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SPES Focus – Work Packages 8-9 “Place Matters”: Environmental awareness and public support to transition policies in Latin America

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Disclaimer

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Abstract

Despite growing evidence that territorial divides shape support for climate policies, little is known about how these dynamics operate in Latin America. This paper tests two core hypotheses: whether residents of non-metropolitan areas exhibit stronger awareness of environmental risks due to greater exposure to localized hazards, and whether support for climate and transition policies is lower in peripheral regions than in metropolitan areas, as apparent in Europe. Our empirical approach is sequential. We first use LAPOP microdata from 16 Latin American countries over the period 2014–2023 to estimate the effect of place of residence on environmental perceptions and policy preferences. Then we mobilize 88 qualitative interviews conducted in peripheral territories in Argentina, Chile, Colombia, and Mexico to shed light on the mechanisms underlying spatial heterogeneity beyond simple urban-rural divides. Quantitative results show that geographical characteristics trump socioeconomic factors in explaining environmental preferences and perceptions, while challenging the expectation of systematically lower support for transition policies in peripheral regions. Although awareness of climate risks is widespread across territories, policy preferences vary sharply by place of residence with peripheral areas' respondents being more supportive of transition policies than metropolitan ones. Qualitative evidence suggests that stronger support for prioritizing environmental protection in peripheral areas is rooted in localized experiences of environmental degradation and perceived policy inaction, which are less salient in metropolitan contexts. These findings underscore the importance of accounting for spatial heterogeneity when designing climate and environmental transition policies.

1. Introduction

Climate change constitutes a quintessential collective action problem (Ostrom, 2010). Transition policies such as carbon taxes or investments in renewable energy infrastructure are frequently perceived as imposing concentrated costs on specific communities while generating diffuse societal benefits. As Olson (1974) emphasized, such perceptions can undermine the broad support and compliance required for these policies to be effective. A growing literature indeed shows that opposition to environmental and climate policies is strongly associated with perceptions of unfair cost distribution across individuals and groups (Franzen and Meyer, 2010; Carattini et al., 2019; Douenne and Fabre, 2020; Bergquist et al., 2022). The recent literature has also evidenced that these perceptions are deeply embedded in territorial divides (Arndt et al., 2023; Rodríguez-Pose and Bartalucci, 2024), and the spatial disconnect between policy costs and benefits lies at the core of contemporary political conflicts over environmental governance across world regions (Peng et al., 2021; Dechezleprêtre et al., 2025).

In Europe, territorial divides strongly shape environmental attitudes, with rural and peripheral regions increasingly resisting transition policies framed as “urban elite-driven” (Mildenberger and Leiserowitz, 2017; Rodríguez-Pose et al., 2023). Triggered by a fuel tax increase, the 2018 Yellow Vest protests in France exemplify how spatially uneven policy costs can spark mass mobilization in territories where populations have limited decarbonized alternatives for daily mobility (Douenne and Fabre, 2022). Similar dynamics are observed in Latin America, where rural and peripheral regions often resist environmental regulations and conservation policies perceived as imposed by urban or international elites (Martinez-Alier, 2002; Hochstetler and Keck, 2007). Mobilizations against fuel price increases and extractive or environmental regulations – such as the gasolinazo protests in Mexico in 2017 or opposition to mining and conservation projects in Peru and Ecuador – illustrate how spatially uneven policy costs can generate resistance in contexts where livelihoods and mobility options are tightly constrained (Tarrow, 2012; Bebbington et al., 2018).

These patterns point to an apparent paradox in contemporary climate politics: territories that are highly exposed to climate risks do not systematically exhibit stronger support for policies aimed at mitigating them. Despite facing heightened vulnerability to climate change, peripheral, resource-dependent, and economically precarious regions often display comparatively lower support for transition policies. This paper examines whether this paradox reflects isolated cases or a broader and systematic relationship. Specifically, we analyze whether and how place of residence, that is metropolitan and non-metropolitan peripheral areas, is associated with differences in environmental risk perceptions and support for climate and transition policies across Latin America.

Systematic evidence on how territorial exposure to climate risks and spatially uneven policy costs jointly shape environmental perceptions remains scarce in much of the Global South. Compared to Europe or North America, the literature on the spatial fragmentation of environmental perceptions in Latin America is limited and has focused primarily on socioeconomic or ideological determinants such as income, education, values, or political affiliation, often disregarding geographical or spatial characteristics (Corral-Verdugo et al., 2013; Spektor et al., 2023; Fasolin et al., 2025). This omission is striking given the region’s pronounced center–periphery divides, which structure access to public services, infrastructure, and political representation (Carrère, 2025; Gómez-Lobo and Oviedo, 2025).

Building on this gap, the paper tests two core hypotheses. First, we examine whether residents of non-metropolitan areas – defined as rural areas and small and medium-sized cities – exhibit stronger awareness of environmental risks due to their specific exposure to localized hazards such as floods or water pollution. Second, we assess whether support for climate and transition policies is lower in peripheral regions than in metropolitan areas, as observed in Europe, where inhabitants

often perceive these policies as imposing disproportionate costs without commensurate benefits (Arndt et al., 2023).

Methodologically, the paper adopts a mixed-methods approach. Quantitatively, we use pooled microdata from the Latin American Public Opinion Project (LAPOP) covering 16 countries over the period 2014-2023 to estimate the effect of place of residence on environmental perceptions and policy preferences, holding constant standard socioeconomic and local development characteristics. Our outcomes include perceived vulnerability to climate hazards, perceptions of the costs of climatic inaction, and preferences regarding the trade-off between environmental protection and economic growth. Qualitatively, we complement these results with 88 interviews conducted in 2024 in peripheral territories of Argentina, Chile, Colombia, and Mexico, which allow us to delve deeper into perceptions and further explore how localized experiences shape policy acceptability. Together, these methods allow us to move beyond simplistic urban–rural dichotomies and identify the mechanisms underlying spatial heterogeneity in environmental attitudes.

The paper contributes to the literature in different ways.

First, we provide the first continental-scale analysis of how spatial characteristics interact with socioeconomic and attitudinal factors to shape environmental perceptions in Latin America. Existing research on climate change risk perceptions focuses largely on high-income democracies, the sparse literature focused on Global South relying on single-country studies or global cross-sections (Lee et al., 2015; Thaker et al., 2020). Recent work on Latin America (Spektor et al., 2023) has expanded this focus using original survey data collected in six countries, but remains limited by narrow country coverage, small samples, and the absence of spatial differentiation. More broadly, the literature continues to privilege education, income, or individual risk perception while neglecting territorial effects (Aklin et al., 2013; Fasolin et al., 2025). Related work documents regional disparities in climate perceptions in China, albeit without a clear center-periphery framework (Xia et al., 2025). By contrast, we show that territorial divides, and particularly center-periphery and metropolitan versus non-metropolitan locations, in Latin America matter so much that they often trump traditional socioeconomic predictors in shaping environmental attitudes and support for environmental policies in Latin America. Consistent with prior evidence that place of residence matters beyond socioeconomic characteristics (Bronfman et al., 2015; Antunes Jimenez et al., 2025), our results also indicate that political ideology and socio-demographic factors have weaker and more inconsistent associations with pro-environmental preferences, diverging from patterns observed in high-income countries.

Second, our paper connects studies of climate vulnerability and opposition to transition policies by examining their geographic interaction. While climate change is often framed as a universal threat, environmental perceptions and policy support are shaped by local experiences (Arikan et al., 2021). Different frameworks emphasize the role of exposure to environmental risks, perceived vulnerability, and informational cues in shaping environmental preferences (Brechtin & Kempton, 1994; Kahn & Kotchen, 2011). Rural areas face heightened vulnerability due to climate-sensitive livelihoods, weaker infrastructure, and lower adaptive capacity (ADB, 2020; IPCC, 2022; ECLAC, 2021). Collective mobilization often arises when policies threaten local environments, livelihoods, or identities (Martinez-Alier, 2002; Bebbington, 2007; Tarrow, 2011; Stokes, 2016). By providing new quantitative and qualitative evidence that these place-based dynamics structure environmental perceptions across 16 Latin American countries over 10 years, this paper advances the literature on contextual and vulnerability-based preference formation. Our results support this context-dependent perception hypothesis, showing that territorial characteristics fully account for variation in environmental prioritization. Moreover, our findings challenge the literature on Left-behind places in Europe (Douenne and Fabre, 2022; Arndt et al, 2023; Rodríguez-Pose and Bartalucci, 2024) by showing that in Latin America, those living in peripheral areas and feeling the most exposed to climate change risks are also the most supportive to environmental action.

Third and lastly, our specifications controlling for both local and individual wealth levels help empirically reinforcing the growing consensus that environmental concern is not a luxury preference, particularly in contexts marked by inequality and environmental exposure. By showing that territorial characteristics dominate income at both the household and city levels, while individual socioeconomic traits primarily shape the environment–economy trade-off rather than core prioritization, we provide robust evidence that environmental preferences seem to be more decoupled from affluence in Latin America than they are in Europe. This clearly challenges the central assumption of post-materialist and affluence-based framework that economic security is a necessary condition for environmental concern (Inglehart, 1977, 1995; Inglehart & Welzel, 2012), and provides support to the literature showing that individuals in lower- and middle-income countries often express strong environmental concern despite limited material security (Brechin & Kempton, 1994).

More indirectly, by highlighting the decoupling of environmental preferences from income, our analysis also complements critiques of income-centered interpretations associated with the Environmental Kuznets Curve, emphasizing the importance of spatial contexts – besides institutions, inequality, and political economy – over mere economic growth (Stern, 2004; Dasgupta et al., 2002). By demonstrating that neither household wealth nor city-level affluence independently predicts environmental prioritization once territorial factors are considered, our study provides new evidence that environmental preferences in Latin America are shaped by awareness, exposure, and local context rather than material surplus.

The remainder of the paper is structured as follows. Section 2 reviews the literature on environmental challenges in peripheral territories, the determinants of transition policy acceptability, and the political consequences of spatial inequality. Section 3 presents the data and methodology. Sections 4 and 5 report the quantitative analysis and section 6 the qualitative findings, while section 7 concludes.

2. Environmental challenges in peripheral territories: Global and Latin American perspectives

Environmental challenges in peripheral territories (small and medium-sized cities and rural areas) of the Global South are not simply attenuated versions of metropolitan problems but qualitatively distinct phenomena rooted in structural spatial inequality. While environmental degradation in large cities is often linked to industrial activity, transport emissions, and heat stress (OECD/UN-Habitat, 2022), peripheral regions face risks associated with floods, water scarcity, and agricultural pollution (Slovic et al., 2024). In addition, rapid demographic growth in small and medium-sized cities frequently outpaces the development of urban planning, infrastructure, and public services, leaving these territories ill-equipped to manage environmental risks (Véron, 2010; Adelina et al., 2020).

In Latin America as in Europe, these vulnerabilities reflect systemic patterns of spatial inequality that prioritize metropolitan regions in resource allocation and policy design (Ferré et al., 2012). Peripheral regions often lack the political influence and institutional capacity required to shape national environmental policies or secure investments in resilience, reinforcing a vicious cycle of exposure and limited adaptation (Rodríguez-Posé, 2013, 2018). As a result, populations in these areas bear a disproportionate share of the social cost of carbon (Budolfson et al., 2017; Kornek et al., 2021). Latin America exemplifies these dynamics. Nearly 40% of the region's population resides in intermediate-sized cities, which are growing faster than metropolitan areas but lack the resources to manage this expansion sustainably (IADB, 2015). Data from the United Nations Office for Disaster Risk Reduction show that cities with fewer than one million inhabitants experience the highest rates of natural disasters in several countries, including Bolivia, Mexico, Colombia, and Peru (UNISDR, 2011). These patterns underscore how spatial inequality shapes both exposure to climate hazards and adaptive capacity.

The spatial anchoring of environmental vulnerability and support to transition policies is closely linked to the center-periphery framework, recently revived in debates on left-behind territories (McLean and McMillan, 2009; Rodríguez-Pose, 2018; Rodríguez-Pose et al., 2023; McKinnon et al., 2024). Related work emphasizes how national centers use political, fiscal, and symbolic instruments to manage or marginalize subnational territories (Keating, 1998; Rodríguez-Pose, 2013; 2018), although critics stress the agency of peripheral actors (Brenner, 2004; Paasi, 2010). In Latin America, historical patterns of dependency and extractive development have reinforced these dynamics, leaving peripheral regions with limited institutional capacity to address environmental challenges (Cardoso and Faletto, 1979; Uribe-Sierra et al, 2013; Veltmeyer and Ezquerro-Cañete, 2024). At the same time, these regions are often more exposed to climate risks and more aware of environmental degradation due to their proximity to vulnerable ecosystems (Evans and Zechmeister, 2018). Evidence from Colombia, for example, shows that environmental priorities differ sharply by city size, with air pollution dominating concerns in large cities and water pollution or biodiversity loss prevailing in smaller ones (Ramirez et al., 2017).

A growing literature also demonstrates that the acceptability of transition policies varies systematically across territories, reflecting the uneven distribution of costs and benefits. In Europe, urban and service-oriented regions tend to be more receptive to green transitions, while rural and carbon-intensive areas often perceive these policies as economically burdensome (Lockwood, 2018). Empirical evidence shows that support for environmental policies is lower in peripheral and peri-urban European regions, where residents face higher energy costs and limited alternatives

(Arndt et al., 2023; Rodríguez-Pose and Bartalucci, 2024). Distributional effects of policies such as the EU Emissions Trading System have reinforced these divides (Känzig, 2023).

These spatial inequalities have significant political consequences. Opposition to transition policies fuels narratives of spatial injustice that populist actors mobilize against climate action (Buzogány and Mohamad-Klotzbach, 2021; Rodríguez-Pose et al., 2024). The Yellow Vest movement in France illustrates how perceived territorial unfairness can derail climate policies (Colomb, 2020; Martin and Islar, 2021; Douenne et al., 2022). Similar resistance to fuel subsidy reforms has been documented in Latin America, where subsidy removals in Mexico and Bolivia negatively affected presidential approval (Montes de Oca León et al., 2024; Von Uexkull et al., 2024).

At the same time, peripheral regions are not merely sites of resistance. In Latin America, environmental activism is deeply rooted in peripheral and indigenous territories, where communities mobilize against extractivism and land degradation while promoting alternative development models (Valenzuela-Fuentes et al., 2021; Munck, 2023). These movements challenge the notion that peripheral opposition to transition policies reflects environmental indifference; instead, they highlight tensions between top-down policy design and locally grounded conceptions of environmental justice (Burman, 2022).

Together, this literature suggests that environmental perceptions and policy acceptability are deeply place-based, shaped by spatial inequality, institutional capacity, and lived experience. Yet, the nature of the relation between peripherality on one side and awareness of climate risks and support to ambitious climate policies (even at the cost of economic growth) on the other side is not necessarily negative, as in Europe. This paper builds on these insights by providing systematic evidence on how these dynamics operate across Latin America.

3. Data and methodological framework

3.1. Quantitative analysis set-up

Our quantitative investigations are primarily based on Latin American Public Opinion Project (LAPOP) data for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay) over four waves (2014, 2016, 2018 and 2023). The LAPOP survey provides a national representative overview of citizens' perceptions and attitudes on a wide range of subjects such as politics, democracy, migration, or environment. Based on this data, we carry out OLS econometric estimations allowing us to assess the controlled effect of living in peripheral territories on environmental perceptions for a comprehensive sample of 57,907 Latin American respondents. Regressions are controlled for a bunch of locality-level (relative economic development), household-level (wealth, education) and individual-level characteristics (age, gender, trust, political education and political stance). As we pool observations for 16 countries and different waves, year-fixed effects as well as country – or alternatively regional – fixed effects are included in estimations. Combined fixed effects are also tested for checking robustness. Lastly and in order to delve deeper in heterogeneity and identify how geography shapes the effect of the traditional explaining factors of environmental perceptions, we also test the interactive effects of these locality-level, household-level and individual-level characteristics. Data sources and descriptive statistics are presented in Appendix Tables 1 and 3.

Equation 1 describes the model estimated:

$$Env_{i,m,j,t} = \alpha_0 + \beta_1 Periph_{m,j} + \beta_2 X_{i,m,j,t} + \beta_3 Z_{h,m,j,t} + \beta_4 W_{m,j} + u_j + v_t + \varepsilon_{i,m,j,t} \quad (1)$$

Where subscripts i stands for individuals, m for the localities, j for the country and t for the survey year. The dependent variable Env measures alternatively the perceptions on climate change, the perception of the cost of inaction and the preference as per the trade-off between the environment and growth. $Periph$ is the dummy or categorial indicator characterizing the center-periphery status of the respondent's city, the X and Z vectors respectively group individual and household-level controls and W stands for the municipality-level of relative economic development. Two fixed effects u_j and v_t standing respectively for the country- or regional-level and time-level are included in estimations.

Since we do not know the precise geographical location of LAPOP respondents for reasons of confidentiality, we approximate it with the documented information on the *municipio*, that is the smallest administrative scale, to which respondents belong identified by its main city. Even though this method does not allow us to pinpoint exactly where the respondent lives within the *municipio*, it nonetheless allows to identify conveniently the geographical context in which the respondent lives, while guaranteeing a good geographic dispersion within each country. This approach enables us to identify 1,222 *municipio*'s main cities covering a large part of the Latin American region that we then code each respondent's place of residence according to a center-periphery criterion. As central territories are defined as metropolitan areas with over 500,000 inhabitants and their immediate surrounding, all the other areas are considered periphery. We can thus construct a first binary indicator based on this center-periphery distinction.

