



THE SCHOOL
FOR FIELD STUDIES

SFS 2840 Political Ecology of Developing Landscapes

Syllabus, Spring 2017

Faculty

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Office Hours posted weekly and by appointment

The School for Field Studies (SFS)
Center for Andes-Amazon Studies (CAS)
Pilcopata, Peru



Course Overview

In this course we will focus on human interactions with natural systems, and vice versa. The course considers these interactions through the interdisciplinary lens of political ecology, examining the political, economic and social factors of environmental issues and changes. This perspective will provide a conceptual framework for understanding how nature-society interactions such as agriculture, resource extraction, and rural development shape the natural, social, political, and economic landscapes of rural areas in the Peruvian Andes and Amazon and elsewhere. Because ecosystem management, resource extraction, rural livelihoods, development, and conservation are simultaneously social, political, economic, and ecological phenomena, holistic critical thinking is essential to understand these systems, enabling us to frame lines of inquiry and define field research questions that would help us envision realistic solutions.

The ecosystems of the tropical Andes-Amazon region support a diversity of social actors and cultural groups who employ a suite of livelihood strategies that are both typical of resource-rich, rural areas unique to Peru and other nearby countries, north and south, which share the Andes-Amazon interface. Many local livelihood strategies are based on natural resources abundant in the region, and range from extractive to productive in nature. These include small-scale agriculture and forestry, non-timber forest product (NTFP) extraction, fishing and hunting, logging, and mineral extraction. Additionally, opportunities for local residents to work in tourism and conservation-related activities have begun to change the perceptions, attitudes, and behaviors of some Andean and Amazonian communities, families, and individuals. In this course we explore the array of existent and emergent livelihood strategies and consider how they influence social and economic change and human-environment interactions.

Learning Objectives

This course emphasizes the inherent interconnectedness of the human and the nonhuman worlds, and approaches the related theories of social natures from the perspectives of Indigenous peoples. With this as our base, specific learning objectives include the ability to:

1. Understand the main ideas, concepts, and theories that underlie social natures research, and be able to apply them in a practical setting.
2. Identify and critically analyse specific examples within the Andean-Amazonian region of socially constructed natures.
3. Understand the main events of regional environmental history and how they have helped shape the existing landscape.
4. Explain emerging environmental and livelihood conflicts within the Andean-Amazonian region in terms of the particularities of place, culture, and history.
5. Recognize the importance of alternative worldviews, and explain how they are useful for natural resource management.
6. Create, organize, and execute a fieldwork project using qualitative research methods, applied through Indigenous principles, paradigms, and practices.

Course Research Direction

During the semester we will use field experiences to show the interrelations of people with their local environment, particularly in terms of the socio-economic importance of the local natural resources. The course will promote an understanding of why individuals and groups use natural resources sustainably and unsustainably. We will examine the roles of agriculture, conservation, ecotourism, non-timber

forest products (NTFP), fisheries, off-farm labour, extractive activities, and migration in the socioeconomic well-being of residents of the region. In doing so, we will probe the tensions between conservation and livelihood strategies and will explore an array of management and institutional arrangements used to address these tensions.

Assessments

Assessment Task	Value (%)	Due Date
Critical Article Review	5	Rotating
Fieldwork Notes	15	11, 16, 28 February
FEW: Market Production and Biodiversity	20	1 March
Reflection Paper	10	7 March
Major Research Paper	15	28 March
Urban Trail Assignment	15	7 April
Final Exam	20	13 April
Total	100	

Critical Article Review – 5%

Rotating Due Dates: Topics include *Indigenous Knowledge, Knowledge and Power, Nature, and Sumak Kawsay* (see Course Content table for more information on these topics).

You are asked to select a topic and write an article/chapter review comparing and contrasting the ideas associated with that topic. The aim of the assignment is to:

- Demonstrate your ability to synthesize material within the context of the course;
- Identify the main issues raised;
- Give a clear, succinct account of those issues; and
- Present a reasoned judgment regarding the soundness of the views or arguments presented by the author.

