# Climate Crisis and Policy Inaction in Indonesia

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**Abstract**

We surveyed voters and politicians in advance of the 2024 Indonesian election to measure preferences for environmental policy. We find that politicians underestimate voter concerns. We conducted an informational experiment with politicians to correct these misperceptions, and we document evidence of learning but no greater support for policy action. We explore three explanations for why voter preferences do not translate into policy. First, politicians only consider acting when their initial misperceptions are particularly large. Second, elite capture prevents politicians from implementing environmental protection. Third, voters prioritize progress in other domains. Our results underscore the multiplicity of challenges facing climate action.

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# 1 Introduction

Lower-income countries are disproportionately affected by the impacts of climate change (Hallegatte 2016). Rising sea levels will lead to major flood damages in coastal cities (Nicholls et al. 2021; Pörtner et al. 2019; Hsiao 2023); slash-and-burn farming sparks wildfire in times of drought (Jayachandran 2009); and rapid industrialization enables the unchecked pollution of groundwater (Ebenstein 2012). These issues bring environmental concerns to the forefront of voters' minds, especially in lower-income countries, where a higher share of respondents report having experienced the impacts of climate change (Dabla-Norris et al. 2023). But politicians are often reticent to take policy action (Pereira et al. 2024).

Why do voter preferences not translate into policy action? In canonical models of political representation, voters express preferences and politicians respond with action (Mansbridge 2003; Pitkin 1967; Przeworski, Stokes and Manin 1999). We present a simple model that emphasizes two complications. First, politicians may not accurately perceive voter preferences. The process of gathering and aggregating information on constituents is challenging and subject to distortions (Broockman and Skovron 2018; Pereira 2021). Second, politicians may find it costly to deliver policy action. Environmental action may meet resistance from organized interests, and it may displace progress on other issues.

We take the model to data in Indonesia, the world's sixth-largest carbon emitter and a country with heightened vulnerability to the impacts of climate change (Jones et al. 2024). Indonesia's democratic institutions should enable voters to press for policy action, and yet policymakers have not introduced compelling climate legislation.[1] Voters have also not sanctioned politicians for this failure to deliver. Against this backdrop, we collected original survey data in advance of the 2024 legislative and presidential elections to elicit preferences for environmental and other policies. We measured both voters' preferences ("first-order beliefs") and politicians' perceptions of these preferences ("second-order beliefs"). We then conducted an informational experiment in which we communicated voter preferences to politicians.

We find that Indonesian voters believe environmental issues to be important—approximately as pressing as the provision of traditional public goods, such as education and health care. This concern is not limited to abstract notions of climate change: voters are especially concerned about the concrete, climate-related issues of heat, flooding, drought, and wildfire in their own communities. This concern also persists

1 Environmental regulation in Indonesia is largely managed by local government. In 2024, less than 3% of candidates for local office mentioned environmental concerns in their platforms. Similarly, from 1980 to 2012, less than 1% of all local regulations dealt with environmental concerns. See SI Figure A7.

despite the costs of action: a large majority of voters support environmental protection even when pressed with the potential economic costs. At the same time, we find that politicians meaningfully underestimate these preferences.

These findings are consistent with our pre-analysis plan, which hypothesized that policy inaction in Indonesia at least partially reflects politicians' misperceptions of voters' preferences. We probe this hypothesis further by communicating voters' preferences to politicians in a randomized informational intervention several weeks before the election. For a treatment group of politicians, we provided a report with information about voter preferences, and we measured their first- and second-order beliefs in a follow-up survey. We find evidence of learning. Relative to a control group, which received the report after the follow-up survey, treatment politicians updated their second-order beliefs on the importance that voters attach to environmental issues. The intervention also increased politicians' own stated importance of these issues. However, information on voter preferences did not affect politicians' willingness to support action on environmental policy.

