

Course Overview

ENVS107b: Atmospheric Civics & Diplomacy

Spring 2022 ~ Tuesdays & Thursdays 3:30-4:50pm ~ Classroom: Mandel G12

Lecturer: Charles C. Chester (“Charlie”)

Teaching Assistants

- Gabe Rosenbloom ~ gabrielchaim@gmail.com ~ Office hours: TBD
- Makayla Wigder ~ makaylawigder@brandeis.edu ~ Office hours: TBD

Relationship between this course & my fall semester course

I teach two courses at Brandeis:

1. ENVS18b: Global Sustainability & Biodiversity Conservation (fall semester)
2. ENVS107b: Atmospheric Civics & Diplomacy (spring semester)

Together, these two courses span the broad range of topics that are typically subsumed under the broad aegis of "global environmental politics" or “international environmental conflict and cooperation” (the latter being the title of the one course I used to teach before I split it into two). The two courses are very purposefully meant to complement each other, and I highly recommend taking them in their Fall-Spring Semester order. However, they can be taken individually and neither is a prerequisite for the other.

Course content

The atmosphere is a local, regional, and global commons. Many scientists have described the atmosphere as suffering from a “tragedy of the commons,” and environmentalists widely claim that the tragedy has become more of a horror film due to the threats of (1) transboundary air pollution, (2) stratospheric ozone depletion, and (3) climate change. While this course examines these three threats from a wide range of perspectives, it mostly takes a combined historical and policy approach to understanding international conflict and cooperation over the atmosphere. The course primarily aims to answer two overarching questions: First, what has the international community done in order to protect the atmosphere, and what should it be doing now? An important part of answering this question is to discern what we mean by “international community,” and to emphasize that it does not only refer to countries and international organizations. Second, and very importantly, what does “protecting the atmosphere” actually mean from the perspective of international environmental policy? One response to the latter question will constitute a key theme of the course—viz., that there are inextricable ties between

"atmospheric health" and other environmental media (viz., land, water, and the biosphere—not to mention human health).

The course begins with a short look at the early history of local and national-level policies for the remediation of air pollution, followed by an in-depth examination of **transboundary air pollution (TBAP)**. Specifically, we will focus on:

- the early history of air pollution;
- the precedent-setting Trail Smelter case between Canada and the USA;
- the problem of acid rain between the same two countries;
- the European Convention on Long-Range Transboundary Air Pollution (CLRTAP) and its protocols;
- TBAP in other parts of the world, with a close look at Asia and the Arctic.

The course then turns to the case of **stratospheric ozone depletion**, with a particular attention to the role of science, scientists, industry, and activists from civil society. We will focus on the key question of how effectively the international community grappled with this problem, and whether—as is commonly claimed—the resolution to stratospheric ozone depletion provides a “model” for a resolution to the problem of climate change.

At this point (about halfway through the semester), the course will turn to the third challenge of **climate change**. For the remainder of the semester, the course will examine a wide range of issues relating to the international politics of climate change, including:

- Climate change science, 1800-1988: “Scientific advocacy,” the formation of the IPCC, and emergent civil society engagement on global warming
- The UN Framework Convention on Climate Change and “common but differentiated responsibilities” (CBDR)
- Mitigation & adaptation under the United Nations Framework Convention on Climate Change (UNFCCC)
- UNFCCC negotiations, 1993-2009: The Kyoto Protocol & the Copenhagen Accord
- Climate change & biodiversity
- LULUCF & REDD (or: why am I studying about forests in a course about the atmosphere?)

- “Climate denialism”
- UNFCCC negotiations, 2010-2015
- Conclusion: The Paris Accord (and whatever comes next)

In addition to these three atmospheric environmental issues, throughout the semester we will be revisiting a set of “core consistent concepts” in global environmental politics. These are, in essence, the overarching “lessons learned” from the case studies presented in both this course and ENV518b: *Global Sustainability & Biodiversity Conservation*.

A note on the role of scientific understanding: It is important to emphasize that this course focuses on human conflict and collaboration over environmental resources in the international arena. Neither the readings nor the lectures will spend a great deal of time on the environmental challenges per se, which means that students should not expect to be focusing on the core scientific issues at play. Although we will cover these basics to the degree that time allows, the course focuses on how people—specifically, people living across international borders from each other—have entered into conflict over environmental conditions and resources, and how they have tried to overcome those conflicts through collaboration.

Learning goals

Overall, what should you expect to learn in this course? There are five essential goals:

- First, students will garner a foundational understanding of the complex array of atmospheric issues subsumed under the rubric of GEP, as well as a solid understanding of the set of core consistent concepts. Specifically, students should conclude the course with a strong understanding of (a) the international community’s track record on resolving conflicts over the atmosphere, (b) the complex international politics involved in resolving conflicts over the atmosphere, and (c) the range of available (and unavailable) options for resolving conflicts over the atmosphere.
- Second, students will work on their “real world” writing skills, in which regard you will write two role-playing work-setting memos. For each of these memos, the TAs will read and edit the first submission, and I will read, edit, and assess the second and third submissions.
- Third, through class lectures, readings, and most importantly the negotiations exercise, you will garner a solid understanding of how difficult it can be to negotiate over international environmental issues—even issues that do not initially seem contentious.
- Fourth, early in the semester, you will be choosing a nongovernmental organization to follow and “represent” throughout the semester. By the end of the academic year, you should garner a good sense of what type of work an NGO does, and what kind of resources are necessary to make your NGO function.
- Finally, because I present the subject of global environmental politics through a historical lens, you will also come away from the course with a well-rounded perspective of the

sweep of the past 125 years—albeit a perspective viewed through an admittedly environment-colored lens.

