

Comparative Issues in Food, Water and Energy

SDIS 3070 (4 credits)

International Honors Program (IHP) Climate Change: *The Politics of Land, Water and Energy Justice*

This syllabus is representative of a typical semester. Because courses develop and change over time to take advantage of unique learning opportunities, actual course content varies from semester to semester.

Course Description

This course takes a political ecology approach to examine the production/management of food, water, and energy systems within the context of climate change. Political ecology makes two basic propositions, as two sides of the same coin. The first is that the complex relationships that make up the natural environment involve social relationships of power. The second is that politics—across societies, forms, and scales—has an ecology.

Furthermore, political ecology begins with the understanding that the ways in which we relate to the environment, and the forms that we manage, produce, and consume natural resources, are always socially and historically constituted. Through these perspectives, we are led to interrogate how and why certain ways of relating to the environment, including the management of resources, become dominant, while others become marginalized or excluded. Who benefits from the design of these systems, who bears the costs, and under what circumstances? How do relations of power in society mediate these dynamics?

The course is structured around three key lines of inquiry: First, what are the historical processes which can help us to understand existing modes of food, water, and energy production and/or management? Second, how are contemporary concerns about food, water, and energy in the context of climate change being problematized and addressed? Third, what conflicts have emerged, and are emerging, around access to food, water, and energy and how might they help to generate alternative visions of the future? Closely complementing the classes taught by local faculty, we will have guest lectures and site visits to illustrate concretely how these issues are played out “on the ground,” and provide an experiential dimension to our critical and comparative analysis of food, water, and energy across four continents.

Learning Outcomes

Upon completion of the course, students will be able to:

- Demonstrate understanding of a political ecological framework to describe the power dynamics implicated in contemporary issues in food, water, and energy;
- Explain natural resource management challenges through the lens of environmental conflict, the social production of marginalization and vulnerability, and inequitable access to environmental resources;
- Analyze who benefits from and who bears the cost of specific natural resource management systems pertaining to food, water, and energy;

- Assess the role of the state, markets, and civil society, including social movements, in the production and management of natural resources, and in environmental governance more broadly;
- Recognize the complex inter-play between local, national and global scales of development and environmental governance

Language of Instruction

This course is taught in English

Instructional Methods

SIT's teaching and learning philosophy is grounded in the experiential learning theory developed by Kolb (1984; 2015) and informed by various scholars, such as Dewey, Piaget, Lewin, among others. Experiential learning theory recognizes that learning is an active process that is not confined to the formal curriculum; "knowledge is created through the transformation of experience" (Kolb, 2015, p. 49). Learning involves both content and process. Learning is holistic and happens through various life experiences upon which students draw to generate new ways of knowing and being. Learning involves a community and is a lifelong endeavor. Learning is transformational. The suggested four step-cycle of *a concrete experience, reflective observation, abstract conceptualization, and active experimentation* embedded in the experiential learning model is not linear and might not always happen in that specific order, as any learning is highly context dependent. These stages of taking part in a shared experience; reflecting on that experience by describing and interpreting it; challenging their own assumptions and beliefs to generate new knowledge; and ultimately applying new knowledge, awareness, skills, and attitudes in a variety of situations and contexts are important for students to engage in to become empowered lifelong learners.

Course Schedule

**Please be aware that topics and excursions may vary to take advantage of any emerging events, to accommodate changes in our lecturers' availability, and to respect any changes that would affect student safety. Students will be notified if this occurs*

SESSIONS' SUMMARY

1. Decolonial and Indigenous Approaches to Understanding Political-Environmental Issues
2. Power, Hydrosocial Relations, and the Political Ecology of the California Delta
3. Fossil Fuels, Democracy, and Post-Carbon Political-Economies
4. Climate, Disaster, and the Environmental Justice in Puerto Rico
5. Energy, Mining, and the Coloniality in the Unincorporated Territory
6. Agroecology and Food Sovereignty in Post-Hurricane Puerto Rico
7. Water, Privatization, and the Resistance in Neoliberal Chile
8. Energy Transitions
9. Agroecology, Food Sovereignty, and the Social Movements in Chile
10. Mining, Territoriality and Identity in the Frontiers of Neo-extractivism

