Alice Lépissier, PhD

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Data scientist and computational social scientist with 10+ years of experience in global climate policy and international development. Deep domain expertise in sustainable investment, climate finance, carbon markets, and illicit finance. Skilled in bridging research and policy interface by combining quantitative research with pragmatic policy proposals, and experienced in high-level political advocacy. Specialty is communicating complex concepts in a clear and impactful way to different stakeholders.

Current appointment

2021–present **Brown University**, Watson Institute for International and Public Affairs, *Postdoctoral Fellow*
- Climate Solutions Lab
- William R. Rhodes Center for International Economics and Finance

Education

2021 **University of California, Santa Barbara**, *PhD in Environmental Science and Management*
- Qualifying fields: Comparative Politics and Applied Statistics
- Dissertation: "A methodological toolkit to understand complex policy problems: applications to climate change and illicit finance"

2020 **University of California, Santa Barbara**, *MA in Statistics*
- Data Science specialization
- GPA: 4.0

2011 **London School of Economics**, *MSc in Economic History*
- Awarded with Merit
- Dissertation: "Adaptation strategies and market responses to deal with uncertainty in rain-fed agriculture in Sub-Saharan Africa"

2010 **Sciences Po Paris jointly with École Polytechnique**, *MSc in Economics and Public Policy*
- Quantitative economics program to elaborate and evaluate public policies in a wide range of contexts
- Events director for student organization on development in Sub-Saharan Africa · Managed 15 society members

2009 **University College London**, *BA in European Social and Political Studies*
- Awarded with First Class Honors
- Year abroad at the *Universidad Complutense de Madrid*

Experience

2023 **Lead Machine Learning Engineer**, *Omdena*
- Working with partner company **Agreed Earth** to develop an AI system to remotely monitor nitrogen-flow in farms in real-time
- Using tech to improve sustainability of agricultural practices
- Selected as part of a global collaboration of 50 engineers across the world using AI for good

2015–2020	**Consultant**, *Various organizations*
	● Development of open data tool for the **Tax Justice Network** quantifying risk exposure to illicit financial flows
	● Quantitative modeling of foreign direct investment and illicit financial flows for the **United Nations Economic Commission for Africa**
	● Scoping report for the **Global Commission on Business and Sustainable Development** on how the private sector can contribute to the Sustainable Development Goals
	● Quantitative analysis and creation of user-friendly replication tool for the **Tax Justice Network** on how much capital is held offshore
2014–2015	**Research Associate**, *Center for Global Development*, London
	● Creator of tool SkyShares.org which allows policy-makers to compute economic costs of a climate deal
	● Conceptualized and developed website with intuitive user interface for decision-makers
	● Quantitative and qualitative research: economic modeling, drafting policy papers and blog posts
	● Policy outreach and engagement on climate agreements, climate finance, and illicit financial flows
2012–2014	**Research Assistant**, *Center for Global Development*, London
	Evidence-driven research on illicit financial flows and climate change to develop practical policy proposals.
Summer 2009	**Consultant**, *LaquaR Consultants CC*, Cape Town
	Research for report on Namibian sea-level rise for the Namibian Ministry of Environment and Tourism.
Summer 2009	**Research**, *ICLEI Africa Secretariat*, Cape Town
	Research on climate change adaptation for the city of Cape Town.
2007 & 2006	**Summer Internships**, *BRED Banque Privée*, Paris, Private Wealth Management division

Working papers

A. Lépissier, C. Boutron, E. Lachapelle, M. Mildenberger, and K. Harrison. "Material interest vs. partisan identity as drivers of opposition to carbon taxes".

A. Lépissier. "Machine learning for missing data on illicit trade".

A. Lépissier. "Machine learning to combat wicked problems: applications to climate change and illicit finance".

A. Lépissier, W. Davis, and G. Ibrahim. "Illicit financial flows from trade misinvoicing and their implication for financing for development".

Publications

2021	**Climatic Change**, *Unilateral climate policies can substantially reduce national carbon pollution*, 166:31
	A. Lépissier and M. Mildenberger Available here
2021	**Tax Justice Network and Latindadd report**, *Vulnerability and exposure to illicit financial flows risk in Latin America*
	A. Cobham, J. Garcia-Bernardo, M. Harari, A. Lépissier, S. Lima, M. Meinzer, L. Montoya Fernández and L. Moreno Available here
2019	**Tax Justice Network report**, *Vulnerability and Exposure to Illicit Financial Flows in Africa*
	C. Abugre, A. Cobham, R. Etter-Phoya, A. Lépissier, M. Meinzer, N. Monkam and A. Mosioma
	Available here
2016	**Technical note**, "Chapter 5: Cheaper, Cooler, Faster: Reducing Tropical Deforestation for a More Cost-Effective Global Response to Climate Change" In *Why Forests? Why Now? The Science, Economics, and Politics of Tropical Forests and Climate Change*, Frances Seymour and Jonah Busch. Brookings Institution Press, Washington, DC
	J. Busch, J. Engelmann and A. Lépissier Available here

