



S F S THE SCHOOL
FOR FIELD STUDIES

Political and Social Dimensions of Conservation

SFS 3081

Syllabus
4 credits

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, this is a field program, and the field can change.

Course Overview

This is a very transformative time in Chilean conservation management. During 2022, the Chilean Constitutional Convention developed a draft new constitution, which includes a serious focus on environmental and natural resource conservation. On September 4th, 2022 the plebiscite decided to reject it. So, many local researchers, and practitioners in different conservation areas are concerned about the implications of it an effective conservation process. In another hand, 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 explores the decision-making apparatus within Chile and delves into the complexity of what societies decide to conserve, why societies decide to conserve or not, which places/things we choose to conserve or not, what the cost is (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 course will stimulate debate and exploration and send students home with 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 in Patagonia. 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 Chile.

Learning Objectives

1. Identify and understand the political processes necessary for the conservation of biodiversity and/or territories in Patagonia, with emphasis on the Chilean system, and examples of the visited locations.
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 natural resource protection.
5. Understand how variables such as geography, topography, distribution of natural resources, and clustered population densities shape how conservation decision-making 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 large-scale questions we address in the PSDC curriculum are:

- When we conserve biodiversity and landscapes, what is it that we are conserving?
- If Patagonia is considered one of the most pristine places on the planet, why are we

conserving, and for what ends?

- How can Chile respond to local and global challenges while securing the functionality of its natural and human systems?
- Given the political and social systems of Chile and Patagonia, is it possible to conserve biodiversity and landscapes while also facing the challenges of climate change?

Assessment

The evaluation breakdown for the course is as follows:

Assessment Item	Value (%)
Participation	10
Field Exercise 1	10
Field Exercise 2	10
Field Notebook	20
Quizzes	15
In-class activities	15
Final Exam	20
TOTAL	100

Participation (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 participate in analytical discussions about the key issues. Active participation during classes, discussions, assignments, and hikes is expected.

FEX1: Knowing tourism and conservation initiatives by social science methodologies (10%)

This FEX will have students learn how to evaluate written content develop interview protocols and use those protocols to conduct interviews. These methods will be useful in querying and understanding the main reasons for conservation in Patagonia. This FEX has two parts.

- The first part is textual analysis, which is necessary for developing an interview protocol. In this part, students will review the public-facing information about different conservation and tourism initiatives in Patagonia. They will use these sources to develop a series of interview protocols that examine the main reasons for conserving and developing tourism in Patagonia.
- The second is conducting a series of interviews with conservation and tourism managers in Patagonia. The students will apply the protocol they developed in the first part of the FEX. Through this process, they can learn about the advantages provided by interviews in obtaining information that cannot be had through other data collection methods.

FEX2: Monitoring reforestation efforts in Patagonia (10%)

This FEX will have students learn about public services efforts for reforestation in Patagonia and will learn methodologies for monitoring these efforts. This FEX has two parts.

- In the first part, the students will learn from the reforestation managers about their work in the field, how to take the monitoring data and the statistical analyzes to be developed in the report.
- In the second part, the students will be divided into groups, and they will visit the reforestation nuclei they have to monitor, collect data, and additionally remove the shelters for reducing the presence of plastics in conservation areas of Patagonia.

Field Notebook (20%)

Each location we travel to provides a context for observation and learning. As we progress through the semester, the class themes will become easier to see in the landscape, and the things we see in a new location deepen the understandings we made in prior spaces. A field notebook is a physical means of capturing the observations and insights that you gain in the field over the course of the semester.

