Vilane Gonçalves Sales

MARIE CURIE POSTDOCTORAL FELLOW

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Profile

Dedicated Post-Doctoral Research Scientist with extensive expertise in climate change economics, environmental econometrics, and advanced data analytics for coastal vulnerability assessments. Adept in remote sensing, machine learning, and interdisciplinary collaboration, she has a proven track record of transforming complex research into actionable strategies for climate resilience and sustainable economic growth. Driven by a commitment to climate justice and equitable adaptation, she actively translates scientific findings into policy-relevant recommendations that inform sustainable coastal management. Her work includes close collaboration with ocean modelling and environmental law research groups, demonstrating a cross-disciplinary approach that bridges advanced scientific research.

Research Interests

- **Economics of Natural Disasters & Climate Change:** Quantify economic impacts of extreme events and coastal flooding, highlighting differential vulnerabilities.
- **Sustainable Coastal Development & Biodiversity Conservation:** Create resilient frameworks for coastal tourism that integrate sustainability and conservation.
- **Climate Change Economics & Artificial Intelligence:** Apply machine learning and AI to model social vulnerability and predict macroeconomic impacts.
- **Climate Justice & Equitable Adaptation:** Advocate for policies that address socioeconomic disparities to ensure fair, inclusive adaptation.

Education

PhD in Economics, University of Birmingham, Birmingham (UK)

2015 — 2019

Essays on the Economics and Policies of Deforestation in Brazil

MPhil in Management and Rural Development, Universidade Federal Rural de Pernambuco, Recife (BR)

2013 — 2015

Distinction

BA Economics , Universidade Federal Rural de Pernambuco, Recife (BR)

2008 — 2012

Academic Honors Diploma (First Class)

Relevant Information

Articles Published

Sales, Vilane Gonçalves, 2023. "Assessing the impact of governance policies on landslide risk in brazilian municipalities", International Journal of Disaster Risk Reduction, 99:104058. https://doi.org/10.1016/j.ijdrr.2023.104058

Sales, Vilane Gonçalves and Eric Strobl, 2023. "Using extreme value theory to assess the mortality risk of tornado outbreaks", Int J Disaster Risk Sci(1), 14:14-25. https://doi.org/10.1007/s13753-023-00474-1

Sales, Vilane Gonçalves, 2023. "Modelling non-linear deforestation trends for an ecological tension zone in brazil", Science of Remote Sensing, 7:100076. https://doi.org/10.1016/j.srs.2023.100076

Fornalé, Elisa, Federica Cristani, and **Vilane Gonçalves Sales**, 2022. "Sustainable management of fisheries resources in a time of climate change: an overview of initiatives in the mediterranean region", Ital. Yearb. Int. Law Online(1), 31:171-187. https://doi.org/10.1163/22116133-03101009

Sales, Vilane Gonçalves, Eric Strobl, and Robert Elliott, 2022. "Cloud cover and its impact on brazil's deforestation satellite monitoring program: evidence from the cerrado biome of the brazilian legal amazon", Applied Geography, 140:102651. https://doi.org/10.1016/j.apgeog.2022.102651

Working Papers

2025 — Present

Sales, Vilane Gonçalves. "A Coastal Hospitality Sector Database for Vulnerability Assessments in Veneto and Emilia-Romagna, Italy." Manuscript submitted for publication in *Data in Brief*.

Sales, Vilane Gonçalves. "Spatial Analysis and Risk Assessment of Coastal Hospitality in Northern Italy." Manuscript submitted for publication in the *Journal of Coastal Conservation*.

G. Sales, Vilane, Cléa Denamiel, and Francesco Bosello, 2025. "Impact of climate change on the direct economic costs of coastal hazards to hospitality: a meter-scale experiment in the adriatic basin", https://doi.org/10.5194/egusphere-egu25-16900

Scholarships, Certifications, Honours and Awards

2008 — Present

Marie Skłodowska-Curie Postdoctoral Fellowship (SEA-LIMITHS Project, Grant 101106544) – 2023–Present

PhD Abroad – Doutorado Pleno no Exterior (Coordination for the Improvement of Higher Education Personnel (CAPES)) – 2015-2019

First Place Master Position Scholarship (Coordination for the Improvement of Higher Education Personnel (CAPES)) – 2013-2015

Scientific Initiation Program PBIC (Coordination for the Improvement of Higher Education Personnel (CAPES)) – 2008 - 2012

Employment History

Marie Curie Postdoctoral Fellow, Ca'Foscari University of Venice, Venice

June 2023 — Present

Currently serving as a Marie Curie Postdoctoral Fellow, I lead the SEA-LIMITHS project, an interdisciplinary investigation into the economic and environmental impacts of coastal sea-level rise on Italy's hospitality sector. In this role, I am responsible for:

- Developing a comprehensive geospatial database of sandy beaches and hospitality establishments in the Veneto and Emilia-Romagna regions, integrating remote sensing, AI, and machine learning techniques.

