Sofia Badini

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Current Position

Jul. 2025 – present Research Scholar
Migration and Sustainable Development (MIG) Research Group, Population and Just Societies (POPJUS) Program
IIASA, Austria

Education

Jul. 2021 – Dec. 2025 Ph.D. Environmental Economics
Environmental Economics and Natural Resources (ENR) Group
Wageningen University, The Netherlands

Fields: environmental and climate economics, applied microeconomics, experimental economics

Sept.–Dec. 2024 Visiting researcher
Environmental Markets Lab, University of California Santa Barbara

2018 – 2021 MSc. Economics (*sehr gut*)
University of Bonn, Germany

Sept.–Dec. 2017 Visiting student
Erasmus University Rotterdam, The Netherlands

2015 – 2018 BSc. Economics and Finance (*cum laude*)
University of Bologna, Italy

Working Papers

Information frictions, overconfidence, and learning:
Experimental evidence from a floodplain
PDF | PAP | Data | Replication package | Documentation | Talk

Abstract I use an online experiment to study whether offering information to floodplain residents is sufficient to change their perceived risk exposure and demand for insurance. Participants are offered information on the flood risk profile at their address and on the national rules over compensation of flood damages. I find that respondents tend to misperceive their risk category according to publicly available flood maps, but express high levels of confidence in their guesses. When not prompted to engage with the information they are offered, one third of them read nothing. When prompted to read information on their risk profile, respondents —particularly residents of high risk areas— tend to stop reading any further and report a lower willingness-to-pay for insurance, but do not update their beliefs differently on average. Spontaneous comments from participants suggest backlash to information emphasizing personal responsibility, concern over their house losing value, distrust towards information from government and media, and aversion to insurance companies.

Adaptation to droughts in Brazil, 1990-2020
PDF

Abstract I examine the effects of droughts on agricultural yield, land use change, irrigation adoption, and crop choice in Brazil using administrative records and satellite-derived data from 1988 to 2021. I use a multi-scalar measure of dryness that considers different water deficit timescales to classify droughts by duration, and implement a stacked difference-in-differences design with synthetic weights. Short-term droughts temporarily reduce yield in less productive regions and regions with no recent drought experience, but do not affect subsequent land use, irrigation, or crop choice. Persistent droughts have a negative and significant – but still transient – impact on yield, regardless of productivity or drought experience. Furthermore, they induce farmers to reduce cultivated area, reduce irrigated cropland, and plant less water-intensive crops. Persistent and recurrent droughts lead to a lasting decline in yield and, in more productive regions, increase land-intensive pastureland at the expense of capital-intensive cropland over time. I find no irrigation expansion in response to droughts.

Mismatch between household flood preparedness and objective flood risk in the Netherlands
(with Anna Abatayo and Andries Richter)
Submitted, draft available upon request

Abstract Climate change is likely to increase the frequency and severity of flooding, a major natural hazard with disproportionate impacts on vulnerable populations. While higher expected flood damages call for stronger household adaptation, limited access to information and lacking resources may prevent optimal decisions. Despite advances in flood mapping and research on household adaptation, the link between expected damages and adaptation decisions remains unknown. Here, we study the relationship between household adaptation measures, risk perceptions, and flood exposure in the Netherlands – a "best case scenario" due to its accurate flood risk information and recent flood experiences. Using publicly available street-level flood maps, a national hydraulic model, and a large-scale geolocated survey, we find a substantial mismatch between private adaptation measures and objective flood risks, as well as significant heterogeneity in risk perceptions. Simulations show that expected damages could be reduced substantially if high-risk households invested more in adaptation relative to low-risk households. These findings reveal important limits to the effectiveness of private adaptation and underscore the need for policies that enhance the accessibility, relevance, and use of flood risk information to support climate resilience.

Expanding horizons: A randomized controlled trial on adolescents' career information acquisition
(with Esther Gehrke, Friederike Lenel, Claudia Schupp)
CESifo Working Paper No. 11225 | PAP | *R&R, Journal of Human Capital*

Abstract We implement a randomized controlled trial in a low-income context to investigate whether students in lower-secondary school acquire information about potential career paths more effectively if this information is ordered by the congruence between the careers and the students' personality and preceded by a task that allows students to explore their own interests. We find that self-exploration in combination with the personalized display increases students' information acquisition. Students also read about more diverse career paths. In particular, low-performing students shift their focus from occupations that require a university education towards potentially more achievable careers that require a high-school degree.

Work in Progress

What constitutes a success in Nature-based Solutions? Insights from the largest river restoration project in the Netherlands
(with Andries Richter, Viola Bennink, Roxane Bradaczek, Maya Daumal, Asli Mutlu, Lotte de Jong, Sverre van Klaveren, Sandra Kristiaan, Annemarie de Groot, Floris Boogaard, Edwin Peeters, Roy Erkens, Tatiana Filatova, Anna Abatayo)

Can you engineer a Silicon Valley? Long-run effects of the BioRegio-contest on innovation
(with Lorenzo Romero)

Employment History

2020 – 2021 Institute for Applied Microeconomics, Bonn
Research Assistant at Covid-19 Impact Lab, developer of the Covid Impact Lab Data Explorer

2019 – 2021 briq Institute on Behavior and Inequality, Bonn
Research Assistant

Sept.–Dec. 2019 United Nations Framework Convention on Climate Change, Bonn
Intern at Adaptation Programme – Impacts, Vulnerability and Risks

Teaching Experience

2021 – 2024 Climate Governance (MSc.), tutor and lecturer
Wageningen University

Grants

2021 SurveyCTO Data Collection Research Grant, honourable mention
Awarded a free one-year subscription to SurveyCTO (equivalent to **USD 3780**)

Conferences and Seminars

2025: Wittgenstein Centre Conference 2025 (Vienna, Austria), Dutch Environmental and Resource Economists Day (Wageningen, The Netherlands), **2024**: London School of Economics Environment Camp (London, UK), Monte Verità Conference on Sustainable Resource Use and Economic Dynamics (Ascona, Switzerland), 29th Annual Conference of the European Association of Environmental and Resource Economists (Leuven, Belgium), **2023**: Wageningen University Development Economics seminar (Wageningen, The Netherlands), Dutch Environmental and Resource Economists Day (Amsterdam, The Netherlands), Young Economists' Meeting (Brno, Czech Republic), 24th Annual BIOECON Conference (Santiago de Compostela, Spain), **2022**: Wageningen School of Social Sciences PhD Day (Wageningen, The Netherlands), Summer School of the European Association of Environmental and Resource Economists (Graz, Austria).

Other Professional Activities

2024 – present Member of Organizing Committee, 2025 Dutch Environmental and Resource Economists (DEARE) Day

2021 – 2024 PhD representative, ENR Group, Wageningen University

2020 – 2021 Contributor of Open Source Economics, University of Bonn, Germany

Journals Refereed

Empirical Economics, Mitigation and Adaptation Strategies for Global Change

Other Information

Languages Italian (native), English (fluent), French (basic), German (basic)

Programming Python, *R*, LaTeX, Git, Google Earth Engine, HTML, CSS, Stata