

Teaching about the policy-environment interface: lessons from Brazil¹

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Abstract

How can political science become more practical and its theoretical concepts more approachable to students? In this paper we reflect on experiential learning through field classes about environmental policy and international environmental policy using lessons learned between 2012-24, with graduate and undergraduate students from Pernambuco, Brazil. Most of the trips were to protected areas, but they also included landfills, rivers, an agroecology farm, an industrial port and estuaries. The purpose of these classes was to connect the experiences in the field to theoretical concepts related to collective action, governance, institutional mosaics, socio-ecological systems, political influence and participation, policy implementation, power asymmetries, and effectiveness and to tackle transversal, multidisciplinary topics such as biodiversity conservation, climate change, desertification, food security, land use, ocean grabbing, plastic pollution, waste management etc. We draw on a survey with 47 previous students, which investigates their perception on the field classes, including how trips may have later affected their professional practices.

Keywords: Environmental policy; environmental issues; nature; PSIR teaching; field classes.

Introduction

Imagine a boat full of political science and international relations (PSIR) students floating in a beautiful mangrove. They were told to put their phones away and not take any pictures; they cannot talk to anyone. The boatman paddles away quietly, sometimes taking a branch out of the way. Although Brazil is home to about 15% of the mangroves of the world, and our university is in a tropical, coastal city

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with one of the largest urban mangroves on the planet, most of these students have never set foot in one.

The mangroves of northeastern Brazil are a full sensorial experience. The aquatic animals make clicking sounds and the large amount of decomposing leaves give the water a peculiar smell. Brazilian mangroves are protected by law, yet almost 25% of them have been lost to deforestation. The main drivers include shrimp farms and real estate speculation related to tourism.

One of the greatest challenges in Political Science and International Relations (PSIR) teaching is bringing reality closer to students. Sometimes students might feel that power relations are too far away from them, or that problems are too big to tackle. When we add an environmental layer to this, the challenge might become even greater.

One reason might be that PSIR courses do not commonly involve field trips, which are essential to understand the policy-environment interface. Additionally, as PSIR professors are likely to not have participated in field classes themselves as students, preparing such classes may not even cross their minds (or they may think they lack the skills or resources to do so, depending on their training) (Oleson & Hora, 2014). Others might give up in face of the logistics and financial challenges along the way.

In Brazil, since 2017, the Ministry of Education has required that environmental issues be taught transversally in the curriculum. Nevertheless, PSIR programs usually include a specific course to teach about environmental policy (Steiner et al., 2022).

Although publications on PSIR teaching and learning PSIR are on the rise, there are very few studies that have focused on using field classes - usually discussing government offices visits - and less so to teach environmental issues (Pahre & Steele, 2014; 2015; Elliot, 2024). Nevertheless, as discussed previously (Steiner et al., 2022), protecting the environment remains a preeminent necessity of our time, and PSIR teachers' role is crucial to build bridges between theories and practices. Additionally, when teaching about inevitable scenarios that might come up, it is important to inspire action, as opposed to generating feelings of indifference and inefficacy (Cameron and Payne, 2011; Peters et al., 2013). The authors personally believe field classes are an important active learning tool, and even more so when teaching classes about the environment-policy interface. In addition to the general

benefits of being outdoors (see, for instance, Frumkin, 2001; Keller, 2006; Maller et al., 2009), we argue that environmental policy can only be fully comprehended through direct contact with at least three dimensions: 1) different actors that deal with or are affected by environmental policies (for example, bureaucrats, park managers, coastal communities, etc); 2) different governmental and nongovernmental institutions that deal with environmental issues or hinder solutions; and 3) the areas themselves that are being protected or not (reserves, beaches, forests, etc).

Here we investigate students' perceptions of these field classes, including how trips may have later affected their professional practices. We draw on a survey with 47 previous students (2012-2024), distributed in January, 2025.

Our paper is divided into four sections, in addition to this introduction. Section 2 introduces basic elements of experiential learning, section 3 presents our survey and some brief aspects of the sample, and section 4 discusses the results. The final section ends with our main conclusions and takeaways.

Theoretical basis for learning in the field

Teachers of the humanities and social sciences influence the framing of policy debates and shape generations of potential future leaders in society. Maliniak et al. (2020), while investigating the gaps between theory (academia) and practice, point out that the putting ideas into often goes through a non-linear process of influencing students who, one day, will become analysts, planners and policy makers or advisors.

In a classic quote, economist John Maynard Keynes wrote that:

The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back (Keynes, 1936, p. 383).

