



Cornell University

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PUBPOL 3615/PADM 5615

Sustainable Finance: Southeast Asia and Global Perspectives

Spring 2024

Mon/Wed, 8:40am - 9.55am at Warren Hall B02

Instructor: Aichiro Suryo Prabowo, Ph.D.

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Office location: 117 Kahin Center, 640 Stewart Ave

Office hours: by appointment

Credit Hours:

3

Prerequisites:

Introductory level course in public policy/administration, economics, or finance. Basic proficiency in Excel is required. Familiarity with algebra and calculus will be helpful.

Course Description:

Climate change presents a dilemma. Under the Paris Agreement, countries of the world committed to the goal of limiting warming to no more than two degrees Celsius from pre-industrial times. Scientists have warned that exceeding the threshold would increase the risks of heatwaves, drought, and extreme weather. Achieving the target, however, requires collective efforts to reduce emissions. Households, businesses, and governments would have to radically shift to cleaner energy supply and greener activities, which will take a great deal of financial resources. Sustainable finance attempts to address this challenge by integrating finance as a discipline into the sustainability framework. Designed for policy students, this course considers the perspectives of policymakers rather than business actors in navigating the green transition. Case studies will be drawn primarily from Southeast Asia, which is considered one of the most vulnerable regions to climate change, although much of the framework is also applicable to other regions around the globe.

Course Objectives:

As a result of participating in this course, you will be able to:

1. Identify the state of climate change in Southeast Asia and around the globe
2. Recognize the role of government, and the limit thereof, in addressing climate change
3. Evaluate the feasibility of government financing (i.e., taxation) in the green transition
4. Identify private financing mechanisms and apply techniques to evaluate their efficacy
5. Identify policy interventions (and potential unintended consequences) to mobilize private financing in the transition

Course Materials:

All required materials will be made available in Canvas. Original course materials are copyrighted intellectual property of the creator of the content and are not a student's property to share, distribute, or sell.

Expectations and Resources for Student Success

Inclusivity Statement:

Cornell supports an inclusive learning environment where diversity and individual differences are understood, respected, appreciated, and recognized as a source of strength. It is expected that students in this class will respect differences and demonstrate diligence in understanding how other peoples' perspectives, behaviors, and worldviews may be different from their own. To support this environment, please keep the discussions we have within the course community and do not record, photograph, or otherwise share images and conversations from the class.

Mental Health and Stress Management Resources:

If you are feeling overwhelmed, or worried about a friend, please reach out to one of your instructors or your academic advisor. We can try to help or we can put you in touch with someone who can help. Cornell has trained counselors available to listen and help: Empathy, Assistance, and Referral Service (213 Willard Straight Hall, 607-255-3277), Cornell Health's Counseling and Psychological Services (CAPS, 607-255-5155), and Let's Talk. Notably, Cornell has recently invested a great deal of time and effort to offer more comprehensive support for our campus community. Please go to mentalhealth.cornell.edu to learn more.

Academic Integrity:

Each student in this course is expected to abide by the Cornell University *Code of Academic Integrity*. Any work submitted by a student in this course for academic credit will be the student's own work. Students agree that by taking this course, all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site.

Accommodations for Students with Disabilities:

Your access in this course is important. Please give me your Student Disability Services (SDS) accommodation letter early in the semester so that we have adequate time to arrange your approved academic accommodations. If you need an immediate accommodation for equal access, please speak with me after class or send an email message to me and/or SDS at sds_cu@cornell.edu. If the need arises for additional accommodations during the semester, please contact SDS. Student Disability Services is located at Cornell Health Level 5, 110 Ho Plaza, 607-254-4545, sds.cornell.edu.

Assignments and Assessments:

Students will be evaluated according to the following course components:

Quizzes	15%
Problem Sets	45%
Group Presentation	15%
Final Exam	25%

For graduate students only: Students enrolled in the graduate program will be required to write an essay in addition to the above requirements. It should be about 2000 words and is due in Week 15. More details will be provided in class, including a set of prompts covering topics that link the class material with current events on sustainable finance and policy. This essay is worth 20% of the grade, while all other aspects of the class will make up the other 80% (Quizzes = 12%, Problem Sets = 36%; Group Presentation = 12%; Final Exam = 20%).

