

Comparative Issues in Food, Water and Energy

SDIS - 3070 (4 credits)

International Honors Program (IHP)

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 systems approach to examine the global and regional production and consumption of food, water, and energy within the context of climate change. We will pay particular attention to the food-energy-water nexus (the interdependencies among these systems) and the embeddedness of these systems within the natural world. We will examine these systems and their nexus in each of the regions we visit, and consider the multiple dimensions of food, energy and water as *source*, as *infrastructure*, and as *flow*.

We will also use the lens of political ecology to consider the ways in which the complex relationships that make up the natural environment involve social relationships of power. We will interrogate how and why certain ways of relating to the environment, including the management of resources, the development of infrastructure, and specific flows of goods and services 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, consumption, and 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 and control over food, water, and energy? Fourth, 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 impacts of regional and global forces on fundamentally intertwined food, energy, and water systems in California, Morocco, Nepal, and Ecuador and to recognize the linkages between these forces, systems, and local landscapes amidst the growing impacts of climate change;
- To introduce students to the theoretical concepts and analytical tools used in nexus and systems thinking across multiple disciplines, 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 complex systems and 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 the nexus and political ecological frameworks to describe 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 (Including Site Visits)	10%
Launch Assignment	5%
Group Presentations on Food, Energy and Water Production, Consumption and Trade for Assigned Country	10%
Assignments in Each Country	(3x25%) 75%

Class Participation (10%)

Students are expected to participate actively in site visits and 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. 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.

Launch Assignment (5%)

In this assignment students will be asked to describe, reflect on, and connect the situations encountered in specific site visits to themes explored in a recent podcast on regional, national and/or local climate change policy.

Group Presentations on Food, Energy and Water Production, Consumption and Trade (10%)

For this assignment students will research the food, energy, and water systems for their assigned country (based on their Country Here We Come Teams).

Regional and Global Food, Energy, Water Challenges in Morocco: (25%) 750-1000 words

At the end of our stay in Morocco, you will be asked to provide a description of local food, energy, and/or water systems and their interdependencies. Questions that may be considered include:

- What are the primary sources of drinking water and electricity in a specific region we visit?
- What forms of fuel are used by households in different regions we visit? How is this sourced and provided? What are household food, water, and energy expenses on a monthly basis?
- What food is produced in the region?
- How much of this is consumed locally, and how much is exported?
- What is the per capita consumption of food, energy, and water in the region?

You may also wish to consider how local/regional systems are connected to global systems, as well as key feedbacks and challenges related to climate change and systemic injustices.

Local Faculty Writing Assignments (Nepal and Ecuador) 2x25%

Specific prompts and due dates will be given by local faculty.

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 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.

Please refer to the SIT Student Handbook for policies on academic integrity, ethics, warning and probation, diversity and disability, sexual harassment, and the academic appeals process.

COURSE SCHEDULE

LAUNCH, SAN FRANCISCO

Session 1. Dr. Sonya Ahamed: Why the Bay Area? Water, Food and Energy Systems: Production, Consumption and Transition

In this class, students will be introduced to concepts of food, energy water systems and their interdependencies (the FEW/WEF nexus). We will see how these systems can be conceptualized in terms of resources, infrastructures, and continual flows from supply to demand centers, and start to consider the many complex challenges around full decarbonization of food, energy, and water systems that embody deep historical inequities and injustices at local, national and global scales. We will also consider how food, water, and energy systems in the countries we will visit can be described using the food-energy-water-material and just transitions frameworks.

Required Viewing: Introducing the Food-Energy-Water Nexus

<https://www.youtube.com/watch?v=0kFxzQJaeME> (Regenerative Cities, Part 1; 6:32)

<https://www.youtube.com/watch?v=dYcLCfjeULA> (Food Energy Water Nexus, Part 2; 6:35);

Recommended Readings

Global Reports on Food, Energy and Water (Skim)

- International Energy Agency. 2023. *World Energy Outlook 2022*. <https://www.iea.org/reports/world-energy-outlook-2023>
- REN21. *Renewables Global Status Report 2023*. <https://www.ren21.net/reports/global-status-report/>
- FAO. 2022. *The State of Food and Agriculture 2022. Leveraging automation in agriculture for transforming agrifood systems*. Rome, FAO. <https://doi.org/10.4060/cb9479en>
- The United Nations World Water Development Report 2022: *Groundwater: Making the invisible visible*—UNESCO Digital Library. <https://unesdoc.unesco.org/ark:/48223/pf0000380721>

