Challenges to International Climate Governance

Semester:	Spring Semester- FS 2023
Root Number:	481838
ECTS:	3
Lecturer:	Prof. Dr. Christoph Riable, Prof. Dr. Gabriele Spilker and Dr. Eddy Bekkers
Dates:	**July 3 to July 6, 2023**
Room:	The is a hybrid course. The course will be held on-site at the World Trade Institute and online on Zoom.

Audience:

- Government officials; Embassy staff; people working for international organizations and NGOs, industry and in legal practice
- Master of Advanced Studies of International Law and Economics (MILE) Students
- Joint LL.M. / Diploma of Advanced Studies Trade and Investment Law (TRAIL+) Students - World Trade Institute / Faculty of Law, Unibe
- Certificate of Advanced Studies / Diploma of Advanced Studies in International Law and Economics (CAS ILE & DAS ILE) Students - World Trade Institute, Unibe
- Students from different universities across Switzerland

Course Description

This course will be divided in 3 parts:

The first part will give first an overview of the current knowledge of Climate Change and its impacts. Thereby, the latest assessment reports of the Intergovernmental Panel on Climate Change (IPCC) will be presented.

The second part of the course deals with the political challenges to climate change governance and covers both the international level (Tuesday) and the domestic level (Wednesday). Tuesday starts with an overview of the history of climate change cooperation. We look in detail into the Kyoto Protocol and discuss how its specific institutional design arose and what consequences this had for both combatting climate change and future climate cooperation.

We then turn to the Paris Agreement and elaborate on its bottom-up commitment structure, which is rather unique in comparison to other international treaties. This bottom-up structure implies that it is each country by itself that decides how its nationally determined contribution (NDC) to combat climate change should look like. This leaves a lot of room for domestic factors influencing countries' international climate commitments.

Therefore, on Wednesday, we turn to the domestic level and investigate in more detail how political factors, such as the type of the political system or civil society involvement, economic factors, such as industry structure and business lobbying, as well as public opinion influences domestic climate policy.

The goal of the third part of the course is to gain a basic understanding of the most important links between trade and climate change. The following topics will be discussed focusing on the economic mechanisms and not on the technical details and the economic modelling:

- The role of trade in climate change mitigation exploring how trade can lead to rising emissions through more production and transport on the one hand and on the other hand to reduced emissions through enhanced diffusion of technologies and intermediates, the sharing of costs of green investments, and exploitation of comparative advantage in renewable energy.
- The role of trade in climate change adaptation exploring how trade can help countries to adjust to climate change related shocks
- The spillover effects of mitigation policies such as carbon pricing, regulation, and renewable energy subsidies between countries, the need for coordination of such policies to prevent fragmentation, and the implications for trade policy in general and border carbon adjustment (BCA) in particular.
- The impact of decarbonisation on trade and welfare, evaluating the distribution of adjustment costs between countries to the low-carbon transition and the implications for global trade patterns in general and energy patterns in particular.

Lecturers

Christoph C. Raible, PD Dr.

Associate Professor at Climate and
Environmental Physics, University of Bern (Bern)
Deputy Director of the Oeschger Centre for
Climate Change Research, University of Bern (Bern)
christoph.raible@unibe.ch

Christoph Raible is an Associate Professor of Atmospheric Dynamics at the division of Climate and Environmental Physics at the Physics Institute of the University of Bern. He also is Deputy Director of the Oeschger Centre for Climate Change Research, which is an interdisciplinary Centre at the University of Bern integrating climate research over 4 faculties. His scientific interest lies in climate processes in past present and future, mainly on atmospheric dynamics and atmosphere ocean interaction. Thereby, he uses Earth System models on the global scale, but also regional climate models, relevant for climate impact studies. Overall, he published 130 publications in peer-reviewed journals.

He started his career in 1990s at the University of Hamburg, Germany studying Meteorology, where he received his doctor degree in 2001. In 2008, he finished his habiliation at the Physics Institute of the University of Bern and became an associate professor in 2015. He teaches atmospheric dynamics, but also is involved in mainly interdisciplinary lectures and seminars, as well as summer schools, like the Swiss Climate Summer Schools or the International Bachelor Summer School for Climate Change Research (see https://www.oeschger.unibe.ch/studies/index_eng.html). He is also engaged in organizing workshops bridging the gap between science and the practical implementation in companies, e.g. for the insurance sector (https://stormworkshops.unibe.ch/).