Course typology (and a heads-up on what to expect)

This is a survey course in which we cover an expansive breadth of material. Given the first learning goal of garnering a “foundational understanding of the complex array of atmospheric issues subsumed under the rubric of GEP,” we simply do not have the space for a deep dive into any particular topic that we cover. In order to achieve the goal of covering this wide swath of material, I have gone to great lengths to summarize and digest the materials in a way that is, I hope and intend, comprehensive, engaging, insightful, and—very importantly—lasting. The principal format I use, however, is one that many consider mind-numbingly pedantic and pedagogically anachronistic: *the lecture*.

Current thinking on best-practices in academia hold, with good reason and empirical evidence on its side, that students learn best in “active learning” classrooms...and not by listening to the ramblings of an absent-minded prof such as myself. So why then keep the course locked into an antiquated lecture format? That is a more-than-fair question. The main reason is that I simply have not found a better way of conveying and making sense of the amount of material we cover in this class. It is no exaggeration to say that each topic we cover in a single day in class could be—and, for the most part, is somewhere—a full semester-long course. Consequently, this course moves along at an extremely rapid pace, and if we stop too long to scrutinize the rosaceae (that is, “smell the roses”), we will fail to cover the whole of the course’s coverage. While I always welcome questions and am more than happy to engage in discussions when they spontaneously arise (as you will find out, I am very flexible when it comes to timing), it is important for students to understand this aspect of the course; frustrations can arise if students do not take this into account in their course selection.

While *the lecture* has been thoroughly bashed as a mediocre-at-best approach to learning, I remain a bit suspicious. Personally, and for whatever it’s worth, the courses I recall from my college experience that made the strongest impression on me—and that most challenged me to think in new and different ways—were lecture courses (no doubt, I’ve forgotten all the other lecture courses I took that made no impression on me whatsoever). I also believe that *sustained listening to learn* is not an innate ability, but an important skill—one that you will have to use for the rest of your life in both domestic and work settings. School, be it 3rd grade or your senior year in college, turns out to be a pretty good place to practice and hone that skill.

Despite my suspicions, there’s no doubt that the word *lecture* carries pejorative connotations for good reason. “Nobody,” as they say, “likes to be lectured.” In recognition of that near-universal sentiment, here’s my commitment to you: in each class, I strive to present the material in a way that both summarizes the day’s case study in an academically rigorous manner, yet also in a way that is engaging to a curious audience. I do not expect my lectures to be appealing to a general audience, but I do want and hope that my lectures are appealing and helpful to people who care about air pollution, stratospheric ozone depletion, and climate change.

As such, I try to present each case study as a *story*, incorporating a variety of images that include maps, photos, and figures, and breaking up my voice with multiple short multimedia (mostly videos) in each class. I also have an exceptionally mediocre sense of humor, and have nearly perfected the art of telling such awful jokes that the serious part of the lecture comes as a welcome relief. My aim, in short, is that you leave the end of each topic with a solid overview of how a problem arose, how it was identified, what its effects were, and then the degree to which international cooperation has resolved the problem (as well as one or two groaners that you can pass on to family and friends).

Course requirements

- Reading and directly commenting on the assigned material is mandatory and a central component of the course (more details on this below).
- Attentiveness and bringing your ADD to class. ADD stands for "Advanced Digital Device," which can be your laptop, pad, or smartphone (coincidentally, or maybe not so coincidentally, ADD also stands for "attention deficit disorder"...more on that below). I will be using particular forms of classroom technology (Google forms and drawings and interactive tech), and you will not be able to engage in class without these.
- Regular attendance. I do realize that athletics, religious events, medical issues and life in general often legitimately interfere with class, so please just send me an email (preferably ahead of class) explaining your absence.
- Choosing a climate change-focused nongovernmental organization (NGO) to represent for the semester. Both the writing projects and the Negotiations Exercise will relate directly to your choice of NGO.
- Participation in an extensive in-class Negotiations Exercise. Playing the role of negotiators for their self-assigned NGOs, students will participate in an extensive negotiations exercise. These negotiations will take place during five in-class sessions and in coordinated sub-groups outside of class. The negotiations necessitate that students (1) take their roles seriously, (2) utilize their analytical and creative talents to their greatest extent, and (3) pay attention to and follow the "rules of the game."
- Students will submit two short "real world" writing assignments relevant to their NGO. Students will submit each assignment three times, conducting extensive redrafting for the second and third submissions. Please note that each submission—including the first—should not be thought of as "drafts," but should be thoroughly composed and fully proofread as if you were submitting it as a final product.
- Students will research and write up an annotated bibliography (AB) on a particular climate change topic of their choice. This exercise entails each student identifying precisely five "key readings" regarding their chosen topic. At the end of the semester, the AB will be published in the relevant location on EarthWeb.info.
- An exam at the end of the semester on the lectures.
- The Final Exam period will consist of short presentations by each student on their chosen NGO.

