Modeling Political Decisions for Sustainability: EU Carbon Removals

Fall (Winter) Term 2023/24

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Purpose and Contents

This seminar will introduce students to the Predictioneer's Game, an applied model of multi-party decision-making. Subsequently, students will apply their modeling skills to specific political decisions on sustainability. The domain of application for the decision forecasts will be the degree of integration of Carbon Removals (negative emissions) into the EU Emissions Trading System. The language of instruction is English.

Learning Goals

Knowledge & Understanding

- background on political decision-making in medium-large actor settings,
- understand the core inputs & outputs of a prediction model, and
- decision-making on EU climate policies, esp. carbon removals.

Applying, Analyzing &Evaluating

- undertake predictions of multi-actor negotiations for a hitherto unresolved challenge of sustainability policy,
- agree, among students and facilitated by the instructors, on standardized position input scales as relevant to utilizing a policy prediction software, and
- research, execute, and evaluate your own simulation model runs.

Competences

- Students develop their own research strategy amendable to using policy prediction tools, e.g., for subsequent use in their thesis as well as in a corporate or political context, and
- work individually as well as in groups on a diverse set of assignments.

Logistics

Time: →*Course Overview* (below)
Location: →*Course Overview* (most sessions take place at Griebnitzsee, Building 6)
Circumstances may require the use of Zoom. Please regularly check →Moodle for announcements.
Prerequisites: Master, M.A., M.S., or doctoral student status, or special student status in Political Science, Public Administration, MAIB, MANIA, MPM, Sociology, Business Administration, Economics, and HPI; exceptions at the discretion of the instructor.
Course Registration: →https://puls.uni-potsdam.de, Course: 430511 (you will be admitted to the waiting list).
Students *without* access to PULS send a brief email to the instructor and indicate (1) first & last name, (2) email (University of Potsdam email preferred), (4) field und semester of studies, (4) why they cannot access PULS, and (5) why they wish to take this course.
Deadline for Dropping the Course: 10 Nov. 2023
Credit Points: 5/6 or 9/10 (ECTS)
Course website: Moodle →https://moodle2.uni-potsdam.de/course/view.php?id=39239 *(currently under development)*
Capacity: 20
Contact Details:
detlef.sprinz@uni-potsdam.de (include *"MPD4S Fall 2023"* in the subject line)
www.sprinz.org
Office Hours: by appointment (preferably, please inquire after class or during breaks)

Practicalities

This course requires usage of Moodle and Zoom for our remote communication and interaction. In addition, we may use other digital tools. We will use Moodle for contents management (self-enrollment for students with a University of Potsdam account) and Zoom for video (as needed). You will need a computing device running Windows OS to run the software ("Predictioneer's Game") used for predicting negotiation outcomes.

Code of Conduct

If you are sick or have a communicable disease, incl. seasonal influenza, please stay at home and consult your medical doctor. If you miss an assignment, you must provide a medical doctor's certificate.

All students are assumed to be familiar with and will abide by the rules of proper academic conduct as specified by the University of Potsdam (→https://www.uni-potsdam.de/am-up/2011/ambek-2011-01-037-

039.pdf, German; https://www.uni-potsdam.de/fileadmin/projects/studium/docs/03_studium_konkret/07_rechtsgrundlagen/plagiatsrichtlinie_EN.pdf, English), and for courses offered jointly with other universities and academic programs, their rules apply in addition; by default, the strictest rule applies. You are expected to undertake all your individual assignments independently. For group assignments, resulting products shall be authored exclusively by all group members (with individual components clearly marked). Failure to comply with such rules may lead to the consequences stipulated in →https://www.uni-potsdam.de/fileadmin/projects/ambek/Amtliche_Bekanntmachungen/2022/Ausgabe_19/ambek-2022-019-786-811.pdf, https://www.uni-potsdam.de/am-up/2021/ambek-2021-06-138a.pdf (German) and →https://www.uni-potsdam.de/fileadmin/projects/studium/docs/03_studium_konkret/07_rechtsgrundlagen/BAMAO_Lesefassung_EN.pdf (English) (§17).

Each written paper submission (excl. presentation files) in this course shall include →https://www.uni-potsdam.de/fileadmin01/projects/wisofak/Dateien/Studium/informationen_f__r_studierende_plagiatssoftware_april_2014.pdf (attach only page 2; in German only).

