

POL487H1  
The Planet's Last Frontiers  
Fall 2019  
Mondays 2-4PM, Sidney Smith 1078

Instructor: Prof. Jessica Green  
Office: Sidney Smith, 3031  
Office Hours, Wednesdays 1-3  
(*please sign up on Quercus*)

### **Course Description**

This course will examine the law, politics and environmental challenges surrounding three parts of the Earth that belong to no one (i.e. *res nullius*): Antarctica, the high seas (and a variety of associated environmental issues), the Arctic and outer space. We ask several questions related to each of these areas:

- 1) What environmental threats do they face?
- 2) How have these threats been addressed – both through international environmental law, and other policy approaches?
- 3) Have these approaches been successful, and why or why not?

The course will consist of four parts. First, we review the history and mechanics of international environmental law to understand the tools available to manage these areas. Next, we investigate each of the three areas in detail, looking both at general issues of management as well as specific cases. Each geographic area will start with a discussion of the environmental aspects: what's there, why we care about it and how it's currently managed. We will then turn to the legal and political responses.

The course will also emphasize research. You will be required to write a research proposal as the final major product for the class. To prepare you for this, we will also read work about research and research design. We will discuss your work as a group as it progresses over the course of the semester.

### **Course Format**

This class will be run in a seminar-style format. Thus, doing the readings, and bringing notes, copies of the readings, or non-Internet connected tablets to class, is essential.

### **Learning Objectives**

By the end of the semester, you should:

- Be able to identify the major environmental and social issues facing the planet's last frontiers.

- Understand the different types of actors involved and their contributions to solutions or inaction.
- Be able to explain the political challenges and legal approaches to international cooperation on transboundary environmental problems.

### **Readings**

Since this is a seminar, doing the readings is an essential component to the success of the course. **You are expected to do ALL of the readings each week, and bring notes and/or hard copies of the readings to class.**

All readings will be available electronically either on the Internet or through Quercus. **UofT-e** means they are available through the library website. **Quercus** means they are available in the readings module on the Quercus site for the class.

### **Course Assignments, Due Dates and Grading**

The main assignment in this course will be a research *proposal* on the topic of your choice, related to the Planet's Last Frontiers. We will spend a fair amount of time in class talking about the assignment, and more generally, how to "do" research. The final product for the class will be a 4000-6000 word research proposal. The proposal will ask a political science research question about one of the planet's last frontiers, conduct a literature review to see what other work has been done on the topic, and propose a feasible method for answering the question.

There will be a number of interim assignments and class time discussions to help you in this process. These are all detailed in the "Assignments" document in the Class documents module.

The details of each assignment are detailed in the document "Assignments" available on the Quercus.

1. Research question and justification (5%)
2. Literature Review (10%)
3. Preliminary presentation (10%).
4. Final presentation (including powerpoint) (10%)
5. Final research proposal (40%)
6. Participation (5%)
7. Take home term test (20%).

### **Policies and Expectations**

- In this course, you can expect that I will strive to be fair, respectful, responsive and open-minded.
- In return, I ask you to be respectful of your classmates and of me, be prepared and on time for class, and meet deadlines for assignments.

- I expect that everyone will attend and participate actively in class. Active participation includes both contributing your ideas (questions, comments, analyses, insights) and listening to the contributions of others (without distraction).
- **No laptops.** The only exception is if you have permission from Accessibility Services, including as a student notetaker. Here's why: "Experimental tests of immediate retention of class material have also found that Internet browsing impairs performance. Moreover, recent research suggests that even when laptops are used solely to take notes, they may still be impairing learning because their use results in shallower processing." *Psychological Science*, DOI: 10.1177/0956797614524581.
- **No texting.** It's disrespectful to me and your fellow classmates. Also, when you think you're being sneaky texting in your lap, you're not. Consider this as 2 hours of internet free existence.
- If you are too tired to stay awake in class, please go home and nap.
- You are expected to come to class, and I may make announcements in class that are not posted on Quercus. If you miss class, it is your responsibility to ensure that you find the information you have missed. I also encourage you not to ask me questions such as "did I miss anything important?" – I tend to think everything I share during class is important.
- **Accessibility:** Students who require special arrangements should contact the Student Accessibility Services at (416) 978 8060; [accessibility.services@utoronto.ca](mailto:accessibility.services@utoronto.ca). Some students find that they must wait to contact and secure approval from Accessibility Services: in these cases, **you should still contact me in advance**, to let me know you might require accommodations for assignments.

