THE SCHOOL FOR FIELD STUDIES

# Political and Social Dimensions of Conservation
# SFS 3081

**Syllabus**

The School for Field Studies (SFS)
Center for Climate Studies (CCS)
Puerto Natales, Chile

This syllabus may develop or change over time based on local conditions, learning opportunities, and faculty expertise. Course content may vary from semester to semester.


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## COURSE CONTENT SUBJECT TO CHANGE

***Please note that this is a copy of a recent syllabus. A final syllabus will be provided to students on the first day of academic programming.***

SFS programs are different from other travel or study abroad programs. Each iteration of a program is unique and often cannot be implemented exactly as planned for a variety of reasons. There are factors which, although monitored closely, are beyond our control. For example:

- Changes in access to or expiration or change in terms of permits to the highly regulated and sensitive environments in which we work;
- Changes in social/political conditions or tenuous weather situations/natural disasters may require changes to sites or plans, often with little notice;
- Some aspects of programs depend on the current faculty team as well as the goodwill and generosity of individuals, communities, and institutions which lend support.

Please be advised that these or other variables may require changes before or during the program. Part of the SFS experience is adapting to changing conditions and overcoming the obstacles that they may present. In other words, the elephants are not always where we want them to be, so be flexible!

## Course Overview

This course explores the decision-making apparatus within Chile and Argentina and delves into the complexity of why humans decide to conserve or not; which places/things we choose to conserve or not, what is the cost (in human capital, economic capital, and to ecosystem services) when we choose to conserve or not, and who ultimately are the power brokers of the conservation movement in Patagonia (corporations, government entities, NGOs, foreigners, etc.). And by extension, how do the Chilean conservation management objectives and operations map onto the broader world stage. This is a very transformative time in Chilean conservation management. The ministries are under re-organization; those that hold political influence now may not be the ones in office next year. Many media outlets such as CNN, the New York Times, and The Economist have had recent profiles on the influence of foreign private entities largely shaping the conservation scene in Chile. This course will allow stimulating debate and exploration and send students home with an unprecedented insight.

While the course will expose students to broad conservation issues that face the entire planet, we will ground these topics in case studies from the diverse locations we visit. Students will learn concepts in conservation both theoretical and practical from lectures and field trips. Throughout the semester, students will be exposed to a wide range of conservation practices, policies and critiques through discussions, direct observations, and assessments of various conservation initiatives that are being implemented and co-managed by diverse stakeholders including: local government agencies, international governments and investors, private companies, local and international organizations, and researchers. The course will provide students with a background to engage in a nuanced discussion of conservation at multiple scales. Students will gain first-hand information about different conservation challenges and approaches from diverse perspectives such as decision makers; park rangers; educators; and conservation activists who are active in the conservation field in both Chile and Argentina.

## Learning Objectives

1. Identify and understand the political processes necessary for conservation of species and/or spaces in Patagonia, with emphasis on the Chilean system, and examples from Argentina.
2. Connect historical land use practices, indigenous territories, natural boundaries and political events to current conservation approaches in the region.
3. Compare the Chilean conservation model—from national parks to privately owned reserves—to approaches elsewhere in the world.
4. Investigate challenges and opportunities in terrestrial, coastal, and marine environments including balancing economic development and industrial opportunities with the protection of natural resources.
5. Understand how variables such as geography, topography, distribution of natural resources and clustered population densities shape how conservation decisionmaking plays out in Chile.
6. Articulate how power is differentially distributed across the sociopolitical landscape, and how this in turn manifests in present day conservation policy and spaces.

## Thematic Components and Research Direction

The overarching question we address in the CCS curriculum is:

***How can Chile respond to local and global challenges while securing the functionality of its natural and human systems?***

## Assessment

The evaluation breakdown for the course is as follows:

| Assessment Item | Value (%) |
|---|---|
| Participation | 10 |
| Quizzes | 15 |
| Research proposal | 30 |
| FEX | 20 |
| Synthesis Exam | 25 |
| **TOTAL** | **100** |

**Participation and topic discussions (10%)**: All students should be prepared for each academic session. This implies reading the materials for each session with enough detail to be able to ask relevant questions; and to participate in analytical discussions about the key issues. Active participation during classes, discussions, assignments and hikes is expected.

