

ENVS 1415: Power, Justice and Climate Change

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Class meeting T/Th 9-10:20am; Urban Environmental Laboratory Room 106

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Office Hours Tuesdays Tuesday/Thursday 10:30a-12; 1:30-2:30pm. other times as needed/by appointment

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COURSE DESCRIPTION

Climate change creates injustices in who caused the problem, who is suffering worst and first, and who is taking action. Power between nations and social groups drives unequal disaster risks and the “compounded vulnerabilities” of poor peoples and nations, and has led to gridlock in United Nations negotiations. The course reviews social and political dimensions of local and national adaptation efforts, media dynamics, collective and individual denial, and the rise of climate social movements.

The human emissions of billions of tons of gases known to trap heat in the atmosphere is a massive experiment on the systems that support our species. Human civilization has developed in a remarkably stable period of global temperature and precipitation, but the climate impacts are rising and projected to get much worse in the decades ahead. Are we helpless? Who is suffering first and worst from climate change?

COURSE OBJECTIVES

1. To understand the disparities in who is causing, suffering from, and responding to climate change
2. To build understanding of the basic trade-offs in addressing climate change
3. To explore human perception and psychological coping with knowledge of climate change and our role in causing it
4. To enrich understanding of the conflicting economic, social, and political actors advocating and resisting aggressive action on climate change
5. To understand the state of global and national politics on climate change
6. To ground global change in real cases—in concrete observations of vulnerability and adaptation to climate change
7. To think critically about possible directions forward

I hope that we can build an exciting, fun and open forum here for all to participate. That means everyone helping by allowing others to talk, not dominating the discussions, and encouraging differences of opinion. I do not expect you to agree with me: I hope you'll stand up for what you think and I will not penalize you for your opinion. Also, please don't worry about asking what you might consider a naive or "stupid" question—others are probably also wondering the same thing. Because the class comes from diverse backgrounds and trainings, we need to be aware that some will need basic background information to bring them into the group. Stay tuned-in: some of these basic reviews will contain information you thought you knew...but didn't. I expect students to treat each other with respect.

REQUIRED TEXTBOOKS

Ciplet, David, J. Timmons Roberts, and Mizan R. Khan. 2015. *Power in a Warming World: The New Global Politics of Climate Change and the Reshaping of Environmental Inequality*. Cambridge, Mass.: MIT Press.

All other readings will be provided on Canvas

TOPICAL OUTLINE OF COURSE

Part 1: Introduction, Vulnerability and Adapting to Inevitable Climate Impacts

Day1. Where We Are Now—Copenhagen, Lima, and a “4 Degrees Warmer World”

Day2. The Basic Science of Climate Change, and a Bit of the Politics of Climate Science

Day3. Vulnerability and Adaptation: global patterns of inequality in who is suffering from climate change and why

Day4. Disasters, Vulnerability and Resilience: the limits and trade-offs of adaptation

Day5. Adaptation Aid: Who Promised What? Who is Delivering? What’s Actually Happening with the Funding?

Day6. Integrative Evaluation: Prioritizing Adaptation Among National Adaptation Programmes of Action

Part 2: Negotiations: Can the UNFCCC Process Deliver Us?

Day7. Negotiations and National Positions

Day8. Divided World—The Enduring and Evolving North-South Divide, and the New Political Economy

Day9. BASIC, OPEC and Climate Change: Vulnerability, Economics, and National Priorities

Day10. Weapons of the Weak: Politics of Consent of the Least Developed and Island States

Day11. Non-state actors in UN climate politics: Business, Environmental NGOs and Vulnerable Peoples

Day12. Evaluative Activity: Mock UN Climate Negotiations--Written Statements from Negotiating Groups

Part 3: Social Movements, Governance, Media and the Public

Day13. Environmental Social Movements Outside the UN: climate justice, big greens, and corporate campaigns

Day14. Religious groups, business networks, cities and states

Day15. Media Coverage and Climate Understanding and Concern in the US and elsewhere

Day16. Trade and security

Day17. Public Opinion, Collective Denial, Science and Doubt, and Coping with Climate Dread

Day18. Activity: Foundation Simulation of Allocation to Organizations

Part 4: Mitigation and Solutions: Technical and Social Approaches

Day19. Mitigation Pathways, Wedges, Options and Barriers

Day20. Climate Capitalism to Rescue? Markets for Clean Development, Agriculture, and Forests

Day21. Geoengineering: An Experiment with N=1 (debate?)

