

Comparative Issues in Food, Water and Energy SDIS3070 (4 credits)

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

This syllabus is representative of a typical 3-country program. Note that program locations may change due to Covid-19 precautions. 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.

Course objectives:

The overall course objectives are:

- To experience, observe, and understand the multi-scalar impacts of regional and global forces on the landscapes, communities and economies of Vietnam, Morocco and Bolivia;
- To introduce students to the theoretical concepts and analytical tools used in political ecology, so as to generate critical understandings of contemporary issues in food, water and energy systems;
- To challenge students to engage with people and places through discussion, dialogue and observation in reflexive and substantive ways that are informed by theories of political ecology;

- To become conscious of the many alternative forms of natural resource production and management which may not be recognized within dominant narratives of development.

Learning Outcomes

By the end 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.

Evaluation and Grading Criteria

Assessment:

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

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 in Vietnam and Morocco.

- a) Group Assignment #1: by 5pm local time (Ho Chi Minh City) on Tuesday, March 3.**
- b) Group Assignment #2: by midnight local time (Ouarzazate) on Tuesday, March 31.**

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 production, or water management (or a nexus of these) comparatively across two or more countries. To link issues in 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 on one or more political ecology readings including Middleton (2015), Swyngedouw, E. (2005, 2009), Elmhirst, R. (2011), or Davis (2006).

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.

The essay is to be **submitted by noon (12:00pm) local time (Cusco) on Monday, April 27.**

Self-Evaluations: (20%)

A written self-evaluation will take place at the end of Bay Area, Vietnam, Morocco, and Bolivia (5% each). 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.

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

Expectations and Policies

- 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 coordinator 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, Family Educational Rights and Privacy Act (FERPA), 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.

COURSE SCHEDULE

INTRODUCTION

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

This lecture will provide an introduction to the political ecology approach, as well as to concepts of decolonization, Indigeneity, and environmental justice. The political ecology approach provides an analytical toolkit from political economy and ecology to understand the complexities of environmental change, and attempts to address it across temporal, political, and spatial scales. As we discuss decolonization, Indigeneity, and environmental justice, we will examine gaps in the political ecological approach, particularly in terms of understanding Indigenous perspectives on place, environmental change, and governance. We will discuss case studies of Indigenous environmental (in)justice and Indigenous leadership to address climate change. We hope that the tools and perspectives provided in our lecture will assist you as you engage with Indigenous and politically and economically under-represented groups around the globe.

Required Readings:

- 1.1 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).
- 1.2 Bauer, William (2016) *California Through Native Eyes*: Chp 1 (pgs. 10-27)
- 1.3 Tuck, Eve, and K. Wayne Yang (2012) "Decolonization is not a metaphor" *Decolonization: Indigeneity, Education & Society*, 1(1): (pgs. 1-10 and 31-36)
- 1.4 Robbins, Paul (2012) *Political Ecology: A Critical Introduction* (2nd ed): Ch. 1, "Political versus Apolitical Ecologies" (p. 11-24)
- 1.5 Adlam, C. and Middleton, B. R. 2019. Keepers of the Flame: Native American cultural burning in California (Report)

Recommended Readings and Supplemental Material:

- 1.6 Carroll, Clint (2015) *Roots of Our Renewal: Ethnobotany and Cherokee Environmental Governance*. Introduction (pgs. 1-35). University of Minnesota Press.
- 1.7 Ron Goode, Shasta Gaughen, Marissa Fierro, Don Hankins, Keir Johnson-Reyes, Beth Rose Middleton, Teri Red Owl, and Randy Yonemura (2018) "Summary Report from Tribal and Indigenous Communities" *California 4th Climate Change Assessment*:
<http://www.climateassessment.ca.gov/state/docs/20180928-TribalCommunitySummary.pdf>

Featured Site Visit, with Diana Almendariz - Nisenan/Wintun Cultural Practitioner: "Collaborative Eco-Cultural Restoration: The Tending and Gathering Garden at the Cache Creek Nature Preserve"

Learn hands-on with Nisenan/Wintun cultural practitioner and educator Diana Almendariz about the history and significance of the Tending and Gathering Garden--a resource for weavers that was created from restoring a gravel mining site near the Cache Creek.

