

# Edgar Rodríguez-Huerta

RIGHTS LAB SENIOR RESEARCH FELLOW IN SOCIAL SUSTAINABILITY AND COMPLEX SYSTEMS

Data Science, Sustainability and Supply Chain Mapping | £2.1m in Co-I & PI grant funding | FWCI: 1.42

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## Experience

### Rights Lab Senior Research Fellow in Social Sustainability and Complex Systems

Nottingham, UK

University of Nottingham, Rights Lab

Oct 2024 - to date

- Quantitative research focused on understanding climate change and decent work interconnections.
- Supply chain mapping and analysis to generate risk assessments using Social-LCA.
- Generation of climate change models to explore effect on labour conditions.

### Rights Lab Research Fellow and Lead in Social-Ecological Systems Modelling

Nottingham, UK

University of Nottingham, Rights Lab

Dec 2021 to Sep 2024

- Awarded Global Talent Visa by UK Government with British Academy endorsement

### Rights Lab Research Fellow in Sustainable Ecosystems and Society

Nottingham, UK

University of Nottingham, Rights Lab

Dec 2021 to Sep 2024

## Industry Experience

### Senior Project Developer and Business Intelligence Specialist

Mérida, México

JLC Corporation

Jan 2010 - Jan 2013

- Managed Business Intelligence and Enterprise Resource Program software, including stakeholder training
- Designed dashboards and reports for retail, financial and academic sectors.

## Education

### Ph.D. in Sustainability Science

Barcelona, Spain

Universitat Politècnica de Catalunya, Institute for Sustainability Science

Sep 2015 to Mar 2020

- Dissertation: Water Societal Metabolism in Yucatan Peninsula, Mexico. Application of Multi-Scale Integrated Analysis of Societal and Ecosystem Metabolism (MuSIASEM)
- Three peer-reviewed publications as first author
- Built exploratory tool to analyse effect of climate change in water demand (R, QGIS, Tableau)

### Master's degree in Sustainability Science and Technology

Barcelona, Spain

Universitat Politècnica de Catalunya, Institute for Sustainability Science

- 120 ECTS. Grade: 8.9/10 Rank 2/12
- MSc thesis: Societal Metabolism in the Energy Sector in Catalunya, applying spatial analysis with QGIS
- Collaborated with multi-cultural and interdisciplinary team

### Master's degree in Logistics

Zaragoza, Spain

Universidad de Zaragoza, Zaragoza Logistics Center

- 105 ECTS. Grade: 9.1/10
- MSc thesis: Methodologies for a Sustainability Balanced Scorecard in the Logistics Sector
- Professional fellowship program in logistics. Training program in multiple companies

### Undergraduate degree in Industrial Engineering

Mérida, México

Instituto Tecnológico de Mérida

- Grade: 9.4/10

## Selected publications

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### Peer reviewed

- **Rodríguez-Huerta, E.**, Leão L., Landman, T. (2025). Climate change, decent work and workers' health in Brazil: theoretical considerations. *Revista Brasileira de Saúde Ocupacional* <https://nottingham-repository.worktribe.com/output/46458837>
- Tigchelaar, M., Jackson, B., Selig, E., Davis, A., O'Regan, E., Trond, K., Nakayama, S., Boyd, D., Cheung, W., **Rodríguez-Huerta, E.**, Williams, C., Decker Sparks, J. (2025). Conceptualization of Decent Work in Fishing in a Changing Climate. *Marine Policy*. <https://doi.org/10.1016/j.marpol.2025.106846>
- Boyd, D., Jackson, B., Decker Sparks, J., Giles M. F, Girindran, R., Gosling, S., Trodd, Z. Ni Bhriain, L., **Rodríguez-Huerta, E.** (2024). The future of decent work: Forecasting heat stress and the intersection of sustainable development challenges in India's brick kilns. *Sustainable Development*, <https://doi.org/10.1002/sd.3272>
- Blackstone, N.T., Battaglia K., **Rodríguez-Huerta, E.**, Bell, B., Decker Sparks J., Cash S., Conrad Z., Nikkhah A., Jackson B., Matteson J., Gao S., Fuller K., Zhang F.F., Webb P. (2024). Diets cannot be sustainable without ensuring the well-being of communities, workers, and animals in food value chains. *Nature Food*, <https://doi.org/10.1038/s43016-024-01048-0>
- Lumley-Sapanski A., **Rodríguez-Huerta, E.**, Young, M., Nicholson A., Schwarz K. (2024). Criminalizing survivors of modern slavery: the United Kingdom's National Referral Mechanism as a border-making process. *Journal of Social Policy*, <https://doi.org/10.1017/S0047279424000230>
- Blackstone, N.T., **Rodríguez-Huerta, E.**, Battaglia K., Jackson B., Jackson E., Benoît Norris C., Decker Sparks, J.L. (2023). Forced labour risk is pervasive in the US land-based food supply. *Nature Food*. <https://doi.org/10.1038/s43016-023-00794-x>

### Non-Peer reviewed

- Cockayne, J., **Rodríguez-Huerta E.**, Burcu, O. (2022). The Energy of Freedom? Solar Energy, Modern Slavery and the Just Transition. *Research report*, 70,000 words, funded by the British Academy: <https://www.thebritishacademy.ac.uk/publications/the-energy-of-freedom-solar-energy-modern-slavery-and-the-just-transition/>
- Boyd, D., **Rodríguez-Huerta, E.**, Jackson B., Decker Sparks, J.L. (2021). The Social and Ecological Impacts of Supply Chains. *Research report*, 16,000 words, funded by the World Wide Fund for Nature.

