Advances in Integrated Assessment Modeling

Integrated assessment models (IAMs) combine science from different disciplines into one computational model. They play a crucial role in the policy design process for many environmental problems and have helped make major contributions to the research literature in environmental economics. Prominent examples are their use in climate economics and estimates of local air pollution impacts. This workshop will introduce participants to the practice of integrated assessment modelling. Four broad topics will form the backbone of the workshop: 1) The role of IAMs in the policy process, 2) IAMs in climate economics, and their use to estimate the Social Cost of Carbon, 3) IAMs in the local air pollution field and 4) the relationship between empirical work and IAMs. The workshop will combine lectures with practical hands on sessions. For example, participants will learn what kind of research is useful for regulatory analysis at the federal level and what best practices are when building spatially resolved models. In the hands-on sessions we will experiment with a number of climate economics models and learn how one can use them to estimate the Social Cost of Carbon. Participants will also learn how to modify these models, for example to test a new discounting scheme or integrate a new damage function. The workshop targets researchers that 1) want to better understand how IAMs work, 2) want to get a head start to do research on and with IAMs or 3) have research that might be usefully used in IAMs and want to learn how to collaborate and integrate with the field of IAMs. No prior experience with IAMs is required.

Instructors

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Program (preliminary)

8:00-8:30 Welcome
8:30-9:45 IAMs in the Policy Process (Kopits)
9:45-10:30 Hands-on session 1 (Anthoff)
10:30-10:45 Coffee break
10:45-12:00 IAMs for local pollution problems (Muller)
12:00-1:30 Lunch
1:30-2:15 IAMs in climate economics and the Social Cost of Carbon (Anthoff)
2:15-3:30 Hands-on session 2 (Anthoff)
3:30-3:45 Coffee break
3:45-5 Empirical work and IAMs (Moore)