Then, within so-defined peripheral territories, we distinguish two main groups: the secondary cities, and the small cities and villages in remote areas. This distinction allows testing the hypothesis that all peripheral countries might not shape similarly environmental perceptions and preferences. A multiple correspondence analysis is carried out in each country to help classify these territories according to several criteria: the size of the city and the estimated population, the distance to a city over 100,000 inhabitants, and the surrounding urban density (average of the distance of three

neighboring cities over 30,000 inhabitants). Besides the center-periphery categorization, we also control for the cities' relative level of economic development (hereafter CRD) based on night-time lights data from NASA/NOAA's Visible Infrared Imaging Radiometer Suite (hereafter VIIRS) over a 2000m radius (Elvidge et al., 2021). The CRD indicator is known to be a good proxy of both the economic development and the productive structures of the area (Bruederle and Hodler, 2018; Pérez-Sindín et al., 2021). Each country's distribution of the CRD indicator is then used for creating a categorical variable differentiating the 50% least bright (affluent) cities – taking the value one – from the most affluent (brightest) ones, the former serving as reference. At the household level, a last indicator was constructed based on a Multiple Correspondence Analysis of household durable goods that we consider as proxies for unobserved income.¹ The household wealth index was divided into terciles corresponding to the poorest, middle and richest groups.

As for the measurement of environmental perceptions, we select three distinct variables in the LAPOP database. The first two provide information on the perception of the severity of climate change and the costs of inaction on a 4-point Likert scale, one at national level (*"if nothing is done to reduce climate change in the future, how serious of a problem do you think it will be for your country"*) from *"no problem"* to *"serious problem"*, and the other at individual level (*"How likely do you think it is that you or someone in your immediate family here in could be killed or seriously injured in a natural disaster, in the next 25 years?"*) from *"unlikely"* to *"very likely"*. Thus, respondents to these two variables with the highest statement are assigned a value of one (otherwise zero). The third variable captures individuals' preference regarding the trade-off between economic growth and environmental preservation based on the question: *"On a 1 to 7 scale where 1 means that the environment should be the highest priority, and 7 means that the economic growth should be the highest priority, where would you place yourself?"* For the sake of easing interpretation, the scale has been inverted and dichotomized so that preference for the environment takes the highest scale level 7 and a dummy taking the value one for scores 6 and 7 (and zero otherwise). Lastly, to further account for intra-city correlation among respondents, standard errors were clustered at the city level.

3.2. Qualitative interviews

To refine the analysis and highlight the blind spots of the LAPOP survey, semi-structured interviews have been conducted among 88 residents of peripheral territories in four Latin American countries (Argentina, Chile, Colombia and Mexico) in July-August 2024. In each country, two secondary cities and their surroundings, including rural areas, have been selected: Comodoro Rivadavia and Villa Maria in Argentina; Cañete and Rancagua in Chile; Buenaventura and Santa Marta in Colombia; San Cristóbal de las Casas and Tula in Mexico. In each of the eight peripheral territories, 11 individuals were interviewed. Respondents were selected to account for the diversity in socioeconomic backgrounds and political positions.

This study is based on semi-structured qualitative field interviews in eight peripheral territories in Argentina, Chile, Colombia, and Mexico (two territories per country). More specifically, the aim was to select small and medium-sized cities and then extend the analysis to the surrounding rural areas. The selection of these cities was guided by a desire for diversification according to five main criteria:

¹ The household wealth index is constructed separately for each country and each survey wave to take into account the national context and changes in the use of goods over time. The list of durable goods is as follows: refrigerator, conventional telephone, cell phone, number of vehicles (none, one, two and more), washing machine, microwave/oven, computer, internet in the home, indoor plumbing, indoor bathroom, television (none, television, flat screen), and a motorcycle. Fewer items are available for year 2023 (refrigerator, washing machine, microwave/oven, computer, internet, indoor plumbing and television).

population size (i.e., fewer than 500,000 inhabitants), geographic location within the country, distance from a metropolis (capital or non-capital), level of development and poverty, and the structure of the local economic fabric. The territories selected in the four countries are presented respectively in the maps in Figures 1 to 4. Maps of survey areas and justification of selection are available in Appendix (Figure A2).

For each individual interviewed, two semi-structured interviews were conducted a few days apart.² The first interview aimed to reconstruct the respondents' life trajectories in terms of places of residence, education, employment, and living conditions. The second interview focused on gathering information about their perceptions, behaviors, and expectations regarding several key areas: social justice, public services, feelings of insecurity, environmental issues, and political concerns. Based on this material, we carried out a systematic analysis of the discourse, seeking to identify points of convergence and divergence, particularly in relation to the characteristics of the respondents and the territories in which they live. In this paper, we exploit the survey module on environmental perceptions and preferences.

Within each of these territories, we interviewed between 10 and 12 individuals (88 in total). Participants were selected by a survey company based on several socio-economic criteria. First, in order to ensure socio-economic heterogeneity among respondents, five occupational status profiles were defined: (i) retirees and economically inactive individuals; (ii) executives and managers in the private and public sectors; (iii) formal employees and self-employed workers in the secondary sector (construction, industry) and services; (iv) farmers (both owners and wage workers); and (v) informal workers. Second, an age criterion was also applied: only individuals aged 35 and over were selected. Finally, in order to address gender considerations, we chose to interview slightly more women than men (51 and 37, respectively).

Tables A4 to A7 in the appendix present the main socio-economic characteristics of the individuals interviewed in the four countries, respectively. As could be expected given the participant selection process, socio-economic conditions are highly heterogeneous, whether in terms of education level, type of employment, or household income per capita. By way of illustration, with regard to the latter criterion, estimated household incomes range from 200,000 to 2,000,000 pesos in Argentina, from 125,000 to 21,000,000 pesos in Chile, from 250,000 to 12,000,000 pesos in Colombia, and from 3,500 to 110,000 pesos in Mexico.³

A significant portion of the respondents have professional situations and income levels that ensure real socio-economic stability and the capacity to cope with shocks, while other respondents perceive themselves as vulnerable. These situations of vulnerability may first manifest as precarious employment statuses, particularly informal work, as illustrated by the cases of Adrian and Noelia in Argentina, Belen and Cindy in Chile, and Aurora and Veridiana in Mexico. The prevalence of informal work is even more pronounced among Colombian respondents, including Betzaida, Enrique, Liceth, Luis, and Sirlene in Buenaventura, as well as Cristian, Ketty, and Weimar in Santa Marta. Another

² In total, 88 individuals were interviewed (176 interviews in total) remotely in July and August 2024. The interviews were recorded and then transcribed. Based on these materials, we conducted a systematic discourse analysis, seeking to identify points of convergence and divergence, particularly in relation to the characteristics of the individuals interviewed and the territories.

³ For information, at the time of writing this article, 100,000 Argentine pesos were approximately equivalent to 68 US dollars, 100,000 Chilean pesos to 111 dollars, 1,000,000 Colombian pesos to 264 dollars, and 1,000 Mexican pesos to 55 dollars.

feature specific to Colombia is the large number of individuals who combine multiple professional activities.⁴

The vulnerability of certain respondents may also be linked to their family situation, as single-parent contexts are often associated with significant difficulties (e.g., Juliana in Argentina, Paz in Chile, Maritza in Colombia, Claudia in Mexico). Asset deficits are also mentioned as sources of vulnerability. For instance, not owning a car leads several respondents (exclusively women) to rely heavily on public transportation, which is often infrequent, poorly serves the territory, and whose reliability is affected by climatic shocks (e.g., Agustina and Alejandra in Argentina; Gabriela, Daniela, Gisela, and Maria Soledad in Chile; Angela and Betzaida in Colombia). Another example is that in both Colombian cities and their surroundings, nearly all respondents reported problems accessing drinking water networks and sanitation systems.

Finally, some respondents associate their vulnerability with difficulties in accessing housing. This can be illustrated by rent that is too high (e.g., Melisa in Argentina; Amparo or José in Colombia), being forced to live with family members (e.g., Adrian or Christian in Argentina; Liceth, Marisol, Sirlene, or José in Colombia; Mabel or Lucero in Mexico), being unable to access property ownership (e.g., Marcos in Argentina; Lilian, Felipe, or Gisela in Chile; Amparo or Cristian in Colombia; Armando in Mexico), or being unable to carry out desired or necessary home improvements (e.g., Alfredo, Maria, or Miguel in Chile; Carlos in Colombia; Fernando in Mexico).

⁴ For example, in Buenaventura, Luis is both a forestry worker and a coca producer; Betzaida works informally in agriculture, in an artisanal gold mine, and as a cleaner. In Santa Marta, José is a painter and a fish seller, while Maritza works in a daycare and also sells pastries.

4. Quantitative results: Aggregate analysis

4.1. Preferences upon the environment-growth trade-off

Table 1 reports estimates of the linear regression of the individuals' prioritization of environmental protection toward economic growth over their territorial characteristics and the set of socioeconomic and perception controls described above. Columns (1) and (2) integrate time and country fixed effects, while columns (3) and (4) include region effects, allowing for the consideration of finer invariant characteristics within countries.⁵

Table 1: Center-periphery and environmental priority – Linear regression

Variables	Strong priority to environmental protection			
	(1)	(2)	(3)	(4)
City characteristics				
Periphery (<i>ref: Metropolises</i>)	0.0293*** (0.0063)	-	0.0270*** (0.0076)	-
Decomposed periphery (<i>ref: Metropolises</i>)				
Secondary cities	-	0.0208** (0.0087)	-	0.0260*** (0.0097)
Small cities or villages	-	0.0334*** (0.0066)	-	0.0271*** (0.0079)
City Relative Development (2km) (<i>ref: 50% richest</i>)	0.0103* (0.0059)	0.0079 (0.0059)	0.0047 (0.0057)	0.0047 (0.0056)
Socio-economic controls				
Female	-0.0136*** (0.0045)	-0.0135*** (0.0045)	-0.0138*** (0.0045)	-0.0138*** (0.0045)
Age (ref: <30 years old)				

⁵ Other specifications not presented here include fixed effects for regions and years combined, which show very similar results. The results are equally robust when using finer fixed effects for provinces, and provinces and years combined. However, we prefer regional fixed effects because they allow for greater diversity of city types within the same territory and avoid over-specifying the model.

30-59	-0.0303***	-0.0302***	-0.0310***	-0.0310***
	(0.0052)	(0.0052)	(0.0051)	(0.0051)
+60	-0.0418***	-0.0416***	-0.0417***	-0.0417***
	(0.0082)	(0.0082)	(0.0081)	(0.0081)

Household Wealth Index (*ref: 3^d tercile*)

1 st tercile	-0.0059	-0.0041	-0.0092	-0.0091
	(0.0059)	(0.0059)	(0.0058)	(0.0058)
2 nd tercile	-0.0003	-0.0001	-0.0014	-0.0013
	(0.0049)	(0.0049)	(0.0049)	(0.0049)

Occupational status (*ref: worker*)

Unemployed	-0.0101	-0.0100	-0.0082	-0.0082
	(0.0078)	(0.0077)	(0.0078)	(0.0078)
Student	0.0288***	0.0289***	0.0271***	0.0270***
	(0.0082)	(0.0082)	(0.0081)	(0.0081)
At home	-0.0239***	-0.0240***	-0.0221***	-0.0222***
	(0.0064)	(0.0064)	(0.0065)	(0.0065)
Retired/disabled	-0.0221**	-0.0220**	-0.0218**	-0.0218**
	(0.0089)	(0.0089)	(0.0090)	(0.0090)

Education level (*ref: primary incomplete*)

Primary complete	-0.0048	-0.0046	-0.0056	-0.0056
	(0.0079)	(0.0079)	(0.0079)	(0.0079)
Secondary incomplete	0.0137*	0.0140*	0.0146*	0.0145*
	(0.0081)	(0.0081)	(0.0080)	(0.0080)
Secondary complete	0.0381***	0.0384***	0.0362***	0.0362***
	(0.0081)	(0.0081)	(0.0080)	(0.0080)
Post-secondary	0.0607***	0.0611***	0.0564***	0.0563***
	(0.0086)	(0.0086)	(0.0086)	(0.0086)

Perception and attitude controls

Inter-personal trust (<i>ref: high</i>)	-0.0391*** (0.0074)	-0.0387*** (0.0074)	-0.0394*** (0.0073)	-0.0395*** (0.0073)
Political knowledge (<i>ref: low</i>)	-0.0244*** (0.0082)	-0.0244*** (0.0082)	-0.0241*** (0.0082)	-0.0241*** (0.0082)
Political orientation (<i>ref: left</i>)				
Centre	-0.0195*** (0.0051)	-0.0195*** (0.0051)	-0.0185*** (0.0051)	-0.0185*** (0.0051)
Right	-0.0293*** (0.0060)	-0.0293*** (0.0060)	-0.0265*** (0.0060)	-0.0265*** (0.0060)
Observations	57,907	57,907	57,907	57,907
Adjusted R ²	0.045	0.045	0.049	0.049
Fixed effects	Country & Year	Country & Year	Region & Year	Region & Year
Reference group average	.39	.39	.39	.39

Source: Authors' elaboration based on the LAPOP database (2014, 2016, 2018 and 2023) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay).

Note: Reported coefficients from a linear regression. The dependent variable is a binary measure indicating that environmental protection should be strongly prioritized over economic growth. *Ref* corresponds to the omitted reference category. Reference group average is the mean value of the dependent variable for the reference group of the *Periph* variable. Values in bold correspond to coefficients significantly different from 0. Weights provided by LAPOP are used for cross-country comparisons. Clustered standard errors are in brackets (by city). *** p<0.01, ** p<0.05, * p<0.1.

We find that citizens living in areas classified as peripheral are more likely to declare stronger preferences for environmental preservation than their counterparts in metropolises, this regardless of their socioeconomic characteristics and of the level of local wealth. The probability of giving high priority to environmental protection over economic growth is nearly 3 percentage points higher for citizens in peripheral areas (column 1), that is around 8% more than for those living in metropolitan areas. When the periphery indicator is decomposed (column 2), the coefficient for citizens residing in small cities and villages is nearly two times that of secondary cities (respectively 9% and 5% more likely to prioritize the environment than in metropolitan areas). When fixed regional effects are substituted to country fixed effects (columns 3 and 4) these coefficients stay roughly the same. Importantly, control variables show the expected signs, showcasing a greater sensitivity to environmental protection among those under 30, students and individuals with higher educational attainment, as well as those who self-identify as politically left-wing.

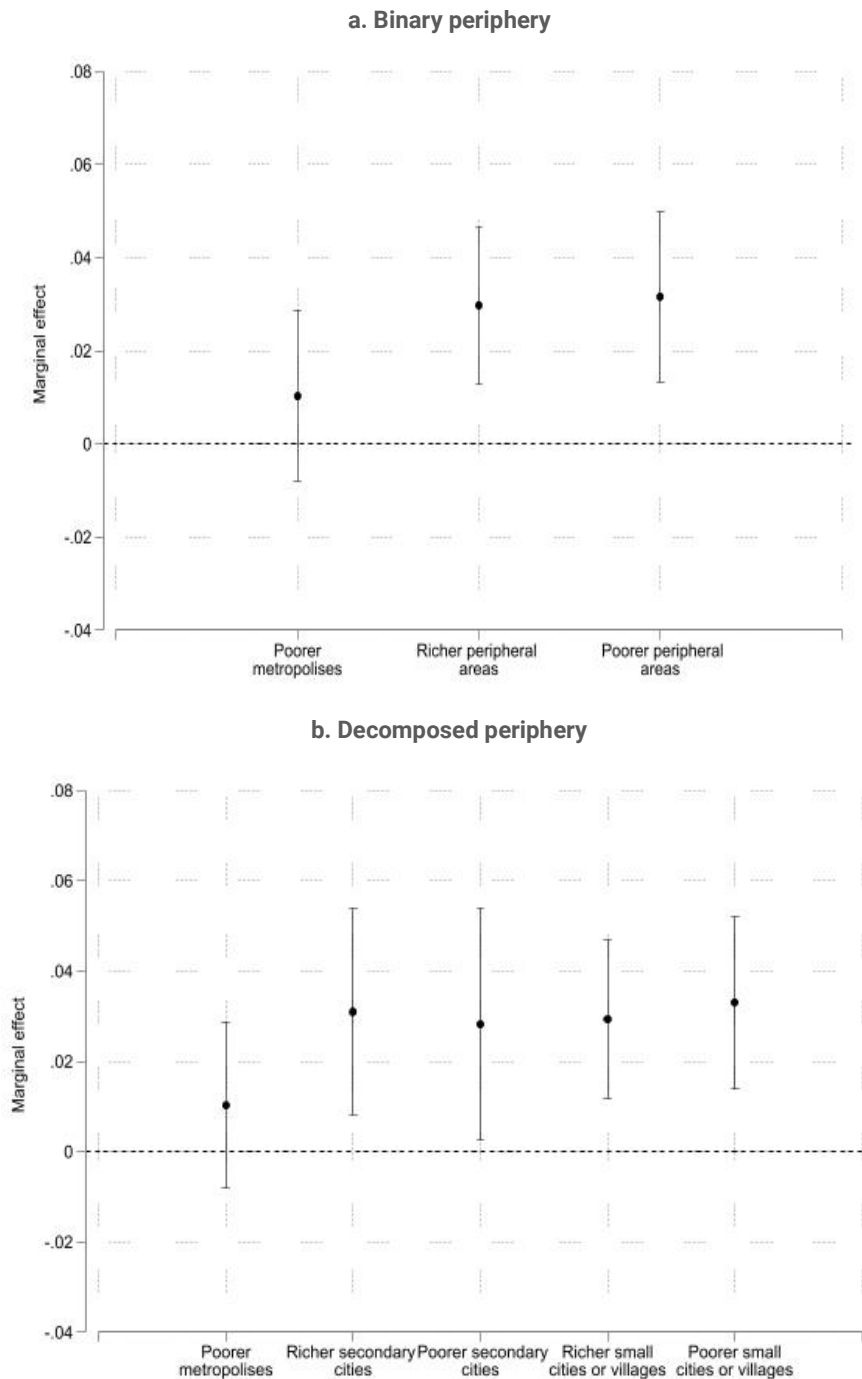
More surprisingly, we find no separate impact of the city's relative affluence or of the household wealth index on environmental prioritization. This means that in Latin America, territorial parameters

entirely trump income characteristics for explaining preferences for environmental transition. On the other hand, individual socioeconomic characteristics shape the preference over the environment-economy trade-off as expected, with the significance and magnitude of coefficients remaining remarkably stable when territorial characteristics are included. Younger, male, secondary educated and leftist respondents show 2-4 percent points higher preference for environmental action than the people from the respective reference groups (6 pp for the tertiary educated). Taken together, these findings align with critiques of post-materialist and affluence-based accounts of environmentalism (Inglehart 1977; 1981), suggesting that environmental preferences in Latin America are driven less by income or material security than by awareness and general or local concern. In the region, environmental concern therefore does not behave as a luxury good and exhibits no discernible income elasticity, echoing evidence that environmental attitudes are shaped by contextual exposure, perceived vulnerability, and normative orientations rather than strictly monetary considerations.

