



Cornell University

**PUBPOL 3615/ 5615**

**Sustainable Finance: Southeast Asia and Global Perspectives**

Spring 2025

Monday/Wednesday 8:40AM - 9:55AM, M Van Rensselaer Hall 1106

**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:**

Required: introductory coursework in economics and finance, along with basic proficiency in Excel. Recommended: Familiarity with algebra and calculus.

**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](http://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](mailto: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](http://sds.cornell.edu).

## Assignments and Assessments:

Students will be evaluated according to the following course components:

	Undergraduate	Graduate
Quizzes	12.5%	10%
Class Participation	12.5%	10%
Problem Sets	37.5%	30%
Group Presentation	12.5%	10%
Critical Review (graduate students only)	-	20%
Final Exam	25%	20%
Total	100%	100%

*For graduate students only:* Students enrolled in the graduate program will be required to write a critical review. More details will be provided in class, including the due date and a set of prompts covering topics that link the readings with current events on sustainable finance and policy. This component is worth 20% of the grade, while all other aspects of the class will make up the other 80% (Quizzes = 10%, Class Participation = 10%, Problem Sets = 30%; Group Presentation = 10%; Final Exam = 20%).

### *Quizzes:*

- You will read scholarly and practitioner-oriented articles germane to the topics covered in this course. Quizzes help you keep up with the material, as well as assess your readiness before class sessions.
- There are quizzes almost every week to be completed individually throughout the semester. No quizzes are assigned during school break. The quiz can be accessed via Canvas and is due before the first meeting of the corresponding week. Most questions are in the form of multiple choices or multiple answers. 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.

### *Class participation:*

- Students are expected to attend in person and actively engage in all class activities, such as policy simulations, group exercises, class discussions, and conversations with guest speakers. The instructor may randomly select students to answer questions or share their opinions on the material during sessions, so please come to class prepared. If you are late or absent when called upon, you will miss the chance to participate, which will negatively impact this grading component.

- The university also requires instructors to report academic concerns through a designated online portal, including instances of a student's extensive absences. Upon notification, the university will connect directly with the student to offer early intervention, discuss available resources, and explore options to drop or withdraw from the course, if applicable.

*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 skill set is valuable in both academia and 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	Wed, 01/22	Introduction (1)	Review syllabus and Canvas	
2	Mon, 01/27 Wed, 01/29	Climate change in Southeast Asia (1)	Problem Set 1 handed out	V
3	Mon, 02/03 Wed, 02/05	Economic-environmental tradeoffs (2)		V
4	Mon, 02/10 Wed, 02/12	The roles of governance and government (2)	Problem Set 1 due	V
5	Mon, 02/17* Wed, 02/19	FEBRUARY BREAK; Climate finance from public sources (3)	Problem Set 2 handed out	
6	Mon, 02/24 Wed, 02/26	The mechanics of carbon tax (3)		V
7	Mon, 03/03 Wed, 03/05	Climate finance from private sources (4)	Problem Set 2 due	V
8	Mon, 03/10 Wed, 03/12	Risk and return (4)	Problem Set 3 handed out	V
9	Mon, 03/17 Wed, 03/19	Equity-investing (4)		V
10	Mon, 03/24 Wed, 03/26	Bonds-investing (4)	Problem Set 3 due	V
11	Mon, 03/31* Wed, 04/02*	SPRING BREAK		
12	Mon, 04/07 Wed, 04/09	Designing policies for sustainable finance I (5)	Group presentation assignment handed out	V
13	Mon, 04/14 Wed, 04/16	Designing policies for sustainable finance II (5)		V
14	Mon, 04/21 Wed, 04/23	Designing policies for sustainable finance III (5) Group meeting	Group slides due	V
15	Mon, 04/28 Wed, 05/30	Group presentations		
16	Mon, 05/05	Group presentations	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

## Course Schedule

### Week 1

Eckstein, D., Hutfils, M. L., & Winges, M. (2018). Global climate risk index 2019. **[pages 3-18 and 28-31]**

IPCC. (2023). Climate Change 2023 Synthesis Report: Summary for Policymakers. **[pages 1-34]**

Shabecoff, P. (1988). Global warming has begun, expert tells Senate. New York Times. **[pages 1-3]**

Stott, Peter A. et al. (2016). Attribution of extreme weather and climate-related events. WIREs Clim Change. **[pages 23-38]**

### Week 2

Asian Development Bank. (2009). The Economics of Climate Change in Southeast Asia: A Regional Review. **[chapter 3/pages 21-55]**

Bankoff, Greg. (2003). Environment and Hazard in Southeast Asia. **[pages 18-30]**

Sengupta, Somini. (2020). "A Crisis Right Now: San Francisco and Manila Face Rising Seas." New York Times. **[pages 1-4]**

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

### Week 3

Daly, H. E. (2005). Economics in a full world. *Scientific American*. **[pages 100-107]**

Dinda, S. (2004). Environmental Kuznets curve hypothesis: a survey. *Ecological Economics*. **[pages 431-455]**

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*. **[pages 579-586]**

Meckling, J., & Allan, B. B. (2020). The evolution of ideas in global climate policy. *Nature climate change*. **[pages 434-438]**



