

Dear all,

You are kindly invited to the next Joint Firm Analysis Seminar of the NBB, KUL, UA, UCL, UGent, UHasselt, ULB, ULg and UMONS

Given by **Leonie Wenz** (Potsdam Institute for Climate Impact Research)

on **The economic commitment of climate change**

Joint paper with Maximilian Kotz and Anders Levermann.

on **Thursday, 28 September** at 16.30 in in the Auditorium of the National Bank of Belgium (Room A1), rue Montagne aux Herbes potagères 61, 1000 Brussels.

**Abstract:**

*Projections of the macroeconomic damage caused by future climate change are crucial to informing public and policy debates regarding adaptation, mitigation and climate justice. They are important for key societal actors including governments, central banks and private businesses which increasingly require the inclusion of climate risks in their macroeconomic forecasts to aid adaptive decision making. Yet, previous projections of global macroeconomic climate-change damages typically considered impacts from average annual and national temperatures over long-time horizons only. Here, we utilize recent empirical findings from more than 1600 regions worldwide over the past 40 years to project sub-national damages from temperature and precipitation including daily variability and extremes. Using an empirical approach which provides a robust lower-bound on the persistence of impacts on economic growth, we find that the world economy is committed to an income reduction of 19% within the next 26 years due to historical carbon emissions and socioeconomic inertia (relative to a baseline without climate impacts, likely range of 11-29% accounting for physical climate and empirical uncertainty). These damages already outweigh the mitigation costs required to limit global warming to two degrees by sixfold over this near-term timeframe, and thereafter diverge strongly dependent on emission choices. Committed damages arise predominantly through changes in average temperature, but accounting for further climatic components raises estimates by approximately fifty percent and leads to stronger regional heterogeneity. Committed losses are projected for all regions except those at very high latitudes, where reductions in temperature variability bring benefits. The largest losses are committed at lower latitudes in regions with lower cumulative historical emissions and lower present-day income.*

Dr. Wenz will be present at the bank on 28 September and there are several slots for a meeting with him. Please contact us at [nbbfirmanalysis.seminar@nbb.be](mailto:nbbfirmanalysis.seminar@nbb.be) if you are interested. This is not just a polite phrase; we very much invite you or any of your colleagues to make use of this opportunity.

Due to security measures, we emphasize the need for you to register by email to [nbbfirmanalysis.seminar@nbb.be](mailto:nbbfirmanalysis.seminar@nbb.be) before Thursday 28 September at 4:00 pm if you plan to attend the seminar. Without registration, you will not be allowed in the seminar room.

You will receive a nominative badge at the entrance. We recommend that you arrive at least 10 minutes before the start of the seminar. Please include name and car plate number for access the NBB Parking Warmoesberg 41.

Looking forward to seeing you there.

Kind regards,

Gert Bijmens (NBB), Emmanuel Dhyne (NBB-UMons), Catherine Fuss (NBB), Johannes Van Biesebroeck (KU Leuven), Joep Konings (KU Leuven), Hylke Vandenbussche (KU Leuven), Vincent Vandenberghe (UCL), Gonzague Vannoorenberghe (UCL), Bart Cockx (UGent), Glenn Rayp (UGent), Paola Conconi (ULB), Ilan Tojerow (ULB), Mathieu Parenti (ULB), Alain Finet (UMons), Jan Bouckaert (UA), Mark Vancauteran (UHasselt), Axel Gautier (ULg), Glenn Magerman (ULB) and Estelle Cantillon (ULB)