



Crafting Climate Justice in Our Communities and Our World

Syllabus

Spring 2021

Feb 3 2021-Mar 3 2021

Wednesdays 5.30pm-7pm Online

Diana Liverman, School of Geography, Development and Environment

How can we understand and solve the challenges of climate change in ways that acknowledge the unequal responsibilities for climate change, the uneven impacts of climate change on different places and people, and the need to develop responses and solutions that reduce the risks of climate change for everyone without undermining other goals of sustainable development?

In this five-week course we will consider the origins of calls for climate justice from researchers, poor and vulnerable countries, women and youth, communities of color, and policy makers. We will discuss the debates within and between researchers, activists, communities and countries about who is most responsible for climate change, who is most vulnerable to it, and who should respond and how. The course will include a mix of lectures (some recorded for background viewing), readings, discussions, and live interviews with some leading scholars and local activists.

[Diana Liverman](#) is a geographer who studies and teaches about the human dimensions of global environmental change, especially the social causes, consequences and responses to climate change. Recently elected to the US National Academy of Sciences, she has been a lead author for the Intergovernmental Panel on Climate Change, and has served on advisory groups to the US government, the United Nations, and business, environmental and cultural organizations. Professor Liverman directs the School of Geography, Development & Environment at the University of Arizona where she holds a faculty appointment as Regents Professor. She was born in Ghana, grew up in England, and studied in London, Toronto, Los Angeles and Colorado. She has taught at University of Wisconsin, Penn State, Oxford and the University of Arizona.

To contact Diana, send an email to liverman@email.arizona.edu and she will try to respond as soon as she can. Some days are overwhelming but I will try my best!

How to participate in the class

There are many challenges in online classrooms, especially those of interaction and discussion which are especially important principles of a community classroom. We will use several strategies to try and facilitate interaction within and beyond our meeting times for those who want a livelier experience.

1. Course materials will be uploaded to the UA Box (shared online resources) for the class. It includes folders for the syllabus, copies of slides used in class, core materials (readings, videos) and supplementary materials (other interesting readings etc.). Supplementary readings range from the highly academic to those by activists about what is meant by climate justice. If you have materials you would like to share then send them to me and I can upload them to the site. The address to find the course site is: <https://arizona.box.com/v/ClimateJustice>.
2. We have a large group and probably not enough time for everyone to introduce themselves in class. So, I have set up a survey where you can introduce yourselves to each other. I will post the survey responses as they come in: The survey is optional, as are all of the questions, and can be found at: https://uarizona.co1.qualtrics.com/jfe/form/SV_9uUlri8iVvIAAnQi
3. Please try to login a few minutes before the class which begins at 5.30pm. We will open the 'room' 15 minutes before class and you are welcome to chat until class begins. I will also stay on 15 minutes after class for questions.
4. When you login to zoom please mute yourself until you want to ask a question or otherwise contribute. The mute button and the video on/off buttons are usually in the bottom left of your screen. I recommend using something other than a phone for the class so you can see slides, and/or videos and/or each other.
5. Then go to the other buttons (usually along the bottom of the screen) and click on the 'chat' and 'participants' buttons. This will open an area where you can see a list of participants and another where you can chat with me or each other. Unless you select a particular person in the dropdown 'To:' your chat messages go to everyone. To name or rename yourself go to your name in the participant list, hover over your name, click the 'more' button and rename (you can also upload a photo used when your video is off).
6. It would be lovely to 'see' you in class but recognize some may not have the internet speed to use video. Perhaps you could make sure to 'name' yourself on zoom.
7. I will use a variety of interactive techniques in class including
 - a. Polling – I will sometimes post a link to a polling system called '*mentimeter*' in the chat where I may ask the class a question and show you the responses. When you click on the link in the chat it will open a new window where you can record your responses.
 - b. Breakout rooms – I may randomly assign you to a breakout room of 5 to 8 people and ask you to discuss a question or topic for 5-10 minutes. Please join your breakout room and you will get a one-minute warning when we are returning to the main classroom. Sometimes I will post a link in the chat to an online note taking document so each breakout room can summarize their ideas.
 - c. Chat: Use the 'chat' to make comments or answer questions. I will keep a record of the chat, try to answer any questions after the class I miss, and post to our 'UA box' site.