Day22. Debate: Should we allow research on geoengineering?

Day23. Scenarios Dark, Light, and Grey

Day24. Final Exam: Assessing Routes Forward

CALENDAR (for readings: + = on Canvas)

Day1- Jan 4: Where We Are Now—Copenhagen, Lima, and a “4 Degrees Warmer World”

Introductions, syllabus, choose groups for seminar SEQ papers

+ McKibben, Bill. 2012. Global Warming’s Terrifying New Math: Three simple numbers that add up to global catastrophe - and that make clear who the real enemy is. *Rolling Stone*, July 19.

<http://www.rollingstone.com/politics/news/global-warmings-terrifying-new-math-20120719>

Day2- Sept 9: The Basic Science of Climate Change and a Bit on the Politics of Climate Science

Group A: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas

Possible video: National Geographic: “Six Degrees Could Change the World”

+ Chapter 4 of Lynas, Mark. 2008. *Six Degrees: Our Future on a Hotter Planet*. Washington DC: National Geographic.

+ Hertzgaard, Mark. 2011. “My Daughter’s Earth.” Chapter 3 of *Hot: Living Through the Next Fifty Years*. Boston: Mariner/Houghton.

+ National Research Council. 2012. *Climate Change: Evidence, Impacts, and Choices*.

Day3- Sept 11: Vulnerability and Adaptation: global patterns of inequality in who is suffering from climate change and why

Group B: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas

+ Kasperson, Roger E. and Jeanne X. Kasperson. 2001. “Climate change, vulnerability, and social justice.” Stockholm Environmental Institute.

- + Adger, W. N. (2006). "Vulnerability." *Global Environmental Change* 16(3): 268-281.
- + Roberts and Parks *A Climate of Injustice*, Chapters 3 and 4.

Day4- Sept 16: Disasters, Vulnerability and Resilience: the limits and trade offs of adaptation

Group A: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas
 + Ekstrom, Julia A. and Susanne C. Moser. 2013. "Institutions as key element to successful adaptation processes: Results from the San Francisco Bay Area." Ch. 6 in Moser and Boykoff *Successful Adaptation to Climate Change*. London: Routledge. P.97-113.

+ Klein, Richard J.T. 2009. "Identifying countries that are particularly vulnerable to the adverse effects of climate change: An academic or a political challenge?" *CCLR* 3:284-291.

Day5- Sept 18: Adaptation Aid: Who owes? Who Promised What? Who is Delivering? What's Actually Happening with the Funding?

ALSO: Discussion of Ban Ki Moon Summit in NYC

Group B: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas

+ Dellink, Rob et al. 2009. "Sharing the burden of financing adaptation to climate change." *Global Environmental Change* 19:411-421.

+ Stilwell, Matthew. 2012. "Climate finance: how much is needed?" P. 120-124 in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.

+ Ciplet et al. 2013. "The Politics of International Climate Adaptation Finance: Divisions in the Greenhouse". *Global Environmental Politics*.

Day6- Sept 23: Integrative Evaluation: Prioritizing Adaptation Among National Adaptation Programmes of Action (Check in on Ban Ki Moon Summit)

NAPA Exercise/Priority setting: Activity on ranking and addressing vulnerability? Four cases based on NAPAs, groups are countries and development agencies, who must make decisions about how to allocate 100 million dollars: which should be prioritized, how should decisions be made, how should effectiveness/fairness be upheld? What concerns might arise? How might inequality be reinforced? How can it be mitigated? How could you measure success?

Read beforehand:

+ National Adaptation Programmes of Action-- Go to the UNFCCC's listing of NAPAs (National Adaptation Plans of Action) here and browse two (these are on the ship intranet)

unfccc.int/cooperation_support/least_developed_countries_portal/submitted_napas/items/4585.php

If time allows: Red Cross/Red Crescent Disaster Preparation/Adaptation Decision-Making Game

+ Ayres, Jessica. 2011. "Resolving the Adaptation Paradox". *Global Environmental Politics*.

+ Van Aalst, M.K., T. Cannon and I. Burton (2008), "Community level adaptation to climate change: The potential role of participatory community risk assessment." *Global Environmental Change* 18: 165-179.

