

ERG 160 – Climate Justice

Course #32272 (Tu & Th 12:30PM-1:59)

Spring 2021: DIS 101 (# 32273), M 4:00P-4:59P | DIS 102 (# 32301), Th 2:00P-2:59P)

Professor Daniel Kammen

Overview

Climate change is transforming our world in ways we are only beginning to understand, and in ways we cannot yet imagine. At the same time, COVID-19, changes in bio- and cultural-biodiversity, and inequality are all dramatically impacting the physical landscape. Each of these threats alters our ability to respond to the pressures that come with life on a hot, crowded, interconnected, and deeply unequal planet.

One of the most significant theoretical and operational changes in our response to climate change may be the emerging and co-evolving lens of social and environmental justice (EJ). Our response to crises is informed by experiences that are themselves shaped by race, gender, socioeconomic status, and age.

This course will explore these issues from a multi-dimensional and multi-media perspective and will engage participants in challenging conversations. There are no pre-requisites beyond a commitment to ask hard questions, engage meaningfully without judging each other, and to do our collective best to recognize racism where we find it, question our own assumptions, and to entertain the idea that anti-racist perspectives may exist in unexpected places, ideas, and via new forms of introspection and collective understanding.

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, and how social justice movements shape our efforts to address these grand challenges of the 21st Century.

Logistics

This class will mix lecture and group discussions, focused on interrogation of foundational texts, or classics in each of the EJ and climate fields. Through these materials we will also explore 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’, where we will use film interviews, and the examination of key texts of groups engaged in EJ activism. We seek to use these explorations to build experience that we can bring to examine theoretical ideas of justice. These opportunities are one means to assist us in ‘lifting the hood’ and see how these organizations work in both practical and theoretical terms.

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)

Resources texts:

Robert Bullard (1990) *Dumping in Dixie: Race, class, and environmental quality* (Westview Press, New York)

John Freeman, editor (2020) *Tales of two planets: Stories of climate change and inequality in a divided world* (Penguin Books, New York)

Adam Hochschild (1998) *King Leopold's Ghost: A story of greed, terror and heroism in Colonial Africa* (Mariner Books: New York)

W	Date	Lecture #/Topic	Field
1	1-19	1 Overview of the climate–justice emergency	Engagement #1 & 2 Introductory Films
	1-21	2 https://implicit.harvard.edu/implicit/takeatest.html Pre-course survey	
2	1-26	3 Climate science and justice	
	1-28	4 https://climatecommunication.yale.edu/visualizations-data/sassy/	
3	2-2	5 Theories of justice	
	2-4	6 Video interviews	
4	2-9	7 Localized climate impacts: communities on the frontlines	
	2-11	8 Film #1	
5	2-16	8 Qualitative and quantitative approaches to institutions	
	2-18	9 Film #2	
6	2-23	10 Race and climate impacts: disparities by race and gender	
	2-25	11 Video interviews	
7	3-2	12 Bringing it home: climate, race and housing	Engagement #3 Film
	3-4	13 Film #3	
8	3-9	14 Climate change and economic opportunity	
	3-11	15 Video interviews	
9	3-16	16 Climate refugees: internal and international	
	3-18	17 Overview of EJ organizations	
10	3-30	18 Religion, faith, and climate justice	Engagement #4 Grid Alternatives
	4-1	19 Video interviews	
11	4-6	20 The Native American energy experience	
	4-8	21 Field Engagement: Grid Alternatives [introduction]	
12	4-13	22 Energy and mining: coal, gas, rare-earths elements	
	4-15	23 Field Engagement: Grid Alternatives [operational assessment]	
13	4-20	24 Agriculture, food-systems and equity in a changing climate	
	4-22	25 Field Engagement: Grid Alternatives [future directions]	
14	4-27	26 The Green New Deal and other approaches to new normal(s)	
	4-29	27 Group critique and assessment	

Guest commentators throughout the semester:

During the semester a number of taped conversations with guest experts will be made available for viewing and conversation. These are called ‘Video Interviews’

The table below highlights some of their activities so that you can do useful background reading before they engage with the class online. These conversations will be a resource for critiquing the two films, and provide context for the assessment of Grid Alternatives.