### Under review/Development

- **Rodríguez-Huerta, E.**, Bell, B., Jackson, B., Blackstone, N.T., Battaglia, K., Marquez, A.S., Benoît Norris, C., Decker Sparks, J.L., Conrad, Z., Matteson, J. (anticipated 2025). The human cost of current and recommended diets in the U.S. (*under second review for Nature Food*). <https://doi.org/10.21203/rs.3.rs-4999594/v1>
- **Rodríguez-Huerta, E.**, Jackson, B., Blackstone, N.T., Decker Sparks, J.L., (anticipated 2025). Modern slavery's carbon cost in supply chains: the case of Brazilian soy and sugarcane. *Book chapter for Supply Chains and the SDGs (Elgar Companion)*.
- **Rodríguez-Huerta, E.**, Trevizan. A., Landman, T., et al. (anticipated 2026). Exploratory Analysis of the interrelationships between occupational health and decent work (*in preparation for World Development*).
- **Rodríguez-Huerta, E.**, Walker, R., Ní Bharain, L., Boyd, D., Jackson, B., (anticipated 2026). Exploration of off-season labour patterns for Indian brick kiln workers (*in preparation for International Journal of Operations & Production Management*).
- Jackson, B., **Rodríguez-Huerta, E.**, Marshall, H., Pereira, A.C., Chandler, C., Light, M., Iqbal, S., Boyd, D., Decker Sparks, J.L. (anticipated 2026). Measuring the co-occurrence of tree loss and modern slavery in Brazil between 2001-2021 (*in preparation TBD*).

### Other selected outcomes

- **Rodriguez Huerta, E.**, (2024-ongoing). Multilingual website for dissemination activities and results of the project 'Climate Change, Occupational Health, and Decent Work: Worker Vulnerabilities and Responses in Brazilian Agriculture' *Digital Artefact: Website Content* <https://www.clidewo.com>
- Jackson, B., **Rodriguez Huerta, E.**, Boyd, D., Girindran, R., Ni Bhriain, L., & Trodd, Z. (2024). Environmental Impacts Training Module: Assessing Risks to Workers in India (Versions: English, Hindi, Punjabi & Bengali) *Digital Artefact: Website Content* <https://nottingham-repository.worktribe.com/output/44691673>
- **Rodriguez Huerta, E.**, (2023). Interactive Visualizations to expand on results from the 'Forced labor risk is pervasive in the US land-based food supply (Blackstone et al. 2023). *Digital Artefact: Website Content* <https://sites.tufts.edu/lasting/data/>

## Grants and Fellowships

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<b>UK Home Office (Modern Slavery Innovation Fund)</b>	£322,000 (Co-I)
The GeoAI for Decent Work: Innovating Engagement with Government, Civil Society and Survivors	2025 - 2026
<b>British Academy (ISPF ODA Challenge-Oriented Research Grants)</b>	£178,000 (PI)
Climate Change, Occupational Health, and Decent Work	2024 - 2025
<b>UK Home Office (Modern Slavery Innovation Fund)</b>	£149,000 (Co-I)
Adding value to the GeoAI Platform for Decent Work: A Survivor-Informed Socio-Ecological Assessment	2024 - 2025
<b>Industry collaboration (Retail sector)</b>	£450,000 (Co-I)
Salient and Evolving Human Rights Risks	2024 - 2025
<b>UK Home Office (Modern Slavery Innovation Fund)</b>	£799,000 (Co-I)
Using Data Science to Transform India's Brick Kilns	2024 - 2025
<b>British Academy (Just Transitions within Sectors and Industries Globally)</b>	£80,000 (Co-I)
Solar Energy, Modern Slavery, and the Just Transition	2021 - 2022
<b>World Wild Fund (USA)</b>	£60,000 (Co-I)
The Social and Ecological Impacts of Supply Chains	2021 - 2022
<b>Consejo Nacional de Ciencia y Tecnología (CONACyT - México)</b>	£80,000 (Scholarship)
PhD and MSc Scholarship	2014 - 2020
<b>Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)</b>	£4,000 (Scholarship)
MSc Fellowship for Directed Academic Activities	2014 - 2015

