

Siwei Tao

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EDUCATION

Duke University

Master of Environmental Policy

Durham, U.S.

Class of 2027

- Courses: Environmental Policy Analysis, Environmental Economics, ESG Investing, Statistics and Program Evaluations...

University of Toronto

Honours Bachelor of Science with Distinction in Environmental Science and Statistics

Class of 2025

Toronto, Canada

- Courses: Multidisciplinary Perspective on the Environment, Chemistry of Environmental Change, Environmental Biology, Physics of the Changing Environment, Statistics and Data Analysis, Environmental Law, Data Visualization...
- Awards & Scholarships: New College Council In-course Scholarship, CIE International Experience Award

PROFESSIONAL EXPERIENCE

Jiangsu Provincial Academy of Environmental Science

Intern, Experiment and Analytical Testing Center

Jun-Aug 2024

Nanjing, China

- Managed data collection and quality review for soil and groundwater samples from coastal chemical industrial zones, processing 500+ data records to ensure project compliance and data accuracy
- Conducted molecular composition and surface morphology analysis on 30+ microplastic samples using FTIR and SEM, delivering critical experimental data for technical reports.
- Collaborated on technical report writing and streamlined cross-team data integration using Excel, ensuring timely project delivery.

PROJECT EXPERIENCE

CleanTech Finance: Hydrogen Industry Investment Analysis & Policy Recommendations

Mar 2026-Present

- Analyzed investment flows across the hydrogen value chain (upstream, midstream, downstream) to identify capital concentration patterns and evaluate alignment with emission reduction potential.
- Cleaned Pitchbook data and applied Logit/Probit models to identify key drivers of capital allocation across gray, blue, and green hydrogen technologies.
- Examined financing challenges facing Chinese clean-tech startups, analyzed public sector risk guarantee mechanisms, and proposed institutional recommendations to expand financing channels.

ESG Value Research: "Wu Wei Er Zhi" Ecological Tea Farming Model in Xishuangbanna

Nov 2025-Present

- Investigated the "Wu Wei Er Zhi" (effortless action) approach, a method of tea cultivation that uses no fertilizers or pesticides and relies on biodiversity for pest control, while tracing the historical factors that preserved ancient tea trees.
- Conducted surveys and in-depth interviews with 20+ farmers, intermediaries, and village officials, collecting primary data on industry status and income structures.
- Quantified the premium value generated by the natural farming model and identified structural bottlenecks such as "middleman dependency" that destabilize farmer incomes.
- Extracted ESG value from environmental, social, and governance dimensions, providing a replicable framework for sustainable ecological agriculture.

Macro Policy & Compliance Analysis: Industrial VOCs Emissions Control in Kunshan

Sep 2025-Nov 2025

- Identified a critical policy gap: the current regulatory framework covers less than 90% of SMEs, with 30% of firms achieving below 70% exhaust gas collection efficiency, directly undermining the regional ozone pollution control target.
- Surveyed 3 major industrial clusters, evaluated 3 policy alternatives, and conducted quantitative comparisons of outcomes.
- Authored a 21-page policy white paper, proposing two cross-departmental coordination strategies and actionable recommendations for macro-level environmental governance.

Consumer Safety & Compliance: Systematic Study of Plastic Additives and Microplastic Pollution

Oct 2023-Apr 2024

- Independently designed and executed leaching experiments on cup lids from seven major brands; analyzed chemical additives using LC-MS and implemented Exposure-Activity Ratio (EAR) models with R for data visualization.
- Conducted a review of 20+ studies, identifying gaps in current regulations regarding secondary microplastic control.
- Analyzed microplastic applications in the PPCP industry, uncovered greenwashing in cosmetic product formulations, and proposed a multi-stakeholder governance framework involving consumers, corporations, and government.

Data-Driven Analysis & Visualization of Global Freshwater Scarcity

Mar 2024-Apr 2024

- Processed FAO global water resource data using R and applied statistical methods to identify high-consumption industries and the top 10 water-stressed countries.
- Developed interactive dashboards in Tableau (maps, bar charts, bubble charts) to visualize water allocation across agriculture, industry, and domestic sectors, along with spatial patterns of desalination capacity.
- Delivered data-driven recommendations to optimize resource efficiency and inform strategies for water-scarce regions.