Module 1: Bay Area, California, USA

Session 1: Decolonial and Indigenous Approaches to Understanding Political-Environmental Issues

Required Reading:

1. Middleton, Beth Rose (2015) "Jahát Jatítotòdom*: toward an indigenous political ecology." In R. L. Bryant (Ed.), *International Handbook of Political Ecology*. Northampton: Edward Elgar Press. Ch. 40 (pgs 561-576).
2. Bauer, William (2016) *California Through Native Eyes*: Chp 1 (pgs. 10-27)
3. Tuck, Eve, and K. Wayne Yang (2012) "Decolonization is not a metaphor" *Decolonization: Indigeneity, Education & Society*, 1(1): (pgs. 1-10 and 31-36)
4. Robbins, Paul (2012) *Political Ecology: A Critical Introduction* (2nd ed): Ch. 1, "Political versus Apolitical Ecologies" (p. 11-24)
5. Adlam, C. and Middleton, B. R. 2019. Keepers of the Flame: Native American cultural burning in California (Report)

Session 2: Power, Hydrosocial Relations, and the Political Ecology of the California Delta

Required Reading:

1. Swyngedouw, E. (2009). The Political Economy and Political Ecology of the Hydro-Social Cycle. *Journal of Contemporary Water Research & Education*, 142(1), 56-60.
2. Stroshane, T. (2003). Water and Technological Politics in California. *Capitalism Nature Socialism*, 14(2), 34-76.
3. Johnston, B. R. (2003). The political ecology of water: an introduction. *Capitalism Nature Socialism*, 14(3), 73-90.
4. Peet, R., Robbins, P., & Watts, M. (2010). Chapter 1: Global nature. In R. Peet... *Global political ecology*. New York: Routledge. 1-47.
5. Paulson, S., Gezon, L. & Watts, M. (2003). Locating the Political in Political Ecology: An Introduction. *Human Organization*. 62 (3), 205-217.

Session 3: Fossil Fuels, Democracy, and Post-Carbon Political-Economies

Required Reading:

1. Mitchell, T. (2009). Carbon democracy. *Economy and Society*, 38(3), 399-432.
2. Juhasz, Antonia et al. 2010. "Chevron Corporate, Political and Economic Review" and "Chevron in California" In *The True Cost of Chevron: An Alternative Annual Report*, pp. 1-7 & 11-12.
3. Huber, M. (2012). Refined politics: Petroleum products, neoliberalism, and the ecology of entrepreneurial life. *Journal of American Studies*, 46(2), 295-312.
4. Newell, P., & Mulvaney, D. (2013). The political economy of the 'just transition'. *The Geographical Journal*, 179(2), 132-140.

Module 2: Puerto Rico

Session 4: Climate, Disaster, and Environmental Justice in Puerto Rico

Required Reading:

1. Bonilla, Y., & LeBrón, M. (2019). *Aftershocks of Disaster: Puerto Rico Before and After the Storm*. Haymarket Books, Chicago, IL. [selected chapters]
2. McCaffrey, K. T. (2008). The struggle for environmental justice in Vieques, Puerto Rico. *Environmental justice in Latin America: problems, promise and practice*. The MIT Press, Cambridge, MA.

Session 5: Energy, Mining, and Coloniality in the Unincorporated Territory

Required Reading:

1. García López, G. A., Velicu, I., & D'Alisa, G. (2017). Performing counter-hegemonic common (s) senses: Rearticulating democracy, community and forests in Puerto Rico. *Capitalism Nature Socialism*, 28(3), 88-107.
2. Kwasinski, A., Andrade, F., Castro-Sitiriche, M. J., & O'Neill-Carrillo, E. (2019). Hurricane Maria Effects on Puerto Rico Electric Power Infrastructure. *IEEE Power and Energy Technology Systems Journal*, 6(1), 85-94.
3. de Onís, C. M. (2018). Energy colonialism powers the ongoing unnatural disaster in Puerto Rico. *Frontiers in Communication*, 3, 2.
4. "Energy Insurrection: Puerto Rico's power failures inspired a Rooftop Solar Movement, But officials are Undermining It--in Favor of Natural Gas" by Alleen Brown, *The Intercept*, February 9, 2020. <https://theintercept.com/2020/02/09/puerto-rico-energy-electricity-solar-natural-gas/>
5. "Puerto Rico is targeting 100% renewable energy. The Trump administration has other ideas." by Umair Irfan, *Vox*. April 17, 2019. <https://www.vox.com/2019/4/17/18306417/puerto-rico-renewable-energy-natural-gas>
6. Massol Deyá, A. (2019). The Energy Uprising: A Community-Driven Search for Sustainability and Sovereignty in Puerto Rico. in *Aftershocks of Disaster: Puerto Rico Before and After the Storm*, 298-308.
7. Lloréns, H. (2016). In Puerto Rico, environmental injustice and racism inflame protests over coal ash. *The Conversation*, 8.

Session 6: Agroecology and Food Sovereignty in Post-Hurricane Puerto Rico

Required Reading:

1. McCune, N., Perfecto, I., Avilés-Vázquez, K., Vázquez-Negrón, J., & Vandermeer, J. (2019). Peasant balances and agroecological scaling in Puerto Rican coffee farming. *Agroecology and Sustainable Food Systems*, 43(7-8), 810-826.
2. Félix, G. F., & Holt-Giménez, E. (2017). "Hurricane María: An Agroecological Turning Point for Puerto Rico?"
3. "Puerto Rico and the cultivation of food sovereignty," by Nicole Medina Collazo. Centre for Sustainable Development Studies (CSDS), University of Amsterdam.
4. Martínez Meraco, Eliván. "The Boom of Monsanto and other Seed Corporations Blows in the South of Puerto Rico." *Centro de Periodismo Investigativo*. March 7, 2017. <http://periodismoinvestigativo.com/2017/03/the-boom-of-monsanto-and-other-seed-corporations-blows-in-the-south-of-puerto-rico/>.

Module 3: Chile

Session 7: Water, Privatization, and Resistance in Neoliberal Chile

Required Reading:

1. Budds, J. (2016). Whose scarcity? The hydrosocial cycle and the changing waterscape of La Ligua river basin, Chile. In *Contentious Geographies* (pp. 81-100). Routledge.
2. Borgias, S.L., 2018. "Subsidizing the State:" The political ecology and legal geography of social movements in Chilean water governance. *Geoforum*, 95, pp.87-101.
3. Torres-Salinas, R., García, G. A., Henríquez, N. C., Zambrano-Bigiarini, M., Costa, T., & Bolin, B. (2016). Forestry development, water scarcity, and the Mapuche protest for environmental justice in Chile. *Ambiente & Sociedad*, 19(1), 121-144.
4. Boelens, R. Hoogesteger, J., Swyngedouw, E., Vos, J., & Wester, P. (2016). Hydrosocial territories: a political ecology perspective. *Water International*, 41(1): 1-14
5. Swyngedouw, E. (2005). Dispossessing H2O: The Contested Terrain of Water Privatization. *Capitalism Nature Socialism*. 16(1), 81-98.

6. Sultana, F., & Loftus, A. (2015). The human right to water: Critiques and condition of possibility. *Wiley Interdisciplinary Reviews: Water*, 2(2), 97-105.