Individual	Description	Relevant web link to begin your investigation
<i>Robert Bullard</i>	Professor and ‘father of EJ’	https://drrobertbullard.com
<i>Hon. Raul Grijalva</i>	Member of Congress, AZ	https://grijalva.house.gov/about-raul/
<i>Wahleah Johns & Suzanne Singer</i>	Navajo Green Translator	http://petrafoundation.org/fellows/wahleah-johns/index.html
<i>Jennifer Granholm</i>	US Secretary of Energy	https://energy.gov
<i>Tom Steyer</i>	Environmentalist	https://www.tomsteyer.com/meet-tom/

Field Engagement:

During the second half of the course, students will take a deeper dive into one organization: Grid Alternatives to explore the choices they have made in taking an active stance on energy and climate justice.

Tentative Film Assignments:

If God is Willing and the Creek Don't Rise (2010)

Spike Lee. Politics, race and climate impact a city of extreme inequality.

King Leopold's Ghost (2006)

Colonialism and racism in the Belgian exploitation of the Congo

Picture a Scientist (2020)

Documentary of racism and sexism in higher education.

Assignments:

Assignment	Due Date	% of Course Grade
Check-in tasks	Weekly	10%
Movie Engagements	Weeks 4, 5 & 7 (due week after)	2.5% each for 1 and 2, and 5% for film 3 = 10%
Field Engagement	End of week 14	30%
Section Participation	Each Week	10%
Final Paper	First day of Examination Period [10 pages maximum, 2x spaced]	Paragraph (5%) & page (5%) Total: 40%

Movie responses are due Friday 5 PM the week *after* the assignment.

Field engagement write-up is due 5 PM April 30

Final paper is due: May 7, 5 PM.

Late policy: 10% per day up to 3 days late.

Communication Tips:

The following communication guidelines will help us prioritize your urgent and personal matters, while also allowing sharing of answers to previous course-material and course-logistic questions posed by other students. All questions will be monitored by the teaching team, but we encourage students to answer where and when they are able.

- Email | reserved for urgent or personal matters
- 'Discussion' forum on bCourses | all course material and course-logistics related questions
- Other communication & dialog tools | not monitored

Lecture and Section Zoom

Course participation in the class is by synchronous attendance (if you can) or asynchronous (by watching the recorded and posted zoom lecture and section recordings).

NOTE: All participants and hosts are now required to sign into a Zoom account prior to joining meetings hosted by UC Berkeley. See "How to sign into your UC Berkeley Zoom account" (<https://berkeley.service->

now.com/kb?id=kb_article_view&sysparm_article=KB0013718) for how to sign in.

Participants who are not eligible for a UC Berkeley-provided Zoom account can use a Zoom account provided by their institution, can create a free, consumer Zoom account (at <https://zoom.us/freesignup/>), or can dial in via the phone.

Join Zoom Meeting

<https://berkeley.zoom.us/j/94610316882?pwd=RzRJQkhQTE9PRENVVGZzWURzczB4dz09>

Meeting ID: 946 1031 6882 | Passcode: 2546283

There is **one lecture each week (Tuesday), and work/project session on Thursday.**

GSI and faculty contact policy:

Dan's Office-Hour (just drop in): Tuesday 5:00 – 5:45. Zoom link: <https://berkeley.zoom.us/j/96114127350>

Isa's Office Hours TBA:

There will be no Section meetings Weeks 1 and 5.

Weekly Assignments

Week 1: Overview of the climate–justice emergency

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.

No section meetings this week.

