



Workshop

Quantifying the Impacts of Climate Change on Socioeconomic Development

Date: April, 22-23, 2024

Venue: The workshop will be hosted by the [Potsdam Institute for Climate Impact Research](#) as a hybrid (physical-virtual) meeting. Virtually, you can join through [this zoom link](#).

In the last decades, societies around the globe started to feel the intensification of extreme weather events and sea level rise due to anthropogenic global warming. Yet, we still lack a comprehensive understanding upon the mechanisms through which climate variability and change impacts on societies and economies. Developing a sound understanding of these mechanisms on the household as well as on the macroeconomic level is essential to i) rigorously attribute changes in natural and human systems to climate change and ii) assess future changes in socioeconomic risks under a further intensification of climate extremes with global warming. Both are needed for better integrated assessments of climate change related risks and transition risks to human well-being and societal prosperity during the transition towards sustainability.

The workshop aims at bringing together leading experts from climate attribution research and climate economics with stakeholders and decision makers from national and international institutions to address the following questions:

- (i) How can we attribute changes in natural and human systems to climate change? How relevant are climate drivers compared to socioeconomic drivers?
- (ii) What are the impacts of climate variability and change on societies and economies? What are the key risks for societies under global warming? What are effective and climate-smart adaptation strategies?
- (iii) What are the combined physical and mitigation risks for societies and economies? How can we build sustainable socioeconomic futures within the planetary boundaries?

The workshop will be organized by the Potsdam Institute for Climate Impact Research (PIK) and funded by BMBF through the project “Quantifying the Direct and Indirect Impacts of Climate Extremes (QUIDIC)”.

Day 1 - Monday, April 22		
13:00 - 13:15	Welcome to the Workshop	Christian Otto

<p>13:15 - 14:55</p> <p>14:55 - 15:20</p> <p>15:20 - 15:50</p> <p>15:50 - 17:30</p>	<p>Session 1: Climate impact attribution (5 Talks (15+5 minutes) followed by a general discussion)</p> <p>Presentations:</p> <ul style="list-style-type: none"> ● Dominik Paprotny (PIK): Human drivers of flood losses in Europe since 1950 ● Michael Wehner (LBL): Quantifying the environmental injustice of flooding ● Matthias Mengel (PIK): The ISIMIP approach to tropical cyclone impact attribution ● Martha Vogel (Red Cross): Towards attribution of compound climate impacts: Developing a storylines based use case on sequential Caribbean tropical cyclones ● Jonas Jägermeyer (U Columbia): The fingerprint of climate change in crop losses during recent heatwaves and droughts <p><i>Discussion</i></p> <p><i>Coffee break</i></p> <p>Session 2: Integrated assessment of climate risks for societies along transformation pathways (5 Talks (15+5 minutes) followed by a general discussion)</p> <p>Presentations:</p> <ul style="list-style-type: none"> ● Leonie Wenz (PIK): The economic commitment of climate change <ul style="list-style-type: none"> ● Francesco Lamperti (Scuola Superiore Sant'Anna, remote): Macroeconomic transition risks in a hybrid agent-based integrated assessment model ● Simone d'Alessandro (U Pisa): The impact of climate damages on public debt sustainability and income inequality ● Franziska Piontek (PIK): Quantifying risks and benefits of integrated transformation pathways <ul style="list-style-type: none"> ● Paola López-Muñoz (UVA): Modeling uncertain economic impacts of climate change under a multi-regional and multi-sectoral bottom-up perspective 	<p>Organizer: Matthias Mengel</p> <p>Chair: Matthias Mengel</p> <p>Tech. support: Simon Treu</p> <p>Organizers: Christian Otto</p> <p>Chair: Christian Otto</p> <p>Tech. support: Jan Haßel</p>
<p>17:30 - 17:55</p>	<p>Discussion</p>	
<p>19:00</p>	<p>Workshop dinner</p>	