Friday Feb 2: Neighborhood Day: Exploring San Francisco and the East Bay

During this field afternoon in San Francisco, you will learn in small groups about the unique histories and trajectories of five local neighborhoods, meeting with community groups working in the arenas of environmental and climate justice, walking in the immediate area, and carefully observing your surroundings. On Angel Island the next day we will collaborate in a synthesis session to weave a larger narrative about the distribution of harms and benefits of energy, water, food, and material infrastructures over time on different communities in the San Francisco Bay Area.

Suggested Listening:

*KQED Podcast [Sold Out: Electric Avenue: The Oakland Block That's Ditching Natural Gas](https://www.podplay.com/podcasts/sold-out-rethinking-housing-in-america-492462/episodes/electric-avenue-206965009). Oct23, 2023 (28 min) <https://www.podplay.com/podcasts/sold-out-rethinking-housing-in-america-492462/episodes/electric-avenue-206965009>

Recommended Reading

Monday Feb 5: Planned Excursion to Star Route Farms, Bolinas, CA and Guest Lecture: Professor April Randle, University of San Francisco

During this site visit students will learn about the history of Star Route Farms, the oldest continuously certified organic row crop farm in California. We will also hear from Faculty Farm Director and Professor April Randle about the impacts of climate change on farm operations, and efforts to mitigate and adapt to these impacts through water and soil management practices.

Suggested Reading

Pathak, T. B., Maskey, M. L., Dahlberg, J. A., Kearns, F., Bali, K. M., & Zaccaria, D. (2018). Climate Change Trends and Impacts on California Agriculture: A Detailed Review. *Agronomy*, 8(3), Article 3. <https://doi.org/10.3390/agronomy8030025>

Moctezuma, S. (2023). *Excluded and Isolated: Farmworker Vulnerability to Climate Change, Inadequate Regulations, and Takings Claims*. 36.

Guest Speaker: Antonia Juhasz: The Political Economy of Oil

Antonia Juhasz is a leading energy analyst, author, and investigative journalist specializing in oil. Juhasz is the author of three books: *Black Tide* (2011), *The Tyranny of Oil* (2008), and *The Bush Agenda* (2006). Her investigations have taken her a mile below the ocean surface in the Gulf of Mexico to the rainforests of the Ecuadorian Amazon, from the deserts of Afghanistan to the fracking fields of North Dakota, from the Alaskan Arctic to the oiled beaches of Santa Barbara, and many more places in between. In this session she will share recent developments in ongoing efforts to prevent further drilling in the Ecuadorian Amazon as well as an update from frontline communities in the Louisiana fossil fuel sacrifice zone.

Required Reading/Listening:

About Antonia: <https://www.hrw.org/about/people/antonia-juhasz> and <https://antoniajuhasz.net/>

Human Rights Watch Report. Jan 2024 'We're Dying Here: The Fight for Life in a Louisiana Fossil Fuel Sacrifice Zone' <https://www.hrw.org/report/2024/01/25/were-dying-here/fight-life-louisiana-fossil-fuel-sacrifice-zone> (Article)

*KQED Podcast: [Sold Out](https://www.podplay.com/podcasts/sold-out-rethinking-housing-in-america-492462/episodes/sold-out-presents-sea-change-217011270) Presents: [Sea Change. Challenges Facing Coastal Communities on the Gulf Coast and beyond](https://www.podplay.com/podcasts/sold-out-rethinking-housing-in-america-492462/episodes/sold-out-presents-sea-change-217011270) Nov 16, 2023. (50 min) <https://www.podplay.com/podcasts/sold-out-rethinking-housing-in-america-492462/episodes/sold-out-presents-sea-change-217011270>

Recommended Reading:

Juhasz, A. Aug. 23, 2023. Ecuadorians Vote to "Keep the Oil in the Soil" in the Amazon. Human Rights Watch. <https://www.hrw.org/news/2023/08/23/ecuatorians-vote-keep-oil-soil-amazon>

Juhasz, A. Mar. 1, 2014. Opinion: Why oil drilling in Ecuador is 'ticking time bomb' for planet. CNN. <https://www.cnn.com/2014/02/28/opinion/ecuador-rainforest-oil-exploration/index.html>

Chevron Alternative Annual Report 2010 or 2011, featuring several sections by Antonia Baker, S. H. (2019). *Anti-Resilience: A Roadmap for Transformational Justice within the Energy System* (SSRN Scholarly Paper 3362355).