Task:

- Order the two required texts for the course
- Update your zoom to the latest version (Version 5.4.9)
- Complete Pre-course survey on bCourses

Exercise

Take the Harvard University Implicit bias test:

<https://implicit.harvard.edu/implicit/takeatest.html>

[But be aware of the significant criticisms of each:

<https://www.thecut.com/2017/01/psychologys-racism-measuring-tool-isnt-up-to-the-job.html>]

Supplemental - Resource sites [we will update this list based on feedback **from you** during the semester]

<http://www.environmentandsociety.org/mml/environmental-justice-resources-online>

<https://www.epa.gov/environmentaljustice/resources-creating-healthy-sustainable-and-equitable-communities>

<https://gejp.es.ucsb.edu>

<https://wecprotects.org/racial-environmental-justice/resources/>

Anti-Racist Resource Guide,

https://docs.google.com/document/d/1hpub-jkm9cLzJWqZSsETqbE6tZ13Q0UbQz--vQ2avEc/preview?pru=AAABcqDdVrA*H5qTII3M41X05dvdmFe0Kg

Week 2: Climate science and justice

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

Klein, Introduction and Ch 1, Right is Right, (and preview Ch 12, Sharing the Sky)

Sen, Introduction and Ch 1, An Approach to Justice; Reason and Objectivity

Exercise:

- Take the global warming 6 America's Quiz:
<https://climatecommunication.yale.edu/visualizations-data/sassy/>

Supplemental:

Paul H. Barber, Tyrone B. Hayes·Tracy L. Johnson, Leticia Márquez-Magaña, and 1400 signatories (2020)
“Systemic racism in higher education,” *Science*, **369** (6510), 1440 – 1441. DOI:
10.1126/science.abd7140

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. <https://doi.org/10.1126/science.289.5488.2287>

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

Maibach EW, Leiserowitz A, Roser-Renouf C, Mertz CK (2011) Identifying Like-Minded Audiences for Global Warming Public Engagement Campaigns: An Audience Segmentation Analysis and Tool Development. *PLoS ONE* **6(3)**, e17571. doi:10.1371/journal.pone.0017571

Week 3: Theories of justice

What are our theoretical tools and frames of understanding for how rights, distributive 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.

Sen, Ch 2 & 3, Rawls and Beyond; Institutions and Persons

Supplemental:

David Miller, “Justice” The Stanford Encyclopedia of Philosophy <https://plato.stanford.edu/entries/justice/>
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. Do different socioeconomic and racial communities respond differently?

Klein, Ch 2, Hot Money

Sen, Ch 4, Voice and Social Choice

Supplemental:

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>

Julia Steinberger (2020)

<https://medium.com/@JKSteinberger/post-capitalist-reading-in-a-time-of-pandemic-945467e67a9e>

Week 5: Qualitative and quantitative approaches to institutions

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.

No section meetings this week.

Klein, Ch 3, Public and Paid For
Sen, Ch 5 & 6, Impartiality and Objectivity; Closed and Open Impartiality

Supplemental:

- 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/>
- Bas Hofstra, *et al.* (2020) “The Diversity–Innovation Paradox in Science,” *Proceedings of the National Academy of Sciences*, **117** (17), 9284 - 9291; DOI:10.1073/pnas.1915378117
- 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.

Week 6: Race and climate impacts: disparities by race and gender

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

Sen, Ch 7, Position, Relevance and Illusion

Supplemental:

- 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”, *Annual Review of Public Health*, **36:1**, 193-209.
<https://www.annualreviews.org/doi/pdf/10.1146/annurev-publhealth-031914-122646>
- Ballew, M., Maibach, E., Kotcher, J., Bergquist, P., Rosenthal, S., Marlon, J., and Leiserowitz, A. (2020). *Which racial/ethnic groups care most about climate change?*. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.
<https://climatecommunication.yale.edu/publications/race-and-climate-change/>
- Foxworth, Raymond (2020) *First Nations Development Institute Report*, “Protecting the Earth, protecting ourselves: stories from Native America,” <https://nonprofitquarterly.org/protecting-the-earth-protecting-ourselves-stories-from-native-america/>
- 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>
- Howell, Zaria (2020) “My Pursuit of Happiness in Afro-Environmentalism”
<https://www.nrdc.org/stories/my-pursuit-happiness-afro-environmentalism>
- Wael Al-Delaimy, Veerabhadran Ramanathan and Msgr. Marcelo Sánchez Sorondo (2020) *Health of People, Health of Planet and Our Responsibility Climate Change, Air Pollution and Health* (Springer: New York). ISBN 978-3-030-31125-4.
Open Access book: <https://link.springer.com/book/10.1007/978-3-030-31125-4>
- Tessum, Christopher W., *et al.* (2019) “Inequity in consumption of goods and services adds to racial ethnic disparities in air pollution exposure,” *PNAS*, **116** (13), 6001 –
<https://doi.org/10.1073/pnas.1818859116>

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.