The review should not be a summary of the article/chapter. Instead, it should state what the author sets out to do and assess how well the author achieves that goal. Some questions to keep in mind while reading the article/chapter include:

- Objectives: what does the article/chapter set out to do?
- Theory: is there an explicit theoretical framework? If not, are there important theoretical assumptions?
- Argument: what are the central arguments of the article/chapter?
- Style: how clear is the author's language/style/expression?
- Conclusion: is the author successful with their project?

You will be asked to sign up for a topic during the first day of class, and you are expected to be prepared to submit your review on the date the topic is presented in class. Late submissions for this assignment will not be accepted.

Assignment Requirement	Marks Assigned
Critical assessment of the key arguments, concepts, and analytical approaches of the week's readings is provided (not a summary).	4
Assignment is clearly organized, well presented, and without spelling and/or grammar mistakes.	1

Fieldwork Notes – 3 x 5% = 15%

Due Dates: 11 February, 16 February, 28 February, 2017.

During the semester, you will have the opportunity to visit three markets, including a highland market, a lowland market, and an agriculturalist market. For your field exercise (FEX), you are asked to practice your ethnographic research methods, including, but not limited to observation, participant-observation, and informal interviewing, in order to collect quantitative and qualitative data that will help you measure differing agricultural patterns and practices, as well as food-plant and/or crop diversity within the Andean-Amazonian ecotones. While visiting the various markets, questions you may wish to consider include:

- How many different types of food plants are represented?
- What food plants and/or crops are available? Which are most plentiful?
- Which food plants/crops are most important, and why?
- Why are certain crops preferred?
- Are some food plants/crops seasonal?
- If not locally grown, where do available food plants/crops come from?
- What do various food plants/crops cost? Are prices seasonal?
- Are other non-food plants available? What are their uses?
- Are other products available?

You are strongly encouraged to pursue several lines of questioning during your data collection stages in order to have enough material from which to provide a rich analysis of the varying market patterns and practices.

You are asked to keep field notes as a record of your market fieldwork experiences. These notes will provide a key data source for your FEX group assignments. Your field notes should document, critically and reflectively, your fieldwork experiences. They should outline and summarize your fieldwork data collection and your observations, as well as the development of your ideas and thoughts in relation to the topic of agricultural production and biodiversity, evaluated through market visits. Your final submission must include evidence of observation, recording, evaluation, and reflection for each market visit.

To encourage reflective writing, you should aim to spend some time while in the markets critically reflecting on your learning experiences during the field exercise. Think about how your field research and experiences may have influenced or challenged your preconceived ideas and opinions. While you are highly encouraged to express your feelings and thoughts non-academically for this assignment, a potential guideline for reflection suggests that you:

- Describe and summarize your learning experiences from the data collection
- Note your feelings and opinions about the research topic and your observations
- Evaluate the different information scenarios you encounter
- Explore your ideas and observations in relation to your academic reading
- Suggest new ideas and/or concepts, and re-examine your ideas in light of your experiences.

You are required to submit field notes after each market visit. While your market visits will be conducted in groups, you are required to submit individual field notes after each visit. Each set of field notes will be worth 5% of your final grade.

Assignment Requirement	Marks Assigned
Observations of all aspects of the physical setting, people present, and recordings of data such as quantitative data and/or qualitative data.	3
Evidence of reflection upon observations and data, including impressions, thoughts, and/or criticisms, and comparisons with previous visits and/or thoughts for future visits.	2

FEX: Markets as a Means of Measuring Agricultural Production and Biodiversity – 20%. Group Assignment.

Due Date: 1 March, 2017

During the semester, you will have the opportunity to visit three markets, including a highland market, a lowland market, and an agriculturalist market. For this field exercise, you will draw upon your field notes and relevant quantitative and qualitative data to help you measure differing agricultural patterns and practices, as well as food-plant and/or crop diversity within the Andean-Amazonian ecotones.

Working in groups of three people, your collective results will be presented in short-paper form, and you will be expected to have pursued a logical line of enquiry during your fieldwork visits that is demonstrated through the clear organization of your paper. In your conclusions, you are asked to reflect on the differences noted between the three markets, discuss potential implications for local communities, and link your observations and reflections to potential broad-scale issues impacting Andean-Amazonian populations, as demonstrated through a broad-based literature review. It is important for this report that you work together so that your final paper is coherent, logical, and nonrepetitive. Please ensure you allocate sufficient time before submission to review and edit your paper.