Although insightful, linear regressions' estimates do not inform on the cumulative role of territorial characteristics, that is whether socio-economic peripherality amplifies or compounds the way spatial peripherality shapes preferences over environmental prioritization. Figure 1 reports the marginal effects of the OLS estimation of a non-linear model including an interaction term between the center-periphery indicator and the relative level of local development as proxied by nightlights. Our estimates suggest that people located in peripheral areas are around 3 percentage points (nearly 8%) more likely to report preference for the prioritization of the environment in public policies than those living in the richest metropolises (the reference), this regardless of the level of local development of peripheral areas. There are no significant differences in the prioritization of environmental policies among citizens living in the least or most developed peripheral areas (Figure 1a), nor when they are disaggregated into secondary cities and small cities and villages (Figure 1b). Lastly, the two figures show that there is no difference of prioritization preference between poorer and richer metropolitan areas.

Disaggregating the periphery indicator by treating the subgroup of suburbs separately does not alter our conclusions, with citizens in peripheries still being more inclined to support pro-environmental policies than those in primary cities, as those in suburban areas, notably those of the richest primary cities, albeit with a lower magnitude (Figure A3 in Appendix). Our baseline findings that pro-environmental preferences are stronger in peripheral areas than in central locations (primary cities) is therefore not driven by the peripheries of these central locations.

Figure 1a-b: Priority to environmental protection - Periphery and local development



Source: Authors' elaboration based on the LAPOP database (2014, 2016, 2018 and 2023) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay).

Note: the mean value of the dependent variable for the reference group of the *Periph* dummy (= richer metropolises) is .39. Coefficients are derived from linear regressions with full controls with time and region fixed effects, adding an interaction between the periphery indicator and the relative level of development of cities. The reference category corresponds to the richer metropolitan areas. 95% confidence intervals are shown. The dependent variable is a binary measure indicating that environmental protection should be strongly prioritized over economic growth. Weights provided by LAPOP are used for cross-country comparisons. Standard errors are clustered by city.

As the baseline, three main findings emerge from these estimations. First, the main factor driving heterogeneous preferences with respect to the environment-growth trade-off in Latin America is the centre-periphery divide, the latter trumping the effect of local economic development. Second, our results point that in Latin America, geography or territorial characteristics are actually better predictors of these preferences than individual and local standard of living. This finding is novel and deserves further explanation based on more fine-grained data. The paper's last section provides qualitative insights helping to refine our understanding of these too quantitative result. Lastly, the higher preferences for more ambitious environmental protection – even at the cost of economic growth – measured for the periphery contrasts with the pattern identified in Europe where peripheral people tend to be less supportive to environmental policies than metropolitan residents. This finding also deserves further exploration by putting it into the peripheral territories context.

4.2. Perceptions of the severity of climatic inaction risks and of the likelihood to be injured due to climatic hazards

Table (2) reports estimation results for the individual perceptions of the severity of the consequences of climate change in the country if nothing is done and for the probability of being personally injured or killed due to a natural disaster. Across the board, the estimations suggest that there is no significant difference in these perceptions across the different types of territories. Socio-economic factors like educational levels and household wealth best explain the differences in opinion on the severity of climate change. Yet, some interesting patterns emerge when looking in detail the results.

First, education matters strongly in that respect, the post-secondary respondents being 13 percent points (19%) more likely than the non-educated to agree on the severe consequences of climate change if nothing is done, more than two times the level for the respondents having only completed primary. The feeling of being physically vulnerable also changes linearly with education attainments, albeit in the other direction: respondents with higher educational attainment are 9 percent points (13%) less likely to report high likelihood to be injured by natural disasters, this regardless of their localization.

Second, perceptions of the climatic crisis are equally shaped by material conditions. Poorer people (those in the first tercile of household wealth) report significantly lower (3 percent points = 4.3%) level of consciousness of the consequence of climatic inaction than the higher middle income and upper income respondents (those in the 3rd tercile) while the former are in the same time 6.6 percent points (9.5%) more likely to report high likelihood to be hit by natural disasters, regardless of their localization.

Lastly, individual political characteristics also matter. Individuals who politically self-identify as right-wing, or report lower levels of political knowledge or of inter-personal trust are associated with lower perceptions of the severity of climate change – respectively 3.3, 5.6 and 8.7 percent points (4.8, 8.1 and 12.6%) lower – than the reference groups. For those reporting lower levels of political knowledge or of inter-personal trust, lower consciousness of climate change is inversely associated with higher worry of being personally hurt by natural disasters – respectively 3.2 (4.7%) and 5.8 percent points (8.4%) lower.

Household wealth and education are thus at the same time positively correlated with the awareness of the risks of climatic inaction and inversely correlated with the perception of being personally at risk from climate disasters, irrespective of their localization. This apparent paradox can reflect two complementary mechanisms. First, it may capture the objectively higher vulnerability of poorer and

less educated citizens, who lack both the financial and informational resources needed to protect themselves from, or insure against, climate disasters and their consequences. Second, and more fundamentally, this pattern is consistent with a well-documented trade-off between economic and environmental concern (Inglehart, 1981, 1995), whereby individuals facing economic insecurity tend to prioritize immediate material needs over longer-term environmental risks (Scruggs and Benegal, 2012; Shum, 2012).

This mechanism is well captured by the “finite pool of worry” hypothesis that individuals possess limited cognitive and emotional resources and therefore hierarchize their concerns in times of crisis: when economic anxiety due for instance to unemployment or inflation rises, attention to issues such as climate change tends to recede (Weber, 2006; Sisco et al., 2023). In this perspective, our findings would suggest that a stronger perception of personal exposure to climate risks among poorer households actually crowds out concern for the aggregate and long-term consequences of climate change in the poor population. Consistently, major economic shocks such as the 2008 financial crisis or the COVID-19 pandemic have been shown to temporarily depress both environmental concern and support for climate policies (Bergquist et al., 2023; Shao, 2025), further supporting the idea that economic vulnerability reshapes the hierarchy of climate-related worries across socio-economic groups.

Table 2: Center-periphery, climate change and natural disasters – Linear regression

Variables	Severe consequences of climate change if nothing is done		Very likely to be injured/killed by natural disasters	
	(1)	(2)	(3)	(4)
City characteristics				
Periphery (<i>ref: Metropolises</i>)	0.0044 (0.0056)		-0.0002 (0.0083)	
Decomposed periphery (<i>ref: Metropolises</i>)				
Secondary cities		0.0022 (0.0070)		-0.0003 (0.0099)
Small cities or villages		0.0046 (0.0058)		-0.0029 (0.0087)
City Relative Development (<i>ref: 50% richest</i>)	0.0064 (0.0042)	0.0090** (0.0041)	0.0079 (0.0058)	0.0050 (0.0058)
Socio-economic controls				
Female	0.0304*** (0.0039)	0.0305*** (0.0039)	0.0319*** (0.0055)	0.0318*** (0.0055)
Age (<i>ref: <30 years old</i>)				
30-59	0.0435*** (0.0043)	0.0435*** (0.0043)	0.0634*** (0.0058)	0.0632*** (0.0584)
+60	0.0390*** (0.0076)	0.0390*** (0.0075)	0.0774*** (0.0104)	0.0771*** (0.0104)
Household Wealth Index (<i>ref: 3^d tercile</i>)				
1 st tercile	-0.0317*** (0.0051)	-0.0319*** (0.0051)	0.0659*** (0.0073)	0.0665*** (0.0073)
2 nd tercile	-0.0011 (0.0041)	-0.0012 (0.0041)	0.0332*** (0.0059)	0.0334*** (0.0059)

Occupational status (<i>ref: worker</i>)				
Unemployed	-0.0127**	-0.0127**	0.0007	0.0007
	(0.0057)	(0.0057)	(0.0081)	(0.0081)
Student	-0.0046	-0.0047	-0.0626***	-0.0628***
	(0.0071)	(0.0071)	(0.0089)	(0.0089)
At home	-0.0152***	-0.0154***	-0.0028	-0.0027
	(0.0050)	(0.0050)	(0.0068)	(0.0068)
Retired/disabled	-0.0040	-0.0040	-0.0171	-0.0171
	(0.0079)	(0.0079)	(0.0110)	(0.0110)
Education level (<i>ref: primary incomplete</i>)				
Primary complete	0.0557***	0.0558***	-0.0124	-0.0125
	(0.0074)	(0.0074)	(0.0102)	(0.0102)
Secondary incomplete	0.0691***	0.0692***	-0.0549***	-0.0553***
	(0.0070)	(0.0070)	(0.0097)	(0.0097)
Secondary complete	0.1051***	0.1052***	-0.0890***	-0.0884***
	(0.0074)	(0.0074)	(0.0101)	(0.0101)
Post-secondary	0.1299***	0.1301***	-0.0925***	-0.0930***
	(0.0088)	(0.0088)	(0.0115)	(0.0115)
<i>Perception and attitude controls</i>				
Inter-personal trust (<i>ref: high</i>)	-0.0870***	-0.0870***	0.0587***	0.0584***
	(0.0058)	(0.0059)	(0.0090)	(0.0090)
Political knowledge (<i>ref: low</i>)	0.0562***	0.0561***	0.0319***	0.0319***
	(0.0043)	(0.0058)	(0.0091)	(0.0091)
Political orientation (<i>ref: left</i>)				
Center	-0.0016	-0.0016	-0.0198***	-0.0198***
	(0.0043)	(0.0043)	(0.0059)	(0.0059)
Right	-0.0336***	-0.0336***	-0.0029	-0.0029

	(0.0042)	(0.0042)	(0.0063)	(0.0063)
Observations	60,671	60,671	38,755	38,755
Adjusted R ²	0.037	0.037	0.052	0.052
Fixed effects	Region & Year	Region & Year	Region & Year	Region & Year
Reference group average	.69	.69	.69	.69

Source: Authors' elaboration based on the LAPOP database (2016, 2018 and 2023) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay). The LAPOP question about the probability of being injured/killed by natural disasters is only available for waves 2016 and 2018.

Note: Reported coefficients from a linear regression. The dependent variable is a binary measure indicating that environmental protection should be strongly prioritized over economic growth. *Ref* corresponds to the omitted reference category. Reference group average is the mean value of the dependent variable for the reference group of the *Periph* variable. Values in bold correspond to coefficients significantly different from 0. Weights provided by LAPOP are used for cross-country comparisons. Clustered standard errors are in brackets (by city). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

When disaggregating peripheries to separate out the suburbs of primary cities, we can see that respondents living of primary cities' suburbs report a stronger perception of the costs of climatic inaction than those of living in primary cities, while the people residing in the other peripheries (secondary cities and rural areas) show no difference with the latter as per this very question (Figure A4 in Appendix). Here again, the pattern is driven by the richest primary suburbs' residents. Finally, there is no difference between the different peripheries and the primary cities for the third question, that is the likelihood of being injured due to climatic hazards with all the territorial coefficients being not significant (results not reported).

All in all, our estimations showcase two apparently contradictory results. On the one hand, geographical characteristics largely explain the heterogeneity on preferences for prioritizing the environment over economic growth, leaving no space for socio-economic individual and local characteristics in the explanation. On the other hand, besides strong levels of acknowledgement of the aggregate and personal potential costs of climatic inaction,⁶ we find no strong evidence that respondents in peripheral areas consider the costs of climatic inaction differently from those in metropolitan areas, either in terms of the general impact on the country or the likelihood of being personally impacted. Socioeconomic and political characteristics better explain the individual differences in the perception of the consequences of climatic inaction and the resulting individual vulnerability to climate disasters, this irrespective of the localization. Taken together, these results point to a paradoxical configuration in which awareness of climate risks is widespread across territories, yet only residents of peripheral areas consistently prioritize environmental protection over economic growth, suggesting that climate policy design must move beyond information-based strategies and instead account for territorially differentiated preferences and trade-offs.

In the next section, several heterogeneity analyses are conducted for shedding more light on the mechanisms underlying the global correlations.

⁶ We could measure that the costs of climatic inaction are well understood and recognized by Latin American people, 75% of our sample reporting high levels of acknowledgement globally and within each territory.

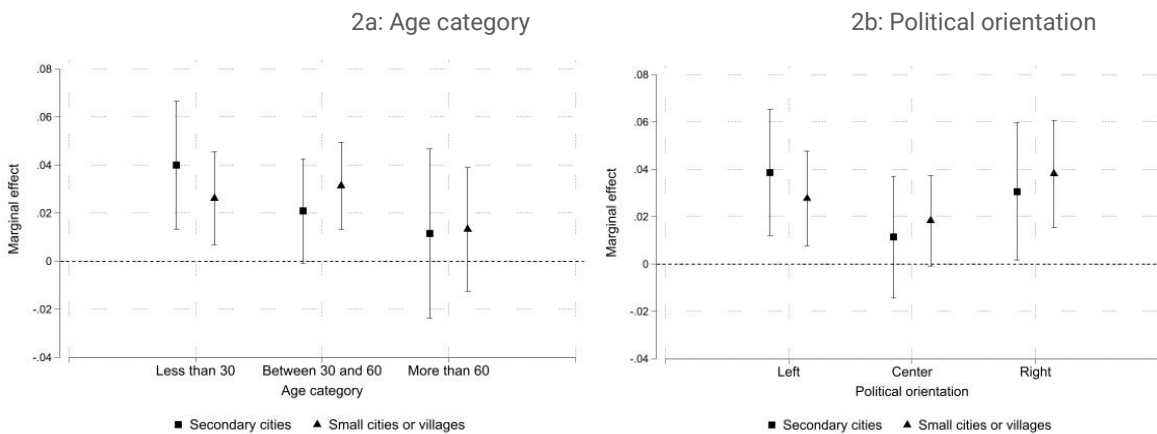
5. Heterogeneity analysis

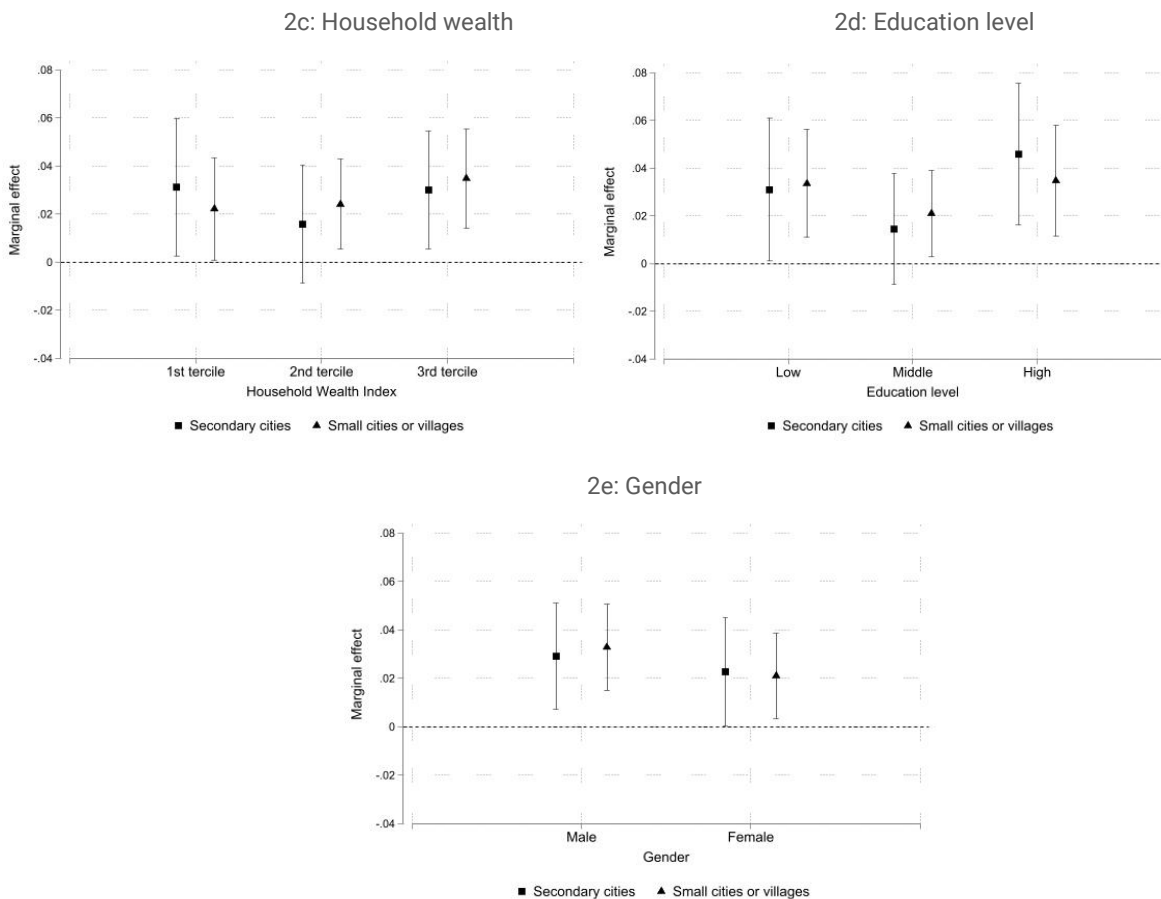
5.1. Household and individual characteristics

Digging deeper in the analysis of the way localization intersects with individual or household socio-economic and political characteristics indeed provides relevant additional insights. A set of non-linear estimations were run to assess how the effect of geography on the preference for environment prioritization is magnified or compounded by individual- or household-level factors. Results are reported graphically in figures 2 to 4 that map the margins computed from the successive estimations of Equation 1 with interactive terms between *Periph* and the binary variables for *Age*, *Political orientation*, *Household wealth* terciles, *Education level*, and *Gender*, respectively.