VIETNAM

Session 2, Mrs. Nguy Thi Khanh: *Renewable and Alternatives Energy Development in Vietnam*

This class reviews key national policies involved in the current development of renewable and alternative energies in Vietnam. Policy strategies are examined for their potential to mitigate climate change and promote green growth and low-carbon development in Vietnam.

Required Readings:

- 2.1 - Green ID: A blueprint for Vietnam's clean energy future
- 2.2 - Green ID Report: *Analysis of future generation capacity scenarios for Vietnam*
- 2.3 - UNDP 2014. "Green Growth and Fossil Fuel Fiscal Policies in Vietnam," (Infographic)
- 2.4 - Zimmer A., Michael J., Steckel J.C. (2015). What motivates Vietnam to strive for a low-carbon economy? — On the drivers of climate policy in a developing country. *Energy for Sustainable Development*. 24:19-32.

Recommended Readings:

- 2.5 - Vietnam Renewable Energy Development Strategy to 2030, vision to 2050
- 2.6 - Luu Duc Hai and Nguyen Thi Hoang Lien (2009). Renewable Energy Policies for Sustainable Development in Vietnam. *VNU Journal of Science, Earth Sciences*, 25, 133-142.
- 2.7 - Vietnam, 2012. *Viet Nam National Green Growth Strategy*.
- 2.8 - Vietnam, 2016. *Viet Nam National Master Plan*.

Session 3, Dr. Quách Thị Xuân: *Participatory and Integrated Water Resource Management in Quang Nam Province*

In this lecture we will examine some of the social and environmental issues associated with hydropower, discussing the complexities and associated challenges of integrated water resource management in the Central Coast region of Vietnam. In particular we will talk about the water resource management in Quang Nam province, focusing on the Vu Gia Thu Bon river basin with the Dak Mi hydropower plant as a case study (students will have an excursion to the power plant the following day). This basin has complex river systems complicated by provincial transboundary issues, with many hydropower dams in the upstream zones, including a diversion dam.

Required Readings:

- 3.1 – "DakMi4 hydropower plant: A lesson learned from a diversion dam"
- 3.2 – "Training Manual: Sustaining River Basin Ecosystems in Hydropower Development"
- 3.3 – Swyngedouw, E. (2009). The Political Economy and Political Ecology of the Hydro-Social Cycle. *Journal of Contemporary Water Research & Education*, 142(1), 56-60.

Featured Site Visit: Dak Mi 4 Hydropower plant and Nuoc Lang resettlement village

Session 4, Mrs. Dieu My: *ResilNam: Ecology and Gender Based Flood Resilience Building in Thua Thien Hue, Central Vietnam*

In recent decades, the low-lying coastal areas and Hue city have been repeatedly affected by severe flooding from the sea, rivers and heavy rainfall. In addition to the chronic stress and shocks caused by flood hazards, a range of societal factors undermines the resilience of already vulnerable groups of society, such as poor and women. In this lecture, we will learn how ResilNam project is strengthening the role of women in disaster risk management and climate change adaptation through ecosystem-based adaptation.

Required Readings:

4.1 – Brander, L. et al. Cost-Benefit Analysis of Ecosystem Based Adaptation Flooding in Central Vietnam

Recommended Readings:

4.2 – ANH, T. T., et al. 2016. "Gender analysis in building climate resilience in Da Nang," Working Paper Series #35 (IIED).

Session 5, Dr. Nguyễn Hữu Thiện: *Mekong Delta in the face of climate change and upstream hydropower*

This lecture examines the problem that the Mekong Delta will have to face within the changing climate and development of upstream hydropower: Loss of sediments and nutrient supply to coastal and estuary environments; water flow and erosion; saline intrusion; and impact on fisheries.