Preparation before class:

1. Look over a couple of NAPAs (on Canvas but also at UNFCCC.int), but really study the one for the country you chose in class. If you were absent, choose any one.
2. Read the two readings listed below by Jessica Ayers and Van Aalst et. al. (no writing required on that, but to understand the exercise you need to get a hold of them)
3. Write four paragraphs on your NAPA, in the form of a summary Funding Request (see below). Print 2 copies of it and bring to class. When you present, I want you to hand one to me and read the other aloud. Again, in class you will be playing two roles--first, as a Least Developed Country asking for funding, and second, as a member of either the Adaptation Fund (of the Kyoto Protocol) or the Least Developed Countries Fund (of the UNFCCC). Your three paragraphs are your funding appeal:

Summary Funding Request for your LDC:

Par 1: National Context in Brief: Why is your country particularly vulnerable and worthy of funds

Par 2: What was your country's process for preparing the NAPA?

Par 3: What are top priority projects from the list in the NAPA that you would propose to these agencies?

Par 4: Provide a Request, in US\$, with some justification.

After presenting your requests, the funding agencies will deliberate and rank proposals and distribute funds. They will have US\$1 billion to distribute.

Process for simulation:

1. Review the process for today. (5 min)
2. Split into groups: LDC Fund, Adaptation Fund. Some students represent Annex 1 countries (wealthy) and some Non-Annex 1 (poorer) countries. Groups meet to develop criteria as a committee (15 min)
3. Presentations by LDCs of NAPAs (25 min)
4. Deliberation by LDCF and AF Boards (10 min)
5. Discussion (15 min)

Part 2: Negotiations: Can the UNFCCC Process Deliver Us?**Day7- Sept 25: Negotiations and National Positions**

Group A: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas + Harrison, Kathryn and Lisa McIntosh Sundstrom. 2007. "The Comparative Politics of Climate Change." *Global Environmental Politics* 7:4: 1-18.
+ DeSombre, Elizabeth R. 2003. "Understanding United States unilateralism: domestic sources of U.S. International Environmental Policy." In Axelrod, Vig and Downie (eds.) *The Global Environment*.
+ Shultz, Jim. 2012. "The desperate search for a strategy to defeat climate change". AlterNet.
+ Gupta, Joyeeta. 2010. "A history of climate change policy". in Wiley Interdisciplinary Reviews: Climate Change. 2010.

****Friday Sept 26: From Goals to Implementation:** Conference at Alumni Center Brown noon-5:30pm. A specialized workshop with leading policy-makers in Rhode Island on long term planning to meet the mitigation targets set out in the Resilient Rhode Island Act of 2014. Details and relation to class (credit, expectations) to come.

Day8- Sept 30: Weapons of the Weak: Politics of Consent of the Least Developed and Island States

Group B: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas + Ciplet, David. 2013ms. "Thirty pieces of silver": The politics of consent in international climate politics"
+ Solon, Pablo. 2012. "Why Bolivia stood alone in opposing the Cancun climate agreement"/The Great Escape III P. 106-109 in in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.
+ Kartha, Sivan. 2012. "India and Africa at COP 17: The false dichotomy of 'survival vs. development.'" P. 118-119 in in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.

Day9- Oct 2: Divided World—The Enduring and Evolving North-South Divide

Group A: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas + Adil Najam, Saleemul Huq, and Youba Sokona. 2003. "Climate negotiations beyond Kyoto: developing countries concerns and interests." *Climate Policy* 3 (2003) 221–231
+ Khor, Martin. 2012. "A clash of paradigms--UN climate negotiations at a crossroads." P. 76-105 in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.
+ Kartha, Sivan, Tom Ananasiou, and Paul Baer. 2012. "The North-South divide, equity and development--the need for trust-building for emergency mobilisation." p. 47-74 in *What Next?/Development Dialogue book*. Niclas Hallstrom, editor.