Yet promoting long lasting learning can be challenging (Bain, 2004), even more so when dealing with topics and sites that may be distant from students. Pedagogical literature on higher education has developed strong evidence regarding possibilities to approach certain subjects in class, as we have discussed previously in Steiner et al. (2022). Experiential learning through field classes might be one of the best alternatives to fit this target (Kolb, 2014).

Some authors suggest that learning is more effective when more than one sense is stimulated (Vasconcelos et al., 2008; Amaral et al., 2014). The five senses help our brains to store events. Have you ever felt like you were taken back to a memory from the past just by smelling something or listening to music? In traditional classroom settings, or even in online learning settings, hearing and vision are usually the only two senses that get stimulated. Touching, smelling and even tasting are important windows to the brain that are usually completely closed in most virtual classrooms.

Humanistic geographer Yi-Fi Tuan, whose vast body of work supports a lot of what is practiced in environmental education, argues that the senses are also crucial to constructing one's sense of place and the way one perceives the environment (see, for instance, Tuan, 1974; 1977). Author Robert Louv (2011) even coined the term "nature-deficit disorder" to emphasize the risks of a childhood without outdoors and nature play, with repercussions that continue into adulthood.

In field classes, students can see, feel, smell, taste and hear things that are completely different from those in a traditional classroom setting, and can enhance retention of the content they need to learn. In our experience, however, field classes remain one of the last options PSIR teachers consider. For that reason, it is not uncommon - as we cited in the beginning of the introduction - for the areas we have taken students to be completely novel in their experience. In one particularly interesting episode, a group of students did not realize one of the city's main rivers passed close to the university, and were able to cross it for the first time during a field activity.

Methods

A questionnaire was sent out to previous undergraduate (political science, administration and social sciences) and graduate students (political science and public policy) who had participated in field trips conducted by the first author. Participants were contacted by email, WhatsApp and Facebook. This included students from eight undergraduate courses (about environmental policy, international environmental policy and public policy, respectively), three professional masters' courses (public policy and the environment or public policies for education and the environment), six mixed masters'/doctorate courses (international environmental

policy and teaching international relations⁴), one doctorate course (public policy), as well as participants in three field activities organized within our research group, MAPORI⁵. This total of 21 courses and activities included approximately 399 students⁶, from which 47 answered the questionnaire (11,8%) (see appendix).

Field activities took place in 29 different sites: 6 Atlantic forest reserves, 3 Amazon forest reserves, 3 estuaries, 3 rivers, 3 beaches, 2 Atlantic forest restinga reserves, 2 landfills, 1 marine research center, 1 agroecology farm, 1 marine/coastal reserve, 1 caatinga (dry savannah) reserve, 1 industrial port, 1 aquarium, and 1 marine conservation project. Some courses involved visits to more than one area. Most areas were visited by the entire class, or part of the class (split into groups), accompanied by the professor, but some students carried out independent field activities⁷ (to 20,7% of the 29 areas). The purpose of the classes was to connect the experiences in the field to theoretical concepts related to governance, socio-ecological systems, participation, policy implementation and effectiveness and to tackle transversal, multidisciplinary topics such as biodiversity conservation, climate change, desertification, food security, land use, waste management, etc.

The survey contained three parts: the first part collected basic information on participants (gender, education, present day profession/job); the second part collected data on field activities and the third part investigated participants' perceptions on these activities.

Sample

Most respondents identified as female (61.7%), 36.2% as female and 2,1% as nonbinary; most had completed college (Figure 01). The most common current jobs were civil servant, administrator and graduate student (Figure 02). Most respondents (55.3%) stated that their current job was unrelated to environmental issues (Figure 03).

⁴ In this case, to teach students how to plan and use field activities in their future courses.

⁵ Study Group on the Environment, Policy and International Relations.

⁶ Field classes included 2-3 extra students, such as teaching or research assistants, or non-matriculated sit-in students. Thus we included an average of 2 students per course in this number (i.e., a total of 40 extra students).

⁷ In some cases, when students were not able to participate in the main field class for health or other reasons, they were allowed to choose another site to visit and report on at a later date. In other cases, students were divided in groups from the start, and each group visited a different site, agreed upon previously, to study.