Course readings

Statement of expectation: Success in this 4 credit course is based on the expectation that students will spend a minimum of 9 hours of study time per week in reading, preparation for class and exams, and working on the writing assignment.

I strive to give a reasonable amount of reading materials for each class, which in practical terms means that I am limiting the maximum number of pages per class to 30. I structure the reading assignments for my courses in a nontraditional manner, for not only will you be downloading the readings, you'll be uploading them as well. What does this mean? All reading assignments will be available in pdf format downloadable from the Course Schedule page. Using pdf software of your choice (typically Adobe Reader, which is available for free, but there are many others), you will then be highlighting, underlining, note-taking, and asking questions directly on these pdfs. Finally, you will then submit them on the Course Latte page.

Unless you have been in a class with me before, you may never have had to hand in your actual reading assignments, so this may feel strange at first...but I have found that as an incentive to do the readings, students generally prefer this approach to either quizzes or in-class "Socratic method" grilling. If you have ever had a class requiring you to submit "thoughts & questions" on the readings, you can think of this as writing your TQs *directly* on the readings!

It gets even a bit stranger. For each day of class, you will have two readings: (1) a pre-class reading and (2) a post-class reading. The pre-class reading will be due the evening before class by 8pm; you can, of course, submit them much earlier if you want. For the post-class reading, however, you will not have access to it until soon after class. The post-class readings for both the Tuesday and Thursday class will be due by 6pm on the following Sunday (more on this below).

Why am I doing this? I have a plan. The pre-class readings that you will be doing will, generally speaking, be "historically contextual." This means that you will be reading something that people were reading when the particular environmental challenge at hand was first being addressed in the international arena. In class, I will then be asking you to think about the readings roughly in terms of: "How ought the international community respond to this challenge?" As a class, we will together think about the options available for problem solving. I will then spend some time in class examining what actually happened—this will be the traditional lecture component (please keep in mind that I spend a great deal of time collecting engaging images, maps, and multimedia to liven up my lectures). But since you will be only getting my perspective on "what happened," my goal with the "post-class" readings is to ensure that you have another perspective on "what happened."

Of the approximately 40 readings you'll have over the semester, **you may hand in seven of them late (specifically, up to a week late)** with no effect on your grade for the assignment. And even if you miss these deadlines on submitting your annotated pdfs, it is still **very much worth submitting them very late; you'll get some credit, and some credit is better than no credit.** But please note that **if you are late with your submissions, you should email your annotated pdfs directly to the TAs, not submit them on Latte.** If all of this seems like an elaborate way for me to ensure that students are doing the reading....then you would be quite

perceptive. Again, the readings are an essential foundation both for your learning and for effective class participation, which is why I put so much emphasis on them.

Although some of the readings may be highly quantitative and conceptually challenging, no background in environmental science on the part of the student is assumed or required. When it comes to scientifically complex readings, we will be mostly examining them through the qualitative lens of “how the international community interprets scientific information.”

That’s not all—there’s more! (Joy & rapture, etc.) You will also be signing up for the emailing list from your NGO, and you are expected to spend several minutes a day reading and cataloguing these emails.

Course grading

Course grades are based on the following:

- Annotated pdfs: 20%
- Class participation (including participation in classroom tech & not sleeping in class): 10%
- Participation in the negotiations exercise: 10%
- Pop quiz on air pollutants: 5%
- Annotated bibliographies for EarthWeb.info webpages: 10%
- Book memo: 15%
 - 5%: 1st submission
 - 5%: 2nd submission
 - 5%: 3rd submission
- Policy memo: 15%
 - 5%: 1st submission
 - 5%: 2nd submission
 - 5%: 3rd submission
- Exam on lecture materials: 15%

While it is important that students attend the class consistently, I am also of the belief that one should not let school get in the way of one's education...which is to say that you have the right to miss a small number of classes in order to attend important athletic, religious, professional and certain miscellaneous other activities. However, it is the student’s responsibility to inform the instructor of these conflicts as soon as possible. Students should thus review their calendars at the beginning of each term to determine if there are any conflicts between class periods and such events. Students who miss class will be required to complete any work that is missed, and they may be required to submit additional assignments to make up for the missed class time.