Required Readings:

5.1 – Eyster, Brian (2019) Last Days of the Mighty Mekong. *Whither the Mekong Delta* (pg.285 – 339)

Recommended background reading:

<https://www.earthrights.org/campaigns/mekong-river-basin-dams-problem-hydropower>

<https://www.internationalrivers.org/campaigns/mekong-mainstream-dams>

MOROCCO

Session 6, Dr. Lisa Bossenbroek: *Gendered impacts of the capitalization of water in Morocco*

Morocco has embarked on an agricultural modernization plan that is importantly premised on changes in how water is used and by whom, with water increasingly being re-allocated from lower value to higher value crops. This often goes accompanied with new capital-intensive modes of 'mining' water and the introduction of new irrigation technologies, provoking a concentration of water in the hands of a few. New modes of water-intensive farming create new wealth and employment opportunities, but also dispossess many of their primary sources of living. This lecture discusses: 1) how such water re-allocations are premised on and happen through existing gendered social institutions; and 2) how they differentially impact different categories of women and men (laborers, landowners, entrepreneurs, etc.).

Required readings:

6.1 - Elmhirst, R. (2011). Introducing new feminist political ecologies, *Geoforum* 42 (2011), 129-132.

6.2 - Bossenbroek, L., & Zwartveen, M. Z. (2018). New Spaces for Water Justice? from Part IV- Governmentality, Discourses and Struggles over Imaginaries and Water Knowledge. In *Water Justice* (pp. 330-345). Cambridge University Press.

Recommended readings:

- 6.3 - Rocheleau, D., B. Thomas – Slayter and E. Wangari. (1996). Chapter one: Gender and environment: A feminist political ecology perspective, in: Rocheleau, D. et al. (eds). *Feminist political ecology: global issues and local experiences*, London: Routledge, 3 – 22.
- 6.4 - Razavi, S. (2003). Introduction: Agrarian Change, Gender and Land Rights. *Journal of Agrarian Change*, 3 (1), 2 – 32.

Session 7, Dr. Lisa Bossenbroek: *Broken dreams? The gendered youth experiences of agrarian change in the Saïss, Morocco*

This lecture focuses on the gendered youth experiences of rural development in Morocco. Rural young men and women are key players in this process, and they are situated in a complex web of power relations hampering the fulfillment of their aspirations and dreams. We will discuss and describe current agrarian dynamics, specifically: 1) illustrating how the experiences, aspirations and dreams of rural young people in the Saïss are intimately linked to agrarian transformation; 2) demonstrating how futures and identities are deeply gendered; and 3) providing nuance to structural analyses of agrarian change with ethnographic accounts of how changes are perceived by the people experiencing them.

Required Readings:

- 7.1 - White, B. (2012). Agriculture and the Generation Problem: Rural Youth, Employment and the Future of Farming. *IDS Bulletin*, 43 (6), 9 – 19.
- 7.2 - Sumberg, J., Anyidoho, N.A., Leavy, J., Lintelo, te D.J.H., Wellard, K. (2012). Introduction: The Young People and Agriculture “Problem” in Africa. *IDS Bulletin*, 43 (6) 1 – 8.

Recommended Readings:

- 7.3 - Gidarakou, I. (1999). Young Women’s Attitudes Towards Agriculture and women’s New Roles in the Greek Countryside: A First Approach. *Journal of Rural Studies*, 15 (2) 147 – 158.

Session 8, Dr. Sheikh Naeem: *Current status of water resources in Morocco and challenges*

This lecture will look at the water needs and resources in Morocco. Some of the issues looked at will be rural/urban divide, water basin management policies, and privatization. The central role of agriculture in Moroccan society and its water needs will be an important segment.

Required readings:

- 8.1 - Swyngedouw, E. (2005). Dispossessing H2O: The Contested Terrain of Water Privatization. *Capitalism Nature Socialism*. 16(1), 81-98.
- 8.2 - Schync, J. and Hoekstra, A. (2014). The Water Footprint in Morocco. UNESCO Institute for Water Education: Value of Water, Research Report Series No. 67. [Focus on Chapters 2 and 3, and skim through Chapter 4.]