**Quizzes (15%)**: Three short quizzes will be used to evaluate the field lectures.

**Research Proposal (30%):** Detailed instruction sheet will be provided in class outlining the proposal requirements. The objective of this assessment is to understand the process of inquiry by way of creating a research proposal– you set the context, demonstrate that you can present a relevant literature review, pick a clear research question, plan out a viable methodology, and outline how gathering this data and analyzing it will have implications on furthering knowledge and/or practically setting up for a positive community intervention addressing a need related to conservation.

For this project you will be working as a team with two or three other students. This assignment requires each student group to write a grant proposal to submit for funding for the project implementation. Each group will choose from one of the regional conservation sites and/or issues (e.g. invasive beaver populations and control, protection of marine environments from negative impacts of the salmon aquaculture industry, hydroelectric projects and riverine habitats) where there are ongoing conservation efforts to conserve a habitat and/or threatened species populations. The proposal shall include a detailed physical description of the area, a list of conservation objectives (saving a species, preventing habitat degradation etc.), a plan to implement measures that fulfill the objectives, a method to monitor and evaluate the project implementation and its outcomes, and a plan to involve stakeholders. Incorporation of relevant academic literature is essential to this process. The primary goal is for you to understand the processes of grant proposal writing as well as to learn how to coordinate the many kinds of actors and conditions that conservationists often face when implementing a plan or writing a grant proposal. Teamwork will be essential for this project. Each group will make a 20 minute oral and visual presentation to their classmates about their respective conservation project.

**FEX: Participant observation of tourist behavior (20%):** Students gain experience in the methodology of participant observation during the boat expedition. Student divide into 3-4 groups to develop questions related to tourist behaviors and impact on conservation outcomes. As individuals, students collect data through observations. Groups share data, but individual students synthesize these findings in a written report that ties the FEX observations to broader course themes.

**Synthesis Exam (25%)**: An exam will be given based on material covered in lectures, readings, and field experiences, giving students the opportunity to synthesize course content.

Grade corrections in any of the above items should be requested in writing at least 24 hours after assignments are returned. No corrections will be considered afterwards.

## Grading Scheme

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| A | 95.00 - 100.00% | 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 | 0.00 - 59.99% |
| | | B- | 80.00 - 82.99% | C- | 70.00 - 72.99% | | |

## General Reminders

**Plagiarism** – using the ideas or material of others without giving due credit – is cheating and will not be tolerated. A grade of zero will be assigned for anyone caught cheating or aiding another person to cheat either actively or passively.

**Deadlines** – Deadlines for written and oral 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; extensions will only be considered under extreme circumstances. Late assignments will incur a penalty of 10% of your grade for each day you are late. After two days past the deadline assignments will not be accepted anymore. Assignments will be handed back to students after a one-week grading period.

**Participation** – Since we offer a program that is likely more intensive than you might be used to at your home institution, missing even one lecture can have a proportionally greater effect on your final grade simply because there is little room to make up for lost time. Participation in all components of the course is mandatory, it is important that you are prompt for all activities, bring the necessary equipment for field exercises and class activities, and simply get involved.

## Course Content

**Type: D**: Discussion, **FL:** Field Lecture, **GL:** Guest Lecture, **L**: Lecture, **O**: Orientation

| *No* | *Title and outline* | *Type* | *Time (hrs)* | *Required Readings* |
|---|---|---|---|---|

| *No* | *Title and outline* | *Type* | *Time (hrs)* | *Required Readings* |
|---|---|---|---|---|
| PSDC 1 | **Commitment to diversity, inclusion and equity – making the classroom a place that enhances all students' learning.** Orientation, discussion, and exploration of equity in different learning styles, perspectives, and lived experiences. (Shared class session with Earth Systems and Climate.) | O | 2.5 | (Crosby 2018, hooks 1994, Barnes, Marín-Spiotta and Morris 2018, Prescod-Weinstein 2017) |
| PSDC 2 | **Course introduction and Making Social Science Matter: Processes of Social Inquiry.** We are not mimicking natural sciences, but developing interpretations, explanations and value-laden recommendations. | L | 1.5 | |
| PSDC 3 | **Environmental History of Chile** Eras of political and social change and their effects on the Chilean environment | L | 2.0 | |
| PSDC 4 | **Patagonia: The Iconic Landscape** The wilderness concept, conservation and preservation at the end of the world | L | 1.0 | (Inostroza, Zasada and König 2016, Cronon 1996a, Cronon 1996b) |
| PSDC 5 | **Economic development and environmental protection in Chile** How neoliberal economic policies have shaped Chilean development, specific impacts in Patagonia, comparison with alternative models, esp. in Latin America | L | 1.5 | (Charmaine 2012) |
| PSDC 6 | **The Political Ecology of Resource Extraction** The role of extractive industries in Chile, impacts on the environment, economy, and livelihoods, multi-stakeholder power dynamics | L | 1.0 | (Bustos, Folchi and Fragkou 2017, Outeiro, Villasante and Oyarzo 2018) |
| PSDC 7 | **Introduction to the Patagonian conservation model**: History, establishment of protected areas, governance, "green grabs", Argentinian and Chilean approaches | L | 1.5 | (Golluscio et al. 2010, Holmes 2014) Optional: (Hora 2018) |
| Multi-day trip to Torres del Paine National Park | | | | |
| PSDC 8 | **History of Torres del Paine National Park** Establishment, management priorities, conservation issues; climate change impacts and issue prioritization in the park | FL | 1.5 | (Petit et al. 2018) |