TBC: Oct 7: Special class visit: Former President of Chile Ricardo Lagos: Developing Nations, Latin America, and Climate Change Leadership

Readings: to be announced, IntercambioClimatico.com blogs; Lagos Draft Prologue; Drafts of Edwards and Roberts *Leaders in a Fragmented Continent* Chapters 1, 2, 5 and 6

Day10- Oct 9: BASIC, OPEC and Climate Change: Vulnerability, Economics, and National Priorities

Group B: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas + Hochstetler, Kathryn and Eduardo Viola. 2012. "Brazil and the politics of climate change: beyond the global commons." *Environmental Politics* 2
+ Wen, Dale Jiajun. 2012. "China and climate change: Spin, facts and realpolitik." P. 125-1469 in in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.
+ Bidwai, Praful. 2012 "Climate change, equity and development--India's dilemmas." P. 147-162 in in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.

+ Roberts and Edwards *Leaders in a Fragmented Continent* Chapters on Brazil and ALBA (3, 4)

Day11- Oct 14: Non-State Actors in UN Climate Politics: Business, Environmental NGOs and Vulnerable Peoples

Group A: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas
+Roberts, Ciptet and Khan. 2013ms. *Power in a Warming World*. Chapter 5 “Carbon Coalitions to the Rescue: Non-state influence in the UNFCCC”

+Ciptet, David. 2013ms. “Movement from the margins? Regime rights struggles in UN climate politics”

+ Lohmann, Larry. 2012 “Beyond Patzers and clients--Strategic reflections on climate change and the ‘Green Economy.” P. 295-326 in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.

+ Pat[zer] Mooney. 2012. “Civil society strategies and the Stockholm syndrome.” P. 327-331 in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.

Day12- Oct 16: Evaluative Activity: Mock UN Climate Negotiations--Write Statements from Negotiating Groups

Simulation: Pairs of students will write (make up) annotated statements from one of the current UNFCCC negotiating groups, concerning the main issues of mitigation, adaptation, finance, and technology transfer. These should be based on the readings in the class to this point on vulnerability and the structure of the nation’s economy, etc., and the annotations should describe which issues each point addresses and what sources you used to make them. Students will submit them electronically before class and read these to the class in the mock negotiations. We’ll then have a short debate, and then if time and technology allow, we’ll watch webcasts of actual UN negotiations statements, or read ones. Negotiating groups: EU-27; G77, AOSIS, OPEC, LDCs, Umbrella/JUSSCANNZ, ALBA, AILAC,

Part 3: Social Movements, Governance, Media and the Public

Day13- Oct 21: Environmental Social Movements Outside the UN: climate justice, big greens, and corporate campaigns

Group B: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas
+ Roberts, Ciptet and Khan. 2013.ms. *Power in a Warming World*. Chapter 8 (excerpt) “Civil Society and Climate Action”

+Bond, Patrick. 2013. “Climate Justice”. Chapter from *Critical Environmental Politics*. Routledge Pres.

+ Bassegy, Nnimmo. 2012. “Leaving the oil in the soil--Communities connecting to resist oil extraction and climate change.” p. 332-339 in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.

+ Anderson, Teresa. 2012. “Riding the wave: how transition towns are changing the world and having fun.” p. 340-347 in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.

Choose 2 out of the four cases:

+ The Democracy Center. 2012. “Climate change on the Ballot”

+ The Democracy Center. 2012. “Closing in on Gateway Pacific: The Campaign to Terminate Coal’s Superhighway to Asia”

+ The Democracy Center. 2012. “The Global Movement Against Fracking”

+ The Democracy Center. 2012. “More Coal for Kosovo: Building a Global Alliance to Take on the World Bank and US State Department’s Dirty Development Plans”

Day14- Oct 23: Religious Groups, Business Networks, Cities and States

Guest visit (Marc Claddis or Class led by Alex Durand (Timmons at conference in Maine)

Group A: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas

Discuss Op-Ed assignment for next time: find an op-ed and summarize, describe its strengths and weaknesses, and critique

+Wilkinson, Katherine. (2012). *Between God and Green*. Chapter 1: “Chronicling Evangelical Climate Care” and Chapter 6: “Sowing the Seeds of a Movement.”

+One or two additional readings

Day15- Oct 28: Media Coverage and Climate Understanding and Concern in the U.S. and elsewhere

Op-ed critique due/Discussion of Op-eds

+ Boykoff, Maxwell and J. Smith. 2010. "Media presentations of climate change." in: Routledge Handbook of Climate Change and Society pp. 210-218, Routledge.