Recommended readings:

- 8.3 - Saadi, M. (2012). Water Privatization Dynamics in Morocco: A Critical Assessment of the Casablancon Case. *Mediterranean Politics*. 17(3), 376- 393.
- 8.4 - Bakker, K. (2010). 16 Commons versus commodities: political ecologies of water privatization. In Peet et al (eds), *Global Political Ecology*, 347. Routledge.
- 8.5 - Iglesias, A., Garrote, L., Flores, F., & Moneo, M. (2007). Challenges to manage the risk of water scarcity and climate change in the Mediterranean. *Water Resources Management*, 21(5), 775-788.

Session 9, Dr. Mohamed Behnassi. *Morocco Green Plan: Genesis, Relevance and Challenges*

The main objective of this class is to present the Moroccan Agricultural Policy — mainly the Morocco Green Plan (MGP) — by focussing on the global and local contexts preceding its elaboration, its main pillars and objectives, its implementation and evaluation mechanisms, the different adjustments made during the process, the different challenges and drivers of change that might boost or obstruct the full achievement of its objectives, and the long-term trends that should be considered to ensure the ongoing improvement of this public policy. The class focusses as well on the Moroccan agricultural sector due to its central role in national development, on its capacity to ensure food and nutrition security, human development, and the great uncertainties regarding its possible evolution in a context marked by environmental and climate change, technological and energy transition, and the new societal roles to be assumed by agriculture.

Required Readings:

- 9.1 - Green Morocco Plan (2010 – 2020).
- 9.2 - Davis, D. (2006). Neoliberalism, Environmentalism, and Agricultural Restructuring in Morocco. *The Geographical Journal*. 172 (2), 88-105.
- 9.3 - Ait Kadi Mohamed & Benoit Guillaume (2012), Agriculture 2030: A future for Morocco, Future Studies, Brief No. 41.

Recommended Readings:

- 9.4 - Ouraich Ismail & Tyner Wallace E. (2014), Morocco's unique situation in the climate change arena: An analysis of climate forecasts and their link to agriculture, WIDER Working Paper 088.
- 9.5 - Patel, R., & McMichael, P. (2009). A political economy of the food riot. *Review* (Fernand Braudel Center), 9-35.
- 9.6 - Malm, A. (2014). Tahrir Submerged? Five Theses on Revolution in the Era of Climate Change. *Capitalism Nature Socialism*, 25(3), 28-44.
- 9.7 - Davis, D. K. (2005). Potential forests: degradation narratives, science, and environmental policy in protectorate Morocco, 1912-1956. *Environmental History* 10(2), 211-238.

BOLIVIA

(Sessions 10-13 are part of the Workshop on *Self-decolonization and Climate Change*)

REQUIRED READINGS for Sessions 10-13 and the *Workshop on Climate Change and Self-Decolonization*:

- Elbers, Joerg (2016). *Holistic Science*. United Nations 2016 Virtual Dialogue on Harmony with Nature – Theme: Earth Jurisprudence
<http://www.harmonywithnatureun.org/knowledgenetwork/dialogue-inputs/>
- Farthing, L. and Kohl, B. (2014). Chapter 4, “Reinventing the State, Expanding Rights and Navigating Dependency.” In *Evo's Bolivia: Continuity and Change*. Austin: University of Texas Press.
- Fabricant, Nicole (2013). “Good Living for Whom? Bolivia's Climate Justice Movement and the Limitations of Indigenous Cosmovisions.” *Latin American and Caribbean Ethnic Studies*, 8:2, 159-178.
- Kohl, B., & Farthing, L. (2012). Material constraints to popular imaginaries: The extractive economy and resource nationalism in Bolivia. *Political Geography*, 31(4), 225-235.

Session 10: Tania Ricaldi: *The Politics of Climate Change in Bolivia*.

This sesión will analyze critically the politics of Climate Change of the Plurinational State of Bolivia, including the laws and their implementation (or lack of).