Weekly quizzes:

- You will read scholarly and practitioner-oriented articles germane to the topics covered in this course. Weekly quizzes help you keep up with the material, as well as assess your readiness before class sessions.
- There are 11 quizzes to be completed individually throughout the semester. No quizzes are assigned in Weeks 1, 6 (February break) and 11 (Spring break), 15, and 16. The quiz can be accessed via Canvas and is due before the Monday session of the corresponding week. Most questions are in the form of multiple choices. You are given two attempts on each quiz; the higher score will be retained in the course gradebook. Upon each submission, you will receive feedback on which questions are answered correctly (or incorrectly). By the due date and time, Canvas will show answer keys and automatically lock the quiz, preventing new submissions. Failure to complete a quiz by the deadline will result in zero.

Problem Sets:

- There are 3 problem sets due over the course of the semester, which are intended to train you to analyze climate, budgetary, and financial data. Each problem set requires you to manipulate, analyze, and present data using Excel. This is a skillset that is proven useful not only in academia but also in public policy.
- Discussion with classmates is allowed, but everyone must turn in an individual assignment. If you work with others, list the names of your peers on top of your document. Note that plagiarism is strictly prohibited; submit your own write up in your own words.

- Submit completed assignments via Canvas. Due dates are reported in the course schedule of the syllabus. To maintain fairness in grading, a letter grade (-10 points/100) will be deducted for each day it is late.

Group Presentation:

- The goal of this assignment is to give you an opportunity to work collaboratively and think about creative solutions to real-world challenges. While this assignment requires you to apply theories and tools taught in class, you are encouraged to also collect additional data and consult external resources.
- Each student will be assigned to a group, and each group will have a topic to study. There are two group outputs: (1) slides to accompany (2) your presentation. Note that your group's slides must be submitted a few days before the presentation date to give enough time for other groups to review. A letter grade (-10 points/100) will be deducted for each day it is late.

Final Exam:

- After the final class session, the instructor will distribute a take-home final exam. The exam will consist of no more than five essay questions on a variety of course topics. The final exam is open note and open book. Students are expected to complete the take-home final individually. You must cite relevant papers listed on the reading list of the syllabus to buttress your arguments.
- Submit your final exam via Canvas by the specified deadline (TBA). A letter grade (-10 points/100) will be deducted for each day it is late.

Course Grading

Grading Practices and Policies:

All assessment scores will be posted on Canvas. If you would like to review any of your grades (including the exam), or have questions about how something was scored, please email me to schedule a time to meet. I am happy to discuss any of your grades with you, and if I make a mistake, I will immediately correct it. Any formal grade disputes must be submitted in writing and within 5 days of receiving the grade.

Grading Scale:

93-100 A	83-86.99 B	73-76.99 C	63-66.99 D
90-92.99 A-	80-82.99 B-	70-72.99 C-	60-62.99 D-
87-89.99 B+	77-79.99 C+	67-69.99 D+	59.99 and below F

An A+ grade is a sign of exceptional performance and will be granted in very rare cases.

Course Schedule

Week	Class Sessions	Topic (Course Objective)	Deliverables	Quiz
1	Mon, 01/22 Wed, 01/24	Introduction; What is (and is not) climate change (1)	Review syllabus and Canvas	
2	Mon, 01/29 Wed, 01/31	Climate change in Southeast Asia (1)	Problem Set 1 handed out	v
3	Mon, 02/05 Wed, 02/07	Functions of government (2)		v
4	Mon, 02/12 Wed, 02/14	Challenges within and across governments (2)	Problem Set 1 due	v
5	Mon, 02/19 Wed, 02/21	Climate finance from public sources (3)	Problem Set 2 handed out	v
6	Mon, 02/26* Wed, 02/28	The mechanics of carbon tax (3)		
7	Mon, 03/04 Wed, 03/06	Climate finance from private sources (4)	Problem Set 2 due	v
8	Mon, 03/11 Wed, 03/13	Risk and return (4)	Problem Set 3 handed out	v
9	Mon, 03/18 Wed, 03/20	Equity-investing (4)		v
10	Mon, 03/25 Wed, 03/27	Bonds-investing (4)	Problem Set 3 due	v
11	Mon, 04/01* Wed, 04/03*			
12	Mon, 04/08 Wed, 04/10	De-risking private investment (5); Group meeting	Group presentation assignment handed out	v
13	Mon, 04/15 Wed, 04/17	Disclosure and greenwashing (5)		v
14	Mon, 04/22 Wed, 04/24	ESG ratings (5)	Group slides due	v
15	Mon, 04/29 Wed, 05/01	Group presentations		
16	Mon, 05/06	Final review	Final exam handed out (due date TBA)	

Notes:

This schedule is subject to change as needed during the semester

*In accordance with the university's academic calendar, no class during February break and Spring break

**Guest lectures are tentatively scheduled

Required readings

Week 1

IPCC. (2023). Summary for Policymakers. *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34

Shabecoff, P. (1988). Global warming has begun, expert tells Senate. *New York Times*.