| *No* | *Title and outline* | *Type* | *Time (hrs)* | *Required Readings* |
|---|---|---|---|---|
| PSDC 9 | **Sustainable tourism and Conservation in National Parks**<br>Trade-offs inherent in ecotourism, with a focus on the remote nature of TDP and climate impacts of tourist visitations | FL | 1.0 | |
| PSDC 10 | **Geographical imagination and the tourist gaze in Patagonia and its effect on conservation outcomes**<br>What are tourists' expectations of TDP? How does park management cater to those expectations (or not)? What effect does this expectation have on the TDP ecosystem? | L | 1.5 | Optional: (Lichtenstein and Carmanchahi 2012) |
| Multi-day boat expedition: fjords, Strait of Magellan, Cape Horn, and penguin colony | | | | |
| PSDC 11 | **Valuating nature: Ecosystem services and the creation of conservation priorities and policies**<br>How are ecosystems valued for the multiple services they provide human communities? What happens when human populations are far from ecosystems providing services? How are cultural services valued compared to provisioning or regulating services? What role to ES have in climate debates and discourses? | L | 1.0 | (Barrena et al. 2014, Martínez Pastur et al. 2016)<br><br>Optional: (Zagarola, Anderson and Veteto 2014) |
| PSDC 12 | **The human–shaped landscape**<br>Biocultural conservation, cultural productions of nature, and traditional ecological knowledge | L | 1.5 | (Aigo and Ladio 2016, Niklitschek et al. 2013, Rozzi et al. 2012a, Chapman 2010) |
| PSDC 13 | **Marine and coastal conservation in Chile and the Region:** issues, movements and policies | L | 1.5 | (Carlos et al. 2014, Jose Luis, Humberto and Laura 2010) |
| PSDC 14 | **Citizen science and its role in conservation research**: opportunities and limitations | L | 1.5 | |
| PSDC 15 | **Social inquiry methods: Participant observation of tourist behavior** | FEX | 4.0 | |
| PSDC 16 | **Invasive species policies and politics** | L | 1.5 | (Aizen and Smith-Ramirez 2019) |
| Mid-semester break | | | | |

| No | Title and outline | Type | Time (hrs) | Required Readings |
|---|---|---|---|---|
| PSDC 17 | **Environmental Governance and Conservation**<br>Land use histories and trajectories in Patagonia; oppression and autonomy | L | 1.5 | (Armesto et al. 2010) |
| PSDC 18 | **Research proposal**<br>Introduction and guidelines, facilitated proposal development | D | 2.0 | |
| PSDC 19 | **Scaling environmental governance**<br>International governance, Patagonian regional policies, land tenure and territories; local regulations and conservation | L | 1.5 | |
| PSDC 20 | **Climate change governance**<br>Mitigation, adaptation, and international agreements; discourse and deliverables | L | 1.0 | (Team and Manderson 2011) |
| PSDC 21 | **Climate change governance discourse analysis**<br>Exercise tracing the discourse of climate change in multiple outlets including media, academia and social media. Students gain skills in discourse analysis methodology. | D | 2.5 | (Backstrand and Lovbrand 2006) |
| Multi-day expedition to Perito Moreno Glacier and Glaciarium Museum in El Calafate, Argentina | | | | |
| PSDC 22 | **World Heritage Site Designations**<br>What heritage is worth protecting? Critical evaluation of the UNESCO World Heritage Program; application of cultural ecosystem services concept | FL | 1.0 | (Rasmussen 2018) |
| PSDC 23 | **Conservation at multiple scales**<br>"Big conservation", local and regional organizations and movements; triage and priorities for terrestrial and marine conservation; governmental ministries in Chile and Argentina | FL | 1.0 | (Rozzi et al. 2012b) |
| PSDC 24 | **Glaciers and mining**<br>Use of glacial harvesting for freshwater source in mining operations, hazards related to these operations | L | 1.5 | "Watershed" documentary film |
| PSDC 25 | **Proposal presentations** | D | **2.5** | |