"Any use of AI to complete an assignment must be acknowledged in a citation that includes the prompt you submitted to the bot, the date of access, and the URL of the program" (https://poorvucenter.yale.edu/AIguidance, 15 Oct. 2023). Failure to do so constitutes academic misconduct (see above).

All (personal) information and material that you encounter in conjunction with this course, on →Zoom, or on →Moodle shall be exclusively used for course-related purposes; they are not part of the public domain. As we will have guest speakers and an issue of current politics as the domain of application, "Chatham House Rules" apply:

> "When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed."
> (https://www.chathamhouse.org/about-us/chatham-house-rule, last accessed: 15 Oct. 2023).

Whenever you use outside services, you agree to abide by their respective End User License Agreement or equivalent. You have to read the EULA (End User License Agreement) of the Predictioneer's Game software, and you accept it automatically when submitting the simulation paper. You also automatically accept all rules of academic conduct for the entire course by submitting your first written assignment, whether this is a paper, presentation file, written test, quiz, or similar.

During our seminar sessions, I expect you to concentrate solely on this course, not other activities.

Students are expected to attend all sessions. If you fall ill, please stay at home and seek medical advice. In case you cannot submit assignments due to medical reasons, you must submit an appropriate medical certificate. In addition, in case you request accommodations ("Nachteilsausgleich"), please inform the instructors to this effect and provide the necessary documentation during the first three modules of this course.

In case observation of religious obligations interferes with academic deadlines, please notify the instructor well ahead of the deadlines.

For proper citation, please consult →https://poorvucenter.yale.edu/using-sources (English), https://www.uni-potsdam.de/de/cogsci-students/studienplanung/gute-wissenschaftlicher-praxis-plagiarismus (German), as well as https://www.uni-potsdam.de/en/cogsci-students/organizing-your-studies/academic-code-of-conduct-plagiarism (English).

Course Requirements and Grading

Students are expected to attend *all* classes and read *all* required readings *before* class so as to allow for informed discussions.

This course comprises a portfolio of assignments. Students receiving 5-6 ECTS will undertake the simulation paper and presentation as a *group* assignment; students wishing to receive 9-10 ECTS undertake the simulation paper and presentation as an *individual* assignment. Please inform the instructor how many ECTS you wish to receive by 09 Nov. 2023 before undertaking the simulation assignment.

Requirements	*Weight*
Fulfill tasks and tests on Moodle	20%
(Individual) actor paper	20%
(Individual) actor paper presentation	10%
(Group) simulation paper	35%
(Group) simulation paper presentation	15%

Course Overview[1]

Module #	Date & Time	Topic	Learning goals students	Homework (in advance of the class meetings) & Activities
1	19 Oct. 2023, 8:30-10:00h, 3.06. S19	Course Overview	Understand the goals and topic of the course	Read detailed syllabus & admission policy Students prepare questions related to the course
2	26 Oct. 2023, 8:30-10:00h, 3.06. S19	The Predictioneer's Game: Logic & Overview	Basic understanding of overall functions and functioning of the Predictioneer's Game	Familiarize yourself with Moodle Watch a set of videos by Bruce Bueno de Mesquita (BdM) Readings according to syllabus
3	26 Oct. 2023, 10:20-11:50h, 3.06. S19	The Predictioneer's Game: Input Data	Detailed understanding of the input data (conceptual) Corona pandemic policy decision as conceptual example	Watch a set of videos by BdM Readings according to syllabus
4	02 Nov. 2023, 10:20-11:50h, 3.06. S19	The Predictioneer's Game: Output Data	Detailed understanding of the output files (conceptual) Interpreting outputs Learn veto rule	Watch a set of videos by BdM Readings according to syllabus Read centrally provided output files
5	02 Nov. 2023, 18:00-20:00h, 3.06. HS 2 (reception to follow)	Guest Lecture: Dr. Artur Runge-Metzger (formerly European Commission): Integrating Carbon Dioxide Removals into EU Climate Policy		Readings according to syllabus Signup for Actor Papers beginning 04 Nov. 2023

[1] The schedule is indicative and subject to short-term changes. Check the course site on →Moodle for updates and announcements.