First, pro-environmental policies – rather than pro-economic growth policies – find larger support among younger and middle-aged citizens in peripheral areas (4 percent points more for the former) than among their counterparts in metropolitan areas (Figure 2a). Similar magnitudes and signs are found when it comes to the magnifying effect of right-wing (larger in small cities) and left-wing (larger in secondary cities) orientations, the first (larger in secondary cities) in and third terciles (larger in small cities) of household wealth and higher education level (Figure 2b to 2d). By contrast, the margins reported in Figures 2c and 2d showing no significant difference in terms of their preferences for prioritizing the environment between secondary cities and metropolitan areas, suggesting that territorial drivers operate less for the respondents with lower-to-middle middle-class attributes (intermediary education and second tercile of wealth). A nearly 2 percent points positive difference indeed remains for the middle-class residents of small cities and rural areas. Lastly, both female and male outside metropolitan areas appear more inclined to favor environmental protection (Figure 2e).

Figure 2: Priority to environmental protection over economic growth – Estimated margins of interactions between individual characteristics and the *Periph* binary



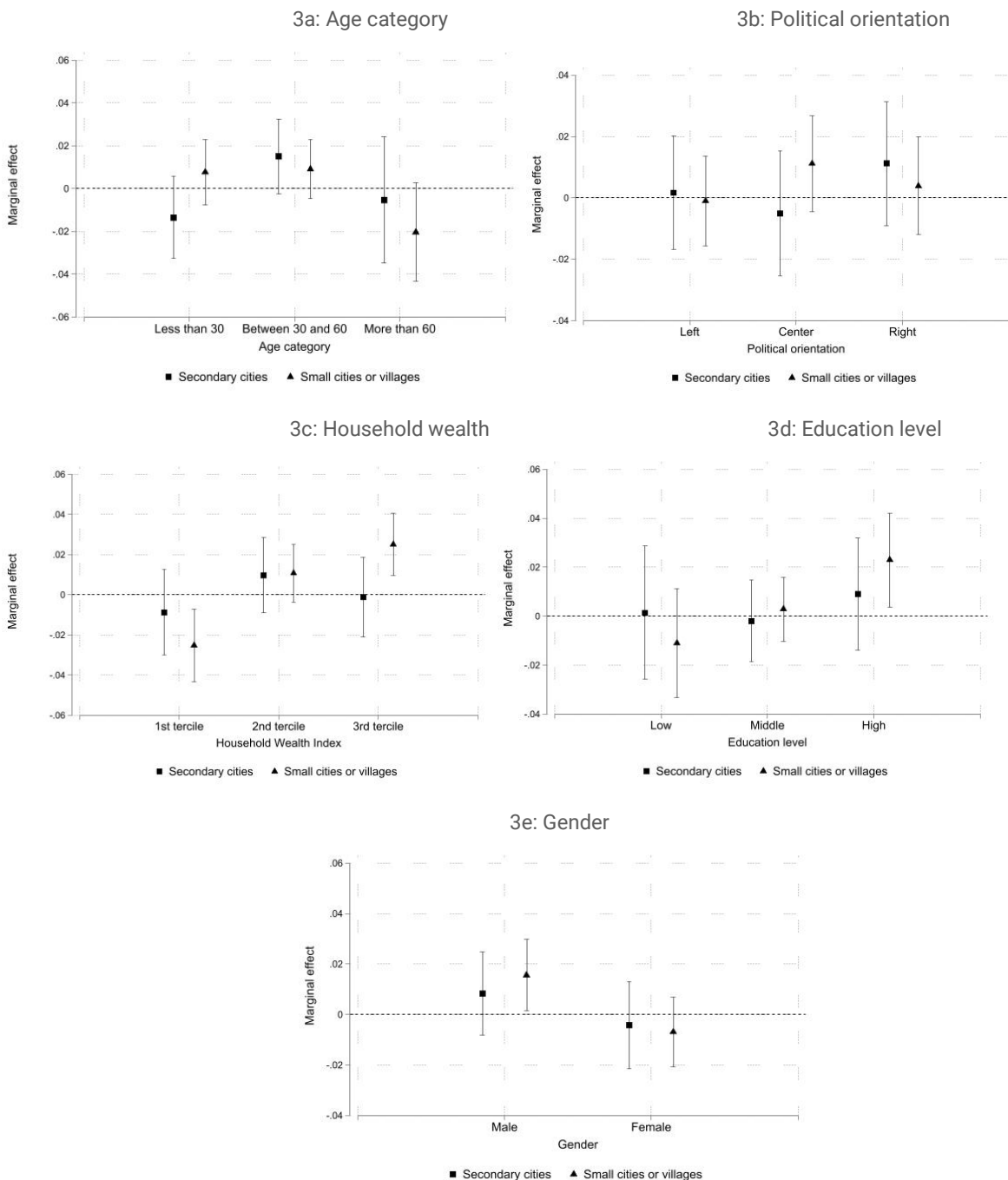


Source: Authors' elaboration based on the LAPOP database (2014, 2016, 2018 and 2023) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay).

Note: n = 57,907. Coefficients are derived from linear regressions with full controls with time and region fixed effects, adding an interaction between the periphery indicator and the chosen socio-economic variable. The reference category corresponds to the counterpart belonging to the same subgroup living in a metropolitan area. 95% confidence intervals are shown. The dependent variable is a binary measure indicating that environmental protection should be strongly prioritized over economic growth. Weights provided by LAPOP are used for cross-country comparisons. Standard errors are clustered by city.

When it comes to perceptions of the global and local risks of climatic inaction, Figure 3 shows that very few individual or household characteristics actually shape the territorial differences. First, Figure 3c shows that the relatively less wealthy households in small cities and villages rate slightly less (roughly 2.5 percent points less) the global risks of climatic inaction than their metropolitan areas' counterparts, the same difference (with a larger magnitude nearly 4 percent points larger than for their metropolitan counterpart) holding for the probability of being injured or harmed by natural disasters (Figure 4c). The fact that we find the opposite result for those in the top tercile and higher educated reporting greater average concern about the aggregate risks of climatic inaction in small towns and villages than their metropolitan counterparts (2 percent points greater), may reflect cross-class differences in access to information about exposure to climate risks depending on resources, occupations and climate education, and cross-territory differences in environmental consciousness.

Figure 3: Higher consciousness of the global risks of climate inaction - Estimated margins of interactions between individual characteristics and the *Periph* binary

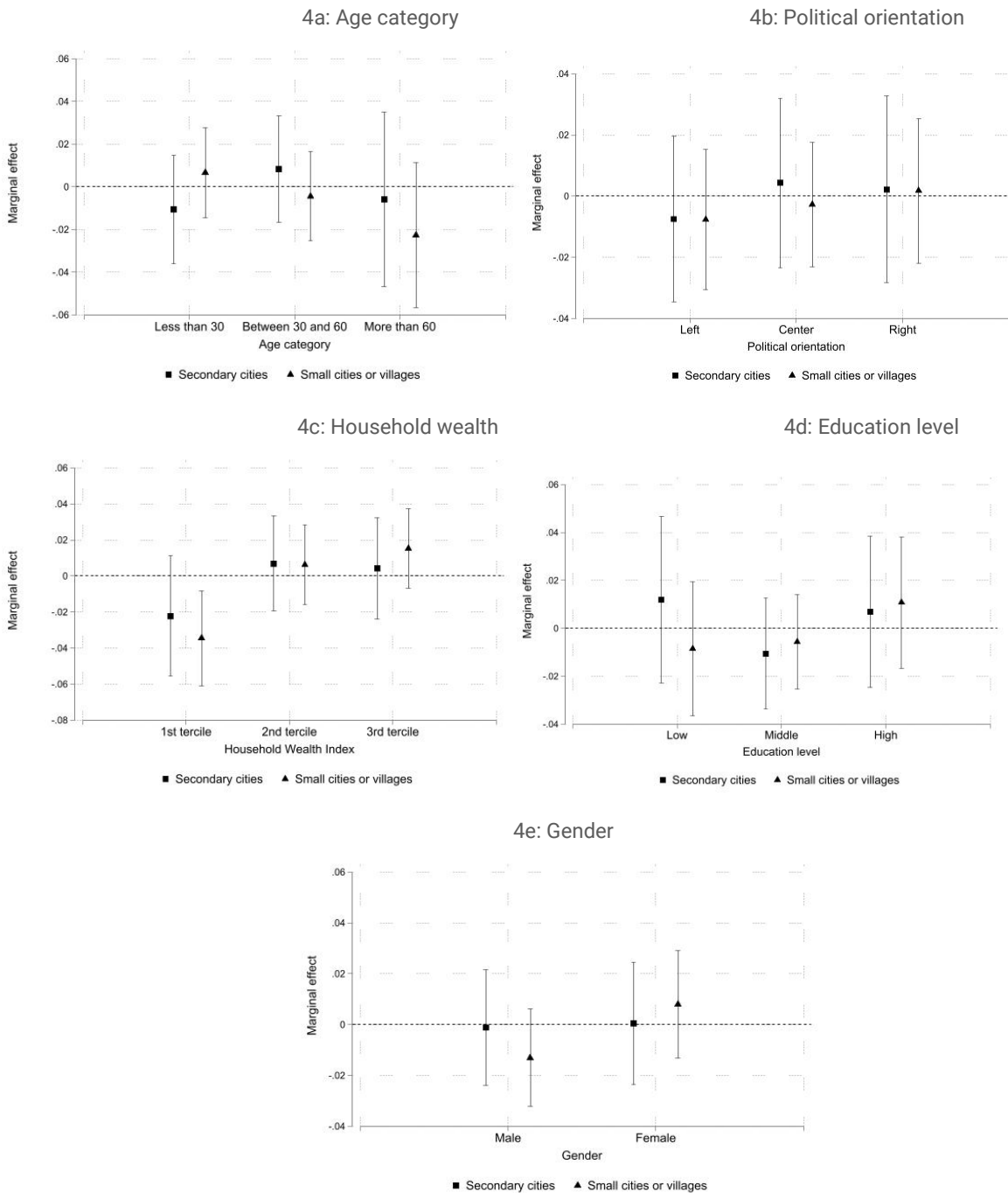


Source: Authors' elaboration based on the LAPOP database (2016, 2018 and 2023) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay).

Note: n = 60,671. Coefficients are derived from linear regressions with full controls with time and region fixed effects, adding an interaction between the periphery indicator and the chosen socio-economic variable. The reference category corresponds to the counterpart belonging to the same subgroup living in a metropolitan area. 95% confidence intervals are shown. The dependent variable is a binary measure indicating a strong consideration of the harmful effect of climate change in the country if no action is taken. Weights provided by LAPOP are used for cross-country comparisons. Standard errors are clustered by city.

Lastly, it is interesting to note that regardless of individuals' political orientation, considerations regarding the effects of global climate change are fairly consistent depending on where individuals live. However, all three political categories agree that priority should be given to pro-environmental policies rather than pro-growth policies (Figure 2b).

Figure 4: Very likely to be injured/killed due to natural disasters - Estimated margins of interactions between individual characteristics and the *Periph* binary



Source: Authors' elaboration based on the LAPOP database (2016 and 2018) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay).

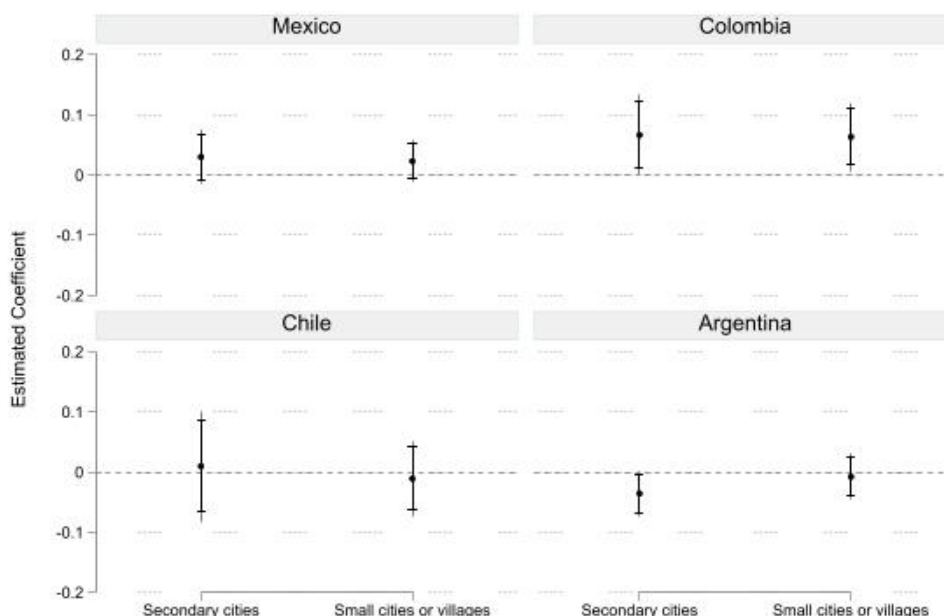
Note: n = 38,755. Coefficients are derived from linear regressions with full controls with time and region fixed effects, adding an interaction between the periphery indicator and the chosen socio-economic variable. The reference category corresponds to the counterpart belonging to the same subgroup living in a metropolitan area. 95% confidence intervals are shown. The dependent variable is a binary variable indicating a high perceived probability of being injured/killed in climate-related disasters. Weights provided by LAPOP are used for cross-country comparisons. Standard errors are clustered by city.

All in all, these intersectional analyses bring relevant additional insights to the analysis of the territorial determinants of environmental perceptions and preferences. First, the higher aggregate support to prioritizing environmental policies emphasized in the Latin American periphery in section 4 appears to be shaped by heteroclite coalitions grouping all socio-economic and political constituencies, from the least-off to the best-off, with the contribution of the lower-and-middle middle class being null in secondary cities and more modest than the other groups in small cities and rural areas. The similarity of preferences regarding environmental policy priority is a first step towards building political alliances across these categories. Yet, much remains to be done notably if we want peripheral politics to have a say in metropolitan national politics, notably in poorly decentralized polities.

5.2. Heterogeneity across the countries covered by the qualitative survey

We are now focusing on the subset of countries covered by the qualitative interviews. As the number of observations is much smaller, most of the results are not statistically significant or are only 10% significant. However, they point to the existence of significant disparities between countries.