| *No* | *Title and outline* | *Type* | *Time (hrs)* | *Required Readings* |
|---|---|---|---|---|
| PSDC 26 | **Patagonia Sin Represas: the political ecology of hydroelectricity in Chile**<br>Social movements, foreign investment energy projects, renewable energy trade-offs in the face of climate change | L | 1.0 | (Silva 2016) |
| PSDC 27 | **Chilean climate commitments:** Expected benefits of meeting climate goals and commitments (1.5°C) across the globe for biodiversity, ecosystem services, habitats, and human well-being | L | **2.0** | |
| PSDC 28 | **Climate solutions**: natural infrastructure. How nature contributes to both climate mitigation and adaptation, including ocean contributions to climate mitigation, adaptation, and solutions<br>**Climate solutions**: students report back | D | **3.0** | |
| PSDC 29 | **Climate grief and ecological grief**<br>Emotional and mental health costs of climate change and environmental awareness; coping strategies<br>(Shared class session with Earth Systems and Climate) | D | **1.5** | |
| Multi-day trip to Puerto Montt region: La Arena; Osorno Volcano; and Chiloé Island | | | | |
| PSDC 30 | **Smallscale fisheries and animal husbandry**<br>Livelihoods shifts and challenges, large industry impacts | L | 1.0 | (Cid Aguayo and Barriga 2016, María Amalia et al. 2018, Salgado et al. 2015) |
| PSDC 31 | **Water rights, distribution and justice** | L | 1.0 | (Nahuelhual et al. 2018, Valdés-Pineda et al. 2014) |
| PSDC 32 | **Food security, sovereignty, and politics** | L | 1.0 | https://foodtank.com/news/2019/02/opinion-green-new-deal-must-transform-our-food-system-to-save-our-climate/ |
| PSDC 33 | **Synthesis** | D | 2.0 | |
| PSDC 34 | **Final assessment: Synthesis exam** | | 2.0 | |
| | **Total contact hours** | | **55** | |

## Reading List


Aigo, J. & A. H. Ladio (2016) Traditional Mapuche ecological knowledge in Patagonia, Argentina: Fishes and other living beings inhabiting continental waters, as a reflection of processes of change. *Journal of Ethnobiology and Ethnomedicine,* 12**,** 56-a.

Aizen, M. A., C. Smith-Ramírez, et al. (2019). "Coordinated species importation policies are needed to reduce serious invasions globally: The case of alien bumblebees in South America." Journal of Applied Ecology 56(1): 100-106.

Armesto, J. J., D. Manuschevich, A. Mora, C. Smith-Ramirez, R. Rozzi, A. M. Abarzúa & P. A. Marquet (2010) From the Holocene to the Anthropocene: A historical framework for land cover change in southwestern South America in the past 15,000 years. *Land Use Policy,* 27**,** 148-160.

Backstrand, K. & E. Lovbrand (2006) Planting Trees to Mitigate Climate Change: Contested Discourses of Ecological Modernization, Green Governmentality and Civic Environmentalism. *Global Environmental Politics,* 6**,** 50-75.

Barnes, R. T., E. Marín-Spiotta & A. R. Morris. 2018. Building community to advance women in the geosciences through the Earth Science Women's Network. In *Women and Geology: Who Are We, Where Have We Come From, and Where Are We Going?,* ed. B. A. Johnson, 121-129. Boulder, Colorado: Geological Society of America.

Barrena, J., L. Nahuelhual, A. Báez, I. Schiappacasse & C. Cerda (2014) Valuing cultural ecosystem services: Agricultural heritage in Chiloé island, southern Chile. *Ecosystem Services,* 7**,** 66-75.