Figure 01. Present day education level of respondents

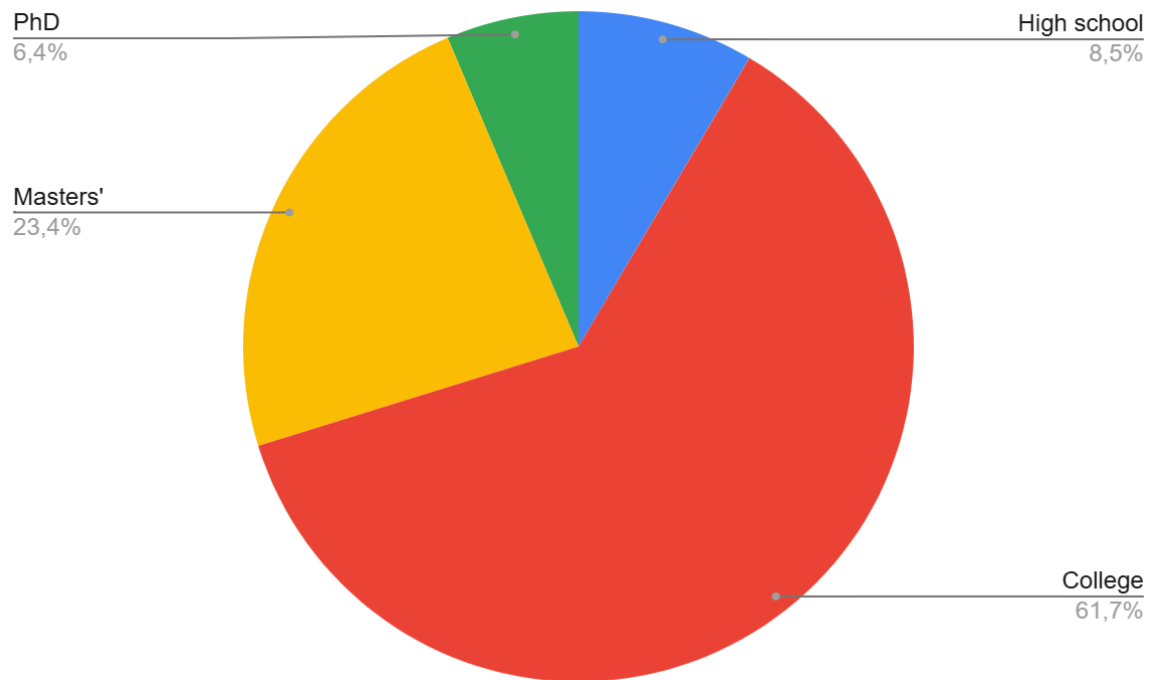


Figure 02. Respondents' current job (n=47)