<https://papers.ssrn.com/abstract=3362355>

Human Rights Watch Report. Jan 2024 'We're Dying Here: The Fight for Life in a Louisiana FossilFuel Sacrifice Zone' Full Report:

https://www.hrw.org/sites/default/files/media_2024/01/us_louisiana0124web.pdf

****Launch Assignment Due Sun Feb 11, at 12 noon Morocco time****

*Pick a podcast (identified with an asterisk * on the SDIS and ENVI syllabi) from our launch sessions and write a paragraph or two (about 250-400 words) describing how the specific programs and/or policies explored in your selected podcast relate to the communities and places you've experienced first-hand on our Bay Area site visits and excursions.*

MOROCCO

Session 2, Dr. Souad Douada: Land Rights and Women's Rights in Morocco

This lecture will look at the relationship between land rights and women's rights in Morocco, focusing on the role of women leaders in contesting the privatization of communally held land. This stand adopted by rural women against neo-liberal privatization policies puts them in direct confrontation with urban women reformers, whose claims reveal a value system outside local customary understandings of morality, gender, and land.

Eddouada, S. (2022). Chapter 3. Doing Fieldwork with Women Land Rights Activists In Morocco: Power Relationships Within Feminism And Its Discursive Framework Of Right in *The Politics of Engaged Gender Research in the Arab Region: Feminist Fieldwork and the Production of Knowledge*, Joseph, S., Meari L., Zaatari, Z., Eds. Bloomsbury Publishing.

Eddouada, S. (2021). Land Rights and Women's Rights in Morocco. *History of the Present*, 11(1), 23–52. <https://doi.org/10.1215/21599785-8772445>

Guest Lecture: *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:

Swyngedouw, E. (2005). Dispossessing H2O: The Contested Terrain of Water Privatization. *Capitalism Nature Socialism*. 16(1), 81-98.

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:

Saadi, M. (2012). Water Privatization Dynamics in Morocco: A Critical Assessment of the Casablancon Case. *Mediterranean Politics*. 17(3), 376- 393.

Bakker, K. (2010). 16 Commons versus commodities: political ecologies of water privatization. In Peet et al (eds), *Global Political Ecology*, 347. Routledge.

Iglesias, A., Garrote, L., Flores, F., & Moneo, M. (2007). Challenges to manage the risk of waterscarcity and climate change in the Mediterranean. *Water Resources Management*, 21(5), 775-788.

Ministry Delegate of the Minister of Energy, Mines, Water and Environment, in charge of Environment (2014) *Moroccan Climate Change Policy*. Retrieved from <http://www.4c.ma/medias/MCCP%20-%20Moroccan%20Climate%20Change%20Policy.pdf>

Sowers, J., Vengosh, A., & Weinthal, E. (2011). Climate Change, Water Resources, and the Politics of Adaptation in the Middle East and North Africa. *Climatic Change*, 104(3-4), 599-627.

Session 3, 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:

White, B. (2012). Agriculture and the Generation Problem: Rural Youth, Employment and the Future of Farming. *IDS Bulletin*, 43 (6), 9 – 19.

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:

Gidakou, 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 4, 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:

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

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.

Razavi, S. (2003). Introduction: Agrarian Change, Gender and Land Rights. *Journal of Agrarian Change*, 3 (1), 2 – 32.

Session 5, 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 focusing 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:

Green Morocco Plan (2010 – 2020).

Davis, D. (2006). Neoliberalism, Environmentalism, and Agricultural Restructuring in Morocco. *The Geographical Journal*. 172 (2), 88-105.

Ait Kadi Mohamed & Benoit Guillaume (2012), Agriculture 2030: A future for Morocco, FutureStudies, Brief No. 41.