Why did our informational intervention fail to generate support for policy action? In the remainder of the paper, we probe three mechanisms. Each has some explanatory power in our setting. First, we consider perceptions. Information about voter preferences does increase support for some environmental policies, but only among politicians who were most heavily misinformed at baseline. Second, we consider costs that are distortionary in nature. In Indonesia, elite capture—perhaps through campaign finance and bribery—creates political headwinds for environmental protection, which challenges agribusiness that profits from deforestation (Cramb and McCarthy 2016). Our informational intervention induced policy support, but only in regions where elite capture is relatively limited. Third, we consider costs that are not necessarily distortionary. We document voter concern in an *absolute* sense by asking whether respondents view environmental issues as important, but progress on the environment might displace progress elsewhere. Politicians may therefore focus instead on voter preferences *relative* to other policies. We find that voters and politicians do align in their rank ordering of policy issues, such that climate inaction arises in part from the opportunity cost of action.

Our main contribution is to show that politician misperceptions are not sufficient for explaining policy inaction. Standard theories of political representation hold that politicians are inclined to move their preferences and behaviors into alignment with voters in a bid to shore up votes (Downs 1957). Our experimental intervention offers some evidence in support of this phenomenon, as is partially consistent with

recent findings (Butler and Nickerson 2011; Chu and Recchia 2022), although our results only obtain for politicians who were heavily misinformed at baseline. Instead, on average, our results reveal a disjuncture between politicians' updated stated preferences and their willingness to support policy action consistent with these updated beliefs. Our framework points to the costs that politicians incur in supporting environmental policy. After all, our intervention did not alter the underlying political economy of local elections in Indonesia, where oligarchic interests can sanction politicians who deviate from the status quo of environmental exploitation. Similarly, our intervention did not alter the administrative costs of implementing and enforcing environmental regulation.

Our results also speak to a growing interest in how politicians' second-order beliefs affect policy action (Hertel-Fernandez, Mildenberger and Stokes 2019). For Indonesian politicians, we document accurate perceptions of voter preferences for traditional public goods—education and healthcare—but underestimates for environmental issues. Environmental concerns have only recently been made salient, and politicians may be slow to update their second-order beliefs. An alternative conjecture relates to the nature of campaigning in a patronage democracy. Politicians cultivate power by offering voters preferential access to government-provided goods like education and healthcare (Aspinall and Berenschot 2019; Hicken et al. 2022), and thus develop a keen intuition for voter demand for these services. But it is difficult to throttle access to environmental public goods—such as clean air—and so politicians have less incentive to learn about voter demand in this domain.

## 2 Framework

Why do politicians fail to act on climate issues? We study this question with a simple model in which politicians consider voter preferences and deliver policy action. This theoretical framework will guide our empirical analysis, which seeks to evaluate the causes of climate inaction in Indonesia.

Our outcome of interest is the extent of policy action $p \in [0, P]$. The most aggressive climate policy is given by $p = P$, which involves maximal efforts to reduce carbon emissions and environmental pollution. In Indonesia, deforestation from slash-and-burn agriculture is a major source of carbon emissions and local pollutants (Burgess et al. 2012; Balboni, Burgess and Olken 2024; Hsiao 2024). Aggressive policy calls for strong protection of forested areas, such as local bans on deforestation. At the other extreme, complete inaction is given by $p = 0$, which reflects the status quo.

We arrive at policy action by proceeding sequentially. First, voters consider the problem of climate

change, and they form preferences that represent their demand for policy action. For climate policy, it is worth underscoring the possibility that voters may simply prefer inaction (Stokes 2016). Climate change occurs over relatively long periods with impacts that may not be realized locally (Egan and Mullin 2017), and voters may not link the abstract notions of climate change to more concrete issues like extreme heat and flooding (Mildenberger et al. 2024). Moreover, efforts to curb emissions may be seen as detrimental to economic growth. While some governments have pledged to compensate those hurt by environmental policy, including as part of the clean energy transition, voters may remain distrustful of these promises (Gazmararian and Tingley 2023). Even if voters privately support environmental policy action, they may resist revealing their preferences, believing their voice to be futile if their fellow citizens do not also support such action (Andre et al. 2024). At the same time, broad support for climate action has been documented at global scale (Dechezleprêtre et al. 2024).

Our voters have preferences $a$ over policy action $p$, and their utility is maximized when the two align. Voter utility takes quadratic form

$$v(p) = -(p - a)^2,$$

such that voter utility declines increasingly in the distance between preferences and policy. We model voter preferences as a pure desire for action on a single issue, and we interpret these preferences as voters' bottom-line mandate for politicians. In practice, these preferences embed a broader range of determinants. Indonesian voters may have low demand for climate action because they underestimate its benefits, because they are wary of its costs, or because they prioritize progress on other issues. Our empirical approach will take this richness seriously: we survey voters at scale to obtain direct measures of voter preferences $a$, as well as their determinants.