2015	**CGD Policy Paper series**, *SkyShares: Modelling the Economic Implications of a Future Global Emissions Budget*, Policy Paper 067
	O. Barder, A. Evans and A. Lépissier Available here
2015	**Technical paper**, *Modelling SkyShares: Technical background*
	A. Lépissier, O. Barder and A. Evans Available here
2015	**UNA-UK report**, "A global emissions budget." In *Climate 2020 - Facing the Future*, Report by the United Nations Association - UK
	O. Barder, A. Lépissier and A. Evans Available here
2015	**Contributed chapters**, *Track it! Stop it! Get it! Report of the High Level Panel on Illicit Financial Flows from Africa*, Commissioned by the AU/ECA Conference of Ministers of Finance, Planning and Economic Development
	African Union and United Nations Economic Commission for Africa Available here
2013	**Journal of International Development**, *Europe Beyond Aid: Assessing European countries' individual and collective commitment to development*, Vol. 25, Issue 6
	O. Barder, J. Clark, A. Lépissier, L. Reynolds and D. Roodman Available here
2012	**CGD Working Paper series**, *Europe Beyond Aid: Assessing Europe's commitment to development*, Working Paper 313
	O. Barder, J. Clark, A. Lépissier, L. Reynolds and D. Roodman Available here

Computing

Skills	economic modeling · statistics · machine learning · scientific reproducibility · website development
Languages	**R** · **Python** · **Stata** · **JavaScript** · **Visual Basic** · **TEX**· **HTML/CSS** · **Docker** *main*
	Google Cloud Platform · Linux · MATLAB · SQL *secondary*
Selected repositories	SkyShares *(JavaScript)* · Bézier spline interpolation *(Visual Basic)* · Genetic algorithm *(R)* Unsupervised learning for illicit activity *(Python)* · Illicit financial flows *(Stata)*

Open datasets

2019	**A. Lépissier** and A. Cobham. "Risk Measures for Illicit Financial Flows Dataset".
	doi:10.5281/zenodo.3371738
2019	**A. Lépissier**. "Illicit Financial Flows from Trade Mis-Invoicing Dataset".
	doi:10.5281/zenodo.3610557

Teaching

Invited	**SkyShares - simulation tool for climate agreements**, *Climate Change AI Summer School*, Tutorial (Summer 2023)
	ENVS 1547 Finance and the Environment, *Brown University*, Guest Lecturer (Spring 2022)
(x2)	**ENVS 0465 Climate Solutions - A multidisciplinary perspective**, *Brown University*, Guest Lecturer (Spring 2022, Fall 2022)
(x4)	**POLS 15 Introduction to Research Methods**, *Department of Political Science, UC Santa Barbara*, Instructor of Record (Summer 2020), Teaching Assistant (Spring 2020, Spring 2019, Fall 2017)
(x2)	**ESM 210 Business and the Environment**, *Bren School of Environmental Science and Management*, Teaching Assistant (Fall 2019), Grader (Spring 2017)
	ESM 269/ED 218 Survey Design and Environmental Public Opinion, *Cross-listed Bren School and Department of Education, UC Santa Barbara*, Teaching Assistant (Spring 2018)

Presentations

2023 ● (Invited) Climate Change AI
● (Invited) AI for Global Climate Cooperation
● (Invited) Gibson Watts seminar
● Panel on "International Perspectives", Future of Sustainable Investing Conference, *Brown University*, USA
● "Smuggling development abroad: how to detect illicit trade activity", Department of Political Science, *University of Pittsburgh*, USA

2022 ● "Illicit financial flows and natural resources", Symposium on Global Capitalism in the Global South, *Brown University*, USA
● "What drives opposition to carbon taxes?", Annual Meeting of the *American Political Science Association*, Canada
● "Paying for our planet's survival: who should foot the bill for decarbonization and how?", *Association des Sections Internationales Britanniques et Anglophones (ASIBA)*, France (remote)