CLASS SCHEDULE

Wednesday February 3rd

1. The human dimensions of climate change and the principles of climate justice

After a brief introduction to the human dimensions of climate change (how society causes climate change, the impacts on society, and how people respond) we will explore some of the principles and perceptions of climate justice. Since this is the first meeting, I have not offered any readings or materials to look at in advance of our class, but I have made some materials available that you may wish to read or save for later.

I have uploaded to our shared 'Box' site a copy of a text book on ***Climate and Society*** written by two of my former students – Robin Leichenko and Karen O'Brien. I also include for interest interviews I did with each of them in Fall 2020 as part of my undergraduate class.

Supplementary materials (articles and weblinks)

Gardiner, S. 2010. *Ethics and Climate Change: An Introduction*. WIREs Climate Change. Vol 1: 54-66.

IPCC 2018 *Special Report on 1.5°C: Summary for Policy Makers* (latest IPCC report on the state of climate change and whether we should and could limit warming to 1.5°C – happy to answer questions about this as I was a lead author).

<https://www.ipcc.ch/sr15/chapter/spm/>

US Global Change Research Program 2018 *Fourth National Climate Assessment* (most recent summary on climate change in United States – University of Arizona made considerable contributions especially Chapter 25 on the Southwest US and Chapter 16 on International interests). <https://nca2018.globalchange.gov/>

Union of Concerned Scientists. *Summary on climate science, impacts and solutions*.

<https://www.ucsusa.org/climate>

BBC. 2021. *Why 2021 could be turning point for tackling climate change* (BBC New Years Day article on climate change) <https://www.bbc.com/news/science-environment-55498657> and

BBC. 2021. *The state of the climate in 2021* <https://www.bbc.com/future/article/20210108-where-we-are-on-climate-change-in-five-charts>

Most popular, active and up-to-date web sites on climate science

- <http://www.realclimate.org/> (debates on latest scientific papers and conferences)
- <https://skepticalscience.com/> (focused on debunking climate change denial)
- <https://insideclimatenews.org/> (lots of reporting on climate change)
- <https://www.climatecentral.org/> (communicating climate change)
- <http://www.katharinehayhoe.com> (climate scientist and communicator)

Videos:

- Mary Robinson. *Why Climate Change is a Threat to Human Rights* (TED talk – 20 mins) <https://youtu.be/7JVtIrBEfho> (Mary was president of Ireland, UN Commissioner for Human Rights, and now a UN climate champion – she spoke at UA a few years ago). Her foundation on climate justice is here: <https://www.mrfcj.org/> She also did a recent interview on COVID and climate justice: <https://youtu.be/CZTwMjmVXOg>
- Some great talks from the climate negotiations in 2017 (and yes, I know the speakers!) <https://iicat.org/2020-turning-point-side-event-unfccc-cop-23>

Wednesday February 10th

2. Unequal responsibility for climate change and responsibility for reducing emissions?

This week we will discuss climate justice in relation to the causes of climate change – which countries, cities, companies, and people are most responsible for climate change? How do we assess and measure responsibility? How does justice enter into debates about reducing emissions? How responsible are we as individuals and what can we do?

Core materials for discussion

Adow, Mohamed, 2020. *The Climate Debt: What the West Owes the Rest*. Foreign Affairs. May/June 2020.

Otto, I et al. 2019. *Shift the focus from the super-poor to the super-rich*. Nature Climate Change 9: 82-84.

Supplementary materials

Baer, Paul. 2018. *International Justice*. Oxford Handbook of Climate Change and Society. Eds. JS Dryzek, R.B. Norgaard, and D. Schlosberg. Oxford University Press.

Bulkeley, H.A., J Carmin, V Castan Broto, G Edwards, S Fuller. 2013. *Climate Justice and Global Cities*. Global Environmental Change 23:914-925.

Frumhoff, P. C., Heede, R., & Oreskes, N. (2015). *The climate responsibilities of industrial carbon producers*. Climatic Change, 132(2), 157–171.

Leichenko R. and O'Brien K. 2018. Climate and Society. Chapter 5 on *Social Drivers of Greenhouse Gas Emissions*..