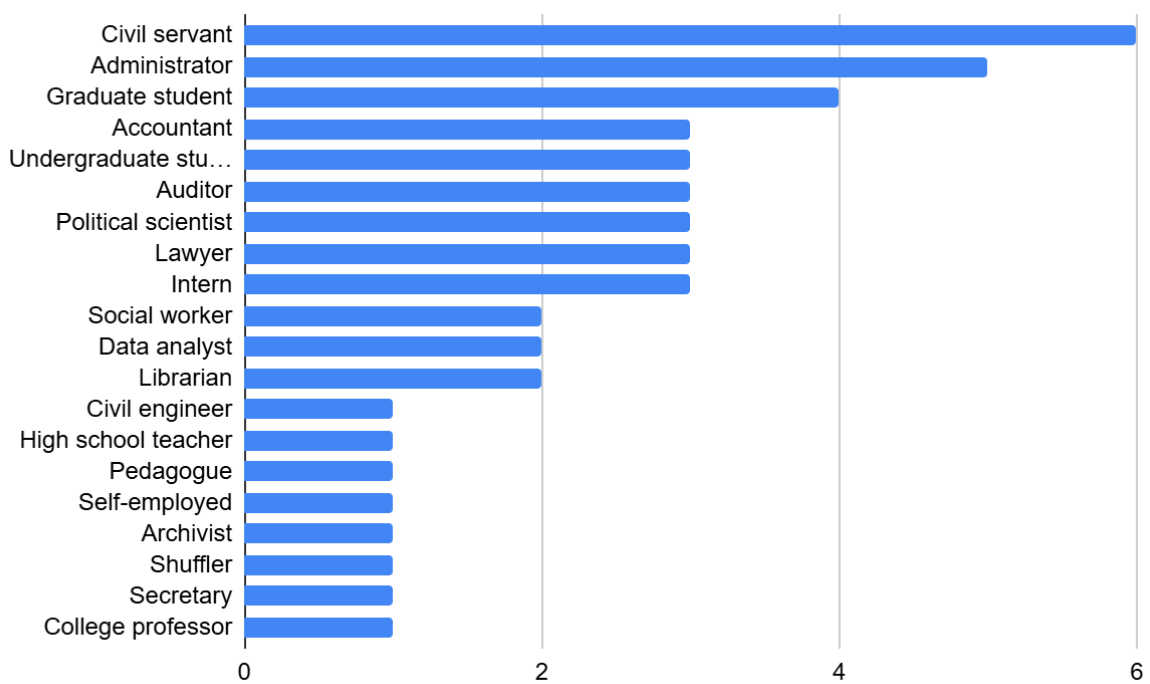
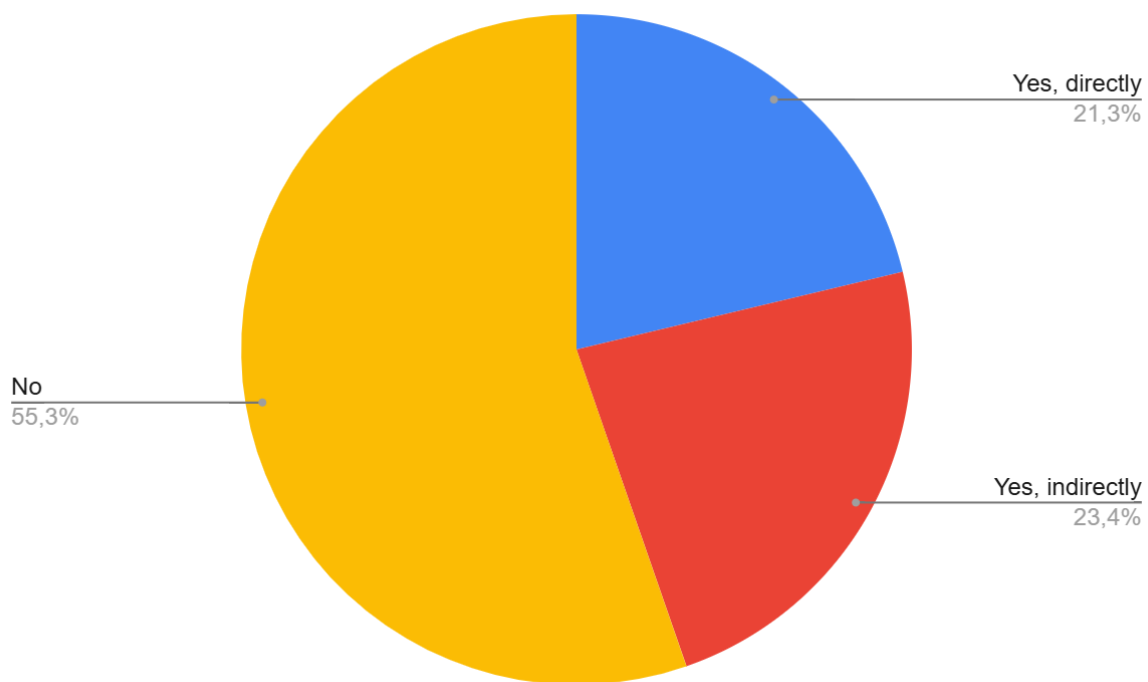


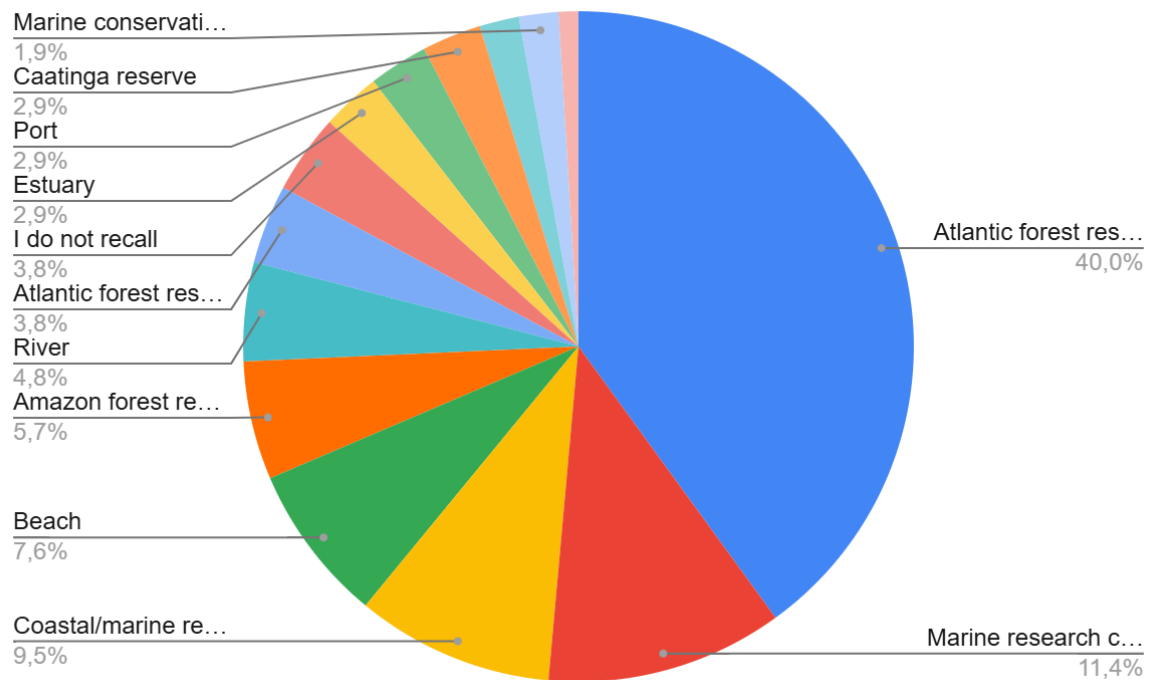
Figure 03. Responses to the question: “Does your current job involve environmental issues?” (n=47)



