Climate economics – Economic analysis of climate, climate change, and climate policy

Instructor

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Introduction

Carbon dioxide is the mother of all externalities – global, ubiquitous, long-term, uncertain, inequitable. This module uses the tools of economic analysis to study the problem of climate change and its solutions. We build up to a cost-benefit analysis, first discussing the costs and means of greenhouse gas emission reduction, before estimating the value of avoided climate change. The cost-benefit analysis is done from the perspectives of both a global social planner and national social planner.

Outline

1. The science of climate change
2. Emission scenarios and options for greenhouse gas emission reduction
3. Costs of greenhouse gas emission reduction
4. Policy instruments for greenhouse gas emission reduction
5. Impacts of and adaptation to climate change
6. Economic impacts of climate and the social cost of carbon
7. Climate and development
8. Optimal climate policy and the social discount rate
9. Uncertainty and equity
10. International climate policy and the provision of global public goods
11. The ozone hole and acid rains as models for international climate policy

In the seminars, we build an integrated assessment model that illustrates key elements of lectures 1-10.

Material

The module follows Richard S.J. Tol (2019), *Climate Economics – Economic Analysis of Climate, Climate Change, and Climate Policy* (2nd edition), Edward Elgar, Cheltenham.

Extra reading is on IDEAS/RePEc: https://biblio.repec.org/entry/td.html

Course material, including lecture videos, is on:
https://sites.google.com/site/climateconomics/

Students from lower and middle-income countries can follow the course via
https://remotestudentexchange.org/