encyclical Letter *Laudato Si’* of The Holy Father Francis On Care For Our Common Home (2015)

[*http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\_20150524\_enciclica-laudato-si.html*](http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html)

*Chapter 12*

*Islamic Declaration on Climate Change* (2015)https://unfccc.int/news/islamic-declaration-on-climate-change

Amartya Sen, Section III.14 (“Equality and liberty”)

Week 11: **The Native American energy experience**

*Marginalization of Native People/First peoples has deep roots, long before climate change. As stewards of some of the most inhospitable lands, and areas now discovered to be rich in renewable energy, indigenous communities are a critical fulcrum point in the climate-justice equation.*

Bobby Magill (2014) *The Navajo Nations Shifting Sands on Climate Change*

<https://www.climatecentral.org/news/navajo-nation-climate-change-17326>

Andre Pagliarini (2019) *What Indigenous Rights Have to Do with Fighting Climate Change*

*https://newrepublic.com/article/154693/indigenous-rights-fighting-climate-change*

Week 12: **Energy and mining: coal, gas, rare-earths**

*Extractive resources are a staple of both the fossil-fuel and the new energy economy. Can the principles of Rawls and Sen’s theories of justice inform the design of equitable, inclusive economies of the future?*

Baer, P., Harte, J., Herzog, A., Holdren, J., Hultman, N., Kammen, D. M., Kresch, B., Norgaard, R., and Raymond, L. (2000) “Equal per capita emission rights: the key to a viable climate change policy”, *Science* **289**, 2287.

# Benjamin K. Sovacool[,](https://science.sciencemag.org/content/367/6473/30" \l "aff-1) Saleem H. Ali, Morgan Bazilian[,](https://science.sciencemag.org/content/367/6473/30" \l "aff-5) Ben Radley, Benoit Nemery, Julia Okatz and Dustin Mulvaney (2020) “Sustainable minerals and metals for a low-carbon future,” Science, **367**, 30-33.

Elinor Ostrom, in *Rethinking Institutional Analysis and Development* 101–139 (Institute for Contemporary Studies, San Francisco, 1988).

Week 13: **Agriculture, food-systems and equity in a changing climate**

*Foods that are healthy for the planet and for people are no longer ‘fringe’ resources and systems. Deep inequality exists today in the labor-pools for food supply chains, and in access to these foods. Is the living wage-food-climate nexus the next big turning-point?*

Annie Shattuck, “Food, Climate and the Myths That Keep Our Planet Hot,” Backgrounder, Climate Justice (Oakland, CA: Food First Books/Institute for Food and Development Policy, 2017), <https://foodfirst.org/publication/food-climate-and-the-myths-that-keep-our-planet-hot/>

Marcus Taylor (2018) “Climate-Smart Agriculture: What Is It Good For?,” *J. of Peasant Studies***45**, 89-107.

Week 14: **Elements of the New Deal and proposed Green New Deals**

*How do theories of justice, and equity become operational? Does it take a crisis such as COVID-19, or are there changing trends and movements that make social and climate justice integral to society?*

Johanna Bozuwa, J. Mijin Cha, Daniel Aldana Cohen, Billy Fleming, Jim Goodman, Ayana Elizabeth Johnson, Daniel M Kammen, Julian Brave NoiseCat, Mark Paul, Raj Patel, Thea Riofrancos (2020) “A Green Stimulus”,

https://medium.com/@green\_stimulus\_now/a-green-stimulus-to-rebuild-our-economy-1e7030a1d9ee

Naomi Klein, Chapter 10 (“Love Will Save This Place: Democracy, Divestment, and the Wins So Far”)

A number of guest discussants are planned. All of those below have agreed to take part in the class, but their schedules are complex and scheduling will take place real-time during the semester.

The table below highlights some of their activities so that you can do useful background reading before they engage with the class online.