Twenty respondents participated in field activities as undergraduates, 30 respondents participated during their masters' studies, and 7 participated while studying towards their PhDs. The total surpasses our sample because some students participated in field activities in two or more levels of study.

The areas most visited by respondents (Figure 04) were: an Atlantic forest reserve (40%), a marine research center (11,4%), and a coastal/marine reserve (9,55).

Figure 04. Areas visited by respondents



Results and discussion

Overall, respondents' perceptions of field activities were positive. Most perceived field activities as very relevant to their overall professional training (Figure 05). Perceptions of relevance to their current job, however, were mixed (Figure 06). Most (68.1%) respondents believed that field activities were very important in helping them understand environmental policy.

When asked to openly mention the main takeaway from field activities, the most frequent responses centered on 1) the importance of protecting a certain ecosystem or the environment in general, 2) comparing theory and practice, 3) acquiring greater knowledge of environmental policy / environmental bureaucracies and 4) learning about local populations and territories (Table 01; Figure 08). Almost all students (91.5%) stated learning about environmental policy would not have been the same without field activities (Figure 09).

Figure 05. Responses to the question: “On a scale from 1 to 5, how relevant was the field activity (or activity) to your overall professional training?” (n=47)

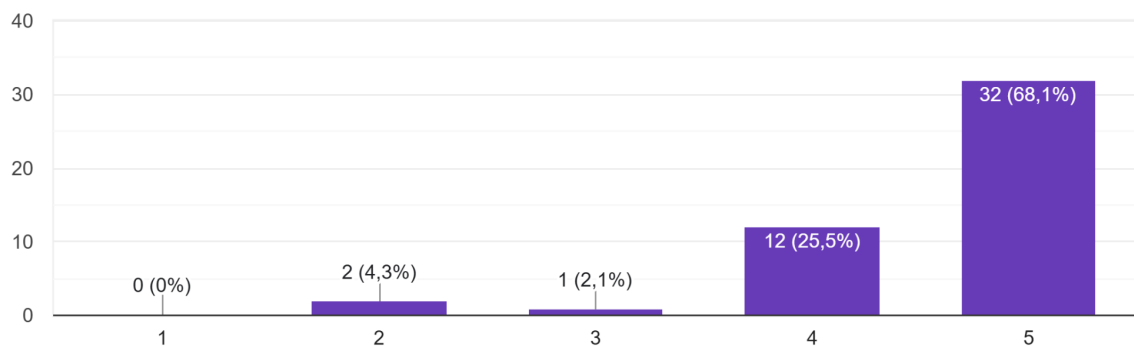


Figure 06. Responses to the question: “On a scale from 1 to 5, how relevant was the field activity (or activity) to your the job or activity you currently perform?” (n=47)

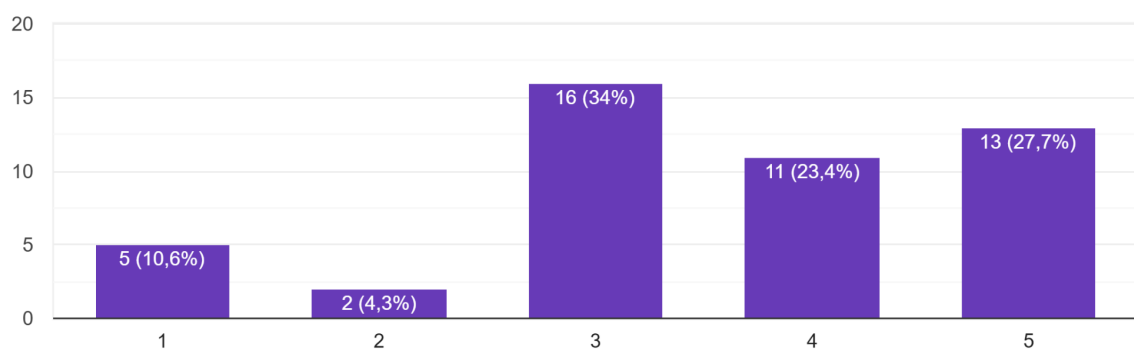


Figure 07. Responses to the question, “On a scale from 1 to 5, how much did the field activities help you understand environmental policy?” (n=47)