You should make personal observations in every field outing – apart from any formal academic activities (e.g., FEX, field lectures) that take place there. These personal observations can form the basis of entries written up in a designated field notebook. You can choose how you wish to develop your field notebook entries to best match your own observational and writing style. NOTE: the field notebook is a shared assignment across the core courses. It will be handed in twice during the semester: before the Midsemester Break and after the Final Exam. Keep in mind the following grading rubric:

- **Completeness (2%):** Your field notebook must have at least one entry per day in the field, and you must have at least one entry for each class at each hand-in. In addition, each individual entry must include the location, the date and time, the course to which the entry is directed, and – of course – the observation you made at the indicated date and time.
- **Coherence (5%):** Each entry should be coherent in the way it presents information. This includes legibility, clear argumentation, a connection of ideas, and concept development. If figures and drawings are included, coherence would mean placing them in their observed context and indicating how they connect with (or stand independent from) any accompanying writing.
- **Correctness (8%):** Each entry should connect with topics covered during lectures, discussions, readings, etc. In addition, the specifics contained in the entry must be factually correct. There is no requirement for formal citations.
- **Connection (5%):** Each entry should connect the field observation with something external to the location – ideally connecting to **themes** being built and discussed across your field notebook entries. Examples of themes: history of fire, the effects of wind, the impacts of conservation initiatives, and even comparisons with familiar landscapes back home. The key is to expand your entries beyond just the lectures or activities of the associated field trip and write your entries with the idea of using them to explore concepts and ideas throughout the semester, instead of having a set of disconnected entries.

Quizzes (15%)

Three short quizzes in the Center will be used to evaluate the field lectures.

In-class activities (15%)

All students should be part of activities held in classes or field trips. Some of these activities are student led-discussion, presentation of assigned papers, finding information relative to different topics, and filling a shared database for the entire course, observing specific elements of the human landscape, among others.

Synthesis Exam (20%)

A final, synthesis exam will be given based on material covered in lectures, readings, and field experiences, giving students the opportunity to synthesize course content. Students will have access to all their class materials for reference.

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.

A Note on Class Readings - Many of the classes have two or more papers associated with them. In these cases, different readings will be assigned to different reading groups. The members for each group will be expected to have read the key portions of their article for the upcoming class, so as to help lead the discussion on the topics covered in their paper. Many research articles use data collection and analysis methodologies that are unfamiliar, and each reading group will be advised about the sections they will be responsible for reading in their papers.

Course Content

D: Discussion; **FL:** Field Lecture; **L:** Lectures; **FEX:** Field Exercise; **GL:** Guest Lecture; **O:** Orientation

*Not all readings are required. See above note on class readings.

No	Title and outline	Type	Hours	Readings
1	Course Introduction Commitment to diversity, inclusion, and equity – making the classroom a place that enhances all students’ learning.	O	1.0	
2	a. Environmental History of Chile Current political system, the main eras of political and social change, their effects on the Chilean environment.	L; D	3.0	Maillet and Carrasco, 2021

No	Title and outline	Type	Hours	Readings
	<p>b. Economic development and environmental protection in Chile How neoliberal economic policies have shaped Chilean development, specific impacts in Patagonia</p>			
3	<p>a. Introduction to the Patagonian conservation model Structure conservation governance, the establishment of public protected areas, private areas and its implications</p> <p>b. The Political Ecology of Resource Extraction The role of extractive industries in Patagonia, impacts on the environment, economy, and livelihoods, and multi-stakeholder power dynamics by revising case studies in Patagonia</p> <p>c. Patagonia the iconic landscape The wilderness concept, conservation, and preservation at the end of the world</p>	L; D	4.0	<p>Bustos, Folchi, and Fragkou 2017</p> <p>Silva 2016</p> <p>Inostroza, Zasada, and König 2016</p> <p>Blair, Bosak, and Gale 2019</p> <p>Anbleyth-Evans et al. 2020</p> <p>Cronon, William 1995</p>
4	<p>a. Making Social Science Matter Processes of Social Inquiry. We are not mimicking natural sciences, but developing interpretations, explanations, and value-laden recommendations. Presenting the SES (Socioecological systems) as a new framework for the biocentrism paradigm</p> <p>b. The human-shaped landscape Changes in the Patagonian ecosystems (marine, terrestrial, freshwater and interface), main drivers of change, and the implications of resource extraction in Patagonia.</p> <p>c. History of Torres del Paine National Park creation, management priorities, conservation issues; climate change impacts and issue prioritization in the park</p> <p>d. Torres del Paine Biosphere reserve Criteria for Biosphere reserve designation. What is the relation between Torres del Paine National Park and Biosphere reserve from a socioecological perspective?</p>	L; D	4.0	Cronon 1996
5	<p>Sustainable tourism and Conservation in National Parks Day trek to Torres del Paine National Park. Discuss trade-offs inherent in ecotourism, with a focus on the remote nature of TDP and climate impacts of tourist visitations</p>	FL	1.0	Fernández Génova et al. 2020
6	<p>a. Environmental Governance and Conservation Present the Anthropocene as a paradigm that has changed Patagonia and its implications on conservation from a philosophical perspective</p>	L; FEX	4.0	Armesto et al. 2010