Second, politicians assess voters' policy preferences. Politicians must consider voter preferences, as those who stray face electoral sanction. The core innovation of our model is to consider how politicians' assessment of voter preferences is subject to potential bias from misperception, similar to recent work in psychology related to the concept of "pluralistic ignorance," which refers to the phenomenon whereby people believe others have different opinions than they do (Ruggeri et al. 2021). Recent empirical research demonstrates that citizens significantly underestimate the true extent to which others care about environmental issues, and that this undermines demand for policy action (Geiger and Swim 2016). This misalignment has also been shown to be common in elites' perceptions of citizens' preferences, with perhaps

more consequential effects (Mildenberger and Tingley 2019). When forced to confront misperceptions of voter preferences, politicians have been shown to update their support for policy action (Sevenans 2021). Worryingly, however, politicians may be indifferent to seeking out corrective information on their own accord (Kalla and Porter 2021).

The sources of elite misperceptions are diverse. Politicians may be biased by their own preferences (Pereira 2021), believing climate policy to be unimportant. Or they may overweight the views of the most vocal constituents (Broockman and Skovron 2018). Our model is also open to the possibility that politicians' misperceptions are related to the recency with which environmental problems have begun to demand attention. Politicians may simply have less experience with environmental issues in particular. Relative to traditional domains like education and health, such issues have entered into political discourse relatively recently. Distortions similarly arise if politicians have strong but biased priors. Climate change has become politically polarizing, and politicians with extreme stances may have disproportionate influence on how other politicians view the issue.

These misperceptions may be especially large in clientelistic settings, where politicians often throttle access to traditional public goods to cultivate voter support. In Indonesia, for instance, it is common for local politicians to expedite certain constituents' access to health services in an attempt to win their votes (Aspinall and Berenschot 2019). But environmental goods like clean air are pure public goods, and so politicians cannot manipulate differential rates of access to certain communities to win their support. Politicians may therefore have less incentive to learn about voters' preferences on environmental issues.

These mechanisms generate perception bias $b$ that causes politicians to stray from voter preferences $a$. This bias is flexible in the sense that politicians may over- or under-appreciate voter concern. Politicians' perception of voter preferences is

$$\hat{a} = a - b,$$

such that $b > 0$ corresponds to under-appreciation. Bias in either direction creates misalignment between voters and politicians. Voters suffer in both cases because voter utility takes symmetric, quadratic form. Combining expressions, politicians' perception of voter utility is

$$\hat{v}(p) = -(p - \hat{a})^2 = -(p - a + b)^2.$$

Such bias can arise for several reasons, as politicians may be influenced by their contact with constituents, their backgrounds, and even their own preferences.

Third, politicians consider the costs of policy action, which may be especially high in the context of environmental issues.[2] On the one hand, these costs can arise from true social costs and thus be nondistortionary. Climate policy may come at the cost of progress on other issues, to the extent that governments have fixed budgets (Adolph, Breunig and Koski 2020). Environmental policy is also directly costly, especially in settings with limited administrative capacity, because regulating emissions requires consistent monitoring at national scale. On the other hand, these costs can arise from political capture and thus be distortionary. In Indonesia, climate action must target large palm oil producers, who produce major emissions by driving widespread deforestation. But these same groups provide politicians with direct clientelistic support, both politically and financially. These organized interests can weigh heavily on politicians' support for policy action. Indeed, deforestation rises when elections increase politicians' reliance on this support, not only in Indonesia (Balboni et al. 2021) but also globally (Sanford 2023).

We consider costs $c$ that scale quadratically in the extent of policy action $p$. Minimal action incurs small costs, but these costs grow increasingly quickly with the scale of policy action.

$$\hat{c}(p) = cp^2$$

In Indonesia, limited regulation of forested area incurs little cost: the regulator does not need to invest in careful monitoring, and agricultural producers can continue to deforest unprotected lands. Strong regulation incurs much larger costs: monitoring becomes difficult, and agricultural producers begin to lobby as regulation cuts into profits. In reality, Indonesian regulation to date has largely relied on deforestation moratoria of limited scope and enforcement (Busch et al. 2015). Our empirical approach will indirectly assess these costs with an informational experiment. The experiment itself does not allow us to conclude whether these costs are distortionary or not, and so we dissect these costs by probing mechanisms in further analysis.