Additionally, each student is required to submit a personal reflection, indicating your growth during this exercise – What did you learn? How were you challenged intellectually? What would you do differently next time?

You are asked to confirm the topic of your paper in class on 22 February, and provide evidence of an initial literature review.

Assignment Requirement	Marks Assigned
Fieldwork data is clearly presented in an organized fashion.	4
Fieldwork data is analyzed, interpreted, and discussed in an insightful manner, and resulting conclusions are presented clearly.	6
Potential connections to broad-scale issues are explored demonstrating a good understanding of how agricultural production and biodiversity fit into the political ecology of the Andean-Amazonian region.	6
Assignment is clearly organized, well presented, and without spelling and/or grammar mistakes.	2
Referencing and bibliography are consistent and correctly formatted.	2

Reflection Paper: Mining – 10%

Due Date: 7 March, 2017.

Mining is the largest political ecology issue facing Peru today. For this reflection paper, you are asked to review and compare the experiences you have had with mining as part of this course, including the field excursions to Maras and Tintaya, the two required course readings (one popular, one academic), and the two films (one NGO based, one Indigenous led) explored in class. You are asked to make reference to all of these materials in your paper.

Reflection papers should communicate how experiences have shaped your understanding of class related materials; think about how your research and experiences may have influenced or challenged your preconceived ideas and opinions. Reflection papers can be personal and/or subjective, however, they must still be clearly organized and academic in nature. Some questions you may wish to consider include:

- Has the reading/film/experience challenged you socially, culturally, or emotionally?
- Has the reading/film/experience changed your way of thinking?
- Does the reading/film/experience leave you with any unanswered questions?
- How do the issues covered by these readings/films/experiences clarify or confuse your previous ideas?

Assignment Requirement	Marks Assigned
A solid understanding of the required materials is demonstrated (through evaluative measures, not merely as a summary of the source).	1
Evidence of conscientious reflection is apparent through a thoughtful analysis of the materials and your personal reflections of them.	3
Paper is clearly written, well organized, and bibliography is correctly formatted.	1

Major Research Paper: Outsider Impacts: Ecotourism in the Andes – 15%
Due Date: 28 March, 2017.

Our presence matters to the political ecology of the Amazonian-Andean ecoregion. For this major research paper, you are asked to choose one example from our ecotourism activities in the Andes (including class field excursions from Cusco, the Sacred Valley, or Wayqecha, from any of the core courses, Salt Mines excluded), explore how these types of activities can impact local populations and places socially and environmentally, and then compare your findings with those from the literature. Methods of data collection could include ethnography, participant-observation, and informal interviewing through respectful questioning of local guides, as well as a thorough literature review.

You are asked to confirm the topic of your paper no later than 23 March, 2017.

Assignment Requirement	Marks Assigned
Choice of ecotourism activity is relevant, and the resulting discussion of the social and environmental impacts is thorough and well researched.	6
Comparison with ecotourism literature reflects a good understanding of existing research and your contribution to it.	6
Assignment is clearly organized, well presented, and without spelling and/or grammar mistakes.	1
Referencing and bibliography are consistent and correctly formatted.	2

Urban Trail – 15%

Due Date: 7 April, 2017.

For this assignment, you will be undertaking a directed expedition in Pilcopata, exploring our unique developing landscape. The trail will introduce you to some of the ways in which we can ‘read’ a place or a landscape, and allow you to develop a deeper understanding of the working relationships that are built into these types of places.

As places are complex, and mean different things, to different people, at different times, you are asked to consider the political ecology embedded in each place, thinking about the roles of power and knowledge in each situation, who is involved in each landscape relationship, and how they are situated within the larger scale, be it regional, national, or international (or any combination).