Figure 5: Strong priority to environmental protection - Sub-sample of survey countries

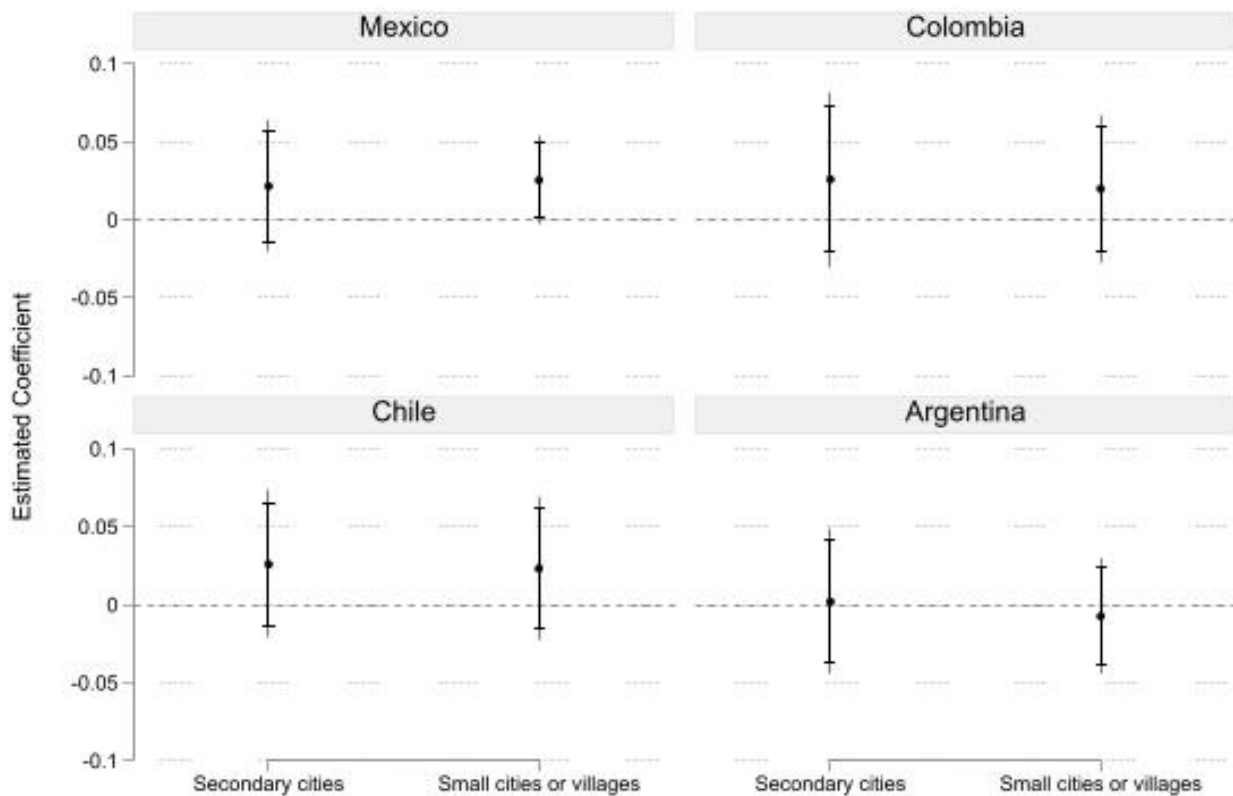


Source: Authors' elaboration based on the LAPOP database (2014, 2016, 2018 and 2023) for 4 countries (Argentina, Chile, Colombia, and Mexico). Note: $n^{MEX} = 5,338$; $n^{COL} = 2,620$; $n^{CHL} = 3,108$; $n^{ARG} = 3,626$. Coefficients are derived from linear regressions with full controls with time and region fixed effects. The reference category corresponds to citizens living in a metropolitan area. 95% confidence intervals are shown. The dependent variable is a binary measure indicating that environmental protection should be strongly prioritized over economic growth. Weights provided by LAPOP are used for cross-country comparisons. Standard errors are clustered by city.

Regarding the trade-off between environmental policies and economic growth (Figure 5), citizens in peripheral areas in Mexico and Colombia are on average more inclined to support pro-environmental

policies than those in metropolitan areas, just as for the global sample. While no conclusions can be drawn for Chile, we find an opposite result for Argentina, where support is slightly lower in secondary cities. A further breakdown separating citizens of primary cities from those of suburbs shows that it is mainly the latter who are most in favor of pro-environmental policies in Argentinean metropolitan areas.

Figure 6: Strong consideration of the effects of climate change / High consciousness of the global risks of climate inaction - Sub-sample of survey countries

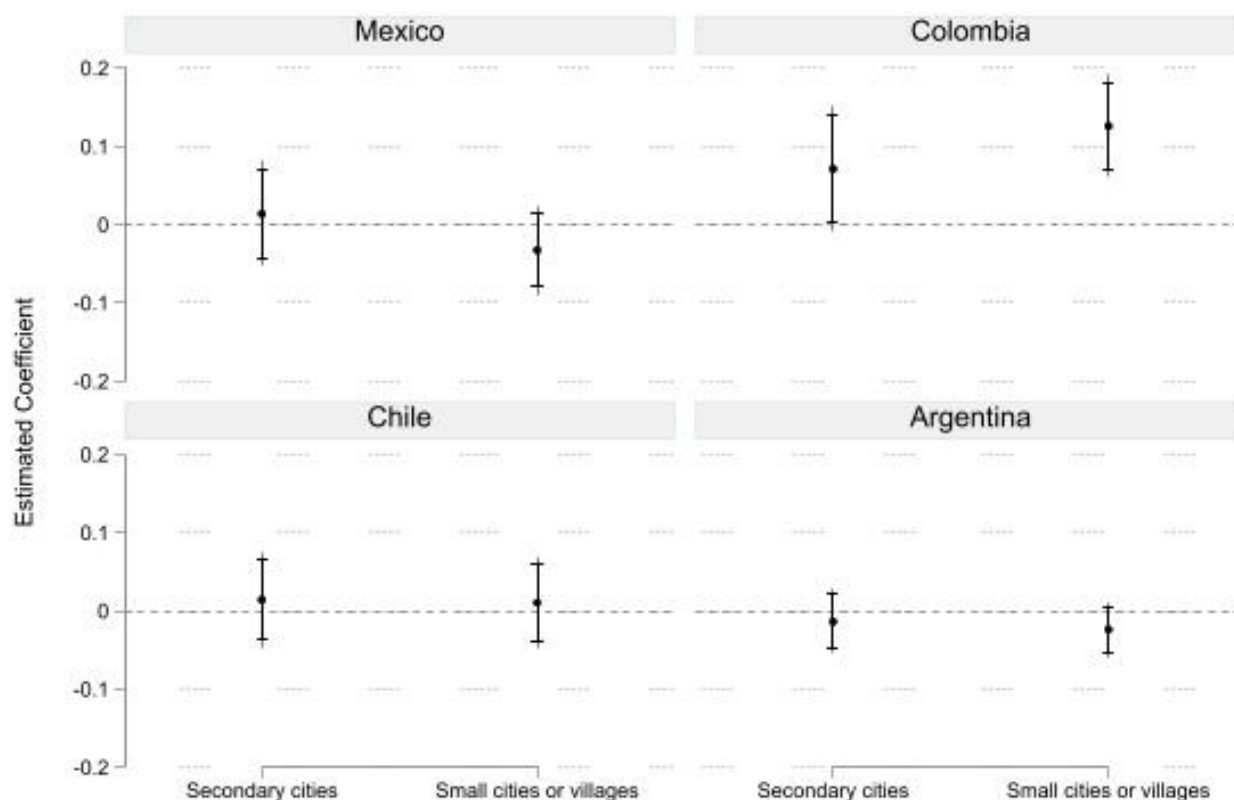


Source: Authors' elaboration based on the LAPOP database (2016, 2018 and 2023) for 4 countries (Argentina, Chile, Colombia, and Mexico).

Note: $n^{MEX} = 4,182$; $n^{COL} = 2,751$; $n^{CHL} = 3,427$; $n^{ARG} = 3,976$. Coefficients are derived from linear regressions with full controls with time and region fixed effects. The reference category corresponds to citizens living in a metropolitan area. 95% confidence intervals are shown. The dependent variable is a binary measure indicating a strong consideration of the harmful effect of climate change in the country if no action is taken. Weights provided by LAPOP are used for cross-country comparisons. Standard errors are clustered by city.

Regarding the other outcomes, citizens living in peripheral areas in Colombia, and particularly from small cities and villages, also perceive a higher probability of being harmed by natural disasters than those in large metropolitan areas (Figure 6). Yet, this result is not observed in the other three countries, where the differences between areas are not clearly apparent. Finally, we do not see any marked differences on the question related to the consequences of climate change on the country in nothing is done (Figure 7).

Figure 7: Very likely to be injured/killed due to natural disasters - Sub-sample of survey countries



Source: Authors' elaboration based on the LAPOP database (2016 and 2018) for 4 countries (Argentina, Chile, Colombia, and Mexico).

Note: $n^{MEX} = 2,628$; $n^{COL} = 1,394$; $n^{CHL} = 2,534$; $n^{ARG} = 2,587$. Coefficients are derived from linear regressions with full controls with time and region fixed effects. The reference category corresponds to citizens living in a metropolitan area. 95% confidence intervals are shown. The dependent variable is a binary variable indicating a high perceived probability of being injured/killed in climate-related disasters. Weights provided by LAPOP are used for cross-country comparisons. Standard errors are clustered by city.

Colombia stands as the country the most aligned with findings on the global sample: peripheral zones feel in the same time more vulnerable to climatic shocks and more supportive to more ambitious environmental policies.

6. Further insights from qualitative original materials

Different insights have been drawn from an original field qualitative survey conducted in four Latin American countries included in our continental sample. This survey shows that environmental concerns (trade-offs) exist but are deeply rooted in the local area and that this fact might help understand the counterintuitive larger support to transition policies in more peripheral areas. As in the qualitative study too, our qualitative survey highlights that individual parameters also play a minor role in shaping the environmental preferences in Latin America.

6.1. A real and well-articulated awareness of local environmental issues

A first insight emerging from the qualitative survey is that when asked about the major national and local problems, respondents rarely mention environmental challenges as major issues. When asked to identify the main problems at the national level, individuals almost never mention the environment and instead largely converge on issues related to the economic difficulties (inflation), social justice (poverty, inequalities), insecurity, public services (access and quality), corruption, and immigration (xenophobia).

In six of the surveyed areas (Comodoro, Villa María, Cañete, Buenaventura, Santa Marta, and San Cristóbal), the same logic seems to prevail when identifying the main problems at the territorial level, with respondents rarely mentioning environmental challenges, with only a few exceptions. The survey areas of Rancagua and Tula, however, appear to stand out from the others, with a more pronounced perception of environmental issues. Of the eleven respondents in the Rancagua area, four mention environmental issues (in a broad sense) as among the most important at the local level (Gisela, Miguel, Regina, and Ximena). The situation is even more marked in Tula de Allende, where seven of the twelve respondents spontaneously refer to environmental issues. However, only Lucero mentions the environment (i.e., water-related issues) as a national problem, while the other six respondents refer exclusively to local issues (flooding, waste management, air pollution, or water pollution).

Still, although environmental issues are rarely mentioned among the priority challenges, when individuals from the selected peripheral territories are specifically asked about their level of sensitivity to these environmental problems, almost all report being concerned (or even very concerned) about them.

The second important insight is showcased by both the quantitative and the qualitative survey and concerns the way environmental perceptions are shaped by territorial specificities. Interviews analysis highlights that, apart from waste management and climate change, respondents primarily cite issues specific their territory, related to their geographic and productive characteristics. As an illustration, in Comodoro Rivadavia and Rancagua, respondents (5 and 7 individuals) mention the pollution impacts of oil and mining activities, linked to the YPF oil operations and the presence of the El Teniente copper mine, respectively. In both territories, reference is made in particular to spills associated with these extractive activities:

Here in the region, there is a lot of pollution from extractive activities, particularly oil. Oil has generated numerous liabilities. In fact, in recent years, due to disinvestment – especially by YPF – there have been many oil spills, and I think this is not taken

seriously. (...) Everything that has happened around the spills, which were serious, has been treated very lightly. (Matias, Comodoro Rivadavia, Argentina)

It could be mining waste. The issue of residues discharged by CODELCO (...). There has already been a spill at some point, but it is very occasional. It is serious when it happens, it is serious, but it is very rare. (Miguel, Rancagua, Chile)

Nonetheless, it is important to note that extractive activities also have direct consequences on other environmental issues, as will be discussed below.

In Villa María, respondents highlight more the negative consequences of the agro-industrial model (6 occurrences). Adrian P., a farmer, expresses a strong critique of the 'soy model,' land concentration, and monoculture:

There used to be small farms, larger than mine but still small, 50 hectares, 150, and today there is nothing left. Everything is anonymous, these are crop pools, companies that we do not know. (Adrian P., Villa María, Argentina)

The agro-industrial model is criticized not only for the use of agrochemicals that pollute the air, soil, and food, but also for deforestation (3 occurrences on this issue specifically), as well as for land inequality and the political externalities it generates, as illustrated by Juliana's testimony:

The major powers hold the land, have access to the land, and do what they want, exploiting as they please. And the politicians are involved too. And the majority of citizens aren't even aware. We have no awareness. And it's the same in Córdoba, they burn the land and then do real estate deals. (Juliana, Villa María, Argentina)

After the issue of waste, water pollution is the most frequently mentioned concern among respondents (45 occurrences). It is understood in a broad sense, as respondents refer both to the scarcity of the resource and to the pollution of rivers and oceans. However, it also tends to be more prominent in certain territories, such as Cañete (5 occurrences), Buenaventura (9), Santa Marta (5), San Cristóbal (8), and Tula (8).

The territorial anchoring of water-related concerns can first be explained by the fact that respondents associate it with corporate activities, particularly extractive industries, as in Buenaventura and Tula:

And now with the mine, what happens? Well, the rivers dry up. Sometimes you pass through certain parts of Chocó and you see that they have dried up because of sand extraction. (Angela, Buenaventura, Colombia)

There is a lot of pollution; the factories here, like PEMEX, discharge a lot of waste [...] Tula is one of the most polluted places. Factories dump their waste into the river, which used to carry clean water. At night, the factories (PEMEX and others) release many chemicals into the river; it smells very bad. It causes diseases and affects all of us. (Claudia, Tula, Mexico)

In the same vein, in San Cristóbal, the issue of water scarcity (3 occurrences) is directly associated with the activity of the Coca-Cola plant, as illustrated by Teresa's testimony:

Well, here there is a company, Coca-Cola, and I have heard that people living in this area often lack water, because they use a lot of water to produce their product. (Teresa, San Cristóbal, Mexico)

Within these territories, water pollution is also seen by some respondents as a consequence of citizens' own behaviors, through the waste they throw into rivers or oceans, as highlighted in the following interview excerpts:

The problem of waste falling into the sea mainly concerns food waste from houses close to the coast. People prefer to throw waste into the sea because the collection vehicle cannot enter these neighborhoods. (Oscar, Buenaventura, Colombia)

Here, since it is a tourist area, we have lakes, beaches, and waste. Waste is a total contaminant, for the water, the sea, and the lake. Tourists leave a lot of waste, like glass, bags, anything that is trash; much of it is left there, some is buried and then covered with sand and soil, and of course, at some point, this will also cost us dearly. (Yessina, Tirúa, Chile)

Air pollution is an issue that is prominently highlighted in Rancagua and Tula. While Rancagua, like Comodoro, is a territory dominated by mining, it is air pollution that emerges most strongly from these interviews (7 occurrences), as illustrated by the following excerpt:

I used to go out for a walk for an hour, but now, with the smoke and the air quality, I prefer to stay at home. (Gisela, Rancagua, Chile)

Air pollution is perceived as both a consequence of mining activity (Ximena) and of wood heating (Miguel, Regina, Lilian). This highlights the complexity of environmental issues, which cannot be reduced to a single cause, but rather result from a combination of individual practices (such as wood heating) and structural factors imposed by local economic structures (dependence on mining activity). In Tula, air pollution is mentioned by 8 respondents and is directly associated with the activity of the refinery, as described by Lucero:

A lot of black smoke comes out [from the refinery], and all that smoke spreads throughout the region here in Tula. So it's pollution. (Lucero, Tula, Mexico)

The city of San Cristóbal is the only one where the issue of deforestation is strongly emphasized (9 occurrences). More generally, this issue is often mentioned superficially, without respondents associating it with a specific, localized cause, as illustrated by Carlos Humberto's interview excerpt:

Deforestation is very significant, and the rivers are polluted. There is a lot of deforestation, but let me tell you, fortunately, we are used to using our own resources. The wooden houses we build, we make them from the trees we cut down. But it is also concerning that many people now engage in commerce with them. (Carlos Humberto, San Cristóbal, Mexico)

Ultimately, respondents' perceptions of environmental issues are strongly rooted in local contexts. While climate change appears as a common concern across all territories, it is not consistently mentioned by respondents. In contrast, local environmental issues predominate and are perceived as closely linked to the sectoral specificities of local economic structures (mining, refineries, forestry, the agricultural model, or the presence of polluting companies). Carbon emissions and global warming are not central concerns for our respondents.

6.2. Preferences weakly connected to socio-economic and political characteristics

The environmental perceptions observed in our survey are only partially linked to respondents' socio-economic position.

It is true that the two respondents who mention no particular concern, or even show a lack of interest in environmental challenges, are characterized by a low socio-economic status (in terms of education level, employment, and/or income). These are Adrian in Argentina and Darwin in Mexico. In Colombia, Betzaida can also be cited – one of the most vulnerable respondents in the country – who, although declaring concern about environmental problems, provides very little reasoning on the subject and sometimes even expresses inconsistent statements.

Beyond these particular cases, there is no tangible evidence to conclude the existence of a clear socio-economic gradient, whether measured by education, professional status, or income. Awareness of environmental issues is observed equally among the wealthiest individuals and among those with more vulnerable profiles due to low income, unstable employment, or single-parent situations. Observing the profiles of respondents also suggests that there is no age gradient, as pro-environmental discourse is found both among the youngest and the oldest respondents, across all surveyed countries. The same applies to gender.

Ultimately, the adoption of pro-environmental attitudes appears to be relatively independent of the political orientation of the surveyed individuals. In other words, our interviews do not highlight stronger environmental sensitivity among individuals identifying as left-wing. For instance, in Argentina, respondents who voted for Javier Milei, such as Julián and Walter, declare themselves very concerned about environmental challenges, thus going against the stance of the current president. For example, Julián expressed concern about river pollution, waste problems, and flooding in Villa María. Only Irma, another Milei voter, seems less concerned and explains that there are 'not that many' environmental problems in Comodoro. However, she mentions that plastic pollution affects her.

The situation is similar in Chile. Several respondents (Maria, Daniela, Miguel, and Felipe) who voted for José Antonio Kast, the far-right candidate in the 2021 presidential election, report environmental concerns as pronounced as those of respondents who voted for Gabriel Boric, the left-wing candidate who was ultimately elected. Nevertheless, as in Argentina, there is one exception: Felipe, a Kast voter, exhibits one of the lowest levels of environmental awareness.

This carbon footprint thing doesn't really stress me anymore. If I have to buy a food product packaged in plastic, I will buy it. (Felipe, Graneros, Chile)

Without making a direct connection between his vote for Kast and his perception of environmental issues, he expresses a stance that does not consider environmental preservation a priority.