Session 8: Energy Transitions

Required Readings:

1. Ministry of Energy of Chile (2012). "National Energy Strategy 2012-2030, Energy for the Future: Clean, Secure, Competitive." <http://www.centralenergia.cl/uploads/2012/06/National-Energy-Strategy-Chile.pdf>
2. Agostini, C. A., Nasirov, S., & Silva, C. (2016). Solar PV planning toward sustainable development in Chile: challenges and recommendations. *The Journal of Environment & Development*, 25(1), 25-46.
3. Tironi, M., & Barandiarán, J. (2014). 15 Neoliberalism as Political Technology: Expertise, Energy, and Democracy in Chile. In *Beyond imported magic: essays on science, technology, and society in Latin America*, 305.
4. Cansino, J. M., Sánchez-Braza, A., & Rodríguez-Arévalo, M. L. (2018). How can Chile move away from a high carbon economy? *Energy Economics*, 69, 350-366.
5. "Is an energy revolution underway in Chile?" by Maximiliano Proaño, 09 Jul 2018. <https://energytransition.org/2018/07/is-an-energy-revolution-underway-in-chile/>

Session 9: Agroecology, Food Sovereignty, and Social Movements in Chile

Required Reading:

1. Edelman, M., Weis, T., Baviskar, A., Borras Jr, S. M., Holt-Giménez, E., Kandiyoti, D., & Wolford, W. (2014). Introduction: critical perspectives on food sovereignty. *Journal of Peasant Studies*, 41(6), 911-931.
2. Cid Aguayo, Beatrice and Alex Latta. 2015. Agro-ecology and Food Sovereignty Movements in Chile: Sociospatial Practices for Alternative Peasant Futures. *Annals of the Association of American Geographers*, 105(2), 397-406.
3. Torres, R., Azócar, G., Rojas, J., Montecinos, A., & Paredes, P. (2015). Vulnerability and resistance to neoliberal environmental changes: an assessment of agriculture and forestry in the Biobio region of Chile (1974–2014). *Geoforum*, 60, 107-122.
4. Zazo-Moratalla, A., Troncoso-González, I., & Moreira-Muñoz, A. (2019). Regenerative Food Systems to Restore Urban-Rural Relationships: Insights from the Concepción Metropolitan Area Foodshed (Chile). *Sustainability*, 11(10), 2892.

Session 10: Mining, Territoriality and Identity in the Frontiers of Neo-extractivism

Required Reading:

1. Svampa, M. (2019). *Neo-extractivism in latin america: socio-environmental conflicts, the territorial turn, and new political narratives*. Cambridge University Press.
2. Rehner, J., Baeza, S. A., & Barton, J. R. (2014). Chile's resource-based export boom and its outcomes: Regional specialization, export stability and economic growth. *Geoforum*, 56, 35-45.
3. Barton, J., Román, Á., & Fløysand, A. (2012). Resource extraction and local justice in Chile: conflicts over the commodification of spaces and the sustainable development of places. In *New political spaces in Latin American natural resource governance* (pp. 107-128). Palgrave Macmillan, New York.
4. Babidge, S., & Bolados, P. (2018). Neoextractivism and Indigenous Water Ritual in Salar de Atacama, Chile. *Latin American Perspectives*, 45(5), 170-185.

5. Bustos, B., Folchi, M., & Fragkou, M. (2017). Coal mining on pastureland in Southern Chile; challenging recognition and participation as guarantees for environmental justice. *Geoforum*, 84, 292-304.

Assignments and Evaluation

Assignment Descriptions and Grading Criteria

Class Participation (10%)

Students are expected to participate actively in faculty sessions and to complete required readings beforehand. Faculty sessions will be connected to and actively complemented by site visits and guest lectures in each country, as well as content from other courses. Participation is more than just showing up or speaking out; it means that you actively contribute to the intellectual growth of the group by thoughtfully engaging with guest lectures, faculty, and fellow students and integrating information from field visits, other courses, observations and discussions from homestays, daily experiences and so forth.

Group writing assignments (2x20% each)

This assignment consists of two group writing assignments, each worth 20%, that require students to describe, reflect on, and analyze the situations encountered in specific site visits, and imagine scenarios of intervention based on different social actors involved. More specific writing prompts will be provided.