While you are welcome to explore the trail in small groups (of no more than three per group), you will most certainly gain more from this exercise through individual immersion in the expedition. You are expected to take detailed notes of your observations at each place, including reflections for how these places reveal the **political ecology** of Pilcopata. Your assignment submissions can be creative, but you are strongly encouraged to reference the course readings to support your arguments. Please ensure all of the assignment requirements are met (see below).

Assignment Requirement	Marks Assigned
Evidence is provided indicating all stops on the urban trail were visited.	4
Competency with the analytic framework of political ecology is demonstrated.	3
A good understanding of the relationships between local, regional, national, and/or international political, economic and social factors, and connected environmental issues within the Andean-Amazonian region is demonstrated.	6
Assignment is clearly organized, well presented, and without spelling and/or grammar mistakes.	2

Final Exam – 20%
13 April, 2017.

The course will conclude with a closed-book written examination. You will be examined on learnings from field activities, classroom discussions, and course readings.

General Information

Participation: Active participation in all facets of the course is expected, to promote productive dialogue and hence, learning. This requires active thinking, or engagement, with all course materials. Part of the goal of a field course is to demonstrate concepts in action; thus, first-hand observations coincide with materials from readings and lectures. In this way, concepts and methods are better understood and applied to other situations. Students who are actively engaged and involved in discussions learn more and are better able to understand and incorporate course materials.

Readings: You are expected to have read all the required articles and book chapters. These will supplement information given in classes. Information from required readings and exercises will be part of the course assessments. All readings will be made available through a printed course reader. It is encouraged that ‘optional readings’ be reviewed by students.

Deadlines: for assignments are instated to promote equity among students and to allow faculty ample time to review and return assignments before others are due. As such, deadlines are firm and extensions will only be considered under extenuating circumstances. If you believe that you have been prevented from completing your work on time for reasons beyond your control (e.g. illness), make sure that you discuss this with faculty members as soon as possible, and certainly, before the assignment is due. Late assignments will incur a penalty of 10% per day. Plagiarism: Using the ideas and material of others without giving due credit, is cheating and will not be tolerated. A grade of zero will be assigned if anyone is caught cheating or aiding another person to cheat actively or passively (e.g., allowing someone to look at your exam). All assignments unless specifically stated should be individual pieces of work.

Grading Scheme

A 95 - 100%	B+ 86.00 - 89.99%	C+ 76.00 - 79.99%	D 60.00 - 69.99%
A- 90.00 – 94.99%	B 83.00 - 85.99%	C 73.00 - 75.99%	F 0 – 59.99%
	B- 80.00 - 82.99%	C- 70.00 - 72.99%	

Course Content:

Type- L: Lecture, D: Discussion, W: Workshop, FL: Field Lecture, FEX: Field Exercise

This is a reading-intensive course, and unless otherwise noted, all course readings are required. Some of the classes are in seminar format and operate primarily as reading groups do. It is therefore absolutely essential that you come to class prepared to discuss all readings assigned for that day.

Hrs: Type	Lecture Title and Description	Readings
0.5: L	Course Introduction: In this introduction, we will learn about some of the most important political ecological concerns in the Andean-Amazonian region.	
2: L, D	Indigenous Knowledge: In this class, we will begin to explore the importance of Indigenous Knowledge and Indigenous Knowledge Systems for natural resource management through a study of relational politics fundamental to Indigenous worldviews.	de la Cadena, 2015
2: W	FEX Introduction: For this workshop, we will discuss the various approaches we can take for the FEX market exercise, and work through scenarios to ensure all students are comfortable with, and excited for, the three FEX market visits required during the semester.	Wright et al, 2012
2: FEX	Biodiversity and Agriculture - Markets I: For our first market visit, we will explore the San Jeronimo Market in Cusco to observe food plant and crop biodiversity in a traditional highland market. Students should be observing patterns and market practices, and be respectfully asking questions of stand owners to collect data for FEX projects.	