In the fourth and final step of our model, politicians choose to deliver policy action or not. We model

2 The context of our study thus draws an important distinction with the work of Sevenans (2021), whose study is closest in design and findings to ours, but who focuses on non-environmental issues.

politicians that choose policy action to maximize perceived voter utility $\hat{v}$ net of costs $\hat{c}$.

$$\arg\max_{p} \left\{\hat{v}(p) - \hat{c}(p)\right\} = \arg\max_{p} \left\{ -(p - a + b)^2 - cp^2 \right\}$$

Solving the maximization problem, we characterize policy action as

$$\hat{p} = \frac{a - b}{1 + c}.$$

This expression highlights that policy inaction has three potential causes to which we turn our attention. First, voters may have low demand for policy action. If voter preferences are such that $a$ is low, then $\hat{p}$ will be low. Second, politicians may have inaccurate perceptions of voter demand. If politicians underestimate voter concern, such that $b$ is high, then $\hat{p}$ will be low – even if voters demand policy action. Third, policy action may have high costs. If politicians find these costs to be binding, such that $c$ is high, then $\hat{p}$ will be low – even if voters demand policy action and politicians appreciate this concern. That is, increasing policy action requires progress on all fronts.

We will take this model to our experimental setting, arguing that our informational experiment isolates the costs of policy action. Our treatment attempts to reduce perception bias $b$, and we validate that it does so by measuring impacts on politician perceptions $\hat{a}$. It follows that impacts on policy action $\hat{p}$ – at least in terms of stated intentions – capture costs $c$ of policy action. Intuitively, if voters demand action and if politicians understand this concern, then it is policy costs that prevent action. Formally, policy action is $\hat{p}' = \frac{a}{1+c}$ in the absence of perception bias. This expression follows simply from substituting $b = 0$ into the expression for $\hat{p}$. The impact of our informational treatment on policy action is then given by the difference between informed action $\hat{p}'$ and uninformed action $\hat{p}$.

$$\Delta\hat{p} = \hat{p}' - \hat{p} = \frac{b}{1 + c}$$

Eliminating perception bias $b$ increases policy action $\hat{p}$ if and only if (1) initial bias $b$ is large and positive and (2) policy costs $c$ are small. We will show that (1) holds empirically, and so our experiment offers a test for (2).

# 3 Empirical Setting and Research Design

We describe the Indonesian setting, original data on voters and politicians, our descriptive analysis, and the informational experiment.

## 3.1 Environmental Policy in Indonesia

We focus on the case of Indonesia, which faces a range of localized environmental challenges, many of which stem from carbon-intensive resource extraction. The national government in Indonesia has largely avoided green policy commitments, instead promoting a form of resource nationalism that encourages the extraction of commodities to spur economic growth (Warburton 2023). Local governments are similarly reticent. Logging is overseen by district officials, who can profit from bribes for illegal deforestation (Burgess et al. 2012). Local mayors can issue land concessions for palm oil production, which drives widespread deforestation and the clearing of carbon-rich peatlands (Hsiao 2024). Local governments receive taxes from mining operations as own-source revenue, which is subject to reduced scrutiny, encouraging local leaders to court extraction.

Perhaps the most salient environmental issue plaguing Indonesia concerns the use of fire for clearing swaths of land in advance of cultivation, a process that generates tremendous amounts of $CO_2$. When the planting season coincides with the El Niño phenomenon that brings drought conditions, much larger wildfires tend to emerge, often blanketing the region in a thick layer of smoke. Despite being nominally illegal, the use of fire to clear idle land is common because it is 20-50% less costly than alternative methods (Purnomo et al. 2019). Recent analyses suggest that industrial-scale and smallholder cultivators alike use burning to clear existing vegetation and sow the soil with nutrients. The frequency and incidence of burning are correlated with local electoral politics, with spikes appearing in years that precede elections, suggesting that incumbents tasked with enforcement may be turning a blind eye to maintain the support of powerful agricultural producers (Balboni et al. 2021).

