

Jeadran Malagón-Rojas, MD, MSc, PhD

Physician-Scientist | Social & Environmental Epidemiologist | Public Health

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1. TECHNICAL COMPETENCIES & SKILLS

Health Impact Assessment & Air Quality

- Population Attributable Fraction (PAF) Estimation
- Distributed Lag Non-Linear Models (DLNM) for Air Pollution & Health
- Time-Series Study Design for Environmental Epidemiology
- Wildfire Smoke PM_{2.5} Exposure Assessment
- Integration of Satellite-Derived Fire & Air Quality Data (GFED4.1s, QFED)
- Short-term Health Effects of PM_{2.5} and Black Carbon
- AirQ+ - WHO/PAHO Health Impact Assessment Tool (currently completing training)

Biostatistics & Epidemiological Methods

- GAM, Quasi-Poisson Regression, HAC-Robust Inference
- Regression Models (Linear, Logistic, Poisson, Gamma)
- Hypothesis Testing (Chi-square, t-test, Mann-Whitney, Poisson tests)
- Epidemiological Surveillance and Outbreak Investigation
- Population-Based and Seroprevalence Survey Design
- STROBE-Compliant Statistical Reporting
- Data Quality Assessment and Bias Control

Geospatial Analysis & Remote Sensing

- GIS for Public Health (Yale GIS Accelerator, May 2026)
- NASA ARSET: Fundamentals of Remote Sensing (2025)

Programming & Data Science

- R: tidyverse, ggplot2, DLNM, GAM pipelines (Intermediate)
- Automation of Epidemiological Analytical Pipelines
- Reproducible Research Workflows
- SPSS, STATA (Proficient)

Monitoring, Evaluation & Policy

- Monitoring & Evaluation (M&E) in Public Health Programs
- Indicator Development and Performance Metrics
- Evidence-Based Public Health Policy Support
- Policy Brief Writing for National and International Health Authorities
- Technical Reports and Annexes for Multilateral Organizations
- Stakeholder Engagement (Ministries of Health, PAHO/WHO, Academia)

Leadership & Capacity Building

- Member- Asociación de Epidemiología de Colombia (ASOCEPIC)
- Member- International Society of Environmental Epidemiology (ISEE)

- Member- International Commission on Occupational Health (ICOH)
- Coordination of Multidisciplinary and Multinational Teams
- Design of Training Materials, Manuals, and Technical Guidelines
- Facilitation of Workshops and Technical Sessions
- Organization of Scientific Events and Congresses
- Mentorship and Academic Leadership

2. EDUCATION

PhD in Public Health (<i>Magna Cum Laude</i>)	El Bosque University, Bogota, Colombia	2017-2022
Doctoral Exchange	Turku University, Finland	2019
MSc Environmental & Occupational Health	Rosario University, Bogota, Colombia	2012-2014
MA International Humanitarian Assistance	Deusto University, Spain/Poland/Germany	2008-2010
Specialization in International Human Rights	College Universitaire Henry Dunant	2008
Medicine - General Practitioner	Javeriana University, Bogota, Colombia	1999-2004

3. PROFESSIONAL EXPERIENCE

GHS Yale Research Fellow

Yale School of Public Health - Department of Environmental Health Sciences

August 2025 - Present | New Haven, CT

- Competitively selected for the Global Health Emerging Scholars (GHES) fellowship
- Leading a multi-city time-series study on wildfire smoke PM_{2.5} and cause-specific mortality across 14 Colombian cities (2016-2023), integrating satellite-derived fire and air quality data (GFED4.1s, QFED) with national mortality registries
- Applying GAM, DLNM, quasi-Poisson regression, and HAC-robust inference
- Developing R-based reproducible analytical pipelines and policy briefings for Colombian national health authorities
- Preparing manuscripts for peer-reviewed journals in environmental and chronic disease epidemiology

Researcher - Environmental & Occupational Health

National Health Institute of Colombia (INS) - National Observatory of Health

September 2017 - Present | Bogota, Colombia

- Led studies on short-term health effects of PM_{2.5} and black carbon in Bogota using time-series designs
- Directed research on heavy metal exposure from artisanal gold and coal mining - achieved 33% reduction in occupational health risks
- Designed and analyzed a national COVID-19 seroprevalence survey
- Led working paper on meteorological and heat stress criteria for national heat-health warning systems (2026)
- Produced peer-reviewed publications, technical reports, and policy briefs for national health authorities

Consultant - Vector-Borne Disease Prevention

PAHO / Ministry of Health, Colombia

August 2010 - December 2013 | Colombia

- Supported public health surveillance and control programs for Dengue, Malaria, Leishmaniasis, and Chagas in endemic zones
- Promoted inter-sector collaboration across health, education, and environmental sectors

Medical Field Officer

Medecins Sans Frontieres (MSF) OC Brussels

October 2009 - July 2010 | Colombia

- Delivered primary health care to populations affected by armed conflict and forced displacement, including Afro-Colombian and Indigenous communities
- Designed, implemented, and analyzed nutritional and health surveys among displaced populations

General Practitioner - Emergency Rapid Response

Spanish Red Cross

December 2008 - September 2009 | Basque Country, Spain

Primary Health Care Unit Coordinator

Tunjuelito Hospital

September 2006 - May 2008 | Bogota, Colombia

- Coordinated health care for internally displaced persons (IDPs), children, pregnant women, and elderly in under-resourced urban areas

4. SELECTED PUBLICATIONS

Environmental Epidemiology & Air Quality

- Malagon-Rojas J & Chen K. (2025). Health effects of wildfire PM_{2.5} in Latin American cities: A rapid systematic review. *Biomedica*, 45(Sp. 2), 41-55.
- Malagon-Rojas JN, Parra-Barrera EL, Toloza-Perez YG, et al. (2022). Assessment of Factors Influencing Personal Exposure to Air Pollution on Main Roads in Bogota: A Mixed-Method Study. *Medicina (Kaunas)*, 58(8):1125. doi: 10.3390/medicina58081125. PMID: 36013592.
- Malagon-Rojas JN, Parra Barrera EL, Lagos L. (2020). From environment to clinic: the role of pesticides in antimicrobial resistance. *Rev Panam Salud Publica*, 44:e44. doi: 10.26633/RPSP.2020.44. PMID: 32973897.
- Malagon-Rojas J. (2025). Whose descent? Whose design? *The Lancet Planetary Health*. <https://doi.org/10.1016/j.lanplh.2025.101313>
- Malagon-Rojas J. (2025). On the contextualisation of decent living standards. *The Lancet Planetary Health*. <https://doi.org/10.1016/j.lanplh.2025.101315>

Contributing Author

- Malagon-Rojas J. [Contributing Author]. *Small Arms Survey 2006*, Chapter 8. Graduate Institute of International Studies, Geneva.

Recent conference presentation

- Malagon-Rojas J, Chu L, Liu R, Meng X, Chen K. (2026). Fire-sourced PM_{2.5} and respiratory hospitalizations in Bogota, Colombia, 2016-2023. *ISEE-NAC Annual Conference*, 2026.

Working Papers

- Malagon-Rojas J et al. (2026). Meteorological and heat stress criteria for national heat-health warning systems: recommendations for Colombia. Observatorio Nacional de Salud, INS. Working Paper, May 2026.

5. LANGUAGES

Spanish - Native

English - C1 (Working Proficiency)

French - A1