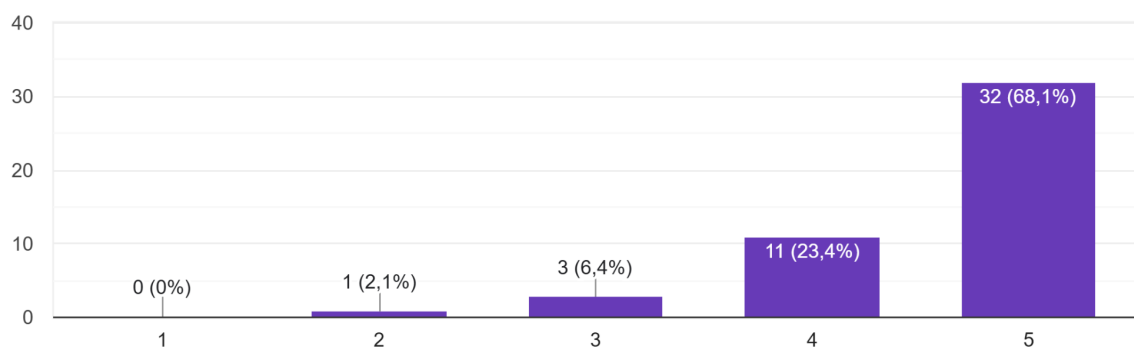


Table 01. Responses to the open-ended question “If you could list the main lesson learned from the field activity(ies) carried out, what would it be?” (n=47)

Response	No. of responses
The importance of protecting a certain ecosystem or the environment in general	12
Comparing theory vs. practice	8
Acquiring greater knowledge of environmental policy / environmental bureaucracies	6
Learning about local populations and territories	6
Learning about certain environmental problems and impacts	5
Learning about the challenges of implementing (environmental) public policies	3
The interdependence between human beings, society, territories and nature	3
Greater contact with nature	3
Talking to public/environmental managers	2
Power and interest dynamics between different actors	2
How to keep students engaged	1
A class in an unusual setting	1
Information exchange	1
Seeing the difference between informal and formal institutions	1
Group work	1
Observation and analytical abilities and methods	1
Meeting fellow students in person (online course)	1
I don't remember	1

Figure 09. Responses to the question, “In your opinion, would your learning about environmental policy have been the same without the field activities?” (n=47)