No	Title and outline	Type	Hours	Readings
	b. FEX 1, part 1: Prep the interview to main stakeholders of tourism and conservation in Punta Arenas multi-day trip			
7	Conservation at multiple scales "Big conservation" through Biosphere Reserve initiatives and local conservation by private owners, international support; triage and priorities for conservation; private and public efforts	FL	1.0	
8	Valuating nature: Ecosystem services and the creation of conservation priorities and policies 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?	FL	1.0	Costanza et al. 2017 Brain et al. 2020 Martínez Pastur et al. 2016 Iriarte, González, and Nahuelhual 2010
9	a. Water rights, distribution, and justice Case studies of how the current conservation governance in Chile requires a new model and framework. b. Water crisis in Chile From extractive systems to present. How water ecosystems are being managed and conserved in Chile with a critical perspective of SES c. Sustainable management and conservation of wetlands 1 Relevance of Patagonian wetlands, threats, and conservation efforts	L; D	4.0	Borgias 2018 Zagarola, Anderson, and Veteto 2014) Nahuelhual et al. 2018 Retamal et al. 2015 A. Figueroa, Contreras, and Saavedra 2018
10	Private initiatives for fauna conservation How private initiatives emerge and how they articulate efforts for a landscape conservation scale	FL	1.0	
11	Biocultural conservation in Patagonia Role of habitat-habits and in-habitants for conserving	FL	1.0	Rozzi 2013
12	FEX 1, part 2 Interview Punta Arenas stakeholders	FEX	1.5	
13	Sustainable management and conservation of wetlands 2 Observation of wetlands as the most productive ecosystems and their role in Patagonian conservation	FL	1.0	CBD Technical Series No. 22 Gitay, Finlayson, and Davidson 2011
14	a. Driver of change in Patagonia Fire as a landscape driver of change to a new land cover or land use and its implications in conservation. Learning how to recognize fire on the landscape by GIS techniques.	GL; D	4.0	Márquez and Staub 2019