Recommended Readings:

- 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.
- Patel, R., & McMichael, P. (2009). A political economy of the food riot. *Review* (Fernand BraudelCenter), 9-35.
- Malm, A. (2014). Tahrir Submerged? Five Theses on Revolution in the Era of Climate Change. *Capitalism Nature Socialism*, 25(3), 28-44.
- Davis, D. K. (2005). Potential forests: degradation narratives, science, and environmental policy in protectorate Morocco, 1912-1956. *Environmental History* 10(2), 211-238.

Session 6- FEATURED SITE VISIT: Ouarzazate Solar Power Station (Noor) and Villagers

Testimony Readings:

- Rignall, K. E. (2016). Solar power, state power, and the politics of energy transition in pre-Saharan Morocco. *Environment and Planning A: Economy and Space*, 48(3), 540-557.
- Sovacool, B. K., Heffron, R. J., McCauley, D., & Goldthau, A. (2016). Energy decisions reframed as justice and ethical concerns. *Nature Energy*, 1(5), 16024.
- Moustakbal, J. The Moroccan Energy Sector: A permanent dependence. *Middle East Eye*. 21 July 2017. <https://longreads.tni.org/fr/the-moroccan-energy-sector> (Dec 2021)]
- Ryser, S. (2019). The Anti-Politics Machine of Green Energy Development: The Moroccan Solar Project in Ouarzazate and Its Impact on Gendered Local Communities. *Land*, 8(6), 100.

MOROCCO SDIS Site Visits:

Technopole - Bassin water transfer Marrakech Organics Farm Marrakech: Water Museum

In-Country Assignment, Due on Mar 10

Regional and Global Food, Energy, Water Challenges in Morocco: (25%) 750-1000 words

At the end of our stay in Morocco, you will be asked to provide a description of local food, energy, and/or water systems and their interdependencies. Questions that may be considered include:

- What are the primary sources of drinking water and electricity in a specific region we visit?
- What forms of fuel are used by households in different regions we visit? How is this sourced and provided? What are household food, water, and energy expenses on a monthly basis?
- What food is produced in the region?
- How much of this is consumed locally, and how much is exported?
- What is the per capita consumption of food, energy, and water in the region?

You may also wish to consider how local/regional systems are connected to global systems, as well as key feedbacks and challenges related to climate change and systemic injustices.

NEPAL

(Sessions and speakers subject to change.)

Session 7 Anil Chitraker, Field Professor: *Climate Orientation and Environmental*

Justice in Nepal Nepal is hoping to attain and maintain a high economic growth rate in the next decade to catchup for all the lost time during the armed conflict and drawn-out political process. This process

of rapid “development” will lead to environmental degradation if precautions are not taken. In protecting nature and wildlife, many important issues are at stake: fair distribution of cost and benefits, impact of pollution on downstream communities and the displacement of traditional ways of life by modern technology and infrastructures, access to tourism revenue, and passing on the costs to the locals. Environmental justice is critical to ensuring long term balance between what we aspire for economically and how we have to manage critical natural resources in a fair manner.

Readings

Securing Nepal's Electric Future: <https://www.nepalitimes.com/opinion/comment/securing-nepal-s-electric-future>

Chitwan's Bote People in a Changing World: <https://www.nepalitimes.com/here-now/chitwan-s-bote-people-in-a-changing-world>

National Nepal Government Adaptation Plan on Climate:

<https://unfccc.int/resource/docs/napa/npl01.pdf>

https://climate.mohp.gov.np/downloads/National_Framework_Local_Adaptation_Plan.pdf

Session 8, Field Walk: Anil Chitraker, Pashupatinath / Boudha Walk

Understanding ancient water systems/bio diversity and city planning around religious sites and monuments

Site Visit: ECCA (Education for Sustainable Development Program)

Session 9, Guest Lecture, Pasang Dolma

Sherpa:

Impact of Climate change on gender and social inequalities in the Himalayan region

Site Visit: Nepal Federation of Indigenous Nationalities (NEFIN) /Center for Indigenous Peoples' Research and Development (CIPRED)

Field Trip Information: Development and environmental issues from the mountains to the plains The Chitwan area of Nepal offers a great location to understand how the development and environmental issues will be addressed and resolved in the years to come. The Chitwan

National Park has a history of nearly five decades and there are many sites and cases that may help us understand the complex links between people and nature; and the short-term economic needs and long-term conservation goals.