The same pattern is observed in Colombia. Carlos Alberto (Buenaventura) is clearly left-wing, having voted for Gustavo Petro in the presidential elections and for the Green Party in the most recent local elections; yet, among Colombian respondents, he is the one who elaborates least on environmental issues (even though he declares concern). Conversely, Jaime (Santa Marta), who identifies as right-wing and holds conservative values on many subjects, expresses the most well-argued environmental discourse among all Colombian respondents. His strong concern for environmental issues even leads him to support President Petro's environmental actions:

I agree with President Petro, because he has promoted an environmental approach. He talks about fossil fuels, which are now obsolete, and about alternative energy sources. There are batteries that store energy, electric cars. (Jaime, Santa Marta, Colombia)

Ultimately, the absence of a political divide regarding environmental concerns is also observed in Mexico. Based on the 2024 presidential election vote, voters for Claudia Sheinbaum or other candidates such as Xóchitl Gálvez or Jorge Álvarez Máynez all show a strong sensitivity to environmental issues. The only two individuals who do not feel concerned are a Sheinbaum voter (Luis) and a respondent with a low socio-economic status (Darwin), who never votes.

Thus, in the context of the peripheral territories studied in the four countries, political identity, in the sense of party affiliation, does not appear to be directly related to environmental perceptions.

6.3. Taking stock

The in-depth analysis of the interviews conducted among inhabitants from peripheral territories in four Latin American countries allows identifying very interesting complementary results.

First, the cities under study are shaped by their environment, with, for instance, local labor markets depending strongly on the exploitation of natural resources (primary sector, especially agriculture and extractive activities) and high exposure to natural shocks (mainly floods and storms).

Second, when asked to identify the main problems at the national level, individuals never mention the environment, instead converging primarily around issues related to the economic crisis (inflation), social justice (poverty, inequality), insecurity, public services (access and quality), and immigration (xenophobia). The same logic seems to prevail when it comes to identifying the main problems at the local level, with respondents rarely mentioning environmental challenges, except in a few isolated cases. Although the interviewees do not consider environment as a top-priority, they express significant concern about environmental challenges and often provide well-reasoned and detailed responses generally grounded in local realities. Table A8 in the Appendix presents the number of occurrences in our interviews for different types of environmental issues. The interviews reveal a wide variety of issues being addressed, reflecting the idea that each individual engages with specific environmental concerns. The most frequently cited and discussed environmental challenges are primarily local in nature, and thus directly rooted in the productive and geographical characteristics of the respondents' area of residence. Very few respondents mention global issues like emission-driven global warming as their main concern, emphasizing more on the local consequences of these trends.

Third, respondents tend to express a high level of acceptance toward making efforts in a perceived situation of shared responsibility (public authorities, companies and citizens) and some express political support for platforms with ambitious environmental objectives. Still and in line with the literature on Europe, this acceptance is often conditional on the consideration of social justice and equity issues.

Fourth, consistently with the quantitative evidence, our interviews did not reveal any clear link between individuals' socio-economic and political positions and their pro-environmental attitudes.

7. Conclusions

In this paper, we provide quantitative and qualitative evidence on the territorial heterogeneity of perceptions and preferences regarding environmental action and inaction for a large cross-section of Latin American people. Overall, our results reveal a nuanced and partly paradoxical pattern. While perceptions of climate risks and awareness of the potential costs of climatic inaction are broadly shared across territories, preferences regarding the trade-off between environmental protection and economic growth vary sharply by place of residence. Geographical characteristics emerge as the primary driver of support for prioritizing environmental protection, trumping both individual and local socioeconomic factors. In contrast, perceptions of vulnerability to climate change and assessments of the consequences of climatic inaction are better explained by socioeconomic and political characteristics, irrespective of territorial location. Taken together, these findings suggest that differences in environmental policy support across territories do not stem from unequal awareness of climate risks or unequal economic status, but rather from territorially embedded preferences over how environmental objectives should be balanced against economic considerations.

This study also contributes to the literature on carbon and environmental transition policies by challenging the common assumption that opposition to ambitious climate action in peripheral territories primarily reflects lower awareness of climate risks. Our results show that perceptions of the costs of climatic inaction are broadly shared across territories, while support for prioritizing environmental protection varies sharply by place of residence. This apparent paradox highlighted by our results, i.e. widespread awareness of climate risks combined with territorially differentiated policy preferences, highlights the importance of accounting for spatial heterogeneity when designing climate and transition policies. This dissociation between risk awareness and policy prioritization suggests that resistance to transition policies cannot be adequately addressed through information or awareness-raising alone. Instead, our findings highlight the central role of territorially embedded economic structures and perceived trade-offs in shaping support for environmental policies, underscoring the need for transition strategies that explicitly account for spatial heterogeneity in costs, benefits, and development trajectories.

Our work directly refers to the center-periphery and left-behind places literatures. While existing research often portrays peripheral and left-behind territories as systematically resistant to environmental action due to perceived economic costs or institutional neglect, our results reveal a more complex pattern in which peripheral regions, despite facing structural disadvantages, exhibit stronger support for prioritizing environmental protection over economic growth. At the same time, shared levels of climate risk awareness across metropolitan and peripheral areas suggest that territorial divergence in policy preferences does not arise from informational deficits, but from place-based trade-offs rooted in economic structure, livelihood constraints, and historical marginalization. By disentangling risk perception from policy prioritization, this study extends center-periphery frameworks beyond distributive grievances and demonstrates that left-behind places can act as normative frontrunners rather than laggards in debates over environmental transition.

Lastly, our analysis provides robust evidence that environmental preferences in Latin America are shaped more by territorial context, local exposure, and awareness than by household or city-level affluence. By decoupling environmental concern from affluence, our findings challenge post-materialist and income-driven frameworks and highlight the limitations of theories derived from high-income contexts. They underscore the need for new theoretical approaches that account for context-dependent, place-based, and vulnerability-sensitive drivers of environmental attitudes, particularly in middle-income, unequal, and environmentally exposed regions. These insights also carry clear implications for environmental policy. Interventions should be designed with local contexts in mind, targeting communities according to their exposure to environmental risks and the

specific vulnerabilities of their livelihoods, rather than relying solely on broad economic or educational indicators. Policies should also engage constituencies across socioeconomic strata, leveraging awareness, participation, and contextually relevant messaging to build support. Finally, recognizing that environmental preferences are shaped by trade-offs and local identities, governance processes should incorporate participatory mechanisms and conflict-sensitive approaches to reduce opposition and increase legitimacy.

Together, these conclusions point to both the theoretical and practical importance of moving beyond affluence-based or class-based assumptions in understanding and shaping environmental action in the Global South.

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Appendix

Figure A1: Classification of LAPOP cities in Latin America



Source: Authors' elaboration based on the LAPOP database (2014, 2016, 2018, 2023) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay).

Note: N = 1,222. Each point corresponds to the location of the main city of the *municipio* where the survey respondent lives, or the city/district of residence when the information is available. Countries in gray are not included.

Table A1: Data sources and description

Function	Database	Access	Availability	Usage
Opinion survey	Latin American Public Opinion Project	December 2023	https://www.vanderbilt.edu/lapop/	Main database
Geolocation	Open Street Map	April 2025	https://www.openstreetmap.org/	Geolocation of city centres
City characteristics	Open Street Map	April 2025	https://www.openstreetmap.org/	Information on the population and administrative role of cities
	GeoNames	May 2024	https://www.geonames.org/	
	City Population	May 2024	https://www.citypopulation.de/	
Distance	OpenRoute Service	May 2025	https://openrouteservice.org/	Distance between two coordinates using road infrastructure
Remote sensing	NASA/NOAA VIIRS V2.1	May 2024	https://developers.google.com/earth-engine/datasets/catalog/NOAA_VIIRS_DNB_ANNUAL_V21?hl=fr#bands	Annual time series (2013-2021)

Source: Authors' own elaboration.

Table A2: Distribution of LAPPOP respondents by territorial category

City category	(a) Group share of total cities (%)	(b) Share of the group's population in the total (%)
Metropolises	24.2	39.3
Primary cities	12.7	26.5
Suburbs	11.5	11.8
Periphery	75.8	60.7
Secondary cities	15.4	16.9
Small cities or villages	60.4	44.8
Observations	1,222	129,350

Source: Authors' elaboration based on the LAPPOP database (2014, 2016, 2018 and 2023) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay).

Table A3: Descriptive statistics

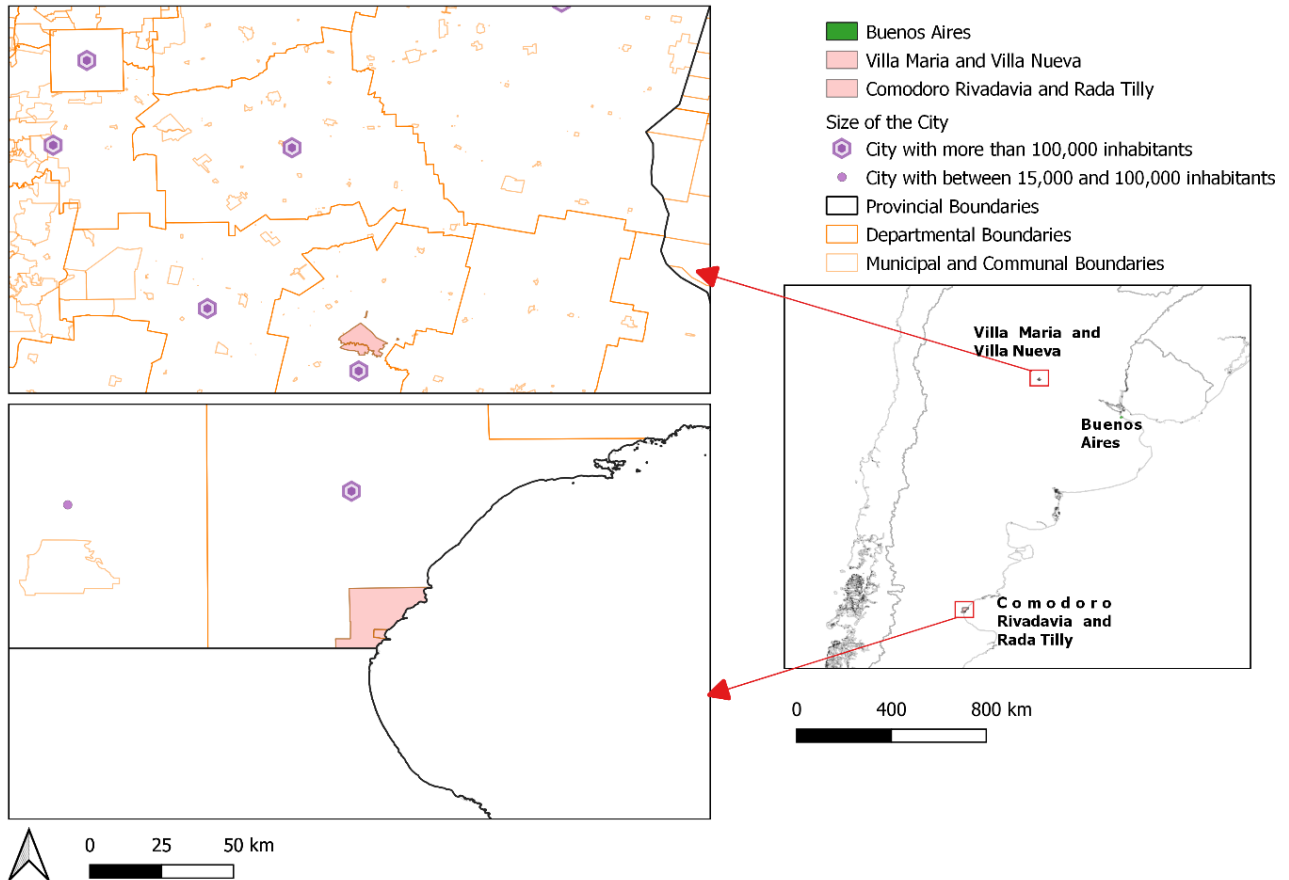
Variables	Number of observations	Proportion (%)
<i><u>Dependent variables</u></i>		
Strong priority to environmental protection over economic growth	70,001	
Yes	25,593	36.6
No	44,408	63.4
Strong consideration of the effects of climate change	16,432	
Yes	55,506	77.2
No	16,432	22.8
Very likely to be injured/killed due to natural disasters	46,658	
Yes	15,648	33.5
No	31,010	66.5
<i><u>Socio-demographic controls</u></i>		
Gender	128,974	
Female	65,644	50.9
Male	63,330	49.1
Age	129,350	
Less than 30 years old	42,359	32.8
Between 30 and less than 60 years old	67,543	52.2
60 years old and more	19,448	15.0
Education	128,161	
No education or primary incomplete	21,355	16.7
Primary complete	16,735	13.1
Secondary incomplete	29,375	22.9
Secondary complete	32,198	25.1
Post-secondary	28,498	22.2

Occupational status	127,968	
Worker	66,814	52.2
Unemployed	11,511	9.0
Student	9,802	7.7
At home	30,630	23.9
Retired/disabled	9,211	7.2
Political knowledge	123,555	
Weak - 1	14,390	11.7
2	12,641	10.2
3	19,181	15.5
4	26,834	21.7
5	24,895	20.1
6	13,666	11.1
Strong - 7	11,948	9.7
Interpersonal trust in the neighborhood	126,662	
Very trustworthy	30,067	23.7
Somewhat trustworthy	47,629	37.6
Not very trustworthy	35,957	28.4
Untrustworthy	13,009	10.3
Political orientation	108,466	
Left	36,500	33.7
Center	38,672	35.6
Right	33,294	30.7

Source: Authors' elaboration based on the LAPOP database (2014, 2016, 2018 and 2023) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay).

Figure A2: Maps and selection criteria of survey areas of the qualitative survey

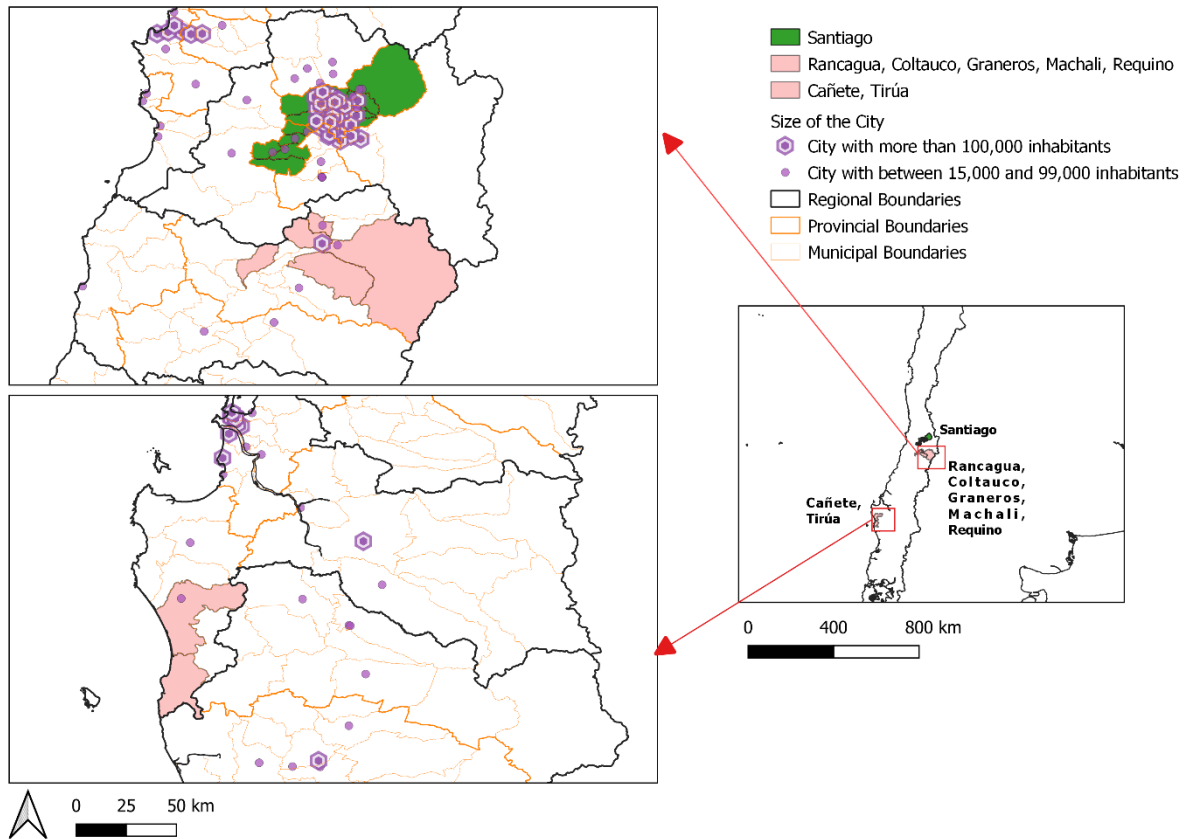
Figure A2.1: Survey areas in Argentina



Source: authors.