Student-teacher communications

- *Contacting me:* The best way to contact me is by email at cchester@brandeis.edu. I filter incoming email with addresses containing "@brandeis.edu" to a high-priority in-box; consequently, you are likely to get my attention sooner by emailing me from your Brandeis account (though if you prefer a different email address, I will eventually get it added to the same filter).
- Generally speaking, immediacy in email replies is NMT (not my thing), but I strive to respond to your emails within a 24 hour period. If you need to reach me urgently, send me an email with the subject line beginning: "TIME SENSITIVE" (yes, in all-caps). If it's super-duper-now-or-nothing important and I haven't responded to your email(s), you can contact the TAs who have my cell number and can call/text me that you need your email answered.
- As a group, I'll be communicating important course-related information with you through the "Course News & Announcements" function on the course Latte page. You may want to set an email filter that directs or highlights these messages in a way that you'll be sure to see them.
- Finally, students must ensure that they are receiving communications from me on a timely basis. Individually, I'll be writing to you from my email address chester@earthweb.info, which many spam filters find a tad suspect, so you also might want to set a filter for that. If for any reason you believe you are not receiving emails from me, you should notify me immediately. If your computer crashes or is otherwise unavailable—a completely understandable and often unavoidable occurrence—it nonetheless remains your responsibility to contact me to let me know that I need to communicate with you via other means.

Office hours

Conversing and chatting with my students is one of the great pleasures of teaching at Brandeis, and so I strongly encourage all students to talk with me at least once (if not many more times) during the semester.

Instead of pre-set formal office hours, I'm asking students to please email me with three times/dates that would work for you. If you want to meet soon, don't hesitate to put that in as your first request (but be reasonable; if you send me an email on Tuesday at 8am asking for a meeting at 9am, I'm likely not even to see your email until after that requested time slot). Also, if you could prioritize asking for a Tuesday or Thursday meeting, that would be great, but any other day of the week (including weekends) could also work—so just ask.

Since I'm pretty flexible, one of those times you suggest is very likely to work for me...but if none do, then I'll email you back with three options on my end, and we will eventually figure out a time that works for both of us.

Technology requirements & policies

Students must bring with them to every class a laptop computer or ADD with (1) a charged battery, (2) a webcam, and (3) access to the Internet. The course will also require access to Google technology (including Forms, Docs, Sheets, and Drawings). Undergraduate students from SAS with financial need should contact [Student Financial Services](#) to discuss options available to purchase equipment and other technology and supply needs. GSAS students should contact Monique Howell in [GSAS](#).

Aside from their use for class purposes, the use of ADDs (advanced digital devices) for any purpose is not allowed in class. Please try to remember to silence them before you come in. It's not a big deal if it goes off during class—as long as you look sheepish and immediately shut it down (I am likely to have this happen to me at least once during the semester).

I welcome the use of laptop computers in class for the purposes of taking notes, but using laptops during class for non-class related work is disrespectful to me and distracting to other students. Texting, emailing, gaming, surfing, and all other uses of your laptop are expressly forbidden in class. You will notice that one of the TAs generally sits in the back of the room during class; I have instructed them to make a note of any students using laptops for non-course-related functions, and your class participation grade for the semester will be reduced as a result of such notations. Is that sufficiently stern? In all seriousness, please remember that it is not only extremely rude to conduct such activities in class, but most often it is also painfully obvious.

Class recordings

Class sessions will be recorded for educational purposes; I will not be using these recordings for any purpose other than usage in this course this semester. You may decline to be recorded; if so, please contact me to identify suitable alternatives for class participation. These recordings will be deleted within two months after the end of the semester. If you can be personally identified in a recording, no other use is permitted without your formal permission. You may not record classes on your own without my express permission, and may not share the URL and/or password to anyone unaffiliated with this course. Your behavior in these recordings, and in this class as a whole, must fulfill Brandeis standards:

Brandeis University is committed to providing its students, faculty and staff with an environment conducive to learning and working, where all people are treated with respect and dignity (Brandeis Business Conduct Policy p. 2, 2020). You must refrain from any behavior toward members of our Brandeis community, including students, faculty, staff, and guests, that intimidates, threatens, harasses, or bullies (Student Rights & Responsibilities, p. 11, 2020 ed.).

If you have any questions or concerns about this policy please contact your department chair or program director.

Academic honesty

You are expected to be honest in all of your academic work. Please consult Brandeis University Rights and Responsibilities for all policies and procedures related to academic integrity. Students may be required to submit work to TurnItIn.com software to verify originality. Allegations of alleged academic dishonesty will be forwarded to the director of academic integrity. Sanctions for academic dishonesty can include failing grades and/or suspension from the university. Citation and research assistance can be found on the university library website.

Disabilities policy

If you are a student who needs academic accommodations because of a documented disability, please contact me and present your letter of accommodation as soon as possible. Please keep in mind that reasonable accommodations are not provided retroactively.

Course Schedule

ENVS107b: Atmospheric Civics & Diplomacy

Spring 2022 - Mondays & Wednesdays 3:-4:50pm - Classroom: Mandel G12
Lecturer: Charles C. Chester ("Charlie")

Key:

- This page is best viewed by unchecking "Print-Layout" on the Google doc's View menu.
- To minimize your having to scroll excessively, I leave the most recent class/event at the top of the schedule where you can conveniently download the day's materials; for anything before that, I've cut-&-pasted it to the bottom of this document.
- Assignment due dates are in boxes.
- I update this page after class with both the post-class reading and the day's lecture slides (both as pdfs). I try to do it soon after class, although it sometimes takes me up to 24 hours.
- Both the schedule and the readings are subject to change, and **I reserve the right to change readings for any particular class up to a week before the class begins**. So keep checking back to this Course Schedule!
- Annotated submissions of the *pre-class* pdf-reading are due the evening before class by 8pm (viz., Monday and Wednesday evenings).
- Annotated submissions of the *post-class* pdf-reading for both Tuesday and Thursday classes are due at 6pm the following Sunday.

