

Princeton Climate Futures Initiative (CFI)

The Climate Futures Initiative (CFI) at Princeton University is an interdisciplinary group of scholars who explore normative and positive approaches to the future of humankind, especially as that future is affected by climate change. The initiative features a wide-ranging dialogue across disciplines and world regions, with considerable attention to ethics.

Research questions that our group addresses include:

- How does the existence and the extent of economic inequality, not only between world regions and across time, but also within regions, affect our assessment of the optimal balance between mitigation and adaptation? How would the balance shift if mitigation costs and/or damages are not assumed to be distributed proportionally amongst income groups? (Dennig et al. 2015)
- How is the optimal balance between mitigation and adaptation affected by our assumptions about how many future people will be around and be vulnerable to climate change (and potentially emitting greenhouse gases)? (Budolfson et al. in review; Scovronick et al. in review)
- To what extent do regional air pollution health co-benefits from mitigation affect the social cost of carbon? How large is the trade-off of health benefits with enhanced warming from aerosol reduction? How do different assumptions about future air quality policies affect these results? (Scovronick et al. in prep.)

Methods

We have developed several extensions of the DICE/RICE model family to include features that allow us to study distribution and equity issues. For example, our NICE (Nested-Inequalities Climate-Economy) model extends the RICE model to represent income quintiles within regions.

CFI also has developed an interactive climate policy simulator in which value judgments are directly translated into consistent policy choices. This is available through a public webpage:

<http://climatepolicysimulator.princeton.edu/>

References

- Budolfson MB, Dennig F, Fleurbaey M, Scovronick N, Siebert A, Spears D, Wagner F (in review)
Optimal climate policy and the future of world economic development.
- Scovronick N, Budolfson MB, Dennig F, Fleurbaey M, Spears D, Siebert A, Wagner F (in review)
Impacts of population growth and population ethics on optimal mitigation effort.
- Dennig F, Budolfson MB, Fleurbaey M, Siebert A, Socolow RH (2015) Inequality, climate impacts on the future poor, and carbon prices. PNAS 112:15827–15832. doi: 10.1073/pnas.1513967112
- Scovronick N, Budolfson MB, Dennig F, Fleurbaey M, Socolow R, Spears D, Wagner F (in prep.) Health cobenefits accelerate optimal climate policy.

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