### **Attendance**

I will take attendance on an unannounced basis. You are allowed one "freebie" absence. After that, absences will negatively affect your participation grade. Three or more unexcused absences (recorded by me) will cut your participation grade to 0.

### **Quercus**

All course materials that are not available on the Internet will be in the "Readings" folder in Quercus. All other documentation will also be available through the Home screen on Quercus.

***Please do not contact me if you are experiencing technical difficulties with Quercus.*** Consult the Help menus, especially [the one for students](#). You may also contact: [lme.migration@utoronto.ca](mailto:lme.migration@utoronto.ca)

### **Deadlines and late penalties**

**All deadlines are final.** For each day an assignment is late, there will be a 3% reduction in your grade. I may make exceptions under extenuating circumstances, such as illness or family

emergency. However, these will require documentation. If there are other issues that you think may affect your ability to turn in assignments on time, I suggest you contact me *as early as possible*. I am **not** inclined to give extensions to those who ask the night before.

### **Email and communication**

I will hold weekly office hours on Wednesdays, and I will be very glad to meet with you at those times to discuss readings, lectures, assignments, essays, and more. If you cannot make my office hours, please email me and we can find another time. **You must sign up for office hours using the course calendar on Quercus.**

I have also listed my email address in the contact information at the start of the syllabus; however, please consider several things when reaching out to me by email:

- **Please check (and double-check) that the answer to your query is not in the syllabus before you contact me with questions.**
- You are expected to write from your University of Toronto email account. If you write from another email account (Hotmail, Gmail, Yahoo, etc), I might not answer.
- I generally use email to address simple yes/no questions and to make arrangements about logistics; if you have any substantive concerns, please come to my office hours.
- I will do my best to respond to your messages, but please don't expect a rapid response. I will not be responding daily to emails about the class, and will not check my email on evenings and weekends. As such, please plan ahead if you need to reach out to me.
- If you write to request an extension or accommodation the night before an assignment is due, I am unlikely to accommodate your needs or offer assistance.
- Please treat emails as a professional form of communication; I expect proper grammar, sentences, and greetings and sign-offs in your messages, and you can expect the same from me. Please include a greeting, and please address me as Prof. Green. A sign-off is also appropriate ("sincerely," "thanks," "cheers," followed by your name).

### **Legal**

**Please read the policy on [academic integrity](#).** Plagiarism results in failure in the class.

**Academic dishonesty is a serious offense that can result in loss of credit, suspension, and possibly expulsion from the university. *All suspected cases of academic dishonesty will be reported.***

Plagiarism includes:

- copying sentences or fragments from any source without quotes and references
- not citing a source used in your papers
- citing internet information without proper citation
- presenting someone else's work as your own
- *inadvertently* copying verbatim from any source.

In many cases, plagiarism is a mistake rather than a deliberate act. If you have questions about what constitutes plagiarism, please come talk to me.

### Sept 9: Introduction and overview

### Sept 16: A crash course in international environmental law

Questions: Why do we have international environmental law? What does IEL look like?

- Hardin, Garrett. 1968. The Tragedy of the Commons. *Science* 162: 1243–1248. Available [here](#).
- Mildenberger, Matto. 2019. The Tragedy of the Tragedy of the Commons. *Scientific American*. Available [here](#)
- Ostrom, Elinor, Joanna Burger, Christopher Field, Richard Norgaard, and David Policansky. 1999. Revisiting the Commons: Local Lessons, Global Challenges. *Science* 284(5412): 282–287. Available [here](#)
- Barrett, Scott. 2010. *Why Cooperate? The Incentive to Supply Global Public Goods*. Oxford ; New York: Oxford University Press. Chapter 1. **UofT-e**
- Bodansky, Daniel. 2010. *The Art and Craft of International Environmental Law*. Cambridge, MA: Harvard University Press. Chaps 1&2. **Quercus**.
- \*\*Read the [Stockholm Declaration on the Human Environment](#) and [the Rio Declaration on Environment and Development](#)

### Sept 23: The Antarctic Treaty System

Questions: What are the key provisions of the Antarctic Treaty, and how are they notable? What are the other agreements in the “Antarctic Treaty System” and what issues do they address?