Richardson, K., Steffen, W, and Liverman D. eds, 2011. Climate Change: Global Risks, Challenges and Decisions. Part III. *Equity Issues*. Cambridge University Press

Datasets and carbon calculators

Calculate your carbon footprint: Conservation International:

<https://www.conservation.org/carbon-footprint-calculator#/>

Data on national greenhouse gas emissions

<https://www.climatewatchdata.org/> (from World Resources Institute, explore emissions by countries, sectors and national commitments to cut emissions)

Assessment of current country climate policies on emissions and whether they limit warming

<https://climateactiontracker.org/>

February 17th

3. The unequal impacts of climate change and climate vulnerability

Climate change has vastly different impacts on places and people, partly because changes in climate are not the same across the world, but also because vulnerability to climate change varies with social conditions – poverty, gender inequality, racism, and access to information and resources. For many people, their vulnerability is intersectional – they are poor, female, indigenous and elderly for example. This week we explore what is known about vulnerability and how it creates climate injustice across the world and in the Southwest United States.

Core material

Kimberly Thomas et. al. 2018 *Explaining differential vulnerability to climate change: A social science review*. WIREs Climate Change.

Lakhani, N. 2020 *Scorching Tucson bucks US trend to put climate justice at centre of plans* <https://www.theguardian.com/environment/2020/nov/12/scorching-tucson-bucks-us-trend-to-put-climate-justice-at-centre-of-plans>

Supplementary material

Adger, N. 2006. *Vulnerability*. Global Environmental Change 16:268-281

Barnett, J. (2020). Global environmental change II: Political economies of vulnerability to climate change. *Progress in Human Geography*, 44(6), 1172–1184.

Davis, T. 2021. *Record heat batters Tucson mobile home residents with poor insulation, lack of cooling* (Tucson.com)

<https://www.jkgeography.com/disparities-in-exposure-to-climate-change-risk-and-vulnerability.html> (UK school curriculum on climate vulnerability)

Leichenko and O'Brien. 2018. Chapter 8. *Vulnerability and Human Security*.

Perkins, P. 2019. *Climate Justice, Gender and Intersectionality*. Routledge Handbook of Climate Justice

Pastor, M., Bullard, R., Boyce, J. K., Fothergill, A., Morello-Frosch, R., & Wright, B. (2006). *Environment, Disaster, and Race After Katrina*. *Race, Poverty & the Environment*, 13(1), 21–26.

UNDP. 2013. *Overview of the linkages between gender and climate change*.

Wilder, M, Liverman D. Bellante, L. and Osborne, T. 2016. *Southwest climate gap: poverty and environmental justice in the US Southwest*. *Local Environment* 21(11):1332-1353.

World Bank 2009 *Vulnerability Exposed: Social Dimensions of Climate Change* (Video) <https://youtu.be/lfmMXsm-Z5U>

February 24th

4. Just responses to climate change: mitigation, adaptation, carbon markets

Can responses to climate change and associated climate policies be unjust? Are there winners and losers from climate policy? This week we will look at justice concerns in the responses to climate change including the implications of emission reductions, how climate adaptation can increase or decrease inequality, and the debates about carbon markets and geoengineering ethics and justice.

Core material

Clark, Duncan. 2011. A complete guide to carbon offsetting.

<https://www.theguardian.com/environment/2011/sep/16/carbon-offset-projects-carbon-emissions>

Bellamy, Rob. 2017. Why you need to get involved in the geoengineering debate. The Conversation. <https://theconversation.com/why-you-need-to-get-involved-in-the-geoengineering-debate-now-85619>

Supplementary Material

Adger, W. N., Paavola, J., & Huq, S. (2006). *Toward Justice in Adaptation to Climate Change*. In *Fairness in Adaptation to Climate Change* (pp. 1–20).

Barnett, J., & O'Neill, S. (2010). Maladaptation. *Global Environmental Change*, 20(2), 211–213.

Carley, S., & Konisky, D. M. (2020). The justice and equity implications of the clean energy transition. *Nature Energy*, 5(8), 569–577.

Democracy Now. 2018. Debate on geoengineering (video)

<https://www.youtube.com/watch?v=UEIoNLryWuw>

Eriksen, S., Schipper, E. L. F., Scoville-Simonds, M., Vincent, K., Nicolai Adam, H., Brooks, N., Harding, B. et al (2020). *Adaptation interventions and their effect on vulnerability in developing countries: help, hindrance or irrelevance?* *World Development*, 141, 105383.

Gardiner, S. M. (2016). Geoengineering: Ethical Questions for Deliberate Climate Manipulators. *The Oxford Handbook of Environmental Ethics*, (January), 1–16.