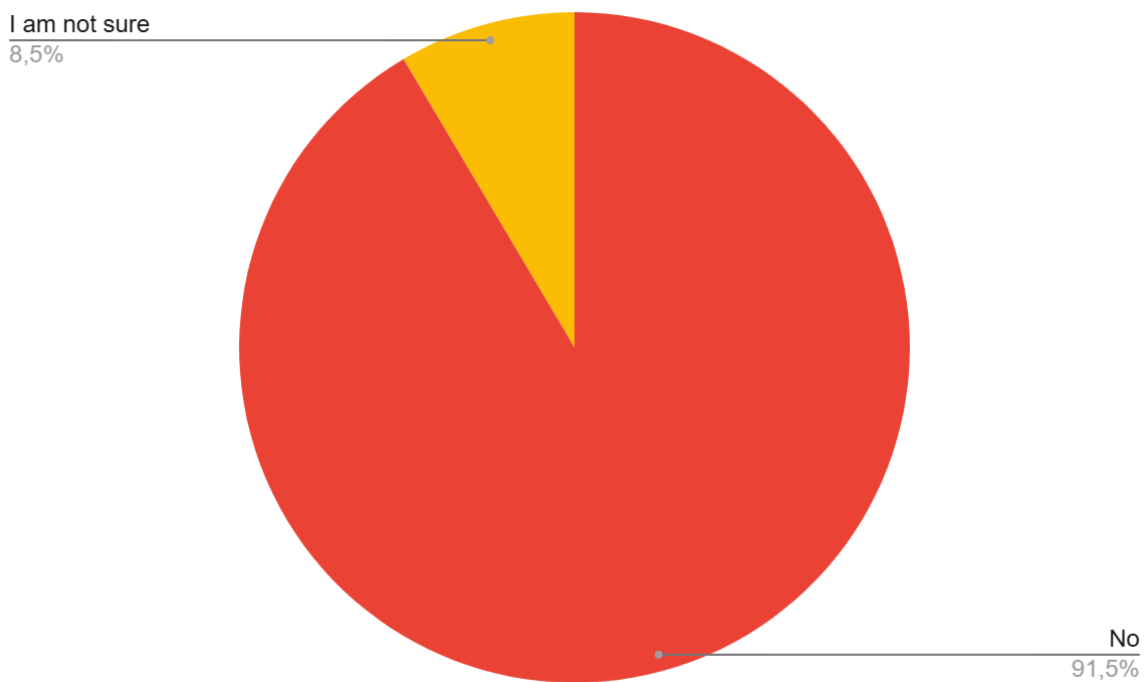


Figure 10. Responses to the question: “Has participating in the field activity(ies) influenced, in any manner, the way you act in the world today?” (n=47)

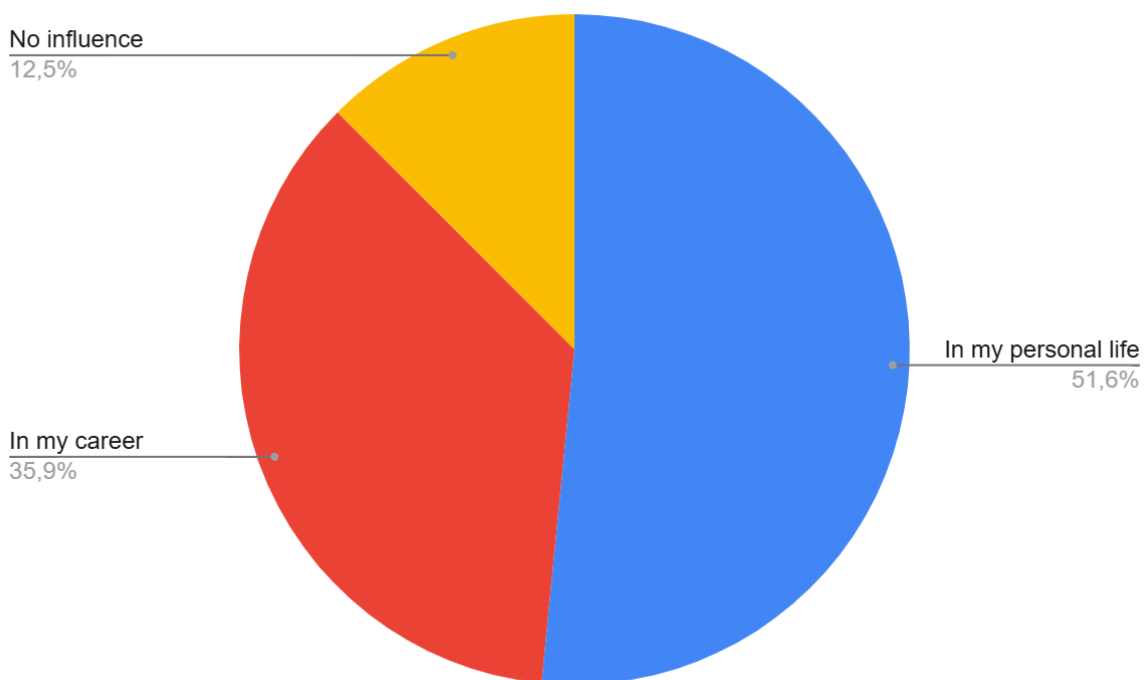


Table 02. Justifications to the “Has participating in the field activity(ies) influenced, in any manner, the way you act in the world today?” (open ended response - 35 respondents)

Justification	No. of respondents
Enhanced environmental awareness / changes in perception	19
It caused changes in habits	5
It made me see I can make a difference in the world and that there are others like myself	3
I learned new research methods	2
It made me more certain of my research interests	1
It directed my future academic interests	1
I acquired more knowledge of environmental issues and their links to society and policy	1
I acquired a sense of community with fellow classmates	1
I learned new teaching techniques	1
I enjoyed having practical experience	1
I acquired more knowledge on the dynamics between different actors	1
It consolidated classroom information	1
It helped me get an internship	1
I did not like the methods used	1

Conclusions

Teaching politics and international relations can be challenging, especially in the Global South, where most students lack the financial resources to travel and experience different realities. Oftentimes students will report they had never been to a forest, for instance, or that they had grown in the city with little contact with other environments. Therefore, field classes might be key to promote such experiences and to support effective learning, especially in environmental policy.