Motivated by the role of local governments in managing environmental policy, we focus our attention on the actions of politicians at the district level (known as *kabupaten* or *kota*). There are 514 districts in Indonesia. At the time of the 2020 population census, the average population per district was of districts was roughly 525,000. Since 2001, when Indonesia underwent a so-called "big bang" decentralization reform, district-level governments have possessed considerable policy-making authority over a wide range

of areas, including health, education, agriculture, public works, transport, and the environment (Nasution 2017). Reflecting the elevated authority of local governments, nearly 40% of all government spending in Indonesia is carried out at the district level. Local governments thus play a key role in mitigating the impacts of climate change.

Districts are governed by a directly elected executive, known as either *bupati* or *wali-kota*, depending on whether the district is rural or urban, respectively. Beneath the district executive is a local legislature, known as the DPRD-II, which is comprised of 25 to 50 representatives. The exact number is a function of the district's population. Members of the DPRD-II are elected to five-year terms from multi-member districts using a system of open-list proportional representation. This system incentivizes individual candidates to differentiate themselves from their co-partisans, thus discouraging the development of programmatic platforms (Aspinall 2014). Hence, there is little variation in policy platforms across major political parties in Indonesia (Fossati et al. 2020). A focus on environmental issues confirms this trend. We collect data on local legislative candidate platforms from the 2019 elections, and we find that less than 0.3% of candidates mentioned the environment. No party had more than 1% of candidates mentioning environmental concerns.

### 3.2 Data

We collected original data on Indonesian voters and politicians. For voters, we conducted a "mass public survey" in two waves with a total sample of 6,886 respondents from the online survey panel vendor Cint/Lucid, which maintains a large sample of respondents in Indonesia. Our first wave included 5,286 respondents and the second wave included 1,650. Respondents were restricted to Indonesian nationals, and we introduced quota-based sampling to ensure a sample that approximates the population distribution on (1) age, (2) gender, and (3) region. In the Supplementary Information (SI), we include a breakdown of the demographic composition of our survey (see Table A1). The first wave of the survey was carried out in December 2023, and the second wave in August 2024.

It is well known that online surveys oversample respondents with high levels of education, thus potentially biasing population-level inferences. Our sample exhibits the same educational bias. Importantly, however, there is very little political polarization along educational lines in Indonesia. Thus, the bias in the demographic composition is unlikely to correlate with our outcomes of interest. Nonetheless, to probe the depth and direction of this bias, and in order to benchmark the quality of the survey results, we asked

respondents about their intended vote choice in advance of the February 2024 presidential election. In the week before the election, 56.6% of respondents in our sample indicated a vote preference for Prabowo Subianto; the election result of 58.8% was statistically indistinguishable from our estimate.[3] In SI Figure A1, we benchmark our results, broken down in terms of different demographic features, against a face-to-face exit poll conducted with random sampling. This exercise reveals that our online survey strongly captures its population-level analogs.

In a second wave of the voter survey, conducted among 1,650 Indonesian adults in August 2024, we asked a more detailed set of questions on environmental policy preferences. To measure voters' relative preferences for policy action, we elicit how voters rank environmental issues relative to other issues and what they view as the single most important issue facing Indonesia today. We also conducted a conjoint experiment in which we randomly assigned policy platforms to two hypothetical legislative candidates asking respondents to indicate a vote preference. Finally, we asked how voters weigh environmental progress against economic growth, gauging the extent to which they would be willing to trade off one against the other. To probe whether voters harbor preferences over environmental policy action in light of concrete issues, we also ask how they view the severity of issues affecting their communities: (1) air and water pollution, (2) extreme temperatures and drought, (3) natural disasters, (4) river and coastal flooding, and (5) carbon emissions.

For politicians, we conducted a panel "candidate survey" with a representative sample of 800 candidates for local legislative office in Indonesia (DPRD-II). Candidates were randomly sampled with stratification: we randomly sampled 80 districts (kabupaten/kota), then randomly sampled 10 candidates from each district. We did not stratify legislative constituencies within districts. To ensure we surveyed only competitive candidates, we restricted the population of candidates to those in top-three list positions and those from the ten parties that polled above 1% nationally on October 1, 2023.[4] We did not survey legislative candidates in Maluku and Papua, owing to challenges in recruitment. The first wave of the survey was launched on November 1, 2023. The second wave of the survey was launched on January 1, 2024.