Readings TBA

Session 10, Anil Chitraker, Disasters – Man-Made and Natural

Disasters, both man-made and natural, have ever greater impact due to population growth and settlements in vulnerable areas. Climate change and development of infrastructure upstream are also changing the pattern, frequency, and the scale of impact of these disasters. Food security is an issue that affects people immediately after disasters.

Readings TBA

Session 11, Anil Chitraker, Demand for Arable Land: Extraction of Raw Materials/Water Extraction

- As more and more infrastructure projects get designed and financed, the **demand for arable land** is going to go up. Nepal is already a very densely populated country and land acquisition and compensation are very difficult processes to manage. Growth and spread of urban areas is also part of the problem. When people are displaced and paid cash for land, we see the money does not last long for people who do not manage it well. Industries that **extract raw materials** from the local environment compete with local and historical needs and uses. Locals cannot often compete in the cash economy. Further the pollution (waste, waste water, dust and smoke) adversely affect the health of the local people. **Water extraction** for diversion to urban areas, irrigation and other consumptive uses like hotels, industries also leave the poor worse off and have very negative impact on the quality of life, food security and time wasted in collecting this increasingly scarce resource. Water pollution, and depletion of ground water is on the rise.

Readings TBA

Session 12, Anil Chitraker, Group Presentations: Energy, water and food systems: challenges and opportunities in achieving a just transition in the lowlands and mountain regions in Nepal

At the beginning of our program in Nepal, you will be separated into groups focusing on the topics of energy, water, and food (considering production, consumption, infrastructure and equity) during our site visits. You will need to work as a group to think about themes to explore, prepare questions, conduct interviews, organize and analyze the information you gathered, and prepare a presentation. In the last class session in Nepal, each group will have **30 minutes** to present your research process and findings to your peers.

ECUADOR

PROFESSOR: Consuelo Fernandez, PhD in collaboration with Sonya Ahamed, PhD and Michael Hill PhD

BIO: Consuelo Fernández-Salvador is an Associate Professor in the Department of Anthropology at the Universidad San Francisco de Quito and holds a Ph.D in Development Studies from the International Institute of Social Studies-Erasmus University Rotterdam. Her research interests

have focused on ethno-politics, extractivism and development, particularly around large-scale mining in the southern Amazon Region in Ecuador. She is co-editor and co-author of the book *La Amazonía Minada. Minería a Gran Escala y Conflictos en el Sur del Ecuador* junto con Teijlingen, K. van, E. Leifsen, and L. Sanchez Vázquez (2017 USFQ Press-Abya Yala). Recently she has also been involved in collaborative research in organizational cultures, as well as community tourism and the impact of Chinese mega-infrastructure in local populations. She is now the coordinator for Ecuador of the SolPan Latin American Consortium as part of the research project “Solidarity in times of COVID19”.

In the Ecuador module of this course, we focus on indigeneity, extractivism, and environmental justice as they relate to regional, globally interconnected food, energy and water systems. We will pay particular attention to the notion of Buen Vivir, the rights of nature, environmental conservation/governance, and the growing impacts of climate change on these systems.

Like Morocco and Nepal, the Ecuador module 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, management, and consumption? 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 and control over food, water, and energy and how might they help to generate alternative visions of the future?

LEARNING OUTCOMES

- Explain environmental governance challenges through the lens of indigeneity environmental justice, the social production of marginalization and vulnerability, and inequitable access to environmental resources;
- Explain notions of Buen Vivir and the rights of nature in Ecuador's Constitution
- Learn about the main challenges faced by territories in the design and implementation of public policies for the conservation of natural resources in Ecuador
- Recognize the complex interplay between local, national and global scales of development and environmental governance;

BRIEF DESCRIPTION OF CLASSES AND SITE VISITS

(Please note class sessions and site visits are subject to change.) Visit the Ecological Reserve Antisana

Learn about Andean glaciers in a changing climate & the impact of glacier retreat on water resources in the city of Quito.