Klein, Ch 4, Planning and Banning
Sen, Ch 9 & 10, Plurality of Impartial Reasons; Realizations, Consequences and Agency

Supplemental:

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

Howell, Zaria (2020) “My Pursuit of Happiness in Afro-Environmentalism”
<https://www.nrdc.org/stories/my-pursuit-happiness-afro-environmentalism>

Vaquero, Idalmis (2015) “Latinos care about the environment. So why aren’t green groups engaging them more?” <https://ensia.com/articles/latinos-care-about-the-environment-so-why-arent-green-groups-engaging-them-more/>

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.

Klein, Ch 6, Big Business and Big Green
Sen, Ch 11, Lives, Freedoms and Capabilities

Supplemental:

Bushnell, James. “Can Climate Efforts Be the ‘Everything Policy Store?’” *Energy Institute Blog*, UC Berkeley, January 19, 2021,

<https://energyatbaas.wordpress.com/2021/01/19/can-climate-efforts-be-the-everything-policy-store/>

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/>

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.

Klein, Ch 9, Blockadia
Sen, Ch 17, Human Rights and Global Imperatives

Abrahm Lustgarten (2020) *The Great Climate Migration has Begun*
<https://www.nytimes.com/interactive/2020/07/23/magazine/climate-migration.html>

Supplemental:

Frey Lindsay (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/#7762bc93197>

Todd Miller (2019) *Why Climate Action Needs to Target the Border Industrial Complex*
<https://www.aljazeera.com/opinions/2019/11/1/why-climate-action-needs-to-target-the-border-industrial-complex/>

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.

Klein, Ch 7, No Messiahs
Sen, Ch 13, Happiness, Well-being and Capabilities

Supplemental:

Encyclical Letter *Laudato Si'* of The Holy Father Francis On Care for Our Common Home – Ch 12 (2015)
http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html

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

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.

Klein, Ch 11, Indigenous Rights
Sen, Ch 8, Rationality and Other People

Supplemental:

Foxworth, Raymond (2020) *First Nations Development Institute Report*, “Protecting the Earth, protecting ourselves: stories from Native America,” <https://nonprofitquarterly.org/protecting-the-earth-protecting-ourselves-stories-from-native-america/>

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?

Klein, Ch 5, Beyond Extractivism
Sen, Ch 12, Capabilities and Resources

Supplemental:

Benjamin K. Sovacool, Saleem H. Ali, Morgan Bazilian, 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?

Klein, Ch 13, The Right to Regenerate

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/>

Supplemental:

Marcus Taylor (2018) “Climate-Smart Agriculture: What is it good for?,” *Journal 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? What approaches exist towards meaningful solutions?

Klein, Ch 10, Love will save this place
Sen, Ch 15, Democracy as Public Reason
&
Klein, conclusion, The Leap Years
Sen, Ch 18, Justice and the World

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

Supplemental:

Ballew, Matthew T., Goldberg Matthew H., Rosenthal Seth A., Cutler Matthew J., Leiserowitz Anthony (2019) “Climate Change Activism Among Latino and White Americans,” *Frontiers in Communication*, **3**, 58. DOI.10.3389/fcomm.2018.00058
Sengupta, Somni (2020) “Black environmentalists talk about Anti-racism”,
<https://www.nytimes.com/2020/06/03/climate/black-environmentalists-talk-about-climate-and-anti-racism.html>
Stone, Richard (2020) “Indigenous Alaskans demand a voice in research on warming,” *Science*, 369 (6509), 1284 – 1285. DOI: 10.1126/science.369.6509.1284

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