Hrs: Type	Lecture Title and Description	Readings
2: FL	Inka Astronomy: During this visit to the Cucso Planetarium, we will gain a deeper appreciation of ancient Indigenous Knowledge of the stars, and how astronomy influenced agricultural and herding activities, hunting practices, and Inka worldviews. During this visit to the Cucso Planetarium, we will gain a deeper appreciation of ancient Indigenous Knowledge of the stars, and how astronomy influenced agricultural and herding activities, hunting practices, and Inka worldviews.	Optional: Urton, 1981
2: L, D	Knowledge and Power: The role of unequal power relations in constituting a politicized environment is a central theme in political ecology. In this class, we will identify how power and the diverse ways through which power is gained, legitimized, exercised and resisted by different actors in environmental resource governance and at multiple scales impacts environmental conflicts.	Blaser, 2013 Robbins, 2012
2: FEX	Biodiversity and Agriculture - Markets II: For our second market visit, we will explore the Quillabamba Market to continue learning about food plant and crop biodiversity, and to compare findings from a lowlands market environment with those from the highlands. Students should be observing patterns and market practices, and be respectfully asking questions of stand owners to collect data for FEX projects.	
6: FL	Indigenous Knowledge and Biodiversity: On this visit to the Potato Park, we will learn how agricultural biodiversity cultivation operates in the Andes, including how Indigenous Biocultural Heritage (IBCH) is prioritized in the Potato Park.	Garrett-Graddy - 2013
2: FL	Extraction: Mining I: We will visit the salt pans in Maras, and discuss how a community managed extraction site differs from other extractive industries.	
3: L, D	Extraction: Mining II: The Madre de Dios region of Peru is one of the most intensively mined areas in the Amazon, and serious social and environmental concerns are impacting the local peoples and the broader environment. In this class, we discuss the implications of mining in Amazonia, focusing on small-scale artisanal gold miners, as well as the broader political economy that drives international markets.	Gardner, 2012
2: FEX	Biodiversity and Agriculture - Markets III: For our final market visit, we will explore the Urubamba Agriculturalist Market to continue learning about food plant and crop biodiversity, and to compare findings from an agriculturalist market environment with those from the previous markets. Students should be observing patterns and market practices, and be respectfully asking questions of stand owners to collect data for FEX projects.	

Hrs: Type	Lecture Title and Description	Readings
4: FL	Agrarian Reform: In 1969, Peru underwent an Agrarian Reform, wherein 22 million acres of land were redistributed, allowing campesino and Indigenous peoples rightful legal access to productive agricultural land. For this excursion, we will visit a cacao and coffee plantation farmed by beneficiaries of the Reform, and learn how the shift from the hacienda system has allowed for the development of organic and artisanal coffee and cacao practices in the region.	Velasco, 1969
1: FL	Aquaculture: During this visit to a small-scale aquaculture project, we will learn about both the economic importance of localized aquacultural activities, as well as the potential for large-scale water contamination through unsustainable practices.	Campos-Silva and Peres, 2016
6 :FL	Mining III - Tintaya: We will visit the copper mining site of Tintaya to learn about this history of extraction in the Andes, and to witness the impacts on the people and the surrounding environment.	Nash, 1993
3: L, D, FL	Nature: In this class, we will challenge the narratives of nature as 'pristine', 'wild', or 'nonhuman', and discuss how Amazonia has evolved as a socio-natural landscape.	Cronon, 1996 Erickson, 2008
2: FL	Cattle: Pasture development is one of the leading drivers of deforestation in the Amazon, however, cattle rearing is often regarded as essential for local livelihoods. For this field lab, we will observe the impact of cattle at Wayqecha, and trace the political history of the concession upon local Quechua farmers.	Loker, 1993
4: D, FL	Coca Cultivation: During this visit to a local coca plantation, we will learn from a campesino farming family about the history, the economics, and the agronomy of coca cultivation in the Kosñipata Valley, as well as the challenges faced by campesinos working within the coca economy.	Salisbury and Fagan, 2011
4: FL	Nature Farms: We will join a senior ACCA naturalist on a nature-farms walk, where we will learn about the different plants used by local and Indigenous peoples in the Kosñipata Valley, and gain a greater appreciation for how Amazonia is a social nature.	Heckenberger et al, 2007
3: L, D, FL	Agroforestry: By visiting an experimental agroforestry project, we will learn how this practice has the potential to reduce deforestation, mitigate climate change, improve local soil fertility, enhance local biodiversity, while developing a productive economic alternative for local residents currently dependent on extractive practices.	Rice and Greenberg, 2000
2: L, D	Amarakaeri: We will be joined by the President of the RCA to learn about the various pressures facing the Reserve.	