Notes: In Argentina, the first city selected is Comodoro Rivadavia (just over 201,000 inhabitants according to the 2022 census), located in the province of Chubut. It is the main city of southern Patagonia but, at the national scale, it remains a medium-sized city, ranking beyond the 20th position. It is an industrial and port city primarily oriented toward the oil industry, as it is located at the center of the San Jorge Gulf oil basin. Its economic development has been driven by the oil industry, notably through the state-owned company YPF (*Yacimientos Petrolíferos Fiscales*). It should be noted that the neighboring city of Rada Tilly (more than 15,000 inhabitants), located on the coast, was also selected. Although it forms a municipality in its own right, Rada Tilly is a residential and seaside town that is often perceived as an affluent neighborhood of Comodoro Rivadavia. The second city selected is Villa María (96,000 inhabitants in 2022), located in the province of Córdoba. Geographically, Villa María is situated only 125 km from Córdoba, Argentina’s second-largest metropolitan area, and functions as an agricultural center for crop production (cereals, oilseeds, fruit) and livestock farming, as well as an industrial hub, mainly for dairy industries but also for manufacturing activities. Despite its relatively small size, Villa María hosts a public university and numerous educational institutions that are particularly attractive to students from across the region. Several respondents also come from the city of Villa Nueva (26,000 inhabitants), located on the other side of the Ctlamochita River, which together with Villa María forms a small conurbation.

Figure A2.2: Survey areas in Chile

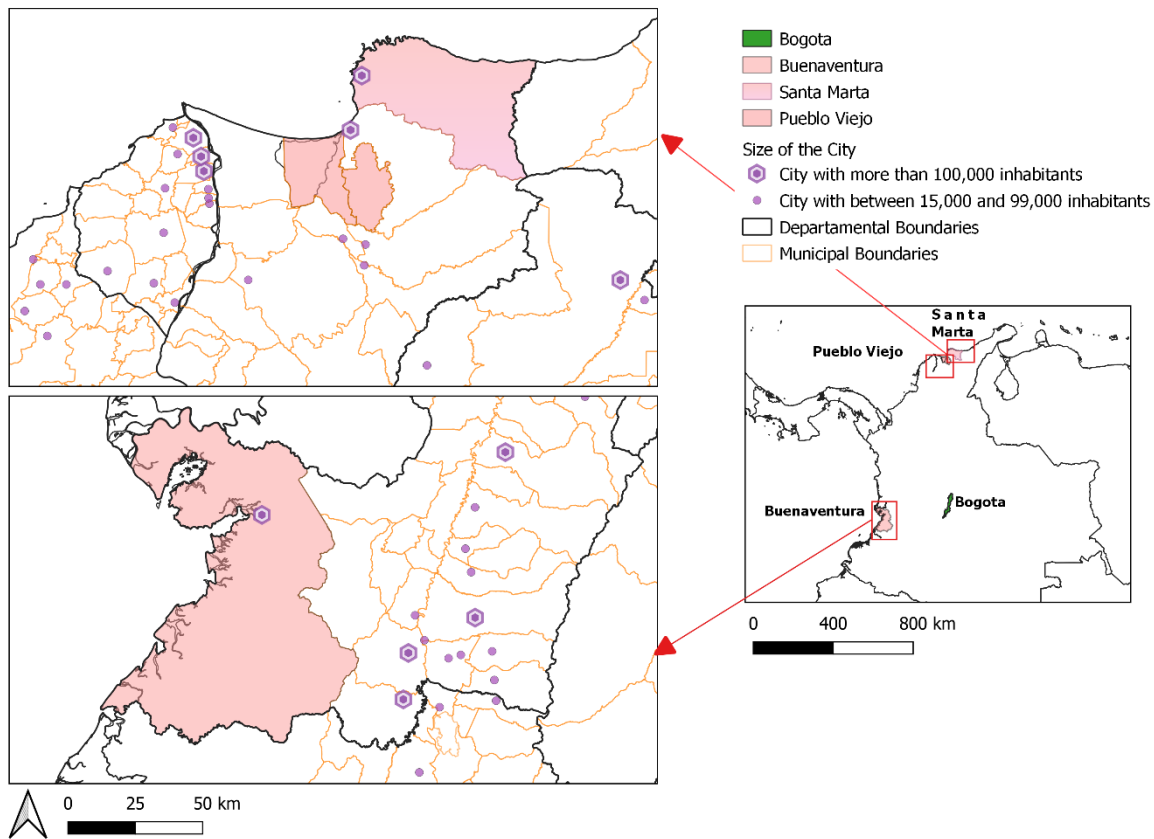


Source: authors.

Notes: In Chile, the first territory selected is the medium-sized city of Rancagua (just over 257,000 inhabitants according to the 2024 census), located in the province of Cachapoal. It is the regional capital of the O'Higgins Region and the eighth most populous urban area in Chile when including Machalí. It is located approximately 87 kilometers from Santiago de Chile, the country's capital. Despite its geographic proximity and its status as a commuter city for the capital, the territory is characterized by a local economy based on agriculture and mining, due to the nearby presence of the El Teniente copper mine, operated by CODELCO (*Corporación Nacional del Cobre*) Chile. Our sample was expanded to include individuals residing in satellite towns of Rancagua such as Graneros, Doñihue, and Machalí. Among these, Machalí is the largest city, with more than 60,000 inhabitants in 2024, and its economy is primarily extractive (copper). The second city selected is Cañete, a small city (just over 37,000 inhabitants in 2024) located in the province of Arauco. It is situated 135 kilometers from Concepción, Chile's third most populous urban area. Cañete's economy relies mainly on the forestry sector. Individuals from the city of Tirúa (approximately 11,000 inhabitants) were also interviewed. Tirúa is a relatively underdeveloped town, where local employment is largely based on subsistence agriculture. It is important to note that the Cañete–Tirúa region has been affected by a long-standing conflict between Indigenous Mapuche communities and agricultural and forestry operators, with the Mapuche claiming ancestral rights to the exploited lands.⁷

⁷ In particular, the radicalized group *Resistencia Mapuche Lafkenche* has carried out and claimed responsibility for numerous killings of agricultural or forestry operators and members of the security forces in recent years.

Figure A2.3: Survey areas In Colombia

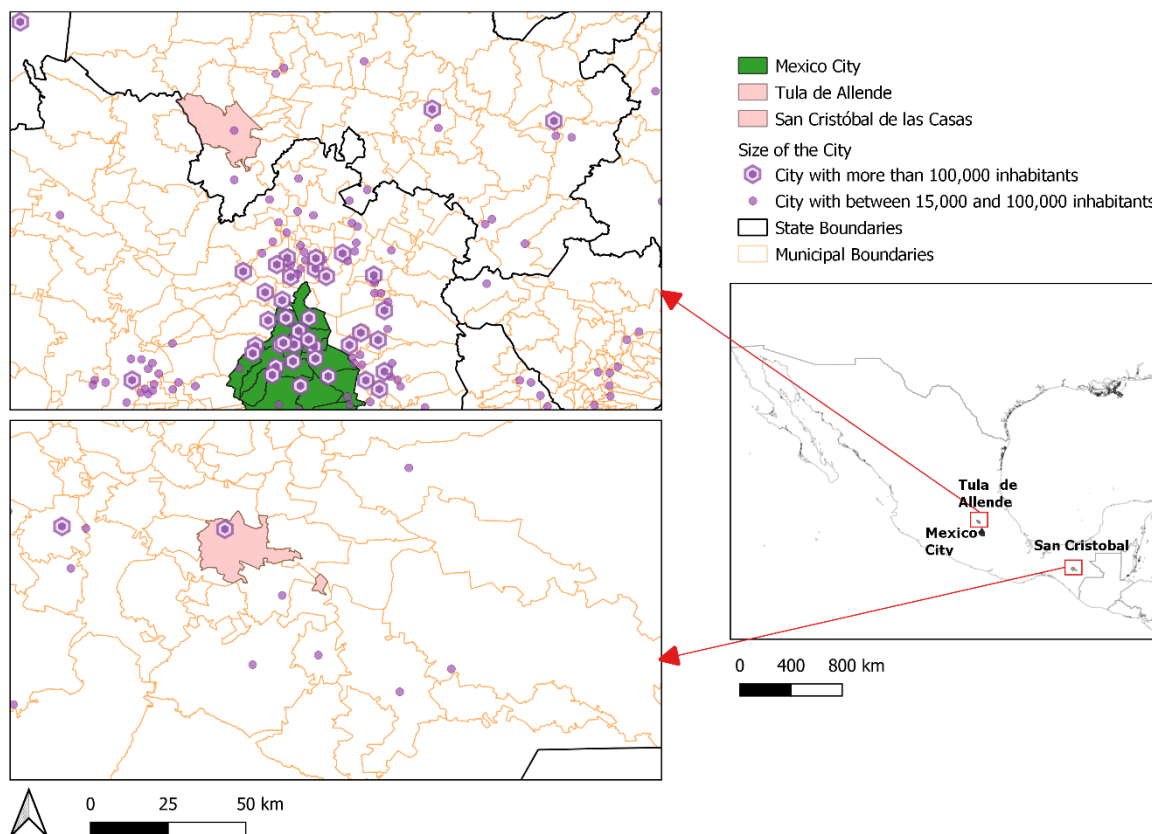


Source: authors.

Notes: In Colombia, the first city selected is Buenaventura (308,000 inhabitants according to the 2018 census), located in the department of Valle del Cauca and close to Cali, Colombia's third-largest metropolitan area (145 km by road).

Buenaventura is known as Colombia's main port on the Pacific coast and one of the ten most important ports in Latin America. Its economic activity is therefore naturally oriented toward international trade, with sugar and coffee being the main exported products. From a socio-cultural perspective, Buenaventura is characterized by the predominance of an Afro-Colombian population (98%), often living in precarious conditions, as well as by chronic insecurity issues, making it one of the most dangerous cities in Colombia. Finally, it should be noted that the areas surrounding Buenaventura are rich in natural resources, as evidenced by the presence of artisanal gold mines. Santa Marta, the second city selected in Colombia and the capital of the department of Magdalena, is the largest city included in this study, with a population of 557,000 at the municipio level in 2018. Although this population size slightly exceeds the 500,000-inhabitant threshold, Santa Marta ranks only as Colombia's tenth-largest city. It is located on the Caribbean coast and is characterized by an economy structured primarily around port and tourism activities. It should also be noted that Santa Marta is located near the banana-producing area (zona bananera). Finally, we interviewed individuals residing in Pueblo Viejo, a small town of 33,000 inhabitants (2018) near Santa Marta. Its economic fabric is structured around fishing and aquaculture, and it is characterized by significant poverty and poor living conditions.

Figure A2.4: Survey areas in Mexico



Source: authors.

Notes: The two territories studied in Mexico are the municipalities of San Cristóbal de Las Casas and Tula de Allende. San Cristóbal de Las Casas, located in the state of Chiapas, is a municipality of approximately 216,000 inhabitants according to the 2020 census. It is considered the cultural capital of Chiapas. A former provincial capital from the colonial period through the Porfiriato, San Cristóbal de Las Casas competes with the municipality of Tuxtla Gutiérrez, the current capital of Chiapas. Benefiting from one of the best-preserved colonial city centers in Mexico, its economy is primarily oriented toward tourism and artisanal activities. In the surrounding areas, however, agricultural activity predominates, mainly subsistence farming (maize, beans, vegetables, etc.), as well as coffee production. Second, the municipality of Tula de Allende (or Tula), with a population of 115,000 inhabitants in 2020, is described as a regional economic and industrial center experiencing significant economic growth. The dynamism of its economy largely relies on the activity of the Miguel Hidalgo refinery operated by PEMEX (*Petróleos Mexicanos*) and the Francisco Pérez thermal power plant (which produces 3% of Mexico’s electricity). The name Tula de Allende derives from the former Toltec capital, whose archaeological site—designated a national park in 1981—is located near the present-day city.

Table A4: Socio-economic characteristics of surveyed individuals (Argentina)

First name	Survey area	Municipality of residence	Sex	Age	Education level	Main occupation	Household size	Estimated monthly household income
Adrian P.	Villa Maria	Morrisson	M	61	Tertiary incomplete	Farmer	1	250,000 AR\$
Adrian	Villa Maria	Villa Maria	M	55	Primary incomplete	Agricultural worker	10	200,000 AR\$ ^(*)
Alejandra	Villa Maria	Villa Nueva	F	46	Tertiary incomplete	Social worker and teacher	1	500,000 AR\$
Daniel	Villa Maria	Villa Maria	M	41	Tertiary completed	Director of purchasing	5	2,400,000 AR\$
Julián	Villa Maria	Villa Nueva	M	51	Tertiary completed	Factory director and teacher	4	1,000,000 AR\$
Juliana	Villa Maria	Villa Maria	F	35	Tertiary incomplete	Self-employed (decoration store)	1	350,000 AR\$
Lucrecia	Villa Maria	Villa Maria	F	38	Tertiary completed	Secretary in a real state agency	1	300,000 AR\$
Mariano	Villa Maria	Villa Maria	M	39	Tertiary incomplete	Agricultural worker	1	1,000,000 AR\$
Melisa	Villa Maria	Villa Maria	F	40	Tertiary completed	Psychopedagogue	1	500,000 AR\$
Noelia	Villa Maria	Villa Maria	F	39	Primary completed	Inactive	7	n.a.
Susana	Villa Maria	Villa Nueva	F	65	Tertiary completed	Retired	2	2,500,000 AR\$

Agustina	Comodoro Rivadavia	Rada Tilly	F	36	Tertiary completed	Psychologist	2	1,000,000 AR\$
Ana Lia	Comodoro Rivadavia	Comodoro Rivadavia	F	72	Tertiary incomplete	Retired	2	3,500,000 AR\$
Carla	Comodoro Rivadavia	Comodoro Rivadavia	F	35	Tertiary completed	Nutritionist	3	n.a.
Cristian	Comodoro Rivadavia	Comodoro Rivadavia	M	44	Tertiary completed	Carpentry worker	5	600,000 AR\$
Gerardo	Comodoro Rivadavia	Comodoro Rivadavia	M	40	Secondary completed	Worker in the oil sector	4	4,000,000 AR\$
Guillermo	Comodoro Rivadavia	Comodoro Rivadavia	M	34	Secondary incomplete	Inactive	3	2,000,000 AR\$
Irma	Comodoro Rivadavia	Comodoro Rivadavia	F	39	Tertiary incomplete	Unemployed	5	900,000 AR\$
Lucas	Comodoro Rivadavia	Comodoro Rivadavia	M	42	Tertiary completed	Attorney general and teacher	4	7,000,000 AR\$
Marcos	Comodoro Rivadavia	Comodoro Rivadavia	M	40	Secondary completed	Technician in the oil sector	3	2,500,000 AR\$
Matias	Comodoro Rivadavia	Comodoro Rivadavia	M	35	Tertiary incomplete	Self-employed insurance advisor	4	7,000,000 AR\$
Walter	Comodoro Rivadavia	Comodoro Rivadavia	M	41	Tertiary incomplete	Technician in the oil sector	3	6,000,000 AR\$

Note: (*) For Adrian, this is his individual income. He shares a home with his children and their families and they share expenses, but we did not collect information on the household's total income; (**) For Cristian, this is his individual income. He lives with his uncle and aunt, their son and his daughter, and they share some of the expenses. Source: authors.

Table A5: Socio-economic characteristics of surveyed individuals (Chile)

First name	Survey area	Municipality of residence	Sex	Age	Education level	Main occupation	Household size	Estimated monthly household income
Alejandra	Cañete	Tirúa	F	35	Tertiary incomplete	Employee working with children with ASD	3	630,000 CLP
Belen	Cañete	Tirúa	F	35	Secondary incomplete	Informal worker (clothing sales)	4	300,000 CLP (*)
Claudio	Cañete	Tirúa	M	40	Secondary completed	Woodworker	4	500,000 CLP
Elizabeth	Cañete	Cañete	F	40	Secondary completed	Agricultural worker	2	600,000 CLP
Gabriela	Cañete	Tirúa	F	35	Tertiary completé	Nurse	4	2,400,000 CLP
Luis	Cañete	Cañete (Concepción)	M	37	Tertiary completé	Unemployed	3	1,700,000 CLP (**)
Maria	Cañete	Cañete	F	73	Secondary completed	Retired	2	214,000 CLP (***)
Miguel	Cañete	Cañete	M	41	Tertiary completé	Risk prevention engineer	4	1,300,000 CLP
Paz	Cañete	Cañete	F	40	Tertiary incomplete	Psychologist	3	2,000,000 CLP
Valeska	Cañete	Cañete	F	40	Secondary incomplete	Agricultural workers	2	400,000 CLP
Yessinia	Cañete	Tirúa	F	35	Tertiary completé	Nurse	3	1,250,000 CLP

Alfredo	Rancagua	Graneros	M	36	Secondary completed	Informal worker (construction)	4	4,000,000 (****)	CLP	
Cindy	Rancagua	Graneros	F	37	Tertiary en cours	Informal worker (clothing sales)	3	900,000	CLP	
Daniela	Rancagua	Rancagua	F	44	Tertiary completed	Director of the social workers department	4	1,450,000 (*****)	CLP	
Felipe	Rancagua	Graneros	M	41	Secondary completed	Agricultural worker	1	500,000	CLP	
Gisela	Rancagua	Rancagua	F	64	Secondary completed	Podiatrist	3	3,600,000	CLP	
Guislen	Rancagua	Graneros	M	40	Secondary completed	Agricultural worker	4	600,000	CLP	
Lilian	Rancagua	Coltauco Doñihue	/	F	43	Tertiary completed	Psychopedagogue	3	1,600,000	CLP
Maria Soledad	Rancagua	Rancagua	F	65	Secondary completed	Self-employed hairdresser	2	550,000	CLP	
Miguel	Rancagua	Machali	M	62	Tertiary completed	Director of a mining services company	3	20,000,000	CLP	
Reggina	Rancagua	Machali	F	61	Secondary completed	Retired	3	1,200,000	CLP	
Ximena	Rancagua	Machali	F	63	Secondary completed	Retired	4	700,000	CLP	