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| **Individual** | **Description** | **Relevant web link to being your investigation** |
| *Robert Bullard* | Professor and ‘father of EJ’ | https://drrobertbullard.com |
| *Raúl Grijalva* | Member of Congress, AZ | https://grijalva.house.gov/about-raul/ |
| *Wahleah Johns* | Navajo Green Translator | http://petrafoundation.org/fellows/wahleah-johns/index.html |
| *Van Jones* | Ella Baker Center, CNN | https://vanjones.net |
| *Naomi Klein* | Author, Green New Deal | https://naomiklein.org |
| *Tom Steyer* | Philanthropist, Candidate | https://www.tomsteyer.com/meet-tom/ |

**Field Trips**:

Students have two week “windows” to virtually visit 3 of the 5 field engagement opportunities. Students must complete and turn-in the 1-page field notes and assessments by the end of each of the assigned 2-week blocks.

Students must turn in two write-ups to take the required mid-term examination (i.e. 2 of #1, #2 or # 3).

Students must turn in one additional (#4 or #5) field write-up after Spring Break and before receiving the final examination.

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| **Field Engagements** | **Name** | **Address** | **Website** | **Hours** |
| #1 | The Ecology Center | 2530 San Pablo Ave #2000, Berkeley, CA 94702 | <https://ecologycenter.org> | Tues – Sunday, 11 – 6  [or Farmer’s Market options] |
| #2 | Rosie the Riveter Natl. Historic Park | 1414 Harbour Way S Richmond, CA 94804 | <https://www.nps.gov/rori/index.htm> | Tues – Sun., 10 AM –4 PM |
| #2 | The Ella Baker Center | 1419 34th Ave, Suite 202, Oakland, CA 94601 | <https://ellabakercenter.org> | Event schedule varies |
| #4 | Communities for a Better Environment | 120 Broadway, Suite 2, Richmond, CA 94804 | <http://www.cbecal.org> | Monday – Friday 10 - 5 |
| #5 | Grid Alternatives | 171 Ocean Ave UNIT 200, Oakland, CA 94608 | <https://gridalternatives.org> | TBA |

**Movie Assignments:**

Students must watch 3 of the following movies and complete 1-page climate-justice critiques.

***Blade Runner*** (1982) or ***Blade Runner 2049*** (2018)

An environmentally dystopian future where androids rebel against their engineered and pre-determined service roles.

***The Burning Season*** (1994)

The film chronicles Chico Mendes' fight to protect the rainforest.

***Come Hell or High Water: The Battle for Turkey Creek*** (2014)

A teacher moves home to Mississippi when the graves of his ancestors are bulldozed due to urban sprawl. Derrick and his neighbors confront corporate interests and politicians as they face Hurricane Katrina and the BP oil disaster.

***Deliverance*** (1972) [Discretion advised]

A hydropower development project creates an opportunity for adventurism and socioeconomic conflict.

***Erin Brockovich*** (2000)

The story of Erin Brockovich’s environmental law self-education and her fight against the contamination of groundwater by California’s Pacific Gas and Electric.

TV Series - ***Rise: Standing Rock,*** watch***Parts 1 & 2*** (2017)

Resistance at Standing Rock to the Dakota Access Pipeline as seen through protests over Sioux ancestral lands creates a pan-tribal protest.

***Under the Dome***(2015)

Chai Jing’s exploration of the impacts of pollution on Chinese society and on her own family. Banned in China.

Other recommended and relevant movies (but without a sufficient combination of the climate-justice nexus to make the cut as a class assignment). For an extensive list of environmental damage and conflict movies, see: https://en.wikipedia.org/wiki/List\_of\_environmental\_films

***Avatar*** (2009)

#1 grossing movie of all-time. Interstellar mineral-resource based invasion and racial conflict.

***Chasing Coral*** (2017)

A team of divers, photographers and scientists set out on a thrilling adventure to document the disappearance of the world's coral reefs.

***Metropolis*** (1927)

Influential German science-fiction film presents a highly stylized futuristic city where a beautiful and cultured utopia exists above a bleak underworld populated by mistreated workers. Considered by some to be the ‘prequel’ of *Blade Runner.*

***Time to Choose*** *(2016)*

Takes audiences on a journey from the threats we face to the remarkable stories of people changing our world for the better.

***Quantum of Solace*** (2008)

James Bond, villains and the cornering of market for new energy sources (not uncommon in movies), but with a *thin* layering of social impacts on the poor. Shaken, and stirred.