6A	09 Nov. 2023, 9:30-10:00h, 3.06. S19	Quiz		Bring proper digital devices with you and arrive aearly
6B	09 Nov. 2023, 10:20-11:50h, 3.06. S19	The Predictioneer's Game: Running the Software	Get Predictioneer's Game running	Install Predictioneer's Game prior to class Submit Predictioneer's Game input file to →Moodle Readings according to syllabus
optional	15 Nov. 2023, 13:00-18:00h, German Foreign Office, Berlin	Briefing on the 28th Conference of the Parties of the UN Framework Convention on Climate Change		Register individually
7	16 Nov. 2023, 10:20-11:50h, 3.06. S19	Guest Lecture: Dr. Joachim Hein (BDI – Confederation of German Industries): Carbon Dioxide Removal (CDR) Needed to Achieve Net Zero – (How) Can (Carbon) Markets Help to Boost CDR?		Readings according to syllabus
8	23 Nov. 2023, 10:20-11:50h, 3.06. S18	Guest Lecture: ???		Sign-Up for Assignment #1 (Actor Papers and Presentations) Readings according to syllabus
9	30 Nov. 2023, 8:30-10:00h, 3.06. S19	Developing the Prediction Scales	Interactive development of the input scales, esp. position scale (& potential influence)	Readings according to syllabus Students submit initial ideas on the position/influence scale to →Moodle
10	30 Nov. 2023, 10:20-11:50h, 3.06. S19	Guest Lecture: Dr. Simon Marr (BMWK, Federal Ministry for Economic Affairs		Readings according to syllabus Signup for Group Papers beginning

		and Climate Action): *title t.b.d.*		01 Dec. 2023
11 & 12	07 Dec. 2023, 8:30-11:50h, 3.06. S19	Presentations: Individual Actor Papers	Student Presentations	Submission of actor papers and presentation files to →Moodle
13	14 Dec. 2023, 10:20-11:50h, location t.b.d.	Workshop: Q&A on Group Projects	Consultations by Simulation Group with the Instructor	Submit general and project-specific questions →Moodle
14 & 15	21 Dec. 2023, 8:30-11:00h, location t.b.d.	Presentations: Individual & Group Predictions	Student Presentations	Submission of presentation files to →Moodle. Simulation Papers are due on 18 Jan. 2024
16	21 Dec. 2023, 11:15-12:00h, location t.b.d.	Course Review		
	18 Jan. 2024			Assignment #2 Papers Due

Additional modules may be scheduled at the discretion of the instructor. Please check announcements on →Moodle for updates.

Textbook & Readings

Bueno de Mesquita, Bruce. 2009. *The Predictioneer's Game: Using the Logic of Brazen Self-Interest to See and Shape the Future*. New York: Random House.

All other readings can be found on →*Moodle*.

Assignments

All Assignments

Assignments will be posted to →*Moodle* well ahead of the deadline. Submission deadlines are indicated in the →*Assignments*.

Read the instructions carefully! All papers include your student ID number(s), assignment number (see overview), and word count on the first page. At a minimum, leave one inch margins from all four edges of A4-sized sheets. Footnotes shall be kept to a minimum. All text is 1.5-spaced, 11-12 point font (except for tables and graphs due to formatting). Paper length will be strictly enforced (the word count includes literally everything – no

exceptions; the academic integrity form is not included in the word count). Papers shall be submitted – both in Word (check your word count!) **and** PDF format – via →*Moodle* by the due date and time *(→Assignment)*. Extensions will be granted only under extraordinary circumstances, following written petition to the instructor.

In case of group assignments, all author ID numbers have to be listed, including a short description who contributed what.

In case you cannot submit assignments due to medical reasons, you must submit a medical doctor's certificate to the instructor.

The allocation of individual students to actor papers and to simulation groups is at the discretion of the instructor.

Assignments will be posted to →*Moodle* and are outlined below.

Actor and Simulation Papers & Presentations

Actor papers will be up to 1,000 words in length, simulation papers will be up to 2,000 words in length per group member. Details on the paper format and the submission procedure will be provided in the formal assignments. All papers and presentation files are due the day prior to the presentation + Q&A session in class. Papers and presentation files are submitted via →Moodle. Papers have to include student IDs and a brief description who did what (the latter refers to group papers only), the topic, and the word count on the cover page.