Day 2 - Tuesday, April 23

<p>9:00 - 10:40</p> <p>10:40 - 11:05</p> <p>11:05 - 11:35</p> <p>11:35-12:15</p> <p>12:15 - 12:25</p>	<p>Session 3: Climate Risk Assessments (5 Talks (15+5 minutes) followed by a general discussion)</p> <p>Presentations:</p> <ul style="list-style-type: none"> ● Arun Rana (ISF/Frankfurt School): Risk quantification from lens of climate and economics — past, present, and future ● David Bresch (ETH, remote): Exploring the efficient frontier in physical risk reporting <ul style="list-style-type: none"> ● Tobias Geiger (DWD): The value chain of weather and climate services and first-hand experiences from the German Meteorological Service ● Christoph Schult (IWH): Climate change economics in Vietnam: redefining economic impact <ul style="list-style-type: none"> ● Ilan Noy (GSSI): Calculating Loss and Damage from extreme weather events in Small Island Developing States <p><i>Discussion</i></p> <p><i>Coffee Break</i></p> <p>Session 4: Long-term impacts on economic development (2 Talks (15+5 minutes) followed by a general discussion)</p> <p>Presentations:</p> <ul style="list-style-type: none"> ● Max Kotz (PIK): Subnational productivity impacts of climate variability and extremes raise Social Cost of Carbon ● Christian Otto (PIK): The social cost of tropical cyclones <p><i>Discussion</i></p>	<p>Organizers: Inga Sauer</p> <p>Chair: Inga Sauer</p> <p>Tech. support: Lennart Quante</p> <p>Organizer: Christian Otto</p> <p>Chair: Thomas Vogt</p> <p>Tech. support: Inga Sauer</p>
<p>12:25-14:00</p>	<p><i>Lunch break</i></p>	
<p>14:00 - 15:20</p>	<p>Session 5: Vulnerabilities to recurrent events and distributional impacts (4 Talks (15+5 minutes) followed by a general discussion)</p> <p>Presentations:</p> <ul style="list-style-type: none"> ● Marleen de Ruiter (VU, remote): Embracing multi-risk complexity: the challenges of dynamic vulnerability ● Inga Sauer (PIK): The impacts of recurrent flood events on households' well-being in the Philippines ● Lennart Quante (PIK): Distributional impacts of extreme weather events ● Jan Haßel (PIK): Inequality of tropical cyclone impacts 	<p>Organizer: Inga Sauer</p> <p>Chair: Kilian Kuhla</p> <p>Tech. support: Thomas Vogt</p>
<p>15:20 - 15:40</p>	<p><i>Discussion</i></p>	
<p>15:40 - 16:00</p>	<p><i>Farewell</i></p>	

Useful information

Reimbursement

We aim at covering your travel costs including transport, hotel expenses for up to three nights (from the

reserved contingent, or upon your own choice up to 120,- € per night), and the workshop dinner .¹

Since funding is limited, we will only be able to cover economy class flights and second class rail travels.

Please return the filled invitation form you received via email for confirmation by our finance department. Once this is done, we kindly ask you to book your tickets and accommodation on your own and keep the original receipts for the reimbursement process.

For your convenience, we have reserved a small contingent in the niu Amity Hotel (see below) and you can refer to it when booking with the call-up keyword "PIK". A single room is 119,- € per night and including breakfast. If not depleted earlier, the call-up allotment is reserved until 11.4.2024.

Further near-by hotels are the Holiday Inn (Am Kanal 15, 14467 Potsdam), the Mercure (Lange Bruecke, 14467 Potsdam), or the Maxx Hotel Sanssouci (Allee nach Sanssouci 1, 14471 Potsdam).

Arrival and accommodation

Arriving at Potsdam main station you can find the **niu Amity Hotel** at 400m walking distance. Take the south exit to Friedrich-Engels-Straße, then turn right and cross Heinrich-Mann Allee. You will find the hotel directly on the corner Leipziger Str./Heinrich-Mann-Allee (Leipziger Str. 1/Block J, 14473 Potsdam).



Venue

The workshop will take place at PIK on the Campus Telegrafenberg. You can **walk there in c. 15 min from Potsdam main station** (though it is constantly uphill). From the main station exit 'Friedrich-Engels Str.', cross the tram- and bus-station as well as the Friedrich Engels street, take the footpath (50 m) to the next parallel street (Heinrich Mann Allee), cross it at the traffic light and walk uphill 100 m to the next traffic light. There you turn into 'Albert-Einstein-Str.' which first leads you through a small residential area and then through a wooded area. Finally, it ends right at the gate of the 'Einstein-Wissenschaftspark', where PIK and other institutes are located.

¹ Reimbursements are made on the basis of the currently valid version of either the German federal travel law (BRKG) or the regulation for official travel abroad (ARV).

There is also a **minibus** (No. 691) that leaves Potsdam main station (Friedrich-Engels-Str., platform 7) heading towards 'Einstein-Wissenschaftspark' in the mornings and in the evenings. [Time table](#)

The workshop will take place in the Big Cupola of building A31 ("The Michelson House"). Please refer to the plan below to get there.