Most originally sampled candidates were contactable and amenable to the survey protocol. However, enumerators faced challenges in locating sampled respondents whose candidacy was considered less se-

3 Our online surveys thus performed *better* than traditional face-to-face surveys based on stratified random sampling techniques. In three such public opinion surveys released the week before the election, pollsters estimated Prabowo's national vote share at 50.8%, 51.8%, and 51.9%.

4 These parties were PKB, Gerindra, PDI-P, Golkar, NasDem, PKS, PAN, Demokrat, Perindo, and PPP.

rious, often those who were in lower list positions (i.e., 2 or 3). Thus, in resampling, the final sample is skewed towards respondents in the top list position in wave 1 (N=317) versus those in list positions 2 or 3 (N=270 & N=213). However, we obtained a re-contact rate of 92.6%. In the event that enumerators were unable to locate the initially surveyed respondent, replacements were sampled from the same district with the restriction that the new respondent was from the same political party. To manage concerns over attrition, respondents who completed Wave 1 were informed that they would receive a report on voters' preferences in Wave 2.

We collected responses on a series of survey measures designed to measure both the preferences of citizens and politicians, as well as their beliefs about the other group's preferences. To measure first-order beliefs, we asked respondents to rate the degree to which they believed a suite of policy issues was important. The issues included climate change, pollution, civil rights, economic development, health, and education. We measured these outcomes on a 4-point Likert scale. Nearly all respondents indicated each issue was either "important" or "very important." We thus focus our attention on the share of voters and politicians who indicate an issue is "very important." We measure second-order beliefs in the same manner, with the difference that voters and politicians are asked how they believe the other groups rate the importance of the different issues.

In the second wave of the politician survey, we asked a series of additional questions designed to measure respondents' willingness to engage in costly policy action. We offered respondents the same battery of issues and probed the extent to which they believed each area demanded immediate policy action. We then probed whether politicians were likely to support two specific policy proposals designed to combat climate change. Specifically, we asked whether they would support (1) an initiative to develop a carbon tax and (2) a commitment to end deforestation in their district.[5] It is worth underscoring some slippage between our theoretical target of interest ("policy action") and our measured outcomes ("stated policy action"). We proceed assuming that the latter is a reasonable proxy for the former, but it remains possible that politicians' stated preferences do not align with their revealed actions.

5 One concern relates to whether candidates understood these proposals. Recall that respondents could respond "don't know" to any question, which offers a proxy for lack of understanding. We find that only 0.6% and 2.5% of respondents indicated that they "didn't know" whether they would support a carbon tax and a deforestation ban, respectively. We interpret these numbers as low, suggesting that candidates generally understood the content of the survey instrument.

### 3.3 Analysis and Intervention

We analyzed our measures of voter and politician support for environmental action, and we communicated our findings to politicians as an informational intervention. We pre-registered our analysis, which we discuss in SI Section A.1. For our analysis, we compare the first-order beliefs of politicians and voters. Our expectation is that both politicians and voters hold a belief that environmental issues are important. Next, we compare politicians' second-order beliefs to the first-order beliefs of voters. Our expectation is that politicians underestimate the importance that voters attach to environmental issues. We calculate standard errors for our point estimates of average first- and second-order beliefs among voters and politicians and conduct simple difference-in-means tests of our estimates to evaluate our hypotheses. We use data from the second wave of the voter survey to compare how voter responses change across measures, with the goal of distinguishing information, preferences, and constraints.

We conducted our informational intervention during the second wave of the candidate survey. This randomized intervention took place in January 2024, several weeks in advance of the Indonesian 2024 legislative election. To minimize potential attrition across waves, we offered respondents an incentive in the form of a report that tabulated data from both the first wave of the candidate survey conducted in November 2023, as well as the results of a regionally-representative online survey. At the beginning of the second survey, we provided a random subset of politicians (N=400) with a report on voters' first-order beliefs, as computed from the first wave of our voter survey. Because of our sample size, we were unable to provide politicians with estimates of voter preferences at the level of their constituency, instead providing them with national-level estimates.[6] We also provided these politicians with information on politicians' first- and second-order beliefs, as computed from the first wave of our politician survey.[7] We did not communicate information from the second wave of our voter survey, which we conducted after this informational intervention. Enumerators delivered an oral presentation and a paper copy of the report to treatment-group politicians at the beginning of the survey. Control-group politicians received the same oral presentation and paper copy of the report at the end of the survey. For fear of inducing social desirability bias, we did not include a manipulation check to capture whether respondents understood the