Gabriele Spilker

Gabriele Spilker is Professor of „International Politics – Global Inequality“ at the Department of Politics and Public Administration and co-speaker of the Excellence Cluster "The Politics of Inequality".

Her main research interests concern both the determinants and the consequences of inequality. In particular, she investigates the consequences of climate change for migration and conflict as well as inequalities in perceiving globalization processes. Her work has been published in the British Journal of Political Science, International Organization, Journal of Politics und Nature Climate Change. Gabriele Spilker is an active part of Scientists for Future (S4F).

Eddy Bekkers

Eddy Bekkers is counsellor in the Economic Research and Statistics Division of the World Trade Organisation (WTO). He focuses on trade policy and climate change modelling. He holds a PhD from Erasmus University Rotterdam and was assistant professor in Linz and postdoctoral researcher in Bern.

He conducts (applied policy) research on topics such as services trade, trade and climate change, trade and FDI, and trade policy scenarios. He has published in peer-reviewed journals such as the Economic Journal, European Economic Review, the Review of International Economics, Economics Letters, and World Economy.

Learning Objectives

- To obtain an overview of the current knowledge of Climate Change and it's impact
- To provide an general overview on how to estimate future climate change
- To understand the mandate of the Intergovernmental Panel on Climate Change (IPCC)
- To obtain an overview of both the international and domestic political dimensions of climate change politics
- To be able to compare the challenges posed by climate change to other international challenges
- To be able to pose and answer interesting and innovative research questions concerning climate change politics.
- To learn and understand different theoretical approaches to explaining both international cooperation in the realm of climate change politics and domestic political reactions.
- Get familiar with main stylized facts on international trade and climate change.
- Gain basic knowledge of the main mechanisms through which trade affects climate change mitigation.
- Gain basic knowledge of the role of trade in climate change adaptation.
- Obtain a basic knowledge of the interaction between climate change policies and trade policies.
- Obtain a basic knowledge of the expected impact of decarbonization on trade flows.

Assessment

- Students' knowledge will be assessed on the basis of a take home exam which needs to be completed on an individual basis.
- Take-home assignment made available on 6 July 2023, 16:00 and to be submitted before 7 July 2023, 20:00 to masters@wti.org

Course Overview

Date	Day	Time	Topic / lecturer
3 July	Monday	09:00 12:00	Introduction to the Climate system of the Earth – Ch. Riable
		13:00 15:00	How do we estimate future climate change?– Ch. Riable
4 July	Tuesday	09:30 12:00	Why is climate change such a difficult international problem /History of Climate Change Regulations opic 3 / lecturer – G. Spilker
		14:00 16:00	International Bargaining – how to distribute the burden – G. Spilkr
5 July	Wednesday	09:30 12:00	The domestic politics of climate Change / Public opinion vis-á-vis the domestic consequences of burden sharing – G. Spilker
		14:00 16:00	Public opinion vis-á-vis the domestic consequences of burden sharing – G. Spilker
6 July	Thursday	10:00 12:30	Trade Flows and Climate/ E. Bekkers
		13:30 16:00	Trade Flows and Climate/ E. Bekkers
7 July	Friday	Due 20:00	Take-home assessment

MONDAY, JULY 3, 2023

Lecturer: Christoph C. Raible

Subject: Climate Change – What is the challenge?

Topics

- Introduction to the climate system of the Earth
  - This includes a definition of climate versus weather
  - A brief overview of the forcing of the climate system
  - An overview of the subsystems: atmosphere, ocean, cryosphere, land and the carbon cycle
- How do we estimate future climate change?
  - Introduction the basic concepts of climate modelling,
  - Definitions of climate scenarios,
  - Climate change detection and Attribution
- What is the IPCC and how are the assessment reports generated? This will be explained with the Working Group I, focussing on the physical basis.
- Main results of Working Group I "the physical basis"
- Main results of Working Group II "Impacts, Adaptation and Vulnerability"

Compulsory Reading Material

- IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3−32, doi:10.1017/9781009157896.001.