Lenfema, G. A. (2018). Can we equitably manage the end of the fossil fuel era? *Energy Research and Social Science*, 35(November 2017), 217–223.

Pearse, R., & Böhm, S. (2014). Ten reasons why carbon markets will not bring about radical emissions reduction. *Carbon Management*, 5(4), 325–337.

Piggot, G., Boyland, M., Down, A., & Torre, A. R. (2019). Realizing a just and equitable transition away from fossil fuels. *Stockholm Environment Institute*.

Welton, S., & Eisen, J. (2019). Clean energy justice: Charting an emerging agenda. *Harvard Environmental Law Review*, 43(2), 307–371.

March 3rd

5. Climate Justice movements

In our final class we will look at the climate justice movement including the activism of youth, Indigenous people, people of color, women, and artists and the proposals that they are making for climate action, the Green New Deal, and the future of climate policy in the US and globally.

Core materials

Rolling Stone. 2019. *Youth climate movement* (video) <https://youtu.be/LHULg2BefKg>
Greta Thunberg. 2021. *Message to Davos* (video) <https://youtu.be/KjRDUIkEbu4>
Lammy, David. 2020. Ted Talk. *Climate justice can't happen without racial justice*
https://www.ted.com/talks/david_lammy_climate_justice_can_t_happen_without_racial_justice

Supplementary Materials

350.org (videos) <https://youtu.be/3amC52eWonU>

Biden. 2020. *Plan for clean energy and environmental justice* (video)
<https://joebiden.com/climate-plan/>

Climate Cinema (Web site) <http://theclimatecinema.org/>

Derman, B. (2020). "Climate change is about us" Fenceline communities, the NAACP and the grounding of climate justice. In T. Jafry (Ed.), *Routledge Handbook of Climate Justice* (pp. 407–419). Taylor & Francis.

Economist 2014. Art and climate change. <https://www.youtube.com/watch?v=L2xCFAmymsl>

Julie's Bicycle. Culture and climate change (Website) <https://juliesbicycle.com/>

Leichenko and O'Brien. 2018. Ch 10. *Transforming the Future*.

Moore, Hilary and Joshua Kahn Russell. 2011. *Organizing Cools the Planet*. PM Press.

Parkin, S. 2020. *Resistance is Fertile: Direct Action vs. Fossil Fuels across North America*. Chapter 6 in Brian Tokar and Tamra Gilnerston eds. *Climate Justice and Community Renewal*. Taylor and Francis.

Pousadela, I. (2020). *Stories from the Youth Climate Movement in the Global South. Yes!*

Tokar. 2019. *On the evolution and continuing development of the climate justice movement*. Routledge Handbook of Climate Justice

Sunrise Movement You Tube channel (videos)
https://www.youtube.com/channel/UCeorX5YWm_jAKknP7TY5I6Q

Whyte, K. (2017). Indigenous climate change studies: Indigenizing futures, decolonizing the anthropocene. *English Language Notes*, 55(1–2), 153–162.

Books and Films relevant to the course

Non fiction

Mary Robinson (2018) *Climate Justice: Hope, Resilience, and the Fight for a Sustainable Future*

Ayana Johnson and Katharine Wilkinson (2020) *All We Can Save: Truth, Courage and Solutions for the Climate Crisis.*

Amitav Ghosh, *The Great Derangement: Climate Change and the Unthinkable*

James Hansen (2009) *Storms of My Grandchildren*

Sheila Watt-Cloutier (2018) *The Right to be Cold: One Woman's Fight to Protect the Arctic*

Naomi Oreskes (2010) *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*

Eric Holthaus (2020) *The Future Earth: A Radical Vision for What's Possible in the Age of Warming*

Paul Hawken (2017) *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*

Naomi Klein 2014. *This Changes Everything.* Simon and Schuster.

Climate Fiction

Kim Stanley Robinson (2020) *Ministry of the Future* (also New York 2140)

Paolo Bacigalupi (2015) *The Water Knife*

Barbara Kingsolver (2012) *Flight Behavior*

Octavia Butler (1993) *Parable of the Sower*

Films

Avatar

Beasts of the Southern Wild

Day After Tomorrow

Wall-E

Many documentaries (*Inconvenient Truth, Before the Flood, Chasing Ice, True North, Years of Living Dangerously, David Attenborough, Life on our Planet*)