Session 13, Dr. Consuelo Fernandez, *Natural Resource Extraction, Indigeneity and Environmental Justice*

In this session, we will address issues of environmental (in)justice that indigenous people face in relation to the extraction of natural resources in the Ecuadorean Amazon Region. Furthermore, through the analysis of different case studies, we will discuss the concept of indigeneity as the articulation of strategies by indigenous organizations in their efforts to resist and deal with extractivism. In this analysis we will understand existing tensions and even conflicts within indigenous organizations and their possible causes.

Required Readings:

Valdivia, G. (2007) 'The 'Amazonian Trial of the Century': Indigenous Identities, Transnational Networks, and Petroleum in Ecuador', *Alternatives: Global, Local, Political* 32: 41-72.

Lu et al. (2017) "Oil as Risk in Waorani Territory", In *Oil, Revolution and Indigenous Citizenship in Ecuadorian Amazonia* (133-175).

Suggested Readings

De la Cadena, M. (2010) 'Indigenous Cosmopolitics in the Andes: Conceptual Reflection beyond Politics', *Cultural Anthropology* 25: 334-370.

Session 14, Extractivism For "Buen Vivir"? with Consuelo

Conflicts and contradictions around the extraction of natural resources

In this session, we will understand the notions of Buen Vivir and the rights of nature and their inclusion in the Ecuador 2008 Constitution. We will discuss the implications of these guidelines and the possibility of providing well-being to local communities while intensifying the extraction of natural resources, by focusing on the Yasuni-ITT Referendum. We will also explore alternatives to extractivism based on local projects in the Ecuadorean Northern Amazon Region.

Required Readings:

Teijlingen, van Karolien and Consuelo Fernández-Salvador (2021) "¿La minería para el buen vivir? Large-scale Mining, Citizenship, and Development in Correa's Ecuador" *Latin American Perspectives*. Pp. 245-261

Rival, L. (2010). Ecuador's Yasuni-ITT Initiative: the old and new values of petroleum. *Ecological Economics*, 70, 358-363

Davidov, Veronica (2013) "In their Own Words. Eco-tourism in Lowland Kichwa Communities" In *Eco-tourism and Cultural Production". An Anthropology of Indigenous Spaces in Ecuador* (117- 149)

Suggested Reading

Jarret, Christopher (2019) *The Social Life of Guayusa from Amazonian Ecuador: An*

April 20th or 27th Site Visit

Visit the Ecological Reserve Antisana

Learn about Andean glaciers in a changing climate & the impact of glacier retreat on water resources in the city of Quito.

FROM APRIL 21ST TO APRIL 27th: AMAZON EXCURSION

- Learn about the Chevron Texaco trial from the perspective of the Kichwa people.
- Learn from different perspectives (actors) about Ecuador's development project and analyze the tensions that arise in practice in relation to extraction and large monocrops in the Amazon territory.
- Visit local communities to hear their stories, learn about their livelihoods and community tourism initiatives. Immerse yourself in the biodiversity of Yasuní.

Session 15, May 1st An Introduction to Yunguilla with Michael

In this session Michael will introduce Yunguilla's history and work towards developing a community tourism organization.

May 11th to 13th Visit the community of Yunguilla

During this site visit you will get to hear from the people of Yunguilla how they transition from working in coal to community tourism. You will also engage in cultural activities and reentry sessions before heading back home.

EVALUATION (Assessment for the course includes the following components):

- Class Participation
- Comparative Essay around extractivism in Ecuador, description below

ESSAY (doubled-spaced, 12pt. Times New Roman, 1-in. margins)

The submission date is May 2nd and must be sent by midnight to (cfernandez@usfq.edu.ec, estefania.sanchez@ihp.edu and sonya.ahamed@sit.edu)

Utilizing the discussion of case studies around extractivism in Ecuador, and comparing them with experiences and readings from other contexts, write an essay of **500-700 words** based on the following questions: what are the most common effects of the extraction of natural resources (and other practices around the use of water, energy production and others with environmental impact) on local populations and what kind of conflicts are created in this contexts? Effects and conflicts should be understood in broad terms and beyond the scope of environmental impact, emphasizing issues of environmental justice, inequalities, articulation of identity, management and notion of territory and others. After this discussion, propose, choose a specific conflict and propose a solution to it, or possible alternatives that could lead to better living conditions and empowerment for local people.