6 In SI Figure A6, we demonstrate that there is relatively little provincial-level variation in concern for environmental issues in Indonesia: for all but one province (DKI Jakarta), the national-level average of voter first-order preferences is contained within the regionally-calculated 95% confidence intervals. In SI Section B.4.9, we show that our main experimental results are not sensitive to regional deviations from national estimates of voters' first-order beliefs.

7 We included politicians' own preferences as a benchmark. Absent this benchmark, we were concerned that politicians would not reflect on whether they had under- or over-estimated voter preferences at baseline.

content of the intervention; instead, as we discuss below, we relied on enumerators' subjective evaluations of whether respondents understood the content delivered to them.

Enumerators reported two implementation challenges. First, because both treated and control politicians received a paper copy of the report, there was some contamination across units, as candidates who received the report earlier shared the document via WhatsApp with other candidates within their same party. Thus, we asked respondents before beginning the second wave of the survey if they had seen the report before, with 19.5% reporting that they had. We conduct several analyses probing whether this "contamination" correlated with respondent characteristics such that the attrition would bias our results. We present the demographic traits of contaminated and non-contaminated subjects in SI Table A6, finding few differences across the two groups. Second, despite the oral presentation and the opportunity to ask probing questions, enumerators reported that several respondents had difficulty understanding the figures. We included a question gauging the extent to which respondents were judged to understand the content of the analyses in the report, with 71.5% judged to have understood. This shortcoming reflects innumeracy on the part of some respondents, but enumerators also reported that some respondents could not speak fluent Bahasa Indonesia and thus could not follow along with the questionnaire. Our main analysis is restricted to those respondents who (1) reported not having seen the report before the survey began and (2) were judged to understand the content by the enumerator. These restrictions yield a sample of 456 respondents: 225 treatment and 231 control. In the SI, we also conduct our analyses on the unrestricted samples (see SI Section B.2). Importantly, in the restricted sample, the distribution of respondents is unbalanced: politicians in the control group are approximately three years older than those in the treatment group. The magnitude of this imbalance is small, but we conduct additional tests in SI Section B.4.10 to probe the robustness of our results to the inclusion of inverse propensity weights for attrition.

We evaluate the impact of our informational intervention on three groups of outcomes. First, we measure politicians' first- and second-order beliefs over the same suite of issues again. Second, we probed politicians' support for immediate policy action on the issues, as well as the extent to which they support more specific policy proposals designed to manage environmental concerns: restrictions on deforestation and a carbon tax proposal. Third, we examined politicians' vote shares, on the expectation that, upon learning voters' true preferences, politicians might update their campaign strategies to bring them in line with the demands of their constituents, and thus secure greater vote shares.

For the first and second outcomes, we conduct a simple difference-in-means test, implemented using

a bivariate OLS model, to estimate the impact of having received the report before the survey (vs. after) on politicians' first- and second-order beliefs, as well as on their willingness to support costly political action. For the third outcome, looking at vote share, we conduct an alternative analysis, using the vote totals for all candidates. Both treatment and control groups received the report before the election, and all respondents were randomly sampled. We can therefore compare vote shares of our sampled respondents with the vote shares of unsampled candidates. We control for candidate list positions to account for bias from differential attrition.

# 4 Results

We describe our survey findings and the results of the informational intervention. We find that politicians underestimate voter concern, but that they learn from information that corrects these misperceptions. At the same time, this learning does not generate support for policy action.