Notes : (*) For Belen, her partner's income was not taken into account because it is described as fluctuating; (**) For Luis, we deducted from his income the child support payments he reported for his children, who live in another household; (***) For Maria, her partner's income was not taken into account as he is not always present; (****) For Alfredo, there is uncertainty about his income because he only reported it in dollars and likely made a conversion error; (*****) For Daniela, her partner's income was not taken into account. Source: authors

Table A6: Socio-economic characteristics of surveyed individuals (Colombia)

First name	Area survey	Municipality residence	Sex	Age	Education level	Main occupation	Household size	Estimated monthly household income
Amin	Buenaventura	Buenaventura	M	57	Tertiary completed	Program director at a foundation	2	6,500,000 COL\$
Angela	Buenaventura	Buenaventura	F	63	Tertiary completed	Teacher (public sector)	3	9,000,000 COL\$
Betzaida	Buenaventura	Buenaventura (R)	F	68	Primary completed	Informal worker (agriculture, mining)	5	250,000 COL\$
Carlos	Buenaventura	Buenaventura	M	54	Tertiary completed	Unemployed	4	2,700,000 COL\$
Enrique	Buenaventura	Buenaventura	M	62	Primary incomplete	Informal worker (moto-taxi)	5	500,000 COL\$
Liceth	Buenaventura	Buenaventura (R)	F	35	Secondary completed	Informal worker (street food)	3	400,000 COL\$ (*)
Luis	Buenaventura	Buenaventura (R)	M	42	Tertiary incomplete	Forest operator	1	2,500,000 COL\$ (**)
Marisol	Buenaventura	Buenaventura	F	37	Tertiary completed	Teacher in an association	3	1,500,000 COL\$
Oscar	Buenaventura	Buenaventura	M	45	Tertiary completed	Sanitation coordinator at the municipality	3	400,000 COL\$
Sirlene	Buenaventura	Buenaventura	F	37	Tertiary incomplete	Self-employed cooker	11	n.a.
Yaryz	Buenaventura	Buenaventura	F	38	Tertiary completed	Employee in an association	5	450,000 COL\$

Amparo	Santa Marta	Santa Marta (R)	F	41	Tertiary completed	Unemployed	3	3,500,000 COL\$
Aurea	Santa Marta	Santa Marta (R)	F	41	Tertiary completed	Executive in a meat trading company	4	3,500,000 COL\$
Cristian	Santa Marta	Santa Marta	M	39	Secondary completed	Informal worker (construction, gardening)	4	800,000 COL\$
Jaime	Santa Marta	Santa Marta	M	53	Tertiary completed	Agricultural consultant	3	1,800,000 COL\$
Jose	Santa Marta	Santa Marta	M	35	Secondary completed	Informal worker (DIY, fish sales)	4	1,500,000 COL\$
Ketty	Santa Marta	Pueblo Viejo	F	35	Tertiary completed	Informal worker (door-to-door sale)	5	1,500,000 COL\$
Maritza	Santa Marta	Pueblo Viejo	F	53	Tertiary completed	Educator in a community daycare	2	1,400,000 COL\$
Sonia	Santa Marta	Santa Marta	F	40	Tertiary completed	Administrative director at the municipality	5	12,000,000 COL\$
Verónica	Santa Marta	Santa Marta	F	47	Tertiary completed	Teacher (public sector)	3	6,000,000 COL\$
Weimar	Santa Marta	Santa Marta	M	54	Tertiary incomplete	Taxi driver (for a company)	3	3,000,000 COL\$
Yazmin	Santa Marta	Santa Marta	F	48	Tertiary completed	School director	3	7,500,000 COL\$

Notes: (*) For Liceth, her estimated monthly income is 400,000 COL\$, but she receives support from her sister (who has an income of 1,200,000 COL\$) and shares some of the expenditures with her; (**) Luis has very fluctuating income, depending on the seasons. It ranges between 2,000,000 and 3,000,000 COL\$ per month. He lives alone during the week but hosts one of his daughters and one of his granddaughters on weekends. He also has a partner. Source: authors.

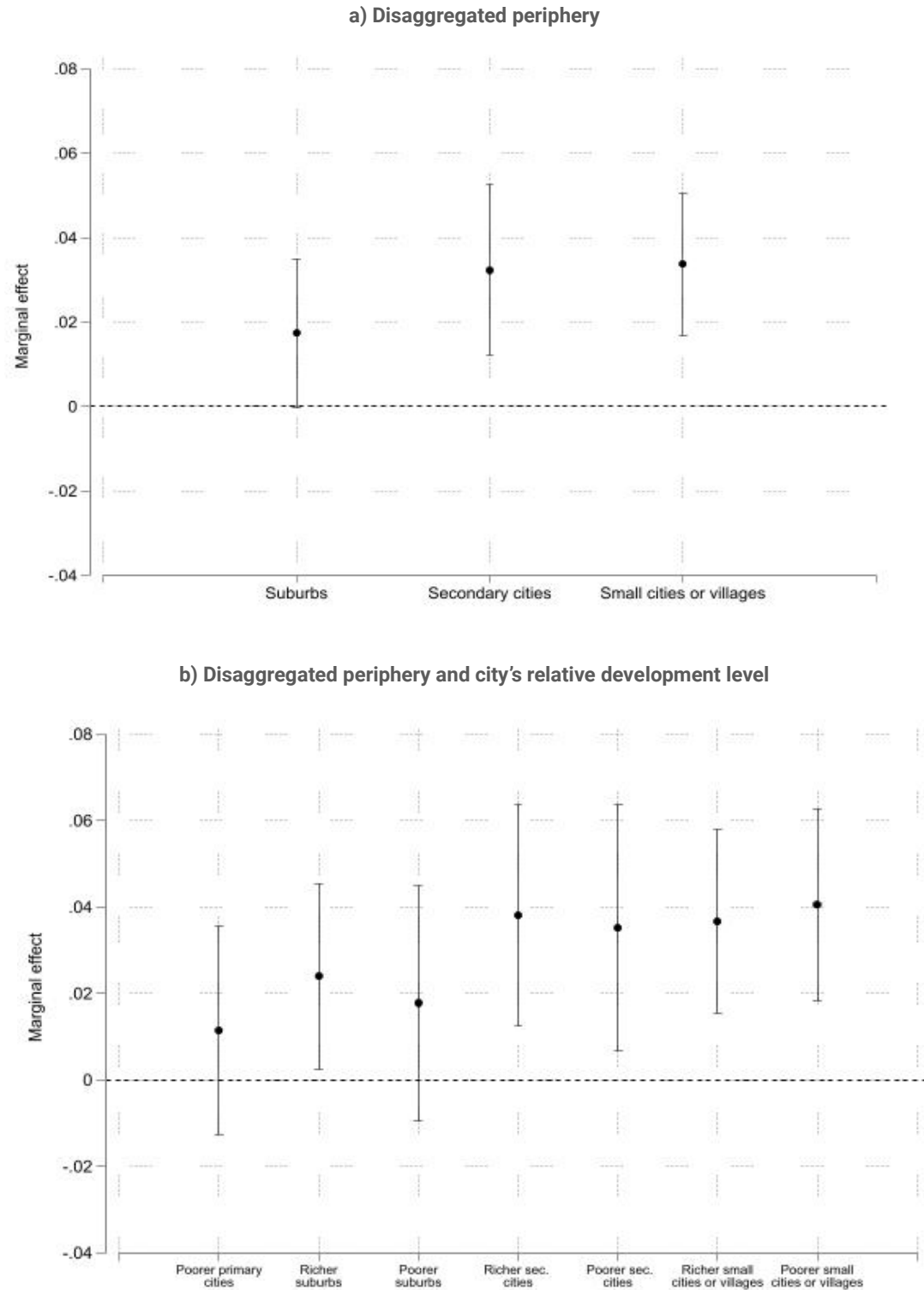
Table A7: Socio-economic characteristics of surveyed individuals (Mexico)

First name	Survey area	Municipality of residence	Sex	Age	Education level	Main occupation	Household size	Estimated monthly household income
Amelia	Tula de Allende	Tula de Allende	F	38	Tertiary completed	Coordinator and high-school teacher	3	37,500 M\$
Ariadna	Tula de Allende	Tula de Allende	F	48	Tertiary completed	Quality supervisor	2	35,000 M\$
Aurora	Tula de Allende	Tula de Allende	F	41	Secondary completed	Informal worker (domestic work, sales)	9	3,500 M\$
Claudia	Tula de Allende	Tula de Allende	F	33	Secondary completed	Informal worker (cosmetic products seller by catalogue)	2	6,500 M\$
Darwin	Tula de Allende	Tula de Allende	H	36	Secondary completed	Informal agricultural labourer	2	10,000 M\$
David	Tula de Allende	Tula de Allende	H	44	Secondary completed	Supermarket order picker	4	10,000 M\$
Fernando	Tula de Allende	Tula de Allende	H	47	Tertiary completed	Agricultural worker and teacher	5	27,000 M\$
Lucero	Tula de Allende	Tula de Allende	F	39	Secondary completed	Unemployed	7	13,000 M\$
Luis	Tula de Allende	Tula de Allende	H	37	Secondary (ongoing)	Marketing supervisor	2	20,000 M\$
Mabel	Tula de Allende	Tula de Allende	F	47	Secondary incomplete	Informal hairdresser	7	16,500 M\$
Mario	Tula de Allende	Tula de Allende	H	58	Tertiary incomplete	Educational materials retailer	4	22,500 M\$

Thelma	Tula de Allende	Tula de Allende	F	52	Secondary incomplete	Informal worker (seller by catalogue)	6	6,000 M\$
Armando	San Cristobal de las Casas	San Cristobal de las Casas	H	58	Tertiary completed	Unemployed	1*	n.a.
Carlos Humberto	San Cristobal de las Casas	San Cristobal de las Casas	H	50	Tertiary incomplete	Agricultural worker	3	13,000 M\$
Luis	San Cristobal de las Casas	San Cristobal de las Casas	H	49	Tertiary completed	Lawyer	5	110,000 M\$
Luz Maria	San Cristobal de las Casas	San Cristobal de las Casas	F	43	Secondary incomplete	Informal worker (Taquería)	4	6,250 M\$
Mariana	San Cristobal de las Casas	San Cristobal de las Casas	F	49	Tertiary completed	Legal and administrative management technician	2**	100,000 M\$
Olivia	San Cristobal de las Casas	San Cristobal de las Casas	F	63	Tertiary completed	Retired	2	25,000 M\$
Rosalía	San Cristobal de las Casas	San Cristobal de las Casas	F	48	Tertiary completed	School secretary	3	19,900 M\$
Teresa	San Cristobal de las Casas	San Cristobal de las Casas	F	36	Tertiary completed	Bank supervisor	2	18,000 M\$
Ulises	San Cristobal de las Casas	San Cristobal de las Casas	H	34	Secondary incomplete	Agricultural worker	3	8,000 M\$
Veridiana	San Cristobal de las Casas	San Cristobal de las Casas	F	35	Secondary completed	Informal worker (grocery shop)	5	4,000 M\$

Notes: (*) Armando, being unemployed, reported no income. To contextualize his economic situation, he lives alone (divorced) but provides for the needs of his three children. (**) For Mariana, it should be taken into account that her two daughters and five grandchildren sometimes live with her. Source: authors.

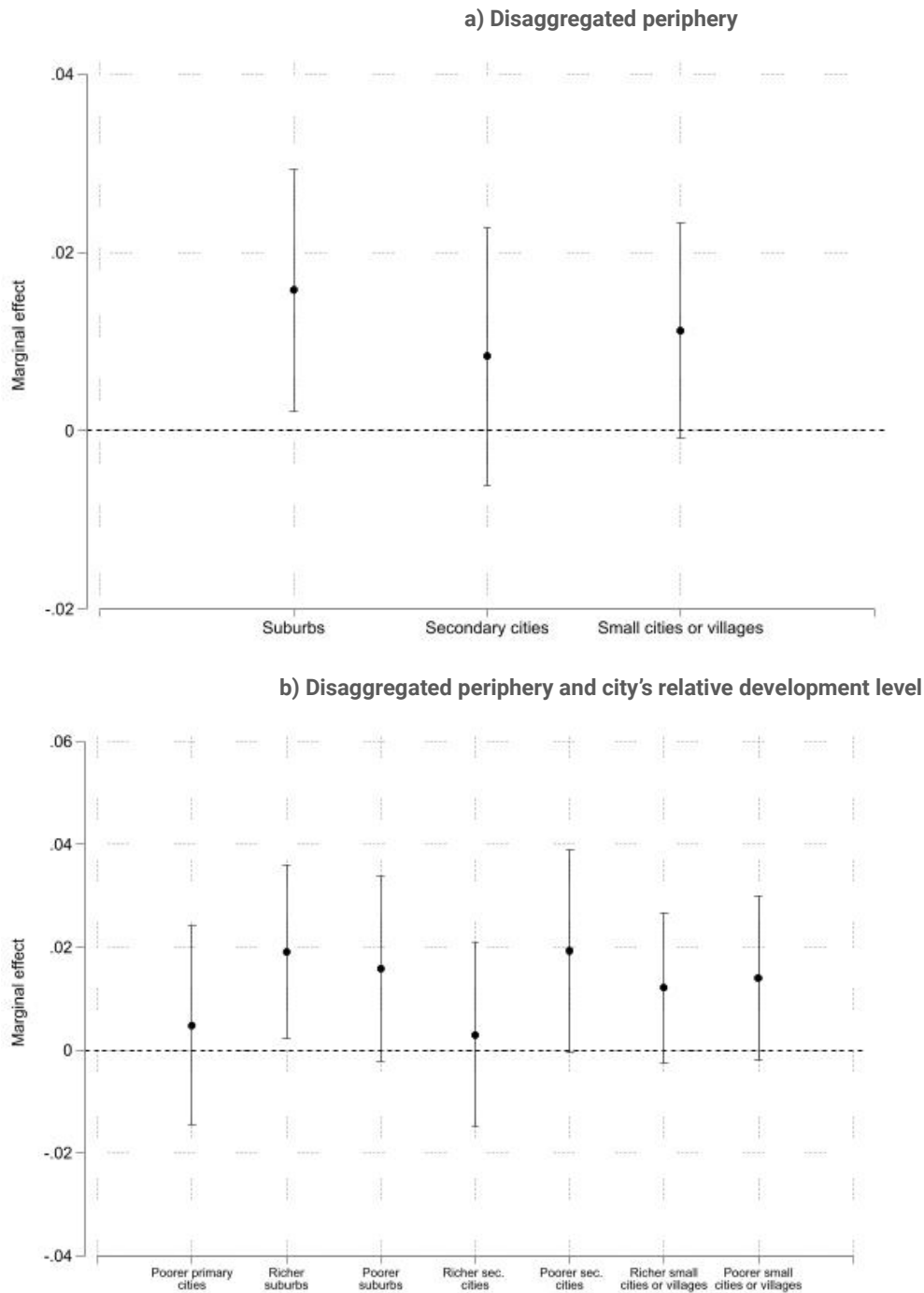
Figure A3: Heterogeneity analysis: Disaggregated periphery and support for pro-environmental policies



Source: Authors' elaboration based on the LAPOP database (2014, 2016, 2018 and 2023) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay).

Notes: the mean value of the dependent variable for the reference group of the *Periph* dummy (= primary cities) is .39. Coefficients are derived from linear regressions with full controls with time and region fixed effects, adding an interaction between the periphery indicator and the relative level of development of cities for (b). The reference category corresponds to the primary cities in (a), and the richer primary cities in (b). 95% confidence intervals are shown. The dependent variable is a binary measure indicating that environmental protection should be strongly prioritized over economic growth. Weights provided by LAPOP are used for cross-country comparisons. Standard errors are clustered by city.

Figure A4: Heterogeneity analysis: Disaggregated periphery and strong consideration of the effects of climate change



Source: Authors' elaboration based on the LAPOP database (2014, 2016, 2018 and 2023) for 16 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay).

Notes: the mean value of the dependent variable for the reference group of the *Periph* dummy (= primary cities) is 68. Coefficients are derived from linear regressions with full controls with time and region fixed effects, adding an interaction between the periphery indicator and the relative level of development of cities for (b). The reference category corresponds to the primary cities in (a), and the richer primary cities in (b). 95% confidence intervals are shown. The dependent variable is a binary measure indicating that environmental protection should be strongly prioritized over economic growth. Weights provided by LAPOP are used for cross-country comparisons. Standard errors are clustered by city.

Table A8: Number of occurrences of environmental concerns in semi-structured interviews

Environmental issues	Argentina			Chile		
	Comodoro Rivadavia	Villa Maria	Total	Cañete	Rancagua	Total
Climate change	4	3	7	2	1	3
Air pollution	2	1	3	1	10	11
<i>Air pollution in general</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>3</i>	<i>4</i>
<i>Road traffic</i>	<i>2</i>	<i>1</i>	<i>3</i>	<i>0</i>	<i>3</i>	<i>3</i>
<i>Wood heating</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>4</i>
Water pollution	3	4	7	3	0	3
<i>River, soil</i>	<i>0</i>	<i>4</i>	<i>4</i>	<i>3</i>	<i>0</i>	<i>3</i>
<i>Ocean</i>	<i>3</i>	<i>0</i>	<i>3</i>	<i>0</i>	<i>0</i>	<i>0</i>
Waste management	7	7	14	9	8	17
Agriculture	1	6	7	3	5	8
Mining	5	1	6	0	7	7
Deforestation	1	3	4	1	3	4
Total	23	25	48	19	34	53

Source: authors' elaboration based on 44 semi-structured interviews in Argentina and Chile.



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