The Economist. (2023). Development v climate. **[pages 57-59]**

#### **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*. **[pages 1-6]**

Cuevas, S. C. (2018). Institutional dimensions of climate change adaptation: insights from the Philippines. *Climate Policy*. **[pages 499-509]**

Dasandi, N., & Esteve, M. (2017). The politics–bureaucracy interface in developing countries. *Public Administration and Development*. **[pages 231-243]**

Jänicke, M. (2017). The multi-level system of global climate governance—the model and its current state. *Environmental Policy and Governance*. **[pages 108-119]**

Schipper, E. L. F. (2020). Maladaptation: when adaptation to climate change goes very wrong. *One Earth*. **[pages 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. **[pages 1-7]**

#### **- FEBRUARY BREAK-**

#### **Week 5**

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

Donahue, A. K., & Joyce, P. G. (2001). A framework for analyzing emergency management with an application to federal budgeting. *Public Administration Review*. **[pages 728-738]**

Gonguet, M. F., Wendling, M. C. P., Sakrak, O. A., & Battersby, B. (2021). Climate-Sensitive Management of Public Finances- Green PFM". *IMF Notes*. **[pages 1-16]**

Musgrave, Richard A. and Musgrave, Peggy B. (1989). Fiscal Functions: An Overview. *Public Finance in Theory and Practice*. **[pages 3-14]**

## Week 6

Bettarelli, L., Furceri, D., Pisano, L., Pizzuto, P. (2025). Greenflation: Empirical Evidence using Macro, Regional and Sectoral Data. *European Economic Review*. **[pages 1-13]**

Finkler, S., Purtell, R., Calabrese, T. D., & Smith, D. (2013). Forecasting using historical data. *Financial management for public, health, and not-for-profit organizations*. **[pages 109-116]**

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

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

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

Williams, D. W., & Calabrese, T. D. (2016). The status of budget forecasting. *Journal of Public and Nonprofit Affairs*. **[pages 127-145]**

## Week 7

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

Fichtner, J., Schairer, S., Haufe, P., Aguila, N., Baioni, R., Urban, J., & Wullweber, J. (2025). Channels of influence in sustainable finance: A framework for conceptualizing how private actors shape the green transition. *Finance and Society*. **[pages 1-25]**

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

Martinus, M. (2024). Just Energy Transition Partnerships (JETPs) in Indonesia and Vietnam: Implications for Southeast Asia. *Fulcrum*. **[pages 1-11]**

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*. [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*. [pages 10-27]

Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*. [pages 425-442]

## 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*. [pages 77-91]

Rubinstein, M. (2002). Markowitz's" portfolio selection": A fifty-year retrospective. *Journal of Finance*. [pages 1041-1044]

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]

International Capital Market Association. (2016). Green Bond Principles. [pages 1-7]

Nguyen, A. H., Hoang, T. G., Nguyen, D. T., Nguyen, L. Q. T., & Doan, D. T. (2022). The development of green bond in developing countries: insights from

Southeast Asia market participants. *The European Journal of Development Research*. [pages 196-215]

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

## Week 11

- SPRING BREAK-

## Week 12

Brunner, S., & Enting, K. (2014). Climate finance: A transaction cost perspective on the structure of state-to-state transfers. *Global Environmental Change*. [pages 138-142]

Busch, J., Ring, I., Akullo, M., Amarjargal, O., Borie, M., Cassola, R. S., ... & Zhou, K. (2021). A global review of ecological fiscal transfers. *Nature Sustainability*. [pages 756-763]

Causevic, A., LoCastro, M., David, D., Selvakkumaran, S., & Gren, Å. (2021). Financing resilience efforts to confront future urban and sea-level rise flooding: Are coastal megacities in Association of Southeast Asian Nations doing enough?. *Environment and Planning B: Urban Analytics and City Science*. [pages 989-1005]

Olson, M. (1969). The principle of "fiscal equivalence": the division of responsibilities among different levels of government. *The American economic review*. [pages 479-487]

Quah, E., & Varkkey, H. (2013). The political economy of transboundary pollution: mitigation of forest fires and haze in Southeast Asia. *The Asian Community: Its Concepts and Prospects*. [pages 1-32]

## Week 13

Flammer, C., Giroux, T., & Heal, G. (2024). Blended Finance. *NBER Working Paper Series*. [pages 1-12 and Figure 1]

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

Krogstrup, S., & Oman, W. (2019). Macroeconomic and financial policies for climate change mitigation: A review of the literature. *IMF Working Paper*. **[pages 6-18]**

United Nations Development Programme. (2013). Derisking Renewable Energy Investment. **[pages 11-27]**

United Nations Development Programme. (2019). Cambodia: Derisking Renewable Energy Investment. **[pages 25-34]**

#### **Week 14**

Bernards, N. (2023). Where is finance in the financialization of development?. *Globalizations*. **[pages 88-99]**

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

Kedward, K., Zu Ermgassen, S., Ryan-Collins, J., & Wunder, S. (2023). Heavy reliance on private finance alone will not deliver conservation goals. *Nature Ecology & Evolution*. **[pages 1339-1342]**

Mazzucato, M. (2023). Financing the Sustainable Development Goals through mission-oriented development banks. **[pages 3-16]**

Yusuf, A. A. (2025). A Climate-Relevant Development or Development-Relevant Climate Agenda?. *The European Journal of Development Research*. **[pages 1-10]**