We will elaborate the relevant position scale for the prediction paper (Assignment #2) in class (Module 9), using working groups.

For the actor papers, please provide a brief historical overview of the actor, its central positions over time on the particular issue under investigation, and score the actor with respect to influence, position, salience, flexibility, veto status (as introduced in Modules 2-4). Each of these scores has to be justified and sources fully referenced. Your presentations will be subject to Q&A by your peers (Modules 11-12).

For the simulation paper, you will have to determine which actors to include (beyond the actors already covered by actor papers), potentially revise the scores offered in individual actor papers, and devise a strategy for employing the Predictioneer's Game, including robustness checks (variations of the input structure, e.g., on parameters where point values cannot be reliably ascertained). Please appendix the input file(s) for the simulations as .txt file(s) and provide full references for all sources. The simulation papers will be subject to Q&A by your peers (Module 14-15).

Modules

Module 1: Course Overview

Course Overview

Module 2: The Predictioneer's Game: Logic & Overview

Bueno de Mesquita, Bruce. 2009. *The Predictioneer's Game: Using the Logic of Brazen Self-Interest to See and Shape the Future.* New York: Random House, ch. 3

Bueno de Mesquita, Bruce. 2010. Judging Judgment. *Critical Review* 22 (4):355-388. doi: 10.1080/08913811.2010.541686

Sprinz, Detlef F., Bruce Bueno de Mesquita, Steffen Kallbekken, Frans Stokman, Håkon Sælen, and Robert Thomson. 2016. Predicting Paris: Multi-Method Approaches to Forecast the Outcomes of Global Climate Negotiations. *Politics and Governance* 4 (3):172-187. doi: 10.17645/pag.v4i3.654

Module 3: The Predictioneer's Game: Input Data

Bueno de Mesquita, Bruce. 2009. *The Predictioneer's Game: Using the Logic of Brazen Self-Interest to See and Shape the Future.* New York: Random House, ch. 4

Bueno de Mesquita, Bruce. 2011. A New Model for Predicting Policy Choices. *Conflict Management and Peace Science* 28 (1):65-87. doi: 10.1177/0738894210388127

Module 4: The Predictioneer's Game: Output Data

Sprinz, Detlef F., and Bruce Bueno de Mesquita. 2015. Predicting Paris: Forecasting the Outcomes of UNFCCC COP-21 With the Predictioneer's Game. Potsdam and New York City: PIK - Potsdam Institute for Climate Impact Research and New York University, doi: 10.13140/RG.2.1.3722.1840

Read output files for Module 4 (→Moodle).

Module 5: Guest Lecture: Dr. Artur Runge-Metzger (Mercator Research Institute on Global Commons and Climate Change, formerly European Commission): Integrating Carbon Dioxide Removals Into EU Climate Policy: Challenges and Governance Options

Smith, S. M., et al. 2023. *The State of Carbon Dioxide Removal - 1st Edition.*

Oxford: University of Oxford, 8-13, browse the remainder. https://www.stateofcdr.org

Edenhofer, Ottmar, et al. 2023. *On the Governance of Carbon Dioxide Removal – A Public Economics Perspective*. CESifo Working Paper No. 10370. Munich: Munich Society for the Promotion of Economic Research - CESifo GmbH, , esp. Section 5. https://www.cesifo.org/DocDL/cesifo1_wp10370.pdf

Module 6A: Quiz

In-Class Quiz
Note: The electronic quiz on the Predictioneer's Game in Module 6A can only be accessed after having watched *all* audio and video files provided in preparation of Modules 2- 4. Please be aware and prepare accordingly in order to avoid any technical issues when the quiz is taken during our session.

Module 6B: The Predictioneer's Game: Running the Software

Prepare an input file for the Predictioneer's Game based on
Bueno de Mesquita, Bruce. 2009. *The Predictioneer's Game: Using the Logic of Brazen Self-Interest to See and Shape the Future.* New York: Random House, 215-226

Purchase, download and install the Predictioneer's Game. Install and read all information, incl. "Excel Tools," "Sample Test Sets," "User Guide,", FAQ, and the EULA
The Dean's Office has agreed to the purchase of a limited number of licenses that shall be shared among students.