- Conducting spatial analyses to model beach erosion and forecast economic losses from sea-level rise under varying climate scenarios.
- Estimating adaptation costs and simulating macroeconomic effects to inform sustainable coastal management and policy-making.

- Bridging academic research and policy by translating complex scientific findings into actionable, policy-relevant insights aligned with the United Nations Sustainable Development Goals.

This position not only advances the frontiers of climate change economics and coastal resilience but also supports the development of equitable adaptation strategies to mitigate the impacts of climate change on vulnerable coastal communities.

Post Doctoral Research, University of Bern, Bern

2019 — June 2023

Teaching

- Deliver teaching for the undergraduate and postgraduate course(s) as appropriate.
- Develop and maintain involvement in teaching plans concerning teaching developments ongoing throughout the year.
- Practical organizational skills to manage time and priorities teaching and administrative duties.

Research

- Functioning somewhat independently, design, organize, and conduct highly specialized and advanced statistical analysis and, in some cases, develop new protocols; summarize findings and publish results in research journals; assume general responsibility for the scientific operations of the laboratory; provide supervision and guidance to master students, bachelor students, and other researchers.

Lecturer (MSc): Environmental Econometrics , University of Bern, Bern

2021 — 2022

- Utilize diverse assessment methods to provide timely, effective feedback and supervise practical work, enhancing student learning.
- Contribute to curriculum development with a research-based, scholarly approach.
- Engage in ongoing professional development and fulfill assigned administrative responsibilities.

Lecturer (MSc): Environmental Economics for Non-Economists, University of Bern, Bern

2019 — 2020

- Utilize diverse assessment methods to provide timely, effective feedback and supervise practical work, enhancing student learning.
- Contribute to curriculum development with a research-based, scholarly approach.
- Engage in ongoing professional development and fulfill assigned administrative responsibilities.

Teaching Assistant (MSc): Political Economy and Economic Policy, University of Birmingham , Birmingham (UK)

2019 — 2019

- Conduct instructional activities, including tutorials, seminars, and lectures, and develop materials that align with learning objectives.

Teaching Assistant (Undergraduate): Environmental Economics at University of Birmingham , University of Birmingham, Birmingham (UK)

2018 — 2018

- Participate in assessments by utilizing diverse methods to provide timely, practical feedback that supports student learning.

Teaching Assistant (Undergraduate): Sustainable Development: Economy and Environment , University of Birmingham , Birmingham (UK)

2017 — 2018

- Effectively manage diverse teaching and administrative tasks as directed by the Head of Subject, contributing to the strategic goals of the Economics Department.

Links

Linkedin   Google Scholar

Skills

Matlab

R

Python

ArcGIS / Qgis

Big Data

Git

JavaScript

MySQL

Machine Learning

LLMs

HPC environments
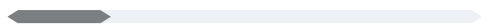
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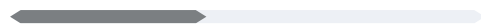
UI/UX Design
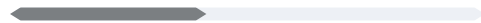
Languages

Portuguese

English

German

Spanish; Castilian

Italian

Supervision

Elise Moret. Extreme Value Analysis of Avalanches Leading to Building Damage in the Swiss Alps. Level: MA. Role: **Advisor**. More info: https://www.climatestudies.unibe.ch/about_us/students/former/index_eng.html

Laisa G Sales. Criação de persona para um micro negócio centrado em sustentabilidade e produtos naturais utilizando Design thinking. Level: MBA. Role: **Co-supervisor**.

References

Francesco Bosello from Ca'Foscari University of Venice
francesco.bosello@unive.it

Eric Strobl from University of Bern
eastrobl13@gmail.com

Courses

Introduction to Python , University of Birmingham

2018 — 2018

The Unix Shell, Version Control with Git, and Programming with Python, Software Carpentry / University of Birmingham

2018 — 2018

ArcGis I, II, III , Imagem – Esri Official Distributor

2015 — 2017

Characteristics

Adaptive Learner / Collaborative Leadership / Resilience Under Pressure / Strategic Communication / Analytical & Organized / Ethical & Integrity-Driven / Commitment to Well-Being

News and Pages

BIFoR wider forested landscapes related research, Birmingham, UK

https://www.birmingham.ac.uk/research/bifor/bifor-wider-research/wider-research.aspx

SEA-LIMITHS Project Page, Venice

https://pric.unive.it/projects/sea-limiths/home

Outreach & Innovative Educational Initiatives

Coastal Hotel Challenge (Unity Game), Veneto Night, Ca' Foscari University, Venice

September 2024 — September 2024

- **Concept & Development:** Created an interactive game in Unity, allowing participants to assume roles (hotel managers, policymakers, mayors) and make strategic decisions to protect coastal hotels from sea-level rise.
- **Educational Focus:** Integrated real-world data and projections from the SEA-LIMITHS project, showcasing how climate change, erosion, and flooding affect coastal tourism.
- **Engagement & Impact:** Facilitated lively discussions on sustainability, adaptation strategies, and economic trade-offs, providing hands-on insight into climate resilience and hotel management challenges.