Comparative Political Ecology Essay (30%)

This 5-6 page essay (doubled-spaced, 12pt. Times New Roman, 1-in. margins) should address the political ecology of energy, food, water, or land (or a nexus of these) comparatively across two or more sites/regions. To link issues in land-food-water-energy to political and economic structures the essay should draw upon one or more 'narratives/theses' outlined in Robbins (2012: 21-24):

- Degradation and marginalization thesis
- Conservation and control thesis
- Environmental conflict and exclusion thesis
- Environmental subjects and identity thesis
- Political objects and actors thesis

As well as three or more other readings from class.

The essay may take one of two forms, which should be clearly identified:

Option 1: Identify a pattern you have observed across sites in two or more countries: the pattern may be a similar 'environmental problem' or climate-change impact; a similar form of socio-environmental inequality; or a similar economic or political struggle. Then use your observations, research/course readings, and concepts in political ecology to help explain that pattern. Explanatory questions may include: What explains the emergence or degree of the environmental problem? How is that problem shaped by larger economic, political and social processes? How do these processes operate to produce similar patterns in different contexts? How are environmental goods and bads distributed across space, time, and along the various axes of social differentiation (social class, gender, race/ ethnicity, age etc.) social class in a way that is systematically unequal? What social interests win and lose in these situations? What are the dominant narratives that are used to explain, legitimize or undermine that problem? What

are the counter-narratives?? What are the social and/or political identities that are being articulated or represented in the conflict or struggle? How do these narratives (dominant and counter), and identities play out to generate similar patterns? What kinds of alternatives may have been possible, or are present but marginalized among some groups or within political struggles? Your explanation may take the form of one of the above-listed 'narratives.' Successful essays will generate insights through explicit and nuanced comparison across sites, and by skillfully presenting both evidence and counter-evidence for their arguments.

Option 2: Identify a point of contrast between sites in two or more countries: the contrast may be a relative 'success' in one site and ecological 'failure' in another; a case of collaboration in one context and overt conflict in another; successful popular mobilization in one site, but political marginalization in another. Then use concepts in political ecology, research/course readings, and observations and from various sites and sources to explain the contrasting situations. Explanatory questions may include: What factors have generated different outcomes to similar problems (e.g. specific climate-related impacts; a particular mode of food production; water shortage)? What explains the relative 'success' or 'failure'? What are the factors that facilitate or hinder collaboration, and/or lessen or deepen conflict? What different political structures have deepened or lessened socially-unequal access to environmental 'goods and the burden of environmental 'bads'? Why does unequal vulnerability to environmental stress or harm—on the basis of race, gender, economic class, or other group—look differently across sites? What are the dominant narratives and counter narratives around the environmental problem? What are the social and/or political identities that are being articulated or represented in the conflict or struggle? How do these narratives (dominant and counter), and identities play out to generate contrasting situations? Like Option 1, your explanation may take the form of one of the above-listed 'narratives,' but instead of centering the essay around a similar pattern across sites, the goal is to explain differences.

Self-Evaluations: (20%)

A written self-evaluation will take place at the end of California, Puerto Rico, and Chile. You will be asked to assess your learning experience in the course, reflect on your intellectual growth, and how you plan to apply it to future endeavors. You will also be asked to provide a grade, and justify it with an argument. A more detailed description of this reflective exercise will be provided in each country.

Assessment

Class Participation	10%
Group Writing Assignments (x2)	40%
Comparative Political Ecology Essay	30%
Self-Evaluations	20%

Late Work

Due to the structure of our program, with a tightly planned country schedule, there is little time available to make up late work. Assignment deadlines are set with this already in mind. Do not expect to be provided extensions. Deadlines for assignments will be confirmed in class. Late work will be assessed a penalty of a grade step per day late (eg. an A- would drop to a B+ if one day late).

Grading Scale

94-100%	A	Excellent
90-93%	A-	

87-89%	B+	
84-86%	B	Above Average
80-83%	B-	
77-79%	C+	
74-76%	C	Average
70-73%	C-	
67-69%	D+	
64-66%	D	Below Average
below 64	F	Fail

Program Expectations

Participation

IHP is an experiential learning program; you have to show up to have the experience. Students are expected to attend all classes, guest lectures, and field activities unless they have a medical excuse that has been communicated and approved of by IHP staff or faculty. IHP has academic requirements to attend class meetings and field activities. Failure to attend classes or field activities means that a student may not be eligible for credit from their university or could result in program dismissal.