Stott, Peter A., Nikolaos Christidis, Friederike EL Otto, Ying Sun, Jean-Paul Vanderlinden, Geert Jan van Oldenborgh, Robert Vautard et al. (2016). Attribution of extreme weather and climate-related events. *Wiley Interdisciplinary Reviews: Climate Change* 7, no. 1: 23-41

Week 2

Amarjargal, Ebro, Nylander, and Duggal (2020). Achieving nationally determined contributions through market mechanisms in Asia and the Pacific. *ADB Sustainable Development Working Paper Series*. **[Appendix 1 or pages 33-40]**

Asian Development Bank. (2009). The Economics of Climate Change in Southeast Asia: A Regional Review. **[chapters 2-3 pages 7-55]**

Yusuf, A. A. & Herminia Francisco. (2009). Climate Change Vulnerability Mapping for Southeast Asia. **[pages 1-14]**

Week 3

Bellon, M. M., & Massetti, E. (2022). *Economic principles for integrating adaptation to climate change into fiscal policy*. International Monetary Fund. **[pages 1-16]**

Daly, H. E. (2005). Economics in a full world. *Scientific American*.

Klein, R. J., Schipper, E. L. F., & Dessai, S. (2005). Integrating mitigation and adaptation into climate and development policy: three research questions. *Environmental science & policy*, 8(6), 579-588.

Musgrave, Richard A. and Musgrave, Peggy B. (1989). Fiscal Functions: An Overview. *Public Finance in Theory and Practice*.

The Economist. (2023). Development v climate.

Week 4

Cooper, R., Peter Cramton, Ottmar Edenhofer, Christian Gollier, Éloi Laurent, David JC MacKay, William Nordhaus, Axel Ockenfels, Joseph Stiglitz, Steven Stoft, Jean Tirole, and Martin L. Weitzman (2017). Why Paris did not solve the climate dilemma. *Global Carbon Pricing* (pp. 1-6). MIT Press.

Cuevas, S. C. (2018). Institutional dimensions of climate change adaptation: insights from the Philippines. *Climate policy*, 18(4), 499-511.

Dasandi, N., & Esteve, M. (2017). The politics–bureaucracy interface in developing countries. *Public Administration and Development*, 37(4), 231-245.

Donahue, A. K., & Joyce, P. G. (2001). A framework for analyzing emergency management with an application to federal budgeting. *Public Administration Review*, 61(6), 728-740.

Schipper, E. L. F. (2020). Maladaptation: when adaptation to climate change goes very wrong. *One Earth*, 3(4), 409-414.

Yurnaidia, Z., Merdekawatia, M., Suryadia, B., Sagbakkenb, H. F., Overlandb, I., & Vakulchuk, R. (2021). ASEAN Climate Action: A Review of Nationally Determined Contributions Updated in 2020.

Week 5

Basri, M. C., & Riefky, T. (2023). Ensuring an Inclusive, Affordable, and Smooth Climate Transition in Indonesia. *Keys To Climate Action*, 127-149.

Gonguet, M. F., Wendling, M. C. P., Sakrak, O. A., & Battersby, B. (2021). *Climate-Sensitive Management of Public Finances—"Green PFM"*. International Monetary Fund. 1-16

Mikesell, John L. (2014). Taxation: Criteria for Evaluating Revenue Options. *Fiscal Administration*. [pages 343-345 and 350-353]

World Bank. (2017). Carbon Tax Guide: A Handbook for Policy Makers, Synthesis: Carbon Taxes in Brief. 7-19

Week 6

Singapore Ministry of Finance. (2022). Budget 2022 Speech. **[pages 44 – 53]**

The Asia Foundation. (2023). The State of Carbon Pricing in Southeast Asia. **[chapter 4 pages 29 - 42]**

Wattanakuljarus, A. (2019). Effects and burdens of a carbon tax scheme in Thailand. *Eurasian Economic Review*, 9, 173-219.

