

# CLAIRE LEPAULT

Paris School of Economics, 48 Boulevard Jourdan, Paris

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## RESEARCH FIELDS

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Environmental Economics, Applied Econometrics, Health, Development Economics

## EDUCATION

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### Paris School of Economics, ENPC, CIREDD

2020 – Present

Thesis title: Health effects of water pollution and heat stress in India

Paris, France

Expected date of completion: July 2024

### References

Hélène Ollivier

Professor at Paris School of Economics

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Philippe Quirion

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Edward Rubin

Professor at University of Oregon

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### University of Oregon

Visiting student in the Economics Department, Host: Edward Rubin

Spring 2023

Eugene, USA

### Paris School of Economics (PSE)

Master 2 Analysis and Policy in Economics

2019 – 2020

Paris, France

### Ecole Nationale des Ponts et Chaussées (ENPC)

Engineering cycle, Master in Economics

2016 – 2020

Champs sur Marne, France

### Lycee Blaise Pascal

Two years of intensive preparatory courses in Mathematics and Physics (MPSI-MP\*)

2014 – 2016

Orsay, France

## JOB MARKET PAPER ([Link to the latest version](#))

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### Is urban wastewater treatment effective in India? Evidence from water quality and infant mortality

*Abstract:* In developing countries, untreated sewage exposes people to alarming water pollution levels, yet there is limited knowledge about the effectiveness of wastewater treatment investments. I evaluate the effect of wastewater treatment on water quality and infant mortality in India, exploiting the staggered introduction of urban sewage treatment plants over the period 2010-2020. I match granular data on sewage treatment plants, river water quality, as well as child births and deaths using the hydrological network. I show that after starting wastewater treatment, levels of fecal coliforms – a commonly used measure of fecal contamination in water – decreased by 50%. Mortality under the age of six months declined by 20% downstream of the plants, with larger effects for boys and children from the bottom wealth quintiles. The results are consistent across several estimators robust to heterogeneous treatment effects, are not driven by selective migration, and are only found downstream of the plants, which rules out confounding effects from other local policies. A back-of-the-envelope calculation suggests that starting wastewater treatment earlier – from 2010 – in urban areas later selected into treatment – after 2020 – would have prevented over 40,000 child deaths in downstream sub-basins.

## WORKING PAPER

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**A hidden health impact of heat: exacerbated anemia in India** with Philippe Quirion and Pierre Uginet

*Abstract:* Heat waves, exacerbated by global warming, have increasingly negative health effects, particularly in relatively poor and hot countries such as India. These impacts are partly direct, caused by hyperthermia, and partly due to reduced food availability. While numerous harmful health effects of hot temperatures have been established, little is known about the links between heat waves and anemia, a medical condition affecting one-quarter of people worldwide and 43% of India's population. Using health, nutritional and climate data, we analyze the relationship between heat stress and anemia in India over the past decade. We examine both dry heat waves (high temperatures) and humid heat waves (combination of high temperatures and humidity). We find preliminary evidence indicating that heat waves worsen anemia in children and women. Moreover, the mechanism responsible does not seem to be related to reduced food availability.

## WORK IN PROGRESS

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**Fertilizers, water quality and perinatal health in India** with Eléonore Rouault

## PUBLICATION

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**Lepault, C.** and Lecocq, F. **Mapping forward-looking mitigation studies at country level**, *Environmental Research Letters* (2021) [link](#)

## RELEVANT EXPERIENCE

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**Contributing Author of Chapter 4 of the 6<sup>th</sup> IPCC Assessment Report (WG III)** 2018-2020  
*Link to Chapter 4 : Mitigation and development pathways in the near- to mid-term*

**Research Assistant at CIRED** 2018-2020  
*Work with Franck Lecocq, CLA of Chapter 4 of the IPCC AR6 (WG III) Nogent-sur-Marne, France*  
*Participation in the creation of the AR6 Scenarios Database [link](#)*

**Research Assistant at the Energy Research Centre** Spring 2019  
*Work with Harald Winkler, CLA of Chapter 4 of the IPCC AR6 (WG III) Cape Town, South Africa*

## TEACHING EXPERIENCE

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**ATER (teaching fellow) at EMS University Paris I Panthéon-Sorbonne** 2023-2024  
*Economics of Uncertainty and Information (L3 taught in French, Pr. F. Pratlong) Fall 2023*

**Teaching Assistant at SciencesPo Paris |PSIA** Fall 2020, 2021, 2022  
*Natural Resources Economics (M1, taught in English), Pr. L.-G. Giraudet*

**Teaching Assistant at University Paris I Panthéon-Sorbonne**  
*Introduction to Econometrics (L3, taught in French), Pr. C. Doz and T. Broer Spring 2022*  
*Statistics : Probabilities (L2, taught in French), Pr. D. Brochard and E. Defebvre Fall 2021*

## SKILLS

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**Computing:** R/Rstudio, Python, Jupyter, Stata

**Languages:** French (native), English (fluent), German (elementary)

## GRANTS & FELLOWSHIPS

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Mobility grant, PSE 2023

Research grant, PSE-EUR 2022  
*Two weeks field work in Bhilwara district (Rajasthan, India). August 2022.*

Doctoral fellowship, ENPC 2020 – 2023

## PRESENTATIONS

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**2023** AERE summer conference (Portland, Maine), UO Micro applied seminar (Eugene, Oregon), IPWSD at Columbia University (New York), International Conference on Development Economics (Paris), PSE Workshop "Forest-Water-Energy" (Paris), Journées doctorales du développement (Orléans)

**2022** EAERE annual conference (Rimini), Nordic Conference in Development Economics (Helsinki), EENR international conference (Orléans), FAERE annual conference (Rouen), Journées LAGV (Marseille), TSE Workshop (Toulouse), CIRED PhD student seminar (Paris), PSE REM seminar (Paris)

**2021** PSE CFD seminar (Paris)

**2019** CIRED Bricol'R (Paris)

## PERSONAL INFORMATION

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Born 1996 / She/Her/Hers / French citizen / Practicing yoga in my free time

*last update : October 2023*