Despite several challenges involving planning, transportation, financing, logistics and execution of field classes, our results corroborate that - in 12 years

promoting field classes in different settings - students seem to have a positive and lasting experience. Engagement with the subject (i.e., environmental policy) also seemed to improve with such classes. Our survey also points to the fact that, beyond learning class content, field classes may promote personal (and interpersonal) experiences that impact collective and individual practices. Although we also understand how challenging it can be for professors to organize field classes, we believe there are many opportunities to be explored that are worth the trouble.

Appendix. Detailed information on field trips (2012-2024)

Date	Course or equivalent	Level	Program/ students	Site	Number of students matriculated
2012	Special Topics in Political Science: Introduction to Environmental Policy	Undergraduate	Licentiate in Social Sciences	Sítio Nova Canaã (agroecological farm)	19
2014	Contemporary International Policy: the Environment and International Relations	Graduate (masters' and PhD)	Graduate Program in Political Science	Aterro Sanitário Público e Consorciado do COMSUL (landfill) / REBIO Saltinho (reserve) / APA de Guadalupe (reserve) / CEPENE (marine research center)	8
2015	Comparative International Policy: the Environment and International Relations	Graduate (masters' and PhD)	Graduate Program in Political Science	Consórcio Público de Municípios da Mata Sul Pernambucana – COMSUL (public consortium) / Aterro Sanitário Público e Consorciado do COMSUL (landfill)	5
2016	Thematic Seminar in International Relations I: International Environmental Policy	Undergraduate	Bachelor's in Political Science	SUAPE (industrial port)	23
2017	Public Policy Administration	Undergraduate	Bachelor's in Administration Sciences	APA Costa dos Corais (coastal-marine reserve)	44

2018	International Environmental Policy	Graduate (masters' and PhD)	Graduate Program in Political Science	APA Costa dos Corais (coastal-marine reserve)	17
2019	Special Topics in International Relations I: Higher Education and International Relations	Graduate (masters' and PhD)	Graduate Program in Political Science	APA Costa dos Corais (coastal-marine reserve) / REBIO Saltinho (Atlantic forest reserve)	24
2019	Special Topics in Public Policy: education policy and environmental policy	Graduate (masters')	Professional Masters' Program in Public Policy	APA Costa dos Corais (coastal-marine reserve)	35
2019	International Environmental Policy	Undergraduate	Bachelor's in Political Science	APA Costa dos Corais (coastal-marine reserve) / REBIO Saltinho (Atlantic forest reserve)	16
2019	Public Policy	Graduate (PhD)	Graduate Program in Political Science	Parque Estadual da Mata da Pimenteira (caatinga reserve)	10
2022	Thematic Seminar III: higher education and international relations	Graduate (masters' and PhD)	Graduate Program in Political Science	APA Costa dos Corais (coastal-marine reserve)	8
2021	International Environmental Policy	Undergraduate	Bachelor's in Political Science	SUAPE (industrial port) / Estação Ecológica Bitá e Utinga (Atlantic forest reserve)	10
2022	Special Topics in Public Policy: education policy and environmental policy	Graduate (masters')	Professional Masters' Program in Public Policy	SUAPE (industrial port) / Estação Ecológica Bitá e Utinga (Atlantic forest reserve)	33
2022	MAPORI Research Group	Graduate (masters' and PhD) and undergraduate	Mixed	Projeto Coral Eu Cuido (marine conservation project) / Aquário Paraíba (aquarium)	5
2023	Introduction to	Undergraduate	Bachelor's in	City of Paudalho -	17

	Environmental Policy		Political Science	bodies of water and socioeconomic issues / APA Aldeia-Beberibe (Atlantic forest reserve)	
2024	MAPORI Research Group	Undergraduate	Bachelor's in Political Science	Resex Flona, Cabedelo-PB (restinga reserve)	4
2024	State and society in Brazil: the environment in the state and the state in the environment	Graduate (professional masters) and undergraduate	Professional Masters' Program in Public Policy / Bachelor's in Political Science	APA Costa dos Corais (coastal-marine reserve)	35
2024	International environmental policy	Undergraduate	Bachelor's in Political Science	APA Costa dos Corais (coastal-marine reserve)	5
2024	Public policy analysis	Graduate	Professional masters	Tapajos river / Mekedecé woods (Amazon forest reserve)	36
2024	MAPORI Research Group	Undergraduate	Bachelor's in Political Science	ESEC Caetés (Atlantic forest reserve)	5
All years	Undergraduate and graduate teaching assistants, interns, research assistants, etc.	Graduate & undergraduate	Mixed	All areas	40

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