- \*\*Read the [Antarctic Treaty](#)
- Arnold, Rudolph. 1975. “The Common Heritage of Mankind as a Legal Concept.” *The International Lawyer* 9(1): 153-58. **Quercus**
- The Development of the Antarctic Treaty System. Available [here](#)
- Peterson, MJ. 1980. “Antarctica: The Last Great Land Rush on Earth.” *International Organization* 34(3): 377-403 **Quercus**

Additional readings for research proposals

- King, Gary, Robert Keohane and Sidney Verba. *Designing Social Inquiry*. Chap 1, pp. 1-20 and 28-33 (of the book, not the .pdf). Available [here](#)
- [How to read a journal article](#)

### Sept 30: The Antarctic Treaty System

Questions: What are some of the major challenges facing the ATS? How are they being address? With what success?

- Read Articles 2 and 9 of [the Convention for the Conservation of Antarctic Marine Living Resources](#) (CCAMLR)
- Read this [FAQ about krill](#), written by CCAMLR
- [Greenpeace Report](#) on krill fishing. Available [here](#)
- Nicol, Stephen. 2018. *The Curious Life of Krill*. Washington: Island Press. Chaps 1&8. **UofT-e**
- Osterblom, Henrik, et. al. 2014. Reducing Illegal Fishing in the Southern Ocean: A Global Effort. *Solutions* 4(5): 72-9. Available [here](#)
- The Guardian, "Antarctica's tourism industry is designed to prevent damage, but can it last?" Available [here](#)
- Verbitsky, Jane. 2013. "Titanic Part II? Tourism, uncertainty and insecurity in Antarctica in Brady, Anne Marie (ed.) 2013. *The Emerging Politics of Antarctica* Abingdon: Routledge. Chapter 11. **Quercus**
- Schillat, Monika. 2016. "Adventure Tourism Poses New Challenges for the International Association of Antarctica Tour Operators. In Monika Schillat et al. *Tourism in Antarctica*. **Quercus**

### Oct 7: The Oceans: Fisheries

How do we manage the world's fisheries? How does the principle of sovereignty work on the high seas? Is sustainable fishing possible?

- Articles 87 and 116-120 of UNCLOS, available [here](#)
- DeSombre, Beth and J. Samuel Barkin. 2011. *Fish*. Cambridge: Polity Press. Chapter 4. **Quercus**
- Peruse State of World Fisheries and Agriculture 2018, paying special attention to figures. Available [here](#)
- Soroos, MS. 1989. The Turbot War: Resolution of an International Fishery Dispute. In Niels Gleditsch, ed. *Conflict and the Environment*. NATO ASI Series. **Quercus**
- Green, Jessica and Bryce Rudyk. 2018. Closing the High Seas to Fishing: A club approach. **Quercus**.

Additional readings for research proposals (these are short)

- Creswell, Robert. 2014. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. London: SAGE Publications. Chapter 2. **Quercus**
- Graff, Gerald and Cathy Birkenstein. 2014. *They Say, I Say: The Moves that Matter in Academic Writing*. Chaps 2, 5 & 8. NY: W.W. Norton and Company **Quercus**
- Green, Jessica F. Hierarchy and Complexity in Global Governance. Unpublished manuscript. Read literature review.

**Oct 14: NO CLASS, THANKSGIVING**

### **Oct 21: The Oceans: IUU Fishing and Transshipment**

How can IUU Fishing be effectively addressed? Can non-state actors make a difference?