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

Carlos, M., J. N. Edwin, C. Susana, D. Manuel, A. D. Patricio, F. Mónica & M. Francisca (2014) Challenges for coastal zoning and sustainable development in the northern Patagonian fjords (Aysén, Chile)/Desafíos para la zonificación del borde costero y desarrollo sostenible en los fiordos norpatagónicos (Aysén, Chile). *Latin American Journal of Aquatic Research,* 42**,** 18.

Chapman, A. 2010. *European encounters with the Yamana people of Cape Horn, before and after Darwin*. New York: Cambridge University Press.

Charmaine, J. (2012) Ecophilanthropy, Neoliberal Conservation, and the Transformation of Chilean Patagonia's Chacabuco Valley. *Oceania,* 82**,** 250-263.

Cid Aguayo, B. E. & J. Barriga (2016) Behind certification and regulatory processes: Contributions to a political history of the Chilean salmon farming. *Global Environmental Change,* 39**,** 81-90.

Cronon, W. (1996a) The Trouble with Wilderness: A Response. *Environmental History,* 1**,** 47-55.

--- (1996b) The Trouble with Wilderness; Or, Getting Back to the Wrong Nature. *Environmental History,* 1**,** 7-28.

Crosby, J. R. 2018. What I Wish My Professor Knew. ed. Stanford_First_Generation_Low_Income_Partnership, https://www.youtube.com/watch?v=8pmJNuxyvpA.

Golluscio, L. A., R. A. Golluscio, M. E. Román, A. Cesa, D. Rodano, H. Bottaro, M. I. Nieto & A. Betelú (2010) Aboriginal settlements of arid Patagonia: Preserving bio- or sociodiversity? The case of the Mapuche pastoral Cushamen Reserve. *Journal of Arid Environments,* 74**,** 1329-1339.

Holmes, G. (2014) What is a land grab? Exploring green grabs, conservation, and private protected areas in southern Chile (- 2014/07/04). *The Journal of Peasant Studies,* 41**,** 547-567.

hooks, b. 1994. Engaged Pedagogy. In *Teaching to Trangress: Education as the Practice of Freedom*, 13-22. New York, NY: Routledge.

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Inostroza, L., I. Zasada & H. J. König (2016) Last of the wild revisited: assessing spatial patterns of human impact on landscapes in Southern Patagonia, Chile. *Regional Environmental Change,* 16**,** 2071-2085.

Jose Luis, I., E. G. Humberto & N. Laura (2010) Patagonian Fjord Ecosystems in Southern Chile as a Highly Vulnerable Region: Problems and Needs. *Ambio,* 39**,** 463-466.

Lichtenstein, G. & P. D. Carmanchahi (2012) Guanaco management by pastoralists in the Southern Andes. *Pastoralism,* 2**,** 1-16.

María Amalia, M., B.-W. Gustavo, N. Laura & S. Gonzalo (2018) Livelihood trajectories in the Chilean Patagonian region: an ethnographic approach to coastal and marine socioecological change. *Regional Environmental Change***,** 1-13.

Martínez Pastur, G., P. L. Peri, M. V. Lencinas, M. García-Llorente & B. Martín-López (2016) Spatial patterns of cultural ecosystem services provision in Southern Patagonia. *Landscape Ecology,* 31**,** 383-399.

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Rozzi, R., J. A. Juan, R. G. Julio, M. Francisca, E. L. Gene, B. A. Christopher, P. Alexandria, P. M. Kelli, H. Eugene, O. M. Andres, H. K. James, W. Mary, J. Kurt, G. J. Clive, J. B. Callicott & T. K. A. Mary (2012b) Integrating Ecology and Environmental Ethics: Earth Stewardship in the Southern End of the Americas. *Bioscience,* 62**,** 226-236.

Salgado, H., J. Bailey, R. Tiller & J. Ellis (2015) Stakeholder perceptions of the impacts from salmon aquaculture in the Chilean Patagonia. *Ocean & Coastal Management,* 118**,** 189-204.

Silva, E. (2016) Patagonia, without Dams! Lessons of a David vs. Goliath campaign. *The Extractive Industries and Society,* 3**,** 947-957.

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Zagarola, J.-P. A., C. B. Anderson & J. R. Veteto (2014) Perceiving Patagonia: An Assessment of Social Values and Perspectives Regarding Watershed Ecosystem Services and Management in Southern South America. *Environmental Management,* 53**,** 769-782.