Read
Bueno de Mesquita, Bruce. n.d. The Predictioneer's Game© Basic Software Training Manual. Retrieved from The Predictioneer's Game (Software)

Module 7: Guest Lecture: Dr. Joachim Hein (BDI – Federation of German Industries): Carbon Dioxide Removal (CDR) Needed to Achieve Net Zero – (How) Can (Carbon) Markets Help to Boost CDR?

Readings to be announced later. Check for updates.

Module 8: Guest Lecture: Actors (t.b.c.)

Schenuit, Felix, and Oliver Geden. 2023. Chapter 22: Carbon Dioxide Removal: Climbing Up the EU Climate Policy Agenda. In Tim Rayner et

al. (eds.). *Handbook on European Union Climate Change Policy and Politics*. Cheltenham: Edward Elgar Publishing, 322-336. https://doi.org/10.4337/9781789906981

Netherlands, Norway, Denmark, & Sweden. (n.d.). *Non-Paper on Carbon Capture and Storage*. https://www.ft.dk/samling/20201/almdel/KEF/bilag/87/2288136.pdf

Danish Ministry of Climate, Energy and Utilities. 2022. *Denmark's Position Paper on an Ambitious EU 2040 Climate Target and a Cost-Effective EU Climate Architecture – A Response to the Public Consultation on the European Commission's 2040 Climate Target* https://www.ft.dk/samling/20222/almdel/EUU/bilag/623/2733409/index.htm

Boettcher, Miranda., Felix Schenuit, and Oliver Geden. 2023. The Formative Phase of German Carbon Dioxide Removal Policy: Positioning Between Precaution, Pragmatism and Innovation. *Energy Research & Social Science*, *98*, 103018. https://doi.org/https://doi.org/10.1016/j.erss.2023.103018

Module 9: Developing the Prediction Scales

Students submit initial ideas on the position/influence scale to →Moodle.

Bueno de Mesquita, Bruce. 2009. *The Predictioneer's Game: Using the Logic of Brazen Self-Interest to See and Shape the Future.* New York: Random House, ch. 5.

Rickels, Wilfried, et al. 2022. Procure, Bank, Release: Carbon Removal Certificate Reserves to Manage Carbon Prices on the Path to Net-Zero. *Energy Research & Social Science*, 94, 102858. https://doi.org/https://doi.org/10.1016/j.erss.2022.102858

Module 10: Guest Lecture: Dr. Simon Marr (BMWK, Federal Ministry for Economic Affairs and Climate Action): title t.b.d.

Meyer-Ohlendorf, Nils. 2023. *Making Carbon Removals a Real Climate Solution - How to integrate carbon removals into EU Climate Policies*. Berlin: Ecologic Institute. https://www.ecologic.eu/19290

Rickels, Wilfried, et al. 2021. Integrating Carbon Dioxide Removal Into European Emissions Trading [Policy and Practice Reviews]. *Frontiers in Climate* 3. https://doi.org/10.3389/fclim.2021.690023

Jörß, WWolfram et al. 2022. *Challenges for the Accounting of Emerging Negative and Zero/Low Emission Technologies*. Working Paper 3/2022, Freiburg i.B.: Oeko-Institut e.V., 34-39. www.oeko.de/fileadmin/oekodoc/WP-NET-accounting.pdf

van den Plan, Sam. 2023. *The 2040 Homestretch - Enhancing EU Climate Action Before and After 2023 - The Role of the EU ETS and Carbon Removals*. n.p.: Carbon Market Watch

https://carbonmarketwatch.org/publications/the-2040-homestretch-enhancing-eu-climate-action-before-and-after-2030-the-role-of-the-eu-ets-and-carbon-removals/

Modules 11 & 12: Presentations: Individual Actor Papers

Presentations: Individual Actor Papers

Please read all presentation files on →Moodle.

Module 13: Workshop: Q&A on Group Projects

Details to be announced on →Moodle

Module 14: Presentations: Individual & Group Prediction Papers

Presentation: Group or Individual Prediction Papers

Please read all presentation file on →Moodle.

Module 15: Course Review