- Agnew, David J. et. al. 2009. Estimating the Worldwide Extent of Illegal Fishing. *PLOS One* 4(2). Available [here](#)
- Boerder, Kristina, Nathan A. Miller, and Boris Worm. 2018. Global hot spots of transshipment of fish catch at sea. *Science Advances* 4 (7): eaat7159. **UofT-e**
- Miller, Dana D., and U. Rashid Sumaila. 2014. Flag use behavior and IUU activity within the international fishing fleet: Refining definitions and identifying areas of concern. *Marine Policy* 44: 204–211. **UofT-e**
- The Nature Conservancy. “Making Sense of Wild Seafood Supply Chains” Read pp. 1-18. Available [here](#)
- Read about a [Global Record of Fishing Vessels](#)
- Read about the Port State Measures Agreement [here](#)

### **Oct 28: Student Presentations: Literature Review and Research Question**

### **Nov 4: NO CLASS, READING WEEK**

### **Nov 11: The Deep Sea: Mining and Bioprospecting**

Questions: Is the Seabed common heritage of mankind? How is it regulated? How does prospecting work, and who benefits?

- Lodge, Michael. 2016. “The Deep Sea Bed” In Donald Rothwell et al. eds, *The Oxford Handbook of the Law of the Sea*. Oxford: Oxford University Press. **UofT-e**.
- Kim, Rakhyun E. 2017. Should deep seabed mining be allowed? *Marine Policy* 82: 134–137. **UofT-e**
- Greenpeace, 2019. In Deep Water. Available [here](#)
- O’Kruk, Amy. 2019. “The new frontier: deep-sea mining” *Globe and Mail*. Available [here](#)
- Read about Deep Green [here](#) and [here](#)
- Heffernan, Olive. 2019. Seabed mining is coming — bringing mineral riches and fears of epic extinctions. *Nature* 571: 465–468. Available [here](#)

### **Nov 18: Biodiversity Beyond National Jurisdiction**

Questions: Why are states negotiating a new BBNJ treaty? Are genetic resources heritage of mankind? What, if any, means should be used to protect biodiversity on the high seas?

- Specter, Michael. 2013. Can we patent life? *The New Yorker*. Available [here](#)
- Some background on what the BBNJ agreement in the *Washington Post* [here](#) and [here](#), and a nice overview of the key issues in the agreement [here](#)
- Harden-Davies, Harriet. 2017. Deep-sea genetic resources: New frontiers for science and stewardship in areas beyond national jurisdiction. *Deep Sea Research Part II: Topical Studies in Oceanography* 137. Advances in deep-sea biology: biodiversity, ecosystem functioning and conservation: 504–513. **UofT-e**

- Blasiak, Robert et al. 2018. "Corporate Control and global governance of marine genetic resources." *Science Advances* 4(6): eaar527. **UofT-e** and available [here](#)
- Read this [brief interview](#) with Vandana Shiva. If you don't know who she is, google her.
- ENB Summary of BBNJ Negotiations, TBA.

### **Nov 25: Space**

Questions: Do we need a space treaty? A moon treaty? Why? How should space and the moon be governed?

- Buck, Susan. 1998. *The Global Commons: An Introduction*. Washington DC: Island Press. Pp. 137-153 **Quercus**
- Brehm, Andrew. 2015. Private Property in Outer Space. 33 *Wis. Int'l L.J.* 353. **Quercus**
- Dirk H.R. Spennemann, Extreme Cultural Tourism From Antarctica to the Moon, *Annals of Tourism Research*, Vol. 34, No. 4, pp. 898–918, available [here](#)
- Foster, Craig. 2016. Excuse Me, You're Mining My Asteroid: Space Property Rights and the U.S. Space Resource Exploration and Utilization Act of 2015 Notes. *University of Illinois Journal of Law, Technology & Policy* (2): 407–430. **UofT-e**
- Peruse the Lunar Registry website. Especially [here](#) and [here](#)  
<http://www.unoosa.org/oosa/en/ourwork/copuos/history.html>
- Skim the [Outer Space Agreement](#)
- Skim the [Moon Agreement](#)

### **Dec 2: Final presentations and review**