January 18 class

Introduction to the course

Topics, themes & activities

- Overview of course and syllabus
- pdf submissions

Pre-class reading for today (due via Latte by 8pm the evening before class)

- None for introductory class

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Cordero, Eugene C, Diana Centeno, and Anne Marie Todd. 2020. The role of climate change education on individual lifetime carbon emissions. *PLoS one* 15, no. 2: e0206266. \(23 pages\)](#)
 - What could possibly be worth reading after listening to your professor read the syllabus for an hour and a quarter? This is a somewhat offbeat article that attempts to measure what students carried away from a class they took as undergraduates. It's a bit long, so don't get caught up in the details; you should read it *through* (including the methods section—do you buy what they're doing?) but not *thoroughly*.

January 20 class

An overview of Atmospheric Chemistry & Global Environmental Politics (two ends of what spectrum?)

Topics, themes & activities

- Choosing your NGO

- Choosing a book for your Book Assessment
- Choosing a webpage for your Annotated Bibliography
- Actor diversity in international relations
- What is “civil society”?
- What is an air pollutant?
- Categories of air pollutants
- Core Consistent Concepts (CCCs)

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Manisalidis, I, E Stavropoulou, A Stavropoulos, and E Bezirtzoglou. 2020. Environmental and health impacts of air pollution: A review. *Frontiers in Public Health* 8, 14.](#) (13 pages)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Fisher, Matthew. 2021. Environmental biology. LibreTexts. Chapter 10.](#) (20 pages)
[Lecture slides for today](#)

Due January 23

NGO selection due by 8pm - Submit [here](#)

Book selection due by 8pm - Submit [here](#)

Annotated Bibliography EarthWeb.info webpage selection due by 8pm - Submit [here](#)

January 25

A historical perspective on local and domestic responses to air pollution

Topics, themes & activities

- “Early” history of air pollution
- Case studies of Manchester & London, England
- US Clean Air Act(s)
- "Glocalization" and issues of scale
- Indoor air quality

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Evelyn, John. 1661. *Fumifugium: Or the inconveniencie of the aer and smoak of London dissipated. Dedicatory Epistle.*](#) (6 pages)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Kumar, Hari, and Emily Schmall. 2021. India's toxic air pollution prompts Supreme Court to act. *New York Times*, November 18.](#) (6 pages)

[Lecture slides for today](#)

January 26

Submit your choice of how you will obtain your book at this [Google Form](#).

January 27

Transboundary air pollution: The Trail Smelter imbroglio

Topics, themes & activities

- Fundamentals of diplomacy & an introduction to international politics
- Bilateral vs. multilateral relations
- Key proposition: Principle 21, the basis of international environmental law, descends from the Trail Smelter conflict.
- Border ecology
- Smokestack ecology
- Emission & transport of air pollutants

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Trail Smelter Arbitral Tribunal. 1938. Decision.](#) (5 page extract).

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Blodgett, Mark S, Richard J Hunter Jr, and Hector R Lozada. 2008. A primer on international environmental law: Sustainability as a principle of international law and custom. *ILSA J. Int'l & Comp. L.* 15-31.](#) (17 pages).
 - This is a law journal article, so very heavy on the footnotes! Here's the good news: you can skim these footnotes. That is, while it's definitely worth skimming them, there's no need to spend time trying to decipher them.

[Lecture slides for today](#)

February 1

Transboundary air pollution: Acid rain politics between Canada & the USA

Topics, themes & activities

- "Two level games" in international diplomacy
- Acid rain science & history
- 1990 Clean Air Act Amendments
- 1991 Canada-US Agreement

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Hepburn, Mary A., and Lawrence R. Hepburn. 1985. Case study of the acid rain film controversy: Political propaganda or environmental education? *The Journal of Environmental Education* 16, no. 4: 1-6.](#) (6 pages)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Randorf, Gary. 1998. Environmental advocacy, the Adirondacks and air quality. *Environmental Science & Policy* 1:3, 175-178.](#) (4 pages)

[Lecture slides for today](#)

February 3

Convention on Long-range Transboundary Air Pollution & its many protocols

Topics, themes & activities

- CLRTAP
- Pollution as a tool in uber politics
- Why use “protocols”?
- Comparing North American with European approaches to air pollution

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Dochinger, L. S., and T. A. Seliga. 1975. Report from the First International Symposium. *Journal of the Air Pollution Control Association* 25: 1103-1105.](#) (3 pages)

Post-class reading for today (due 6pm on the Sunday following today’s class)

- [Johan Sliggers, and Willem Kakebeeke, eds. 2004. Clearing the air: 25 years of the Convention on Long-range Transboundary Air Pollution. New York and Geneva: UN Economic Commission for Europe. Extract from Chapter 2.](#) (12 pages)

[Lecture slides for today](#)