No	Title and outline	Type	Hours	Readings
	b. Local and sustainable entrepreneurs Efforts to reduce the current threats to conservation			
15	Driver of change in Patagonia Fire as a landscape driver of change to a new land cover, observing the fire effects during the 19th century	FL	1.0	León et al. 2021 Iturraspe 2016
16	a. Glaciers and their role in conservation Learn how glaciers are being conserved and public policies to improve water security conservation through glaciers b. FEX 2, part 1 Preparation of Monitoring reforestation efforts in Patagonia	GL, FEX	3.0	Anaconda et al. 2018
17	Synthesizing the major interdisciplinary themes Semester review and discussion of the many ways in which the lecture themes tie together.	D	1.0	
18	a. Role of science in cultural and biological conservation Main discoveries and management in Patagonia b. FEX 2, part 2 Practice of Monitoring reforestation efforts in Patagonia and creating the draft report	L; FEX	2.0	Martínez-Harms et al. 2022
19	Food security, sovereignty, culture, and politics Local activities that promote cultural conservation and at the same time biological conservation	GL	2.0	
20	Role of science in cultural and biological conservation Main discoveries and management in Chiloe	FL	2.0	Romero et al. 2019
21	Wildlife rehabilitation Main reasons of wildlife injuries, difficulties, and challenges of reintroducing them into the environment	FL	2.0	
22	Marine and coastal conservation in Chile and the Region Issues, movements and policies, and new constitution implications	L; D	1.0	
23	FEX 2, part 3 Monitoring reforestation efforts in Patagonia and shelter removing	FEX	2.0	
24	Invasive species policies and politics Main invasive species in public conservation initiatives	FL	1.0	Araos et al. 2020
25	Socioecological perception of glaciers Perception as a cultural action to conserve	D	1.0	Stewart et al. 2016
26	Scaling environmental governance International governance, Patagonian regional policies, land tenure, and territories; local regulations and conservation	D	2.0	Petit et al. 2018 OECD/ECLAC 2016
27	a. Climate grief and ecological grief: Emotional and mental health costs of climate change and environmental awareness; coping strategies	L; D	4.0	Methmann 2010 DW 2018

No	Title and outline	Type	Hours	Readings
	<p>b. Climate change governance discourse analysis: Exercise tracing the discourse of climate change in multiple outlets including media, academia, and social media. Students gain skills in discourse analysis methodology</p> <p>c. Climate change governance Mitigation, adaptation, and international agreements; analysis of how climate change has been included in the new Chilean Constitution</p>			DW 2020 E. Figueroa 2019 Arriagada et al. 2018 Sapiains et al. 2021
28	Synthesizing the major interdisciplinary themes Semester review and discussion of the many ways in which the lecture themes tie together.	D	1.5	
29	Final Exam		3.0	
Total Hours			60	

Reading List

*Not all readings are required. See above note on class readings.

- Anaconda, Pablo Iribaren, Josie Kinney, Marius Schaefer, Stephan Harrison, Ryan Wilson, Alexis Segovia, Bruno Mazzorana, et al. 2018. "Glacier Protection Laws: Potential Conflicts in Managing Glacial Hazards and Adapting to Climate Change." *Ambio* 47 (8): 835–45. <https://doi.org/10.1007/s13280-018-1043-x>.
- Anbleyth-Evans, Jeremy, Francisco Araos Leiva, Francisco Ther Rios, Ricardo Segovia Cortés, Vreni Häussermann, and Carolina Aguirre-Munoz. 2020. "Toward Marine Democracy in Chile: Examining Aquaculture Ecological Impacts through Common Property Local Ecological Knowledge." *Marine Policy* 113 (March): 103690. <https://doi.org/10.1016/j.marpol.2019.103690>.
- Araos, Ana, Claudia Cerda, Oscar Skewes, Gustavo Cruz, Patricio Tapia, and Fernando Baeriswyl. 2020. "Estimated Economic Impacts of Seven Invasive Alien Species in Chile." *Human Dimensions of Wildlife* 25 (4): 398–403. <https://doi.org/10.1080/10871209.2020.1740837>.
- Armesto, Juan J., Daniela Manushevich, Alejandra Mora, Cecilia Smith-Ramirez, Ricardo Rozzi, Ana M. Abarzúa, and Pablo 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 (2): 148–60. <https://doi.org/10.1016/j.landusepol.2009.07.006>.
- Arriagada, Rodrigo, Paulina Aldunce, Gustavo Blanco, Cecilia Ibarra, Pilar Moraga, Laura Nahuelhual, Raúl O’Ryan, Anahí Urquiza, and Laura Gallardo. 2018. "Climate Change Governance in the Anthropocene: Emergence of Polycentrism in Chile." Edited by Anne R. Kapuscinski, Kim A. Locke, and Jennie Stephens. *Elementa: Science of the Anthropocene* 6 (January): 68. <https://doi.org/10.1525/elementa.329>.
- Bennett, Nathan J., Robin Roth, Sarah C. Klain, Kai M. A. Chan, Douglas A. Clark, Georgina Cullman, Graham Epstein, et al. 2017. "Mainstreaming the Social Sciences in Conservation." *Conservation Biology* 31 (1): 56–66. <https://doi.org/10.1111/cobi.12788>.
- Blair, Heidi, Keith Bosak, and Trace Gale. 2019. "Protected Areas, Tourism, and Rural Transition in Aysén, Chile." *Sustainability* 11 (24): 7087. <https://doi.org/10.3390/su11247087>.
- Borgias, Sophia L. 2018. "'Subsidizing the State': The Political Ecology and Legal Geography of Social Movements in Chilean Water Governance." *Geoforum* 95 (October): 87–101. <https://doi.org/10.1016/j.geoforum.2018.06.017>.