Required Readings:

- 9.1 - Law of the Rights of Mother Earth, 2012. (Please read all ten articles)

<http://www.worldfuturefund.org/Projects/Indicators/motherearthbolivia.html>

9.2 - Manifiesto of the Isla del Sol: "Save Our Mother Earth to Save Life", 2015. (Please read pages 1-11) (only available online)

<http://www.planificacion.gob.bo/uploads/webingles/index.html#p=1>

9.3 - Intended Nationally Determined Contribution (INDC) from the Plurinational State of Bolivia (Oct 12, 2015) (Please read all 17 pages)

<http://www.planificacion.gob.bo/uploads/2.INDC-BOLIVIA-English%20%28doc%29.pdf>

9.4 - Executive Summary of the Second National Communication of the Plurinational State of Bolivia, 2009. (please read the first ten pages 42-52) <http://unfccc.int/resource/docs/natc/bolnc2exsume.pdf>

Session 11, Dr. Vivian Camacho: *Food Sovereignty in Bolivia*

Part I – *Ancestral Knowledge in Health as an Integral Component for the Care of the Pachamama (Mother Earth)*

Part 2 – *Food Sovereignty and Agroecology*

These presentations analyze the Andean perspective or Cosmo vision on the issues of Food Sovereignty, and the importance of the Ancestral Knowledge as a key element for the Care of the Pachamama (Mother Earth). It describes the relation and some of the rituals of communication between human beings and nature.

Session 12, by Oscar Olivera: *Cosechando Agua de*

Lluvia, Sembrando Conocimiento, Construyendo Comunidad (Harvesting rain water, seeding knowledge, building community)

This presentation is designed to explain what is going on currently with the water issue in Bolivia in times of change and transition. This includes both the correspondence and contradictions between water management laws and socio-hydrological realities, emphasizing the dissemination of information and action about the impacts and implications of climate change for water. Oscar Olivera will focus his presentation on his efforts with schools of marginalized and vulnerable communities to collectively create water harvesting systems and urban gardens.

Required Readings:

11.1 - Olivera, O., & Lewis, T. (2004). *Cochabamba!: water war in Bolivia*. South End Press. 1-32.

11.2 - Johnston, B. R. (2003). The political ecology of water: an introduction. *Capitalism Nature Socialism*, 14(3), 73-90.

Recommended Readings and Viewings:

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

11.4 - Bakker, K. (2003). Archipelagos and networks: urbanization and water privatization in the South. *Geographical Journal*, 169(4), 328-341.

11.5 - Five Water Warriors Defending Rights from North Dakota to Chile (<https://www.telesurtv.net/english/news/5-Water-Warriors-Defending-Rights-from-North-Dakota-to-Chile-20170315-0018.html>)

11.6 - Documentary "Blue Gold: World Water Wars" (2008) (based on the book by Maude Barlow and Tony Clarke) (<https://vimeo.com/208683543>)

11.7 - Documentary "Tapped" (2009) (<https://www.youtube.com/watch?v=dzntuXdE8dY>)

Session 13, by Renán Orellana: *Diagnostico General de Energía en Bolivia [Overview of Bolivia Energy Sector] (part I); and by Miguel Fernández: *Energías Alternativas [Alternative Energy in Bolivia] (part II)**

In these presentations we learn about energy in general in Bolivia in the Latin-American context and in part 2 the analysis is focused in Alternative Energies and its uses, both in governmental and private sectors.

Required Readings:

https://energypedia.info/wiki/Bolivia_Energy_Situation

<https://energytransition.org/2017/03/bolivia-a-model-for-energy-storage-in-latin-america/>

<https://www.ianas.org/PDF/BolivaRenewableEnergyinBolivia1.pdf>

Session 14, Tania Ricaldi: *Concluding Reflections on Food, Water, and Energy in the Context of Climate Change in Bolivia*

This class will review the central aspects of food, water and energy in climate change policies in Bolivia, with analysis and concluding reflections on the implications of climate change for these sectors.