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ACADEMIC APPOINTMENTS

UNIVERSITY OF TEXAS A&M College Station, TX, USA
— Assistant Professor, Department of International Affairs *2023 - Present*

EDUCATION

UNIVERSITY OF BRITISH COLUMBIA Vancouver, BC, Canada
— Ph.D. in ISLFS, Food and Resource Economics Track *November 2023*

UNIVERSIDAD DE LOS ANDES Bogotá, Colombia
— M.A in Economics *2013*
— B.A in Economics *2011*
— B.Sc in Industrial Engineering *2014*

RESEARCH AND TEACHING INTERESTS

Environmental Economics, Development Economics, and Public Policy

WORKING PAPERS

— “[Too Polluted to Sin? Dirty Skies, Crime, and Adaptation Responses in Mexico City](#)”
(Job Market Paper)

This paper estimates the non-linear effects of air pollution on criminal activity in a developing country setting, and provides empirical evidence on the potential behavioral responses mediating this relationship. To do so, I combine daily administrative data on crime, air pollution, and sentiment polarity from millions of social media posts in Mexico City between January 2017 and March 2020. The identification strategy relies on highly dimensional fixed-effect models, non-parametric estimations of dose-response functions, and an instrumental variable approach that employs wind speed and wind direction as instruments for air pollution. My results suggest a causal and inverted U-shape relationship between air pollution and crime. Therefore, there is an inflection point after which marginal increases in air pollution negatively affect criminal activity. Exploring the mechanisms behind this relationship, I found that air pollution has the power to shape people’s emotional states and mobility patterns. These results provide important insights for developing countries where pollution is dangerously high, and crime is still one of the most pressing issues. More specifically, it suggests that, under certain circumstances, environmental regulation tailored to reduce air pollution must consider the presence of behavioral responses and these non-linear interactions with criminal activity in their design.

— “[Yes They Can: Empowering Women](#)”
(with Sofia Nordenving and Thorsten Rogall)

We study how giving women political and domestic responsibility can lead to persistent female empowerment and overall welfare improvements. Using Rwandan post-genocide data, we exploit local variation in gender imbalances that caused a power vacuum that women filled as household heads and local politicians. In office, they provide more public goods. Overall, in female-led villages, women are healthier, better educated, wealthier, less likely to accept and experience domestic violence, and enjoy more sexual and financial autonomy. Importantly, younger women are carrying these changes, and gender norms changed. In villages where men stayed in power, we find negative or no effects.

—“Toxic Recycling: The Cost of Used Lead-Acid Battery Processing in Mexico”
(with Erin Litzow, Bianca Cecato and Mauricio Romero)

There is no known safe level of lead pollution exposure. Many countries have taken steps in the last half century to remove lead from their environments, but, at times, these policies can cause pollution sources to shift to countries with weaker regulatory environments. Previous studies have theorized about and empirically documented this ‘pollution haven’ phenomenon, but few have examined the costs borne by recipient communities. In the setting we study, a 2009 tightening of environmental standards in the United States caused used lead-acid battery recycling, an industry that emits large amounts of lead pollution, to shift to Mexico. We estimate the effects of this increased industrial activity and associated pollution on student learning in recipient communities in Mexico. We use data from a nationwide test in Spanish and math, conducted from 2006 to 2013. We compare test scores before and after the 2009 U.S. policy change among students attending schools near and downwind of Mexican recycling facilities and those studying farther away. We estimate effects on test scores of negative 0.05-0.09 standard deviations, with effects being slightly stronger for math than Spanish. Comparing dynamic effects across grades, we find suggestive evidence that effects are stronger for students who were younger in 2009. We also compare effects across communities, showing that the costs to education are heavily concentrated in communities that were already worse off before the 2009 change in lead-acid battery recycling activity. The results of our study underline the importance of considering unintended consequences and cross-border spillovers when regulating toxic pollutants. The heterogeneity of effects across communities highlights the need for more research on the costs of lead pollution exposure in low- and middle-income countries, where the vast majority of exposure occurs today.

PUBLICATIONS

—“Valuing Blue Carbon: Carbon Sequestration Benefits Provided by the Marine Protected Areas in Colombia”
(with Jorge H. Maldonado), May 2015, *PLoS ONE*, 10(5)

Marine protected areas are aimed to protect and conserve key ecosystems for the provision of a number of ecosystem services that are the basis for numerous economic activities. Among the several services that these areas provide, the capacity of sequestering (capturing and storing) organic carbon is a regulating service, provided mainly by mangroves and seagrasses, that gains importance as alternatives for mitigating global warming become a priority in the international agenda. The objective of this study is to value the services associated with the capture and storage of oceanic carbon, known as Blue Carbon, provided by a new network of marine protected areas in Colombia. We approach the monetary value associated to these services through the simulation of a hypothetical market for oceanic carbon. To do that, we construct a benefit function that considers the capacity of mangroves and seagrasses for capturing and storing blue carbon, and simulate scenarios for the variation of key variables such as the market carbon price, the discount rate, the natural rate of loss of the ecosystems, and the expectations about the post-Kyoto negotiations. The results indicate that the expected benefits associated with carbon capture and storage provided by these ecosystems are substantial but highly dependent on the expectations in terms of the negotiations surrounding the extension of the Kyoto Protocol and the dynamics of the carbon credit’s demand and supply. We also find that the natural loss rate of these ecosystems does not seem to have a significant effect on the annual value of the benefits. This approach constitutes one of the first attempts to value blue carbon as one of the services provided by conservation.