## Awards

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<b>Instituto Tecnológico de Mérida</b>	2025
Distinguished alumni of 2025 in the Industrial Engineering programme	
<b>THE Awards (Finalist, Research Project of the Year in Social Sciences)</b>	2024
Team member of Slavery from Space: Using Satellites for Human Rights and Sustainable Development	
<b>University of Nottingham Knowledge Exchange and Impact Awards 2024</b>	2024
Team member of Slavery from Space: Using Satellites for Human Rights and Sustainable Development	
<b>Chamber of Commerce of Aragon, Spain (Memoria Pilot award)</b>	2008
Report in Logistics Excellence for large enterprises (La Bella Easo, Zaragoza)	

## Selected Events and Collaborations

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<b>Conference: II International Congress on Ecological Humanities</b>	Barcelona, Spain
The Johns Hopkins University - Universitat Pompeu Fabra Public Policy Center	Jul 2025

- Decent Work and Workers Health nexus in Brazilian agriculture

### **Workshop: Just transitions in food, farming and fisheries**

Ethical Trading Initiative, IIED, BananaLink

*London, UK*

*Jun 2025*

### **Workshop: Addressing Human Trafficking and Forced Labour in the Anthropocene**

Survivor Alliance, The Human Trafficking Legal Center, The Freedom Fund

*Oxford, UK*

*Apr 2025*

### **Workshop: Visualizing Complexity Science**

Complexity Science Hub

*Vienna, Austria*

*Sep 2024*

### **Collaboration: Friedman School of Nutrition Science and Policy at Tufts University**

Leading A Sustainability Transition in Nutrition Globally (LASTING) Project

*Boston, MA, USA*

*2022 to 2024*

### **Workshop: Decent Fisheries Work in a Changing Climate**

Stanford University, the King Center and Center for Ocean Solutions

*Stanford, CA, USA*

*May 2023*

### **Brown bag sessions**

U.S. Department of Labor and Tufts University

*Stanford, CA, USA*

*Mar 2022*

- Talk: How Social Life Cycle Assessment (S-LCA) can help address forced labour

### **22nd Ordinary Session of the Yucatan Peninsula Basin Council**

Consejo de Cuenca de la Península de Yucatán & Ithaca Environmental

*Mérida, México*

*Feb 2021*

- Invitation to co-design the Regional Water Program 2020-2024 of the Yucatan Peninsula

## **Teaching**

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### Graduate

#### **Data management and visualization for academic research**

Instituto Tecnológico de Mérida

*Mérida, México*

*Nov 2021*

- Course for MSc students in Regional Development Studies

### Seminars

#### **Seminar: Sustainability science to tackle forced labour: methods and measurements**

Universitat Politècnica de Catalunya, Institute for Sustainability Science

*Barcelona, Spain*

*Jul 2025*

## **Selected extra training**

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#### **Research Communication Programme**

Research Academy University of Nottingham

*Jun 2025*

#### **MOOC: Partnering for change: Link research to societal challenges**

Network for Transdisciplinary Research td-net of the Swiss Academies of Arts and Sciences

*Apr 2025*

#### **Stepping into Leadership 2023/24. LMA Development Programmes**

Research Academy University of Nottingham

*Feb 2024*

#### **MOOC: Analysing/Presenting Data/Information**

Edward Tufte Course (8h)

*Oct 2023*

#### **MOOC: Data Science: Statistics and Machine Learning Specialization**

Coursera Programme (Johns Hopkins University) (133h)

*Jan 2021*

#### **MOOC: Specialization in Data Science (R Programming)**

Coursera Programme (Johns Hopkins University) (290h)

*Oct 2020*

#### **MOOC: Spatial Data Science and Applications**

Coursera Programme (Yonsei University) (24h).

*Sep 2020*

## MOOC: Systems Thinking in Public Health

Coursera Programme (Johns Hopkins University) (20h)

Aug 2020

## MOOC: Ecosystem Services.- A Method for Sustainable Development

Coursera Programme (University of Geneva) (24h)

Jul 2020

## MOOC: Sustainability of Social-Ecological Systems: Nexus among Water, Energy, and Food

Coursera Programme (Universitat Autònoma de Barcelona) (48h)

Jul 2020

## Skills and Languages

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Languages

*Spanish (Native), English (Fluent)*

Programming and Markdown language

*R, SQL (intermediate), Quarto*

Software

*Tableau [Desktop and Prep], Rstudio, QGIS, OpenLCA, Zotero, VosViewer, Xerte (intermediate), Affinity (learning), Observable (learning)*

## Academic Service

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Grants and Journals Reviewed

*British Academy for Knowledge frontiers: Just Transition, Journal of Cleaner Production, Energy Policy, Hydrogeology Journal, Joule, Anti-Trafficking Review, Economía Creativa.*

Student Supervision

- PhD Students: 3 supervised – Topics in Food Systems
- MSc Students: 4 supervised – Research in data extraction, and regional development
- Support for MSc students from the Technical University of Denmark (DTU) for the project “Sociotechnical dimension of renewable energies” (Apr 2024).
- BSc Students: 3 supervised – Placement students related to data science projects and just transition

Societies

- Member of The British Academy Career Researcher Network since 2023.