+ McCright, Aaron M. and Riley E. Dunlap. 2011. "The politicization of climate change and polarization in the American public's views of global warming, 2001-2010." *Sociological Quarterly* 52: 155-192.

+ McCright, Aaron M., Chenyang Xiao, and Riley E. Dunlap. 2014. "Political Polarization on Support for Government Spending on Environmental Protection in the USA, 1974-2012." *Social science research*.
Or
McCright, Aaron M., Riley E. Dunlap, and Chenyang Xiao. 2014. "Increasing Influence of Party Identification on Perceived Scientific Agreement and Support for Government Action on Climate Change in the United States, 2006–12." *Weather, Climate, and Society* 6.2 (2014): 194-201.

Day16- Oct 30: Trade, Security and Climate Governance 2.0

Group B: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas

+ Brauch, Hans Günter (2009) "Securitizing Global Environmental Change", in: Brauch; Oswald Spring; Grin; Mesjasz; Kamari-Mbote; Behera; Chourou; Krummenacher (Eds.): *Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts* (Berlin et al.: Springer): 65-102.

+ O'Brien, K.; Lera St. Clair, A.; Kristoffersen B., 2010: *Climate Change, Ethics and Human Security* (Cambridge: Cambridge University Press). Chapter 1.

+ Solomon, Illana and Justin Guay. "US challenges India's solar energy incentives: What's at stake". *Huffington Post*

Day17- Nov 4: Public Opinion, Collective Denial, and Coping With Climate Dread

Group A: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas

+ Norgaard, Kari Marie. 2009. "Cognitive and behavioral challenges in responding to climate change." Policy Research Working Paper 4940, World Bank Background Paper for the 2010 *World Development Report*.

+ Brody, Samuel D., Sammy Zahran, Arnold Vedlitz and Himanshu Grover. 2008. "Examining the relationship between physical vulnerability and public perceptions of global climate change in the United States." *Environment and Behavior* 40(10):72-95.

+ Heritage Foundation. 2001. "Why president Bush is right to abandon the Kyoto Protocol." Heritage Foundation Backgrounder No. 1437. May 11, 2001.

Day18- Nov 6: Integrative Activity: Simulation of Foundation Allocation to Climate Organizations

Activity: In this simulations, students in pairs will represent environmental organizations and private foundations who support them, and decide which types of climate organizations they would support. Foundations will have to define their guiding principles, "theory of change," and objectives and strategies they wish to see, and supply to the groups beforehand. NGOs will develop 3 page proposals building upon readings and discussions in the class, and submit before class. In class, groups will do a 5 minute "pitch," and the grant-makers will huddle and decide how to allocate their \$5m and explain their decisions. A final discussion will raise issues of how this process assists and constrains change (e.g. in creating a climate of competition between groups).

Groups:

1. Market-based Green: Environmental Defense Fund or Resources for the Future
2. Left Wing of Mainstream: Greenpeace or Sierra Club
3. Development/Moral: Oxfam or Christian Aid
4. Indigenous Environmental Network
5. Energy Justice Network
6. Rainforest Action Network (corporate campaigns)
7. ICLEI

Read Beforehand:

+ Montague, Peter. 2012. "Why the Environmental Movement is Not Winning". *Huffington Post*.

+ National Committee for Responsive Philanthropy. 2012. *Cultivating the Grassroots: A Winning Approach for Environment and Climate Funders* (skim)

Part 4: Mitigation and Solutions: Technical and Social Approaches

Day19- Nov 11: Mitigation Pathways, Wedges, Options and Barriers

Group B: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas
 + Pacala, S. and R. Socolow. (2004) Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies. *Science* 305 pp. 968–971. [5 pp.]
 + Steinberger, Julia K., J. Timmons Roberts, Glen P. Peters and Giovanni Baiocchi. 2012. Pathways of human development and carbon emissions embodied in trade." *Nature Climate Change* Published online: 22 JAN. DOI: 10.1038/NCLIMATE1371.
 + UNEP. 2011. *Decoupling Natural Resource Use and Environmental Impacts from Economic Growth*. www.unep.org. By Marina Fischer-Kowalski et al.
 + Winkler, H. et al. (2007). "What factors influence mitigative capacity?" *Energy Policy* 35 (1): 692–703.
 + Anderson, Kevin. "Climate change going beyond dangerous – Brutal numbers and tenuous hope." P. 16-40 of *What Next*

