

Rodríguez-Huerta, Edgar

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

email: edgar.rodriguezhuerta@nottingham.ac.uk · ORCID: 0000-0002-6887-0040 · LinkedIn: [linkedin.com/in/edgar-rodriguez/](https://www.linkedin.com/in/edgar-rodriguez/) · Nottingham, UK

Experience

-
- | | |
|---------------------|--|
| Oct 2024 – present | Rights Lab Senior Research Fellow in Social Sustainability and Complex Systems University of Nottingham, Rights Lab — Nottingham, UK <ul style="list-style-type: none">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. |
| Dec 2021 – Sep 2024 | Rights Lab Research Fellow and Lead in Social-Ecological Systems Modelling University of Nottingham, Rights Lab — Nottingham, UK <ul style="list-style-type: none">Awarded Global Talent Visa by UK Government with British Academy endorsement |
| Dec 2021 – Sep 2024 | Rights Lab Research Fellow in Sustainable Ecosystems and Society University of Nottingham, Rights Lab — Nottingham, UK |

Industry Experience

-
- | | |
|---------------------|--|
| Jan 2010 – Jan 2013 | Senior Project Developer and Business Intelligence Specialist JLC Corporation — Mérida, México <ul style="list-style-type: none">Managed Business Intelligence and Enterprise Resource Program software, including stakeholder trainingDesigned dashboards and reports for retail, financial and academic sectors. |
|---------------------|--|

Education

-
- | | |
|---------------------|---|
| Sep 2015 – Mar 2020 | Ph.D. in Sustainability Science Universitat Politècnica de Catalunya, Institute for Sustainability Science — Barcelona, Spain <ul style="list-style-type: none">Dissertation: Water Societal Metabolism in Yucatan Peninsula, Mexico. Application of Multi-Scale Integrated Analysis of Societal and Ecosystem Metabolism (MuSI-ASEM)Three peer-reviewed publications as first author |
|---------------------|---|

- Built exploratory tool to analyse effect of climate change in water demand (R, QGIS, Tableau)
- 2013 – 2015 **Master’s degree in Sustainability Science and Technology** Universitat Politècnica de Catalunya, Institute for Sustainability Science – Barcelona, Spain
- 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
- 2008 – 2009 **Master’s degree in Logistics** Universidad de Zaragoza, Zaragoza Logistics Center – Zaragoza, Spain
- 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
- 2003 – 2008 **Undergraduate degree in Industrial Engineering** Instituto Tecnológico de Mérida – Mérida, México
- Grade: 9.4/10

Selected Publications

Peer reviewed

- Rodríguez-Huerta, E., Rosas-Casals, M., Sorman A.H. (2017). A societal metabolism approach to job creation and renewable energy transitions in Catalonia. *Energy Policy*. <https://www.sciencedirect.com/science/article/pii/S0301421517303786>
- Rodríguez-Huerta, E., Rosas-Casals, M., Hernandez-Terronez, L.M (2019). Water societal metabolism in the Yucatan Peninsula. The impact of climate change on the recharge of groundwater by 2030. *Journal of Cleaner Production*. <https://www.sciencedirect.com/science/article/pii/S0959652619322875>
- Rodríguez-Huerta, E., Rosas-Casals, M., Hernandez-Terronez, L.M (2020). A water balance model to estimate climate change impact on groundwater recharge in Yucatan Peninsula, Mexico. *Hydrological Science Journal*. <https://www.tandfonline.com/doi/full/10.1080/02626667.2019.1702989>
- 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://doi.org/10.1590/2317-6369/16224en2025v50eddsst12>
- 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. (2025). Current and recommended diets in the USA have embedded forced labour risk. *Nature Food*. <https://www.nature.com/articles/s43016-025-01242-8>
- 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>
- 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>
- 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>
- Costa Leão, L.H., Rodríguez-Huerta, E., Landman, T., de Almeida Moura, F. (2026). Trabalho escravo, mudanças climáticas e saúde do trabalhador na agricultura brasileira: casos do Maranhão, Rio de Janeiro e Mato Grosso. *Livro: Pesquisa Trabalho Escravo Contemporâneo*.