9. Brain, M.J, L. Nahuelhual, S. Gelcich, and F. Bozzeda. 2020. "Marine Conservation May Not Deliver Ecosystem Services and Benefits to All: Insights from Chilean Patagonia." *Ecosystem Services* 45 (October): 101170. <https://doi.org/10.1016/j.ecoser.2020.101170>.
10. Bustos, Beatriz, Mauricio Folchi, and Maria Fragkou. 2017. "Coal Mining on Pastureland in Southern Chile; Challenging Recognition and Participation as Guarantees for Environmental Justice." *Geoforum* 84 (August): 292–304. <https://doi.org/10.1016/j.geoforum.2015.12.012>.
11. Costanza, Robert, Rudolf de Groot, Leon Braat, Ida Kubiszewski, Lorenzo Fioramonti, Paul Sutton, Steve Farber, and Monica Grasso. 2017. "Twenty Years of Ecosystem Services: How Far Have We Come and How Far Do We Still Need to Go?" *Ecosystem Services* 28 (December): 1–16. <https://doi.org/10.1016/j.ecoser.2017.09.008>.
12. Cronon, William. 1995. "The Trouble with Wilderness; or, Getting Back to the Wrong Nature." In *Uncommon Ground: Rethinking the Human Place in Nature*, 69–90. New York: New York: W. W. Norton & Co.,.
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14. DW, Planet A, dir. 2018. *Climate (In) Justice*. <https://www.youtube.com/watch?v=pHRu0VV-Dbw&t=2s>.
15. ———, dir. 2020. *Why It's Hard to Care about Climate Change*. <https://www.youtube.com/watch?v=QK7g6pgaC7I>.
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17. Figueroa, Alejandra, Manuel Contreras, and Bárbara Saavedra. 2018. "Wetlands of Chile: Biodiversity, Endemism, and Conservation Challenges." In *The Wetland Book*, edited by C. Max Finlayson, G. Randy Milton, R. Crawford Prentice, and Nick C. Davidson, 823–38. Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-007-4001-3_247.
18. Figueroa, Ester, dir. 2019. *Climate Change Is a Gender Issue*. https://www.youtube.com/watch?v=zCYZ_2xFLfc.
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23. Maillet, Antoine, and Sebastián Carrasco. 2021. "Between Environmental Subsystem Change and Extractive Regime Resilience." In *Andean States and the Resource Curse*, by Gerardo Damonte and Bettina Schorr, 1st ed., 158–76. London: Routledge. <https://doi.org/10.4324/9781003179559-11>.
24. Márquez, Ítalo, and Guido Staub. 2019. "Mapping of Reforestation Progress in Chilean National Park Torres Del Paine." *Proceedings of the ICA* 2 (July): 1–5. <https://doi.org/10.5194/ica-proc-2-83-2019>.

25. Martínez Pastur, Guillermo, Pablo L. Peri, María V. Lencinas, Marina García-Llorente, and Berta Martín-López. 2016. "Spatial Patterns of Cultural Ecosystem Services Provision in Southern Patagonia." *Landscape Ecology* 31 (2): 383–99. <https://doi.org/10.1007/s10980-015-0254-9>.
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