- IPCC, 2022: Summary for Policymakers [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.)]. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3–33, doi:10.1017/9781009325844.001.

- AR6 Synthesis Report (SYR) will be released in March 2023: https://www.ipcc.ch/report/sixth-assessment-report-cycle/

Optional Reading Material

We do not expect to read the full reports, but try to read parts which are of interest of you.

- IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change[Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, In press, doi:10.1017/9781009157896.

- IPCC, 2022: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. Cambridge University Press, Cambridge, UK and New York, NY, USA, 3056 pp., doi:10.1017/9781009325844

TUESDAY, JULY 4, 2023

Lecturer: Prof. Dr. Gabriele Spilker

Topics

- **Why is climate change such a difficult (international) problem?**
  - Mandatory reading:
    - Bernauer, Thomas. 2013. Climate change politics. *Annual Review of Political Science* 16: 421-448.
  - Additional reading:
    - Hardin, Garrett. 1968. The Tragedy of the Commons. Science 162: 1243-1248.
- **History of Climate Change Regulation**
  - Mandatory reading:
    - Gupta, Joyeeta. 2010. A History of International Climate Change Policy. *WIREs Climate Change* 1(5): 636-653.
  - Additional reading:
    - Barrett, Scott. 2003. *Environment and Statecraft: The Strategy of Environmental Treaty-Making*. Oxford: Oxford University Press. Chapter 15.
    - Falkner, Robert. 2016. The Paris Agreement and the new logic of international climate politics. *International Affairs* 92(5): 1107-1125.
- **International Bargaining – How to distribute the burden?**
  - Additional reading:
    - Victor, David. 2006. Toward Effective International Cooperation on Climate Change: Numbers, Interests and Institutions. *Global Environmental Politics* 6(3): 90-103.
    - Nordhaus, William. 2021. Why Climate Policy Has Failed and How Governments Can Do Better. *Foreign Affairs.*
    - Busby, Joshua and Johannes Urpelainen. 2020. Following the Leaders? How to Restore Progress in Global Climate Governance. *Global Environmental Politics 20*(4): 1-23.
    - Dolšak, Nives, and Aseem Prakash. 2022. Three faces of climate justice. *Annual Review of Political Science* 25: 283-301.

WEDNESDAY, JULY 5, 2023

Lecturer: Prof. Dr. Gabriele Spilker

Topics:

- **The domestic politics of climate change**
  - Mandatory reading:
    - Tørstad, Vegard, Håkon Sælen, and Live Standal Bøyum. 2020. The domestic politics of international climate commitments: which factors explain cross-country variation in NDC ambition? *Environmental Research Letters* 15(2).
  - Additional reading:
    - Bättig, Michèle and Thomas Bernauer. 2009. National institutions and global public goods: are democracies more cooperative in climate change policy? *International Organization* 63(2): 281-308.
    - Tennant, Elizabeth, and Elisabeth A. Gilmore. 2020. Government effectiveness and institutions as determinants of tropical cyclone mortality. *Proceedings of the National Academy of Sciences* 117(46): 28692-28699.
    - Povitkina, Marina. 2018. The limits of democracy in tackling climate change. *Environmental Politics* 27(3): 411-432

- **Public opinion vis-á-vis the domestic consequences of burden sharing**
  - Mandatory reading:
    - Dechezleprêtre, Antoine, Adrien Fabre, Tobias Kruse, Bluebery Planterose, Ana Sanchez Chico, and Stefanie Stantcheva. 2022. *Fighting climate change: International attitudes toward climate policies* (No. w30265). National Bureau of Economic Research.
  - Additional reading:
    - Gaikwad, Nikhar, Federica Genovese, and Dustin Tingley. 2022. Creating Climate Coalitions: Mass Preferences for Compensating Vulnerability in the World's Two Largest Democracies. *American Political Science Review*: 1-19.
    - Beiser-McGrath, Liam and Thomas Bernauer. 2019. Could revenue recycling make effective carbon taxation politically feasible? *Science advances* 5(9), eaax3323.
    - Mildenberger, Matto, Erick Lachapelle, Kathryn Harrison, and Isabelle Stadelmann-Steffen. 2022. Limited impacts of carbon tax rebate programmes on public support for carbon pricing. *Nature Climate Change*, *12*(2), 141-147.
    - Gampfer, Robert. 2014. Do individuals care about fairness in burden sharing for climate change mitigation? Evidence from a lab experiment. *Climatic Change* 124(1-2): 65-77.

