Measuring the impacts of climate change on economic outcomes : theory and evidence (12h)

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This course covers the methods to determine the economic losses from climate change, from natural disasters and other unanticipated events to well as long-term changes in the economy due to climate change.

Course structure and references

1. How to measure climate change impacts : theoretical questions

Hedonic methods, contingent valuation, discounting

2. How to measure climate change impact : empirical use of weather data

- Auffhammer, M., S. Hsiang, W. Schlenker and A.H. Sobel (2013), "Using weather data and climate model output in economic analyses of climate change", Review of Environmental Economics and Policy 7(2).

- Dell, M., B. Jones and B. Olken (2014), "What do we learn from the weather? The new climate-economy literature", Journal of Economic Literature 52(3).

- Hsiang, S. (2016), "Climate change econometrics". NBER Working Paper 22181.

3. The impact of climate change on income and growth

- Burke, M., S. Hsiang and E. Miguel (2015), "Global, non-linear effect of temperature on economics production", Nature 527.

- Dell M., B. Jones and B. Olken (2009), "Temperature and income: Reconciling new cross-sectional and panel estimates", American Economic Review 99.

- Dell M., B. Jones and B. Olken (2012), "Temperature shocks and economic growth: Evidence from the last half century", American Economic Journal: Macroeconomics 4(3).

- Nordhaus, W. (2006), "Geography and macroeconomics: new data and new findings". Proceedings of the National Academy of Sciences 103.

4. The impact of climate change on agriculture and the role of adaptation

- Burke and Emerick: Adaptation to Climate Change: Evidence from US Agriculture (AEJ-Policy, 2016)

- Bento, Mookerjee, and Severnini : A unifying approach to measuring climate change impacts and adaptation, seem 2023

Evaluation will be based on article presentation.