February 8

Transboundary air pollution around the globe

Topics, themes & activities

- Economic impacts of air pollution
- India & China's domestic air pollution
- Asian haze & Indonesian forest fires
- Asian Dust/Brown Cloud
- POPs & Mercury

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [ScienceDaily. 2008. “Dirty brown clouds impact glaciers, agriculture and the monsoon.”](#)

Post-class reading for today (due 6pm on the Sunday following today’s class)

- [Nansai, K, et al. 2021. Consumption in the G20 nations causes particulate air pollution resulting in two million premature deaths annually. *Nature Communications* 12:1, 6286.](#) (12 pages)
 - This article looks at the concepts of “transboundary” and “air pollution” in a very different way than I’ve been covering it in class. Do you think it makes sense to use the ideas of *consumption* and *trade* as vectors of air pollution? Please note that this is a highly technical article; if you find it difficult to wade through the details, don’t worry—just plow through as best you can.

[Lecture slides for today](#)

February 10

Setting the stage for understanding stratospheric ozone depletion & the discovery of ozone depleting substances (ODSs)

Topics, themes & activities

- Key idea: Public understanding of environmental issues evolves rather than spontaneously generates.
- The fallacy of the eureka hypothesis
- Supersonic transport (SST)
- Early concerns over stratospheric ozone depletion (SOD)

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Carter, Luther J. 1975. Deception charged in presentation of SST study. Science 190, no. 4217: 861-861. \(1 page\)](#)
 - Note that the Thomas M. Donahue cited in this story is the father of Environmental Studies faculty member Brian Donahue.

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Primack, Joel R., and Frank von Hippel. 1974. Advice and dissent: Scientists in the political arena. Chapter 2. \(20 pages\)](#)

[Lecture slides for today](#)

February 15

From problem definition to a commitment to solve the problem (but not actually solving the problem)

Topics, themes & activities

- Ozone depleting substances (ODS)
- Epistemic communities
- 1985 Vienna Convention
- 1987 Montreal Protocol
- Detractors & critics

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Brodeur, Paul. 1986. Annals of chemistry: In the face of doubt. New Yorker, June 9, 70-87. \(17 pages\)](#)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [UNEP. 2021. "Inside the 20-year campaign to rid the world of leaded fuel." United Nations Environment Program. August 30. \(8 pages\)](#)
 - Note that this is due Sunday, February 27, at the end of the break.

[Lecture slides for today](#)

February 17

"Saving the world": The effectiveness of international ozone politics

Topics, themes & activities

- SOD & ODS since 1987
- Key idea: International cooperation saved the world (usual caveats apply).
- Causal factors in environmental effectiveness
- The Multilateral Fund & "common but differentiated responsibilities" (CBDR)

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [White House. 1987. Memo re: Montreal Protocol & related materials.](#) (14 pages)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Chasek, Pamela S., David Leonard Downie, and Janet Welsh Brown. 2021. Global environmental politics. Dilemmas in world politics. New York: Routledge. §: Stratospheric ozone depletion.](#) (13 pages)
 - Note that this is due Sunday, February 27, at the end of the break.

[Lecture slides for today](#)

February 18

Policy Memo Sub-1 due by TBD – Submission box on Latte page

March 1

Conceptualizing climate change from the 19th Century to 1988: “Scientific advocacy,” emergent civil society engagement on global warming, and the formation of the IPCC

Topics, themes & activities

- Overview of the upcoming Negotiations sessions
- The 19th century "discovery" of greenhouse gases and global warming
- Scientists at work: Fourier, Foote, Tyndall, Arrhenius, Revelle, Keeling & more.
- The Keeling curve
- Early warnings from the scientific community
- Civil society takes notice of “global warming”
- The Intergovernmental Panel on Climate Change (IPCC)
- Is "scientific advocacy" a contradiction in terms?
- Is "climatology" akin to the science of “medicine”?

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Conservation Foundation. 1963. Implications of rising carbon dioxide content of the atmosphere: A statement of trends and implications of carbon dioxide research reviewed at a conference of scientists. New York.](#) (7 pages)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Grundmann, Reiner. 2016. Climate change as a wicked social problem. Nature Geoscience 9, no. 8: 562-563.](#) (2 pages)

[Lecture slides for today](#)

March 3

Negotiating the 1992 UN Framework Convention on Climate Change and “CBDR”

- The strange, tragic, triumphant, and ambiguous negotiations history of the UNFCCC

- Common but differentiated responsibilities (CBDR) as a solution and/or a problem.
- North-South, First World-Third World, Developed-Developing, and other utterly unworthy and unavoidable labels.

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Anderson, Christopher and Peter Aldhous. 1991. Third world muscles in on climate treaty. *Nature* 349 28 February: 727.](#) (1 page)
 - For this short editorial, it is critical to keep in mind that it's 1991—the year before the UN Framework Convention on Climate Change was signed.