WORK IN PROGRESS

— “Agricultural Spillovers from Coca Eradication: Evidence from Colombia”
(with Raahil Madhok)

— “The Unintended Consequences of Illicit Crops on Rural Women”

— “The Political Economy of Environmental Regulation”
(with Juan Felipe Riano)

PROFESSIONAL EXPERIENCE

MOSBACHER INSTITUTE FOR TRADE, ECONOMICS, AND PUBLIC POLICY
— Research Fellow

CS, TX, USA
2023 – Present

UNIVERSITY OF BRITISH COLUMBIA — Graduate Research and Teaching Assistant	Vancouver, BC, Canada <i>2017 – 2022</i>
THE INTER-AMERICAN DEVELOPMENT BANK — Consultant at the Education Division and the Caribbean Country Dep.	Washington DC, USA <i>2016 – 2017</i>
THE WORLD BANK — Consultant at the Development Impact Evaluation Unit (DIME)	Washington DC, USA <i>2015 – 2016</i>
FEDESARROLLO — Research Assistant	Bogota DC, Colombia <i>2013 – 2015</i>
UNIVERSIDAD DE LOS ANDES — Research Assistant at CEDE	Bogota DC, Colombia <i>2011 – 2013</i>
MINISTRY OF FINANCE AND PUBLIC CREDIT — Intern at the General Directorate of Public Credit and National Treasury	Bogota DC, Colombia <i>2010</i>

FELLOWSHIPS AND AWARDS

UNIVERSITY OF BRITISH COLUMBIA – International Tuition Award – President’s Academic Excellence Initiative Award – Lasserre-Renzetti Prize for Best Student Paper & Presentation at CREEA – Faculty of Land and Food Systems Graduate Award – George Weston Ltd. Doctoral Fellowship – Anthony Dalton Scott Fellowship in Economics	Vancouver, Canada <i>2017-2023</i> <i>2020-2023</i> <i>2021</i> <i>2020-2021</i> <i>2019-2020</i> <i>2017</i>
LATIN AMERICAN AND CARIBBEAN ENVIRONMENTAL ECONOMICS PROGRAM – Scholarship for the VII Environmental and Resource Economics Training Course – Scholarship for the VI Environmental and Resource Economics Training Course	Costa Rica <i>2012</i> <i>2013</i>
UNIVERSIDAD DE LOS ANDES – Scholarship for Masters in Economics – Scholarship for Undergraduates (Beca ‘Quiero Estudiar’)	Bogotá, Colombia <i>2011 – 2013</i> <i>2007 – 2013</i>

CONFERENCES AND WORKSHOPS

– EAERE Summer Conference, Leuven, Belgium	<i>July-2024</i>
– Texas Development Economics Workshop, Austin, TX, USA	<i>April-2024</i>
– Western Economic Association International AERE Sessions, Portland, USA	<i>June-2022</i>
– AERE Summer Conference, Miami, FL, USA	<i>June-2022</i>
– CREEA 31st Annual Conference, Virtual Conference	<i>October-2021</i>
– 5th World Congress of Environmental and Resource Economists, Istanbul, Turkey	<i>July-2014</i>
– XV National Seminary of Marine Sciences (Senalmar), Cartagena, Colombia	<i>September-2014</i>

TEACHING EXPERIENCE

TEXAS A&M UNIVERSITY — Global Economy, <i>Graduate Level</i> — Environmental Issues and Development, <i>Graduate Level</i>	College Station, USA <i>2023, 2024</i> <i>2024</i>
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UNIVERSITY OF BRITISH COLUMBIA	Vancouver, Canada
— Syllabus design of two graduate courses, <i>Graduate Level</i>	2022
— TA Economics of Poverty, <i>Graduate Level</i>	2022
— TA Economics for Public Policy, <i>Graduate Level</i>	2018, 2019, 2021
— TA Economics of Food Consumption, <i>Undergraduate Level</i>	2020, 2021
— TA The Economics of International Trade and the Environment,	2020, 2021
— TA Land and Resource Economics, <i>Undergraduate Level</i>	2020
— Syllabus design of a graduate course, <i>Graduate Level</i>	2019
— TA Economics of Global Resource Use and Conservation, <i>Undergraduate Level</i>	2019
— TA Topics in Food and Resource Economics, <i>Graduate Level</i>	2019
— TA Wealth and Poverty of Nations, <i>Undergraduate Level</i>	2018
UNIVERSIDAD DE LOS ANDES	Bogotá, Colombia
— TA Intermediate Microeconomics, <i>Undergraduate Level</i>	2013
— TA Macroeconomics and Markets, <i>Graduate Level</i>	2011, 2013
— TA Finance, <i>Undergraduate Level</i>	2011, 2012

SKILLS

QUANTITATIVE AND PROGRAMMING	Stata, R, Python
GEOGRAPHIC INFORMATION SYSTEMS	ArcGIS, QGIS, R
LANGUAGES	Spanish (native), English (fluent)

REFERENCES

PROFESSOR SIWAN ANDERSON
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