Hrs: Type	Lecture Title and Description	Readings
2: FL	Terra Preta: Amazonian soils are typically nutrient poor, and when stripped of the vegetation cover, rapidly degrade. However, localized fertile patches can be found in the forest, and are presumed to be of anthropogenic origin. In this class, we will visit the station's bio-char facility, and learn how anthrosols can be made and utilized to improve soil fertility.	
0.5: FL	Extraction: Logging: We will briefly stop at a logging concession and discuss some of the social and environmental impacts of logging in Peru.	Wallace, 2013 UAC, 2014 Optional: Shepard et al, 2010
4: FLAB	Political Ecology of Pilcopata: For this field lab, we will embark on a directed expedition to Pilcopata to explore the political ecology of our unique developing landscape. We will observe how social, economic, and political factors influence and are influenced by environmental issues.	Roberts and Thanos, 2003
4: L, D, W	Road Ecology: After observing the roads throughout the Sacred Valley and the Kosñipata Valley, we will discuss how roads impact the local environment, and consider how other types of road systems might also be impacting the peoples and the places in the Andes-Amazon region. Sumak Kawsay: In this final class, we will think about how development in the Andes-Amazon region will look in the future, focusing on one possibility currently emerging from Andean Indigenous thought, which prioritizes the idea that a quality life is possible only within community, importantly, one that has been expanded to include nonhuman entities.	Caro et al, 2014 Hajek and Zanabria, 2015 Gudynas, 2011
65	Total Instructional Hours	

Course Readings:

- Blaser, M. (2013). Notes Towards a Political Ontology of 'Environmental' Conflicts. In L. Green (Ed.), *Contested Ecologies: Dialogues in the South on Nature and Knowledge*, (pp. 13-27). Cape Town: HRSC Press.
- Campos-Silva, J.V. and C.A. Peres. (2016). Community-based Management Induces Rapid Recovery of a High Value Tropical Freshwater Fishery. *Scientific Reports*, 6 (34745): 1-23.
- Caro, T., A. Dobson, A.J. Marshall, and C.A. Peres. (2014). Compromise Solutions Between Conservation and Road Building in the Tropics. *Current Biology*, 24(16): 722-725.
- Cronon, W. (1996). The Trouble with Wilderness; or, Getting Back to the Wrong Nature. In W. Cronon (Ed.), *Uncommon Ground: Rethinking the Human Place in Nature*, (pp. 69-90). New York, NY: W.W. Norton and Company, Inc.
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- Graddy, T.G. (2013). Regarding Biocultural Heritage: In Situ Political Ecology of Agricultural Biodiversity in the Peruvian Andes. *Agriculture and Human Values*, 30:587-604.
- Gudynas, E. (2011). Buen Vivir: Today's Tomorrow. *Development*, 54(4): 441-447.
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- Rice, R.A. and R. Greenberg. (2000). Cacao Cultivation and the Conservation of Biological Diversity. *Ambio*, 29(3): 167-173.
- Robbins, P. (2012). *Political Ecology: A Critical Introduction*, 2nd Edition. Hoboken, NJ: John Wiley and Sons.
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- Salisbury, D.S., and C. Fagan. (2011). Coca and Conservation: Cultivation, Eradication, and Trafficking in the Amazon Borderlands. *GeoJournal*, 78(1): 41-60.
- Shepard, G.H. Jr., K. Rumenhoeller, J. Ohl-Schacherer, and D.W. Yu. (2010). Trouble in Paradise: Indigenous Populations, Anthropological Policies, and Biodiversity Conservation in Manu National Park, Peru. *Journal of Sustainable Forestry*, 29:252-301.
- Upper Amazon Conservancy. (2014). *Murder in the Peruvian Rainforest*. Upper Amazon Conservancy and ProPurús Occasional Press Release.
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