- FEBRUARY BREAK ON MONDAY, CLASS MEETS ON WEDNESDAY -

Week 7

Climate Policy Initiative. (2023). Global landscape of climate finance 2023- Executive Summary. **[pages 1-7]**

Krogstrup, S., & Oman, W. (2019). Macroeconomic and financial policies for climate change mitigation: A review of the literature. *IMF Working Paper*. **[pages 19-29]**

Migliorelli, M. (2020). The Sustainability–Financial Risk Nexus. *Sustainability and Financial Risks: The Impact of Climate Change, Environmental Degradation and Social Inequality on Financial Markets*, 1-29. **[pages 1 - 9]**

UNFCCC. (2022). Technical Assessment of Climate Finance in South-East Asia. **[pages 27 – 42]**

Week 8

Brealey, R. A., Myers, S. C., & Allen, F. (2020). Introduction to Risk and Return. *Principles of corporate finance*. McGraw-hill. **[pages 167-190]**

Migliorelli, M. (2020). The Sustainability–Financial Risk Nexus. *Sustainability and Financial Risks: The Impact of Climate Change, Environmental Degradation and Social Inequality on Financial Markets*, 1-29. **[pages 10 - 27]**

IEA Renewable Energy Technology Department. (2011). Risk Quantification and Risk Management in Renewable Energy Projects. **[pages 50-79]**

Week 9

De Haas, R., Martin, R., Muûls, M., & Schweiger, H. (2022). Firms and finance during the green transition. *Scaling Up Sustainable Finance and Investment in the Global South*. [pages 11-18]

Markowitz, Harry. (1952). Portfolio Selection. *Journal of Finance*, 77-91

Rubinstein, M. (2002). Markowitz's" portfolio selection": A fifty-year retrospective. *Journal of Finance*, 57(3), 1041-1045.

Schoenmaker, D. & Schramade, W. (2023). Equity-investing with an ownership stake. *Principles of Sustainable Finance*. [pages 211 – 241]

Week 10

Climate Bonds Initiative. (2023), ASEAN Sustainable Finance State of the Market 2022. [pages 8 – 10 and 29 - 34]

Flammer, C. (2021). Corporate green bonds. *Journal of financial economics*, 142(2), 499-516.

Kapoor, A., Teo, E. Q., Azhgaliyeva, D., & Liu, Y. (2020). The viability of green bonds as a financing mechanism for green buildings in ASEAN. *ADB Working Paper Series*. [pages 4 - 14]

Schoenmaker, D. & Schramade, W. (2023). Bonds-investing without voting power. *Principles of Sustainable Finance*. [pages 252-279]

Week 11

- SPRING BREAK, NO CLASS THIS WEEK -

Week 12

Bernards, N. (2023). Where is finance in the financialization of development?. *Globalizations*, 1-15.

Golka, P., Murau, S., & Thie, J. E. (2023). Towards a Public Sustainable Finance Paradigm for the Green Transition. 1-13

Green Climate Fund. (2023). Making blended finance work for nature-based solutions. [pages 14-26]

Krueger, P., Sautner, Z., & Starks, L. T. (2020). The importance of climate risks for institutional investors. *The Review of Financial Studies*, 33(3), 1067-1111. **[pages 1067 - 1086]**

United Nations Development Programme. (2022). Cambodia: Derisking Renewable Energy Investment. **[pages 19 - 32]**

Week 13

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California management review*, 54(1), 64-87.

Task Force on Climate-related Financial Disclosures. (2021). Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures. **[pages 14 - 22]**

UNEP FI. (2013). Portfolio Carbon: Measuring, disclosing and managing the carbon intensity of investments and investment portfolios. **[pages 18-36]**

Volz, U. (2018). Fostering green finance for sustainable development in Asia. **[pages 10-22]**

Week 14

Coffee Jr, J. C. (2011). Ratings reform: The good, the bad, and the ugly. *Harv. Bus. L. Rev.*, 1, 231-278. **[pages 231 – 271]**

McKinsey. (2022). Does ESG really matter and why? McKinsey Quarterly. 1-9.

Rivlin, A. M., & Soroushian, J. B. (2017). Credit rating agency reform is incomplete. *Washington, DC: Brookings Institution*. 1-5.

Pan, F. (2021). ESG Disclosure and Performance in Southeast Asia. 1-3.

Sustainalytics. (2021). ESG Risk Ratings - Methodology Abstract. **[pages 4 – 14]**

Week 15

- GROUP PRESENTATIONS -

Week 16

- FINAL REVIEW -