Day20- Nov 13: Climate Capitalism to the Rescue? Markets for Clean Development, Agriculture, and Forests

Group A: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas
 + Sacramento Bee Viewpoints. 2013. "Should Cap and Trade use Forestry Offsets: No"
 + Sacramento Bee Viewpoints. 2013. "Should Cap and Trade use Forestry Offsets: Yes"
 + Meckling, Jonas. 2011. "The globalization of carbon trading: Transnational business coalitions in climate politics." *Global Environmental Politics*.
 + Lohmann, Larry. 2012. "Climate as investment--Dead and living solutions." p. 164-184 in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.
 + Reyes, Oscar. "What goes up must come down--Carbon trading, industrial subsidies and capital market governance." P. 185-209 in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.
 + Stabinsky, Doree and Lim Li Ching. 2012. "Ecological agriculture, climate resilience and adaptation--a roadmap." p. 238-263 in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.

Day21- Nov 18: Geoengineering: An Experiment with N=1

Group B: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas
 + The Royal Society (2009). "Geoengineering the Climate: Science, Governance, and Uncertainty." London: Science Policy Centre. http://royalsociety.org/geoengineering_the_climate/
 Required: Read Summary, pp. ix–xii (pp. 11–14 of the PDF), and the Discussion and Conclusion, pp. 47–62 (pp. 61–76 of the PDF) [20 pp.]
 + ETC Group--Pat Mooney, Kathy Jo Wetter and Diana Bronson. "Darken the sky and whiten the earth--the dangers of geoengineering." p. 210-237 in *What Next?/Development Dialogue book*, Niclas Hallstrom, editor.
 + Parson, Edward and David Keith. 2013. "End the deadlock on governance of geoengineering research" *Science Magazine*.
 +Hamilton, Clive. 2011. "The powerful coalition that wants to engineer the world's climate." *The Guardian Newspaper*.
 +Vidal, John. 2011. "Geo-engineering: Greed versus green in the race to save the planet. *The Guardian*.

Day22- Nov 20: Debate: Should Research in Geoengineering be Allowed?

Activity: Students will be divided into groups to debate whether it is acceptable to research the development of technologies to engineer the atmosphere, through techniques like injecting soot into the high stratosphere to block solar radiation, dumping iron into the oceans to allow "blooms" of algae to absorb carbon, etc. Utilizing readings and discussions through the semester, students will decide with their group which position to take (Yes or No), and develop one-page statements with arguments supporting their positions.
 + Hamilton, Clive. 2011. "Ethical Anxieties about geo-engineering: moral hazard, slippery slope and playing god". Paper presented to the Australian Academy of Science.

Day23- Nov 25: Scenarios Dark, Light, and Grey

Group A or B: Two page reading SEQ paper: summary/synthesis/questions due before class by Canvas
 + Roberts, Ciplet and Khan. 2013.ms. *Power in a Warming World*. Chapter 9, "Scenarios" DRAFT
 + Newell, Peter and Matthew Patterson. 2009. *Climate Capitalism*. Chapter 10: "What futures for climate capitalism". MIT Press.
 + Lovins, Hunter (interview). 2011. "Can climate capitalism save the world?" *Greenbiz.com*
 + Klein, Naomi. 2011. "Capitalism vs. the Climate." *The Nation*.

Nov 28: No School, Thanksgiving, Enjoy!

Dec 2, 4: Op-Ed workshop and discussion and UNFCCC progress discussion, in person or by Skype. Details TBA depending upon UNFCCC credentialing and travel planning for Lima

Due: Write your own Op-Ed on “What should we do about climate change?” Discuss also what we shouldn’t do.