Class Preparation

This program is built upon the strong belief that your experiences result in deep insights and powerful learning. Course assignments are created to facilitate learning opportunities and experiences. Dialogue in class about these insights and participation in these activities is critical. For this reason, your active engagement is very important. As a learning community, each one of us will influence the learning environment. Please take responsibility for your role in this environment and come to class prepared to engage with others in a positive and thought-provoking manner.

Academic Integrity

Academic dishonesty is the failure to maintain academic integrity. It includes, but is not limited to, obtaining or giving unauthorized aid on an examination, having unauthorized prior knowledge of the content of an examination, doing work for another student, having work done by another person for the student, and plagiarism. Academic dishonesty can result in severe academic penalty, including failure of the course and/or dismissal from the institution/program.

Plagiarism is the presentation of another person's ideas or product as one's own. Examples of plagiarism are: copying verbatim and without attribution all or parts of another's written work, using phrases, charts, figures, illustrations, computer programs, websites without citing the source; paraphrasing ideas, conclusions or research without citing the source; using all or part of a literary plot, poem, film, musical score, computer program, websites or other artistic product without attributing the work to its creator.

Students can avoid unintentional plagiarism by carefully following accepted scholarly practices. Notes taken for papers and research projects should accurately record sources of material to cited, quoted, paraphrased, or summarized, and research or critical papers should acknowledge these sources in footnotes or by use of footnotes.

Violations of SIT Study Abroad academic integrity policy are handled as violations of the student code of conduct and will result in disciplinary action. Please discuss this with your faculty and staff if you have questions.

General Considerations

- Show up prepared. Be on time, have your readings completed and questions in mind for discussion or clarification. Being prepared raises the level of class discussion for everyone. This includes being punctual and prepared for guest lectures and site visits. All students are expected to be present at every program session, with the only exceptions being illness (written note required from a non-IHP adult, e.g. homestay parent, or preferably, health care professional). Unexcused absences and habitual lateness will result in penalties reflected in your participation grade. Please inform the traveling faculty or fellow if tardiness is anticipated.
- Have assignments completed on schedule and done in accordance to the specified requirements. This will help ensure that your assignments are returned in a timely manner. Points will be deducted for assignments turned in late.
- Ask questions in class. Be attentive, respectful and engaged with the guest lecturers and site visit hosts. These are often very busy professionals and community leaders who are doing us an honor by meeting with us and deserve your full attention and respect.
- Comply with academic integrity policies (no plagiarism or cheating, nothing unethical). Any plagiarism or cheating will result in a score of zero for that assignment and could result in additional disciplinary measures as outlined in the Academics section of the IHP Student Handbook.
- Respect differences of opinion (classmates, lecturers, site visit hosts, homestay families). You are not expected to agree with everything you hear, but you are expected to listen across difference and consider other perspectives with respect.
- Be pro-active and flexible and take ownership of your learning experience as individuals and as a group. The experiential model of learning requires that you look forward and back across the semester. The logistics of our time in each country means that coursework will not always develop in a strictly linear fashion.
- Electronic devices: The use of phones, tablets and laptops are not permitted during site visits and guest lectures. We will discuss the need for the use of technology during this course.

SIT Policies and Resources

Please refer to the [SIT Study Abroad Handbook](#) and the [Policies](#) section of the SIT website for all academic and student affairs policies. Students are accountable for complying with all published policies. Of particular relevance to this course are the policies regarding: academic integrity, research and ethics in field study and internships, late assignments, academic status, academic appeals, diversity and disability, sexual harassment and misconduct, and the student code of conduct.

Please refer to the SIT Study Abroad Handbook and SIT website for information on important resources and services provided through our central administration in Vermont, such as [Library resources and research support](#), [Disability Services](#), [Counseling Services](#), [Title IX information](#), and [Equity, Diversity, and Inclusion](#) resources.