2019 ● "Mapping developing countries' exposure to illicit financial flows: a new data-set of risk measures", Dark Architectures: Advancing Research on Illicit Global Wealth Chains, *University of Sussex*, UK
● "Assessing the causal impact of UK climate policy using synthetic controls: an impact analysis of the 2001 Climate Change Programme", 5th Annual Conference on Environmental Politics and Governance, *University of California, Santa Barbara*, USA
● "Mapping developing countries' exposure to illicit financial flows: a new data-set of risk measures", Development Studies Association Annual Conference 2019, *The Open University*, UK
● "The environmental effectiveness of UK climate reforms: An impact analysis of the 2001 Climate Change Programme", Duck Family Graduate Workshop on Environmental Politics and Governance, *University of Washington*, USA
● "Assessing the Causal Impact of Carbon Pricing Using Synthetic Control Methods: An Impact Analysis of the UK's Climate Change Programme", Bren PhD Symposium, *University of California, Santa Barbara*, USA
● "Trade mis-invoicing estimates in Africa", Inception Meeting on Preventing Trade Mis-invoicing in Selected African Countries, *UN Economic Commission for Africa*, Ethiopia

2018 ● Expert meeting on statistical methodologies for measuring illicit financial flows, Sustainable Development Goal 16.4.1, *UN Conference on Trade and Development*, Switzerland

2015 ● "Ice and Climate Science – Question Time with the Experts", *Durham University*, UK
● "Economics of climate change: Extension or Reinvention?", Warwick Climate Forum, *University of Warwick*, UK

2014 ● "How can financial markets help us tackle climate change?", *University of Warwick*, UK
● "Stakeholder perspectives on climate change adaptation", JPI Climate, *Euro-Mediterranean Center on Climate Change*, Italy

2013 ● "Exposure to illicit flows in Africa", Technical Committee of the High Level Panel on Illicit Financial Flows from Africa, *UN Economic Commission for Africa*, Ethiopia
● "An illicit flows target for post-2015", Conference on Illicit Financial Flows, *Academics Stand Against Poverty*, UK

2010 ● Interview with Youssou N'Dour about African development, *Sciences Po Paris*, France
Event filmed for Senegalese television · Organized the event & negotiated free concert · 200 attended

Leadership and outreach

Op-ed	"Global goals can deliver on 2°C and new development finance - here's how", The Guardian, 9/24/15.
Blogging	Various posts on *Views from the Center for Global Development*, including "Setting a Price on Carbon Immediately Is Necessary to Avoid Dangerous Climate Change" and "A Global Carbon Tax or Cap-and-Trade? Part 1: The Economic Arguments".
Referee	*Journal of Environment and Development, Climatic Change, Policy Studies Journal, Politics & Policy, International Journal of Development Issues*, Climate Change AI Innovation Grants Program
Service	Coordinator of the "Sustaining Movement Momentum and Building Political Power" conference, June 2017, *University of California Santa Barbara*
Advising	Advisor to Master's group project: "Functional Forests: The Role of California Forests in Achieving Statewide Carbon Neutrality", 2020, *Bren School of Environmental Science and Management*
Service	Search committee for tenure-track Lecturer in Environmental Data Science, 2020, *Bren School*
Service	Search committee for Assistant Professor in Environmental Data Science, 2020, *Bren School*
Advising	Primary advisor for senior undergraduate thesis, Tucker Wilke, 2022, *Brown University*
Service	Founding Member of *Boston Women in Business for Good*, 2022
Service	Jury member for "AI for Global Climate Cooperation", 2023, *Mila, Montréal*

Awards and fellowships

2022	Honorable mention, S&P Global Academic ESG Research Award
2020	Central Campus Dissertation Fellowship, Graduate Division, University of California Santa Barbara
2020	Nominee for Outstanding Teaching Assistant Award, Academic Senate, University of California Santa Barbara
2020	Graduate Student Research Fellow, National Socio-Environmental Synthesis Center (SESYNC)
2019	H. William Kuni Fellowship, Bren School of Environmental Science and Management
2019	Winner of "People's Choice" award for best talk at PhD Symposium, *Bren School of Environmental Science and Management*
2017	Energy and Climate Graduate Fellow of the Scholars Strategy Network
2016	Bren School of Environmental Science and Management Recruitment Fellowship *for 3 years*
2016	International Doctoral Recruitment Fellowship, University of California Santa Barbara *for 3 years*
2006	Sessional Prize for academic merit, University College London

Grants

2020	"Financial Opacity and Challenges to Forest Governance in Indonesia and Malaysia", National Socio-Environmental Synthesis Center (SESYNC), co-PI on Graduate Pursuit
2016	"The economic prize for business of achieving the Sustainable Development Goals", Business and Sustainable Development Commission, research grant number BSDC-02
2016	"The Price of Offshore, robust replication", Tax Justice Network, research grant
2013	"The Political Economy of Illicit Financial Flows in Africa and their Impact on Africa's Development", United Nations Economic Commission for Africa, grant with Alex Cobham

Languages

Fluent	**French** (native) · **English** · **Spanish**	*written & spoken*
	Italian	*conversational*

References available upon request