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Witt, Stephen. 2021. The man who predicted climate change. *New Yorker*. December 10.](#) (10 pages)

[Lecture slides for today](#)

Friday, March 4

Policy Memo Sub-2 due by noon - Submission box on Latte page

March 8

In-class Webinar: Gina McCarthy with Brandeis Journalism Program

Topics, themes & activities

- We will attend this webinar in class

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Blanding, Michael. 2022. In the White House, fighting for the environment. *TuftsNow*. March 2.](#) (3 pages)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Schneider, Claudia R, Lisa Zaval, and Ezra M Markowitz. 2021. Positive emotions and climate change. *Current Opinion in Behavioral Sciences* 42, 114-120.](#) (7 pages)

No lecture slides for today

Tuesday, March 8

Negotiations materials to Charlie by 10pm at this [Google Form](#) (and here's the [Negotiations Assignment](#), available on Latte)

March 10

Climate negotiations exercise - Session #1

March 15 [Note: I'm very behind, so the topics for "today" are not accurate for what we have covered. I will be adjusting things accordingly soon...but also note that the post-class reading is still due!]

UNFCCC negotiations 1993-1997: Building up to the failed success of the Kyoto Protocol

Topics, themes & activities

- Why the Kyoto Protocol failed miserably
- Why the Kyoto Protocol was a tremendous successes
- Key idea: Perhaps more than any other environmental agreement, the case of the Kyoto Protocol demonstrates the critical necessity of understanding the domestic political situation of key countries.

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Yandle, Bruce. 1999. Bootleggers and Baptists in retrospect. Regulation 22, no. 3: 5-7. \(3 pages\)](#)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Weart, Spencer R. 2008. The discovery of global warming. Cambridge, MA: Harvard University Press. Chapter 8. \(23 pages\)](#)

[Lecture slides for today](#)

March 17

Climate negotiations exercise - Session #2

March 22

Catch-up day

Topics, themes & activities

- Everything I'm very behind on (see *Topics, themes & activities* from previous few classes)

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Meyer, Robinson. 2022. On top of everything else, nuclear war would be a climate problem. Atlantic Monthly. March 9.](#)
 - This reading is something of a "newsy" interlude as I try to catch up with the schedule. Given what we're seeing in the news these days, please note that this reading is a true downer—probably the most depressing thing you'll read in this class all semester (and in terms of depressing readings, this course sets a high bar...or was that a low bar?). It certainly has put me in a low spot, and I spend my working life reading depressing materials. But...it's a good summary of what we are up against today, and not grappling with it directly would be, for me, disrespectful to you. That said, I would suggest not reading this right before you go to bed—maybe at breakfast right before a busy day!
 - If you already did the CRP2019.pdf reading that used to be due on this date, don't worry, you're all set—I've just moved it to a future class.

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Vanderheiden, Steve. 2015. Common but differentiated responsibility. In *Essential concepts of global environmental governance*, eds. Jean-Frédéric Morin, and Amandine Orsini, 31-34. New York: Routledge. \(4 pages\)](#)

[Lecture slides for today](#)

March 24

Climate negotiations exercise - Session #3

Sunday, March 27

Memo Sub-3 due by 6pm - Submission box on Latte page

March 29

Guest lecturer: Peter Frumhoff

Topics, themes & activities

- Peter Frumhoff is this year's Richmond Fellow at Brandeis.
- He worked at the Union of Concerned Scientists for years.
- I was Peter's TA when he taught a course called "International Biodiversity Conservation" at Tufts' Fletcher School.
- We have no set agenda for today, but I want you to come to class with questions on how "NGOs get things done." He's been there and can answer your questions!

Pre-class readings for today (due via Latte by 8pm the evening before class)

- Instead of a pre- and post-class reading for today, you have two pre-class readings
- [Frumhoff, Peter C., Richard Heede, and Naomi Oreskes. 2015. The climate responsibilities of industrial carbon producers. *Climatic Change* 132, 157-171. \(12 pages\)](#)
- [Ekwurzel, B., J. Boneham, M. W. Dalton, R. Heede, R. J. Mera, M. R. Allen, and P. C. Frumhoff. 2017. The rise in global atmospheric CO₂, surface temperature, and sea level from emissions traced to major carbon producers. *Climatic Change* 144, no. 4: 579-590. \(15 pages\)](#)

Post-class reading for today (due 6pm on the Sunday following today's class)

- None [see note above]

No lecture slides for today

March 31

Film viewing: I am Greta

Topics, themes & activities

- We will be watching the documentary *I am Greta* today.
- The movie is 17 minutes longer than class; I will stay through to the end and it's your option to stay (I understand some of you will have appointments).
- As we watch, I'll be asking you to take short notes in regard to the film's relevancy to your NGO.

Pre-class reading for today (due via Latte by 8pm the evening before class)

- No pre-class reading for today since I am late in posting one. However, you may well benefit by doing the post-class reading below before seeing the movie.