Dec 15 2pm: Final Exam: In Class Synthetic Exam--half on mitigation and solutions (combining readings, lectures/discussions and your own thoughts about whether capitalism can address climate change how we could move forward), half on the rest of the course (open syllabus and notes)

METHODS OF EVALUATION / GRADING RUBRIC

Course work consists of SEQ summary/evaluation papers, an analysis paper on the field trip and its readings, preparation for and participation in class,

1. Two page reading SEQ summary/synthesis/questions, and Op-ed critique (8 of 10 days assigned): 40%
2. Participation, including preparation 10%
3. Original Op-ed on “What should we do about climate change?” 10%
4. Written and oral group work in interim evaluations for units 1-4: 20%
5. Final exam 20%

Details:

1. Two page reading SEQ summary/evaluation/questions (7 of 10 assigned): 40%. The class will be divided into two groups which will alternate days preparing Two page SEQs on the reading. These are due 8pm the night before class by Canvas. All class members are responsible for signing on and reading each other’s questions before the scheduled class. These discussion papers should discuss two readings, and please do not write about the very short readings. The papers should include 4 parts: 1. An introductory paragraph raising a paradox or central question about the topic of the readings. This is crucial. [1 paragraph] 2. a very brief (concise) summary of the central points or arguments the author(s) present(s) [2-3 paragraphs]. 3. a brief assessment of the strengths and weaknesses of the authors’ central argument [2-3 paragraphs]. Without being authorities, comment here on whether the author’s evidence really supports what they set out to do and their conclusions. How does their viewpoint color the interpretations they make? Say why you agree or disagree with their project and conclusions. Here I encourage you to be contentious and take a risk by taking a strong stand that will get debate going in class. Finally, 4. Provide two discussion questions related to the readings. One should be a lingering question for you, and the other a question that will promote class discussion. I am looking for well-written SEQs which summarize and critique the readings directly, support their arguments, and when possible which draw in questions and issues raised in other readings and earlier in the course.
2. Participation 10%-- There will be opportunities in class and in smaller group discussions for your participation. This portion of the grade is based on attendance, preparation (having done the reading and other work before class), and quality of interventions.
3. Original Op-ed on “What should we do about climate change?” 10%
4. Group work—15%: We will break into smaller groups and have evaluative debates and simulations four times this semester—preparation and leadership on this will be included in the participation grade.
5. Final exam or term paper—20%: On the final day of the term, students will have an opportunity to synthesize the big issues of the course, explicitly tying in readings, lectures, talks and observations from field trip, and other materials. An alternative open to students is a term paper, 15-20 pages double spaced, addressing a related issue in depth.

Supplemental Readings and Resources: Power, Justice and Climate Change, Fall 2014

Part 1: Introduction, Vulnerability and Adapting to Inevitable Climate Impacts

Day1: Where We Are Now—Copenhagen, Doha, and a “4 Degrees Warmer World”

+ Roberts, J. Timmons. 2011. “Multi-polarity in the new world (dis)order: US hegemonic decline and the fragmentation of the global climate regime”. *Global Environmental Change*. or Roberts, Cipler and Khan. 2013. or *Power in a Warming World*, Chapter 1 and 2. Manuscript.

+National Geographic videos for expected impacts for each degree of warming are on YouTube, <http://channel.nationalgeographic.com/channel/videos/six-degrees-could-change-the-world/> Here's three degrees: <http://www.youtube.com/watch?feature=fvwp&NR=1&v=skFrR3g4BRQ>

Skim through the text of the original UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol (KP):

UNFCCC: <http://unfccc.int/resource/docs/convkp/conveng.pdf>

KP: <http://unfccc.int/resource/docs/convkp/kpeng.pdf>

Hansen, James et al. 2008. “Target atmospheric CO₂: Where should humanity aim” p. 81-88 in Bill McKibben (ed) *The Global Warming Reader*. New York: Penguin.

Peruse presentations at the “Four Degrees and Beyond” conference at Oxford University’s Environmental Change Institute, <http://www.eci.ox.ac.uk/4degrees/>

Day2. The Basic Science of Climate Change, and a Bit of the Politics of Climate Science

VIMS/CCRM. 2012. “Climate Change Impacts in Virginia: A natural resource database.”

http://ccrm.vims.edu/coastal_zone/climate_change_db/index.html

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Part 2: Negotiations: Can the UNFCCC Process Deliver Us?

Day7. Negotiations and National Positions

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Day8. Divided World—The Enduring and Evolving North-South Divide, and the New Political Economy

Day9. Weapons of the Weak: Politics of Consent of the Least Developed and Island States

Day10. BASIC, OPEC and Climate Change: Vulnerability, Economics, and National Priorities

Day11. Non-state actors in UN climate politics: Business, Environmental NGOs and Vulnerable Peoples

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Day15. Media Coverage and Climate Understanding and Concern in the US and elsewhere

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