- Gampfer, Robert, Thomas Bernauer, and Aya Kachi. 2014. Obtaining public support for North-South climate funding: Evidence from conjoint experiments in donor countries. *Global Environmental Change* 29: 118-126.
- Elsig, Manfred and Gabriele Spilker. 2023. Dealing with Clashes of International Law: A Micro-Level Study of Climate and Trade. *Working Paper.*

THURSDAY, JULY 6, 2023

Lecturer: Dr. Eddy Bekkers

Subject: Trade Flows and Climate

Topics:

- The role of trade in climate change mitigation exploring how trade can lead to rising emissions through more production and transport on the one hand and on the other hand to reduced emissions through enhanced diffusion of technologies and intermediates, the sharing of costs of green investments, and exploitation of comparative advantage in renewable energy.
- The role of trade in climate change adaptation exploring how trade can help countries to adjust to climate change related shocks
- The spillover effects of mitigation policies such as carbon pricing, regulation, and renewable energy subsidies between countries, the need for coordination of such policies to prevent fragmentation, and the implications for trade policy in general and border carbon adjustment (BCA) in particular.
- The impact of decarbonisation on trade and welfare, evaluating the distribution of adjustment costs between countries to the low-carbon transition and the implications for global trade patterns in general and energy patterns in particular.

Compulsory Reading Material

- Copeland, B. R., Shapiro, J. S. and Taylor, M. S. (2022). Globalization and the Environment. in Gopinath, G., Helpman, E. and Rogoff, K. (eds.), Handbook of International Economics, Amsterdam: North Holland.
- Böhringer, C., Fischer, C., Rosendahl, K. E. and Rutherford, T.F. (2022). Potential Impacts and Challenges of Border Carbon Adjustments. Nature Climate Change 12:22–29.
- Eddy Bekkers, Lory Iunius, Kirti Jhunjhunwala, Jeanne Métivier, Enxhi Tresa, Nihal Yilmaz (2023). Decarbonizing the global economy: scenarios and impacts. WTO Staff Working Paper Forthcoming

Complementary Reading Material

- World Trade Organisation (2022). World Trade Report 2022: Climate change and international trade.

- Böhringer, C., Peterson, S., Rutherford, T. F., Schneider, J. and Winkler, M. (2021), Climate Policies After Paris: Pledge, Trade and Recycle: Insights From the 36th Energy Modeling Forum Study (EMF36). Energy Economics 103, 105471.
- Peszko, G., van der Mensbrugghe, D., Golub, A., Ward, J., Zenghelis, D., Marijs, C., Schopp, A., Rogers, J. A. and Midgley, A. (2020), "Challenges, Risks, and Opportunities of a Low-Carbon Transition", Diversification and Cooperation in a Decarbonizing World: Climate Strategies for Fossil Fuel Dependent Countries, Washington, D.C.: World Bank.
- Scholten, Daniel, et al. "The geopolitics of renewables: New board, new game." Energy Policy 138 (2020): 111059.
- Gouel, C., & Laborde, D. (2021). The crucial role of domestic and international market-mediated adaptation to climate change. Journal of Environmental Economics and Management, 106, 102408.
- Bekkers, E., & Cariola, G. (2022). Comparing different approaches to tackle the challenges of global carbon pricing (No. ERSD-2022-10). WTO Staff Working Paper.
- Marc Bacchetta, Eddy Bekkers, Jean-Marc Solleder, Enxhi Tresa (2023). The Potential Impact of Environmental Goods Trade Liberalization on Trade and Emissions. WTO Staff Working Paper Forthcoming
- Eddy Bekkers et al. (2023). Carbon pricing. WTO Paper Forthcoming.

FRIDAY, JULY 7, 2023

- Take-home assessment due 20:00