

# CLAIRE LEPAULT

Paris School of Economics, 48 Boulevard Jourdan, Paris

✉ [claire.lepault@psemail.eu](mailto:claire.lepault@psemail.eu)  Website  Github

## RESEARCH FIELDS

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Environmental Economics, Applied Econometrics, Health, Development Economics

## EDUCATION

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### Paris School of Economics, ENPC, CIREN

2020 – Present

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

Paris, France

*Expected date of completion: September 2024*

#### References

Hélène Ollivier

*Professor at Paris School of Economics*

48 Boulevard Jourdan, 75014 Paris, France

[helene.ollivier@psemail.eu](mailto:helene.ollivier@psemail.eu)

Philippe Quirion

*Research Director at CIREN*

45bis Av. de la Belle Gabrielle, 94130 Nogent, France

[philippe.quirion@cnrs.fr](mailto:philippe.quirion@cnrs.fr)

Liam Wren-Lewis

*Professor at Paris School of Economics*

48 Boulevard Jourdan, 75014 Paris, France

[liam.wren-lewis@psemail.eu](mailto:liam.wren-lewis@psemail.eu)

Edward Rubin

*Professor at University of Oregon*

1585 E 13th Ave, Eugene, OR 97403, USA

[edwardr@uoregon.edu](mailto:edwardr@uoregon.edu)

### University of Oregon

Spring 2023

*Visiting student in the Economics Department, Host: Edward Rubin*

Eugene, USA

### Paris School of Economics (PSE)

2019 – 2020

*Master 2 Analysis and Policy in Economics*

Paris, France

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

2016 – 2020

*Engineering cycle, Master in Economics*

Champs sur Marne, France

### Lycee Blaise Pascal

2014 – 2016

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

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:* Global warming has 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 vector-borne diseases and reduced food availability. While numerous harmful health effects of high temperatures have been established, there is very little research on their possible impact on 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 high temperatures and anemia in India over the past decade. We match blood hemoglobin measures from nearly 259,000 children, 901,000 women and 138,000 men to both dry heat waves (high temperatures) and humid heat waves (combination of high temperatures and humidity). We find that high temperatures exposure in the 30 days preceding the blood measurement worsen anemia in all individuals, especially children and women. Moreover, the mechanisms responsible do not seem to be related to reduced food availability, but malaria could explain part of the relationship between temperature and anemia.

## 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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### Refereeing

*Environment and Development Economics, Economie et Statistiques*

**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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### Part-time ATER (teaching fellow) at University Paris I Panthéon-Sorbonne

**2023-2024**

*Statistics (L2, 36h in French), Pr. R. Zafri*

*Spring*

*Macroeconomics (L3, 24h in French), Pr. M. Leduc*

*Spring*

*Economics of Uncertainty and Information (L3, 36h in French), Pr. F. Pratlong*

*Fall*

### Teaching Assistant at SciencesPo Paris |PSIA

**Fall 2020, 2021, 2022**

*Natural Resources Economics (M1, 16h in English), Pr. L.-G. Giraudet*

### Teaching Assistant at University Paris I Panthéon-Sorbonne

*Introduction to Econometrics (L3, 30h in French), Pr. C. Doz and T. Broer*

**Spring 2022**

*Statistics : Probabilities (L2, 24h 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
<i>Two weeks field work in Bhilwara district (Rajasthan, India). August 2022.</i>	
Doctoral fellowship, ENPC	2020 – 2023
Part-time fellowship ENPC	2023 – 2024

## PRESENTATIONS

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**2024** ADRES JM conference (Paris), CERDI-University Clermont Auvergne, CERGIC-ENS Lyon, TrEnCE WG seminar (*online*), University of Melbourne

*Scheduled: WASH Economics conference at AMSE (Marseille), EAERE annual conference (Leuven)*

**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 : May 2024*