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Bond, Patrick. 2021. Climate justice advocacy: Strategic choices for Glasgow and beyond. In *Negotiating climate change in crisis*, eds. Steffen Böhm, and Sian Sullivan, 335-352. Open Book Publishers.](#) (18 pages)

No lecture slides for today

Friday, April 1

Book Memo Sub-1 due by noon - Submission box on Latte page

Sunday, April 3

Negotiations email to your Executive Director - Submit via email to Charlie

April 5

Mitigation v. adaptation

Topics, themes & activities

- Mitigation & Adaptation

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Climate Reality Project. 2019. "Climate adaptation vs. mitigation: What's the difference, and why does it matter?" November 7.](#) (5 pages)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Bortscheller, Mary J. 2010. Equitable but ineffective: How the principle of common but differentiated responsibilities hobbles the global fight against climate change. *Sustainable Development Law & Policy* 10, no. 2: 49-69.](#) (10 pages)

[Lecture slides for today](#)

April 7

UNFCCC negotiations 1997-2007: Kyoto to Bali

Topics, themes & activities

- A close analysis of the Kyoto Protocol

- Adaptation & mitigation

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Mace, M.J. 2010. International treaties. In *Climate change science and policy*. ed. Stephen Henry Schneider, 221-234. Washington DC: Island Press. \(14 pages\)](#)
 - This is a very nice summary of the “state of climate diplomacy,” but note the publication date: 2010. Pay close attention to what the author calls for at the end of the chapter.

Post-class reading for today (due 6pm on the Sunday following today’s class)

- [Veerkamp, Anthony. 2015. Preservation in a changing climate: time to pick up the tab. *Forum Journal* 29, no. 4: 9-18. \(10 pages\)](#)

[Lecture slides for today](#)

April 12

UNFCCC negotiations 2008–2015: Copenhagen “fiasco” to the Paris Accord, part 1

Topics, themes & activities

- The successful failure of the Copenhagen Accord
- The failed success of the Paris Accord
- Where does CBDR stand?
- Loss and damage

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Chasek, Pamela S. & David Leonard Downie. 2021. *Global environmental politics*. Routledge. §Climate change, pp.102–117. \(18 pages\)](#)

Post-class reading for today (due 8pm on the Monday, April 25)

- [Kashwan, Prakash. 2021. Climate Justice in the Global North. *Case Studies in the Environment* 5, no. 1. \(13 pages\)](#)
 - This is written by the new professor in the Environmental Studies Program!

[Lecture slides for today](#)

April 15

Book Memo Sub-2 due by noon - Submission box on Latte page

April 14

UNFCCC negotiations 2008–2015: Copenhagen “fiasco” to the Paris Accord, part 2

Topics, themes & activities

- The successful failure of the Copenhagen Accord
- The failed success of the Paris Accord
- Where does CBDR stand?
- Loss and damage

Pre-class reading for today (due via Latte by 8pm the evening before class)

- None for today

Post-class reading for today (**due 8pm on the Monday, April 25**)

- [UNFCCC. 2022. "Introduction to Climate Finance."](https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance)
[https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance.](https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance)
 - In response to a question I couldn't fully answer in class, I looked around for a good reading on climate finance, but I couldn't find anything useful under 40 pages. This webpage from the UNFCCC does a pretty good job of summarizing the "state of climate finance." (For more—lots more—see [here](#).)

[Lecture slides for today](#)

April 26

International cooperation on climate change & biodiversity

Topics, themes & activities

- Effects of climate change on biodiversity
- Forests & Reduced Emissions from Deforestation & Degradation Plus (REDD+)
- Migratory species
- Landscape responses to climate change
- Land use, land use change & forestry (LULUCF)
- Agriculture, Forestry, and Other Land Uses (AFOLU)

Pre-class reading for today (**you already submitted this one last week!**)

- [Locke, Harvey, et al. No date. A nature-positive world: The global goal for nature.](#) (21 pages)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Gregersen, H, PA Dewees, H El-Lakany, B Singer, and J Blaser. 2020. Global forest governance and sustainable development: Reflections on the life and times of John Spears. *International Forestry Review* 22, no. 1: 142-154.](#) (13 pages)
 - This is an article I happened on by chance. It celebrates the career of someone I'd never heard of, but who obviously made a big impact. In tracing his career, the article does a nice job of describing the history of the international forest regime complex.

[Lecture slides for today](#)

April 28

Conclusion: Parting thoughts on the future of diplomatic efforts to curb climate change

Topics, themes & activities

- The Kigali Amendment as a harbinger on integration?
- CBDR still with us
- The relationship between our climate's future and the future of climate politics

- Everything matters....

Pre-class reading for today (due via Latte by 8pm the evening before class)

- [Harris, Paul G. 2022. COP26: The eternally weak pulse of climate diplomacy, and what needs to change. *PLOS Climate* 1, no. 3: e0000019.](#) (4 pages)

Post-class reading for today (due 6pm on the Sunday following today's class)

- [Berny, Nathalie, and Christopher Rootes. 2018. Environmental NGOs at a crossroads. *Environmental Politics* 27, no. 6: 947-972.](#) (26 pages)

[Lecture slides for today](#)

Noon, April 29

Annotated bibliography Sub-1 due - Submission box on Latte page

6-9pm, May 10

Take-home, open-book *Final Exam* on the lectures, your NGO, and air pollutants

May 11, 6pm

1) Book Memo Sub-3 due - Submission box on Latte page

2) Annotated bibliography Sub-2 due - Submission box on Latte page