ADDITIONAL INFORMATION

Languages: English (fluent), Mandarin (native), Korean (Basic)

Skills: R, Python, Stata, SQL, MS Office, Tableau, Excel; Statistical Modeling, ESG & Policy Analysis

陶斯微

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教育背景

杜克大学 (2026 U.S News 全美大学排名第 7 位)

08/2025-05/2027(预计)

环境政策硕士

美国北卡罗来纳州达勒姆

- 核心课程: ESG 投资、环境经济学、环境政策分析、自然资源与保护区管理、统计与项目评估

多伦多大学 (2025 年 QS 世界大学排名第 29 位)

09/2021-05/2025

荣誉理学学士 (环境科学、统计双专业)

加拿大安省多伦多

- 核心课程: 环境法、环境变迁化学、环境生物学、人与环境相互作用、环境跨学科视角
- 荣誉与奖学金: New College Council 学业奖学金、CIE 国际经验奖

实习经历

江苏省环境科学研究院

数据分析与项目助理实习生

06/2024-08/2024

- 独立负责海岸带化工园区土壤及地下水样本的大规模数据收集与质量审查, 处理 500+条数据记录, 通过严格核查确保项目合规性与数据准确性。
- 运用傅里叶变换红外光谱 (FTIR) 与扫描电子显微镜 (SEM) 完成 30 余份微塑料样本的分子成分与表面形态分析, 为技术报告提供关键实验数据支撑。
- 协助撰写技术分析报告, 使用 Excel 完成跨团队数据整合与可视化呈现, 推动项目按时交付。

项目经历

清洁技术金融研究: 氢能产业链投资分析与政策建议

2026. 03-至今

- 从产业链视角 (上游制氢、中游储运、下游应用) 分析氢能领域投资流向, 识别吸引资本最多的环节及背后逻辑, 评估投资是否匹配减排潜力最大的技术。
- 对比灰氢、蓝氢、绿氢三类生产技术的投资规模与分布, 结合 Pitchbook 数据库清洗与整理, 运用 Logit/Probit 模型分析影响资本配置的关键因素。
- 探讨中国清洁技术初创企业融资困境, 研究公共部门风险担保机制及金融产品创新案例, 从体制机制层面提出拓宽融资渠道的建议。
- 参与清洁技术金融项目数据库共建, 负责氢能板块数据更新与维护。

ESG 价值研究: 西双版纳高山村古树茶 “无为而治” 生态模式研究

2025. 11-至今

- 以 “无为而治” 为核心视角, 调研古树茶不施肥、仅基础修剪的自然生长模式。
- 结合生态多样性论证无需打药的原因, 并追溯古树茶保留至今的历史成因。
- 开展 20+户农户、中间商及村干部的社会调查问卷与深度访谈, 收集产业现状、收入结构等一手数据。
- 量化评估自然模式对古树茶溢价的影响, 识别 “中间商依赖” 导致农户收入不稳定的结构性瓶颈。
- 从环境、社会、治理 (ESG) 三方面提炼价值, 为生态农业可持续发展提供参考范式。

宏观政策与合规分析: 昆山市工业排放 (VOCs) 治理调研

2025. 09-2025. 11

- 识别政策痛点: 当前监管体系覆盖不到全市 90%的中小企业, 导致 30%企业废气收集率低于 70%, 直接影响区域臭氧污染治理目标。
- 调研 3 大工业集群, 评估三种政策方案的可行性并进行量化效果对比。
- 撰写 21 页分析白皮书, 提出 2 项跨部门协同监管策略及宏观环境治理优化建议。

校园鸟类碰撞调查与生态保护: 昆山杜克大学案例研究

2025. 08-2025. 11

- 与全国防鸟撞行动网络合作, 独立设计并执行鸟类尸体移除实验, 量化清道夫活动对鸟撞监测的干扰。
- 运用对比分析与实验数据, 发现 91%模拟尸体被清道夫 (主要为校园流浪猫) 移除, 71%清除发生在夜间, 证实传统日间巡查方法存在系统性低估。
- 利用 Tableau 进行空间与物种分析, 识别高风险建筑与易感物种, 为精准干预提供数据支撑。
- 提出引入 “清道夫校正因子” 估算真实死亡率, 并向校园管理部门提交 “鸟类友好型建筑设计” 建议。

消费品安全与合规评估: 塑料添加剂与微塑料污染系统性研究

2023. 10-2024. 04

- 独立设计并执行针对 7 个主流品牌杯盖的析出物实验, 运用液相色谱-质谱联用 (LCMS) 定量分析化学物质种类与浓度, 使用 R 语言完成暴露-活性比 (EAR) 模型计算和数据可视化。
- 系统梳理 20+篇前沿文献, 识别现行法规在次生微塑料管控方面的缺口。
- 深入剖析化妆品行业微塑料应用, 发现部分产品 “微塑料-free” 宣称与实际成分存在差异 (即洗绿现象), 提出消费者、企业、政府多方共治框架。

附加信息

语言: 英语 (精通, 本硕全英文教学/工作语言)、普通话 (母语)、韩语 (基础)

技能与工具: R、Python、Stata、SQL、Tableau、Excel, Wind, 政策分析、ESG 研究