Reports

- 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*.
- 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/>
- Rodríguez-Huerta, E., Domingos Martinez dos Santos, I., de Almeida Moura, F., Faria Leal, C.R., Landman, T., Castellero, I.T.A., Coutinho, K.G., Moraes, L., Pavia, L.R., Manuela Gallego, Soares, M.R., Brandão, M.P.F., Barros Costa, S., Siviero, A.A., Trevizan, A.F., Galvão Gomes, P.I. (2026). Climate Change, Decent Work, and Workers' Health: Vulnerabilities and Responses of Workers in Brazilian Agriculture. *CLIDEWO project*. <https://doi.org/10.5281/zenodo.18839271>
- Landman, T., Brotherton V., Bosatta L., Rodríguez-Huerta, E. (2026). Towards a Just Transition in the UK food retail sector. *Sainsbury's and Rights Lab human rights research partnership*. <https://www.nottingham.ac.uk/research/beacons-of-excellence/rights-lab/resources/reports-and-briefings/2025/september/briefing-paper-just-transition-in-the-uk-food-retail-sector.pdf>

Grants and Fellowships

2025 – 2026

UK Home Office (Modern Slavery Innovation Fund)

The GeoAI for Decent Work: Innovating Engagement with Government, Civil Society and Survivors

2024 – 2025

British Academy (ISPF ODA Challenge-Oriented Research Grants)

Climate Change, Occupational Health, and Decent Work: Worker Vulnerabilities and Response in Brazilian Agriculture

2024 – 2025

UK Home Office (Modern Slavery Innovation Fund)

Adding value to the GeoAI Platform for Decent Work: A Survivor-Informed Socio-Ecological Assessment

2024 – 2025

Industry collaboration (Retail sector)

Salient and Evolving Human Rights Risks

2024 – 2025

UK Home Office (Modern Slavery Innovation Fund)

Using Data Science to Transform India's Brick Kilns

2021 – 2022	British Academy (Just Transitions within Sectors and Industries Globally) Solar Energy, Modern Slavery, and the Just Transition
2021 – 2022	World Wild Fund (USA) The Social and Ecological Impacts of Supply Chains
2014 – 2020	Consejo Nacional de Ciencia y Tecnología (CONACyT - México) PhD and MSc Scholarship
2014 – 2015	Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR) MSc Fellowship for Directed Academic Activities

Awards

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

Selected Events and Collaborations

Jul 2025	Conference: II International Congress on Ecological Humanities The Johns Hopkins University - Universitat Pompeu Fabra Public Policy Center – Barcelona, Spain Decent Work and Workers Health nexus in Brazilian agriculture
Jun 2025	Workshop: Just transitions in food, farming and fisheries Ethical Trading Initiative, IIED, BananaLink – London, UK
Apr 2025	Workshop: Addressing Human Trafficking and Forced Labour in the Anthropocene Survivor Alliance, The Human Trafficking Legal Center, The Freedom Fund – Oxford, UK
Sep 2024	Workshop: Visualizing Complexity Science Complexity Science Hub – Vienna, Austria

2022 – 2024	Collaboration: Friedman School of Nutrition Science and Policy at Tufts University Leading A Sustainability Transition in Nutrition Globally (LASTING) Project — Boston, MA, USA
May 2023	Workshop: Decent Fisheries Work in a Changing Climate Stanford University, the King Center and Center for Ocean Solutions — Stanford, CA, USA
Mar 2022	Brown bag sessions U.S. Department of Labor and Tufts University — Washington DC, USA
	How Social Life Cycle Assessment (S-LCA) can help address forced labour
Feb 2021	22nd Ordinary Session of the Yucatan Peninsula Basin Council Consejo de Cuenca de la Península de Yucatán & Ithaca Environmental — Mérida, México
	Invitation to co-design the Regional Water Program 2020-2024 of the Yucatan Peninsula

Teaching

Nov 2021	Data management and visualization for academic research Instituto Tecnológico de Mérida — Mérida, México
	Graduate course
	• Course for MSc students in Regional Development Studies
Jul 2025	Seminar: Sustainability science to tackle forced labour: methods and measurements Universitat Politècnica de Catalunya, Institute for Sustainability Science — Barcelona, Spain
	Seminar

Selected Extra Training

Jun 2025	Research Communication Programme Research Academy University of Nottingham
Apr 2025	MOOC: Partnering for change — Link research to societal challenges Network for Transdisciplinary Research td-net of the Swiss Academies of Arts and Sciences
Feb 2024	Stepping into Leadership 2023/24 — LMA Development Programmes Research Academy University of Nottingham
Oct 2023	MOOC: Analysing/Presenting Data/Information Edward Tufte Course (8h)
Jan 2021	MOOC: Data Science — Statistics and Machine Learning Specialization Coursera Programme (Johns Hopkins University) (133h)
Oct 2020	MOOC: Specialization in Data Science (R Programming) Coursera Programme (Johns Hopkins University) (290h)

Sep 2020	MOOC: Spatial Data Science and Applications Coursera Programme (Yonsei University) (24h)
Aug 2020	MOOC: Systems Thinking in Public Health Coursera Programme (Johns Hopkins University) (20h)
Jul 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)

Skills

Programming Software	R, SQL (intermediate), Quarto Tableau [Desktop and Prep], Rstudio, QGIS, OpenLCA, Zotero, VosViewer, Xerte (intermediate), Affinity (learning), Observable (learning)
----------------------	--

Languages

Spanish	Native
English	Fluent

Academic Service

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.