## 4.1 Descriptive Results

How do voters and politicians compare in terms of the issues they believe to be most important? We present our first set of descriptive analyses in Figure 1. The report of our informational invention presented this figure as a summary of voters' and politicians' first-order beliefs, alongside summary information on the demographic composition of our results. Voters report higher first-order beliefs about the importance of environmental issues, compared to politicians. Specifically, 45.9% of voters indicate that climate change is a "very important" issue, compared with only 30.5% of politicians. Similarly, 57.5% of voters indicate pollution is a "very important" issue, compared with only 45.4% of politicians. This relationship reverses for more conventional material welfare issues, where politicians report higher first-order beliefs on non-environmental issues, compared to voters. 79.5% and 78.8% of politicians say that health and education, respectively, are very important issues. This compares to only 71.2% and 72.9% of voters who indicate as much for health and education, respectively. In other words, politicians appear to overstate the premium on which voters place on traditional public goods and understate the importance of environmental concerns to voters. Voters and politicians hold statistically indistinguishable evaluations of the importance of civil rights and economic development.

Our chief theoretical interest is in understanding the extent to which politicians correctly evaluate the importance that voters privately attach to different issues. Here, consistent with our pre-registered

Figure 1—Voters and Politicians' First-Order Preferences

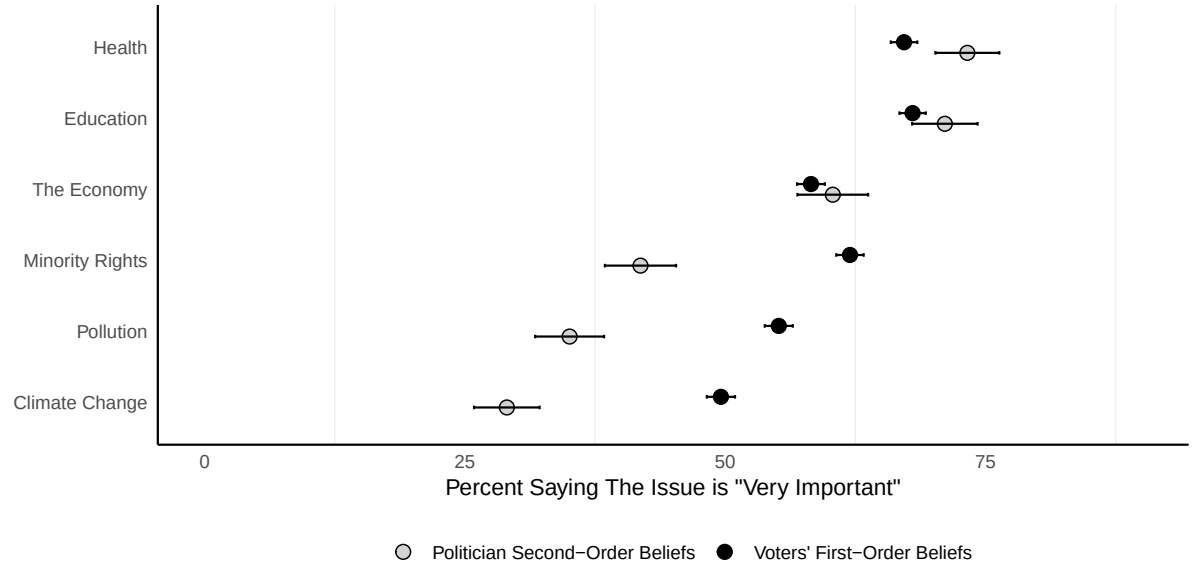
*Note*: Points represent the share of voters (black) and politicians (grey) who say each issue is a "very important" problem facing Indonesia today. First-order beliefs were measured in November 2023 for politicians and in December 2023 for voters. We include 95% confidence intervals of our estimates.

hypotheses, politicians hold incorrect second-order beliefs about environmental issues, underestimating voters' first-order beliefs about the importance they attach to climate change and pollution. Specifically, politicians estimated that 28.9% and 34.9% of voters would rate climate change and pollution as "very important," respectively; in fact, 45.9% and 57.5% of voters rated these issues as "very important." However, strikingly, politicians hold nearly perfect second-order beliefs about non-environmental issues. Politicians underestimated voters' first-order beliefs about the importance of education by only 1.9 percentage points (72.9% vs. 71%) and overestimated voters' first-order beliefs about health by 2 percentage points (73.2% vs. 71.2%).[8]

We note a divergence in the alignment of politicians' first- and second-order preferences with voters' first-order preferences. In the case of traditional public goods, such as health and education, politicians' first-order beliefs outstrip voters'. But politicians' second-order beliefs on these issues are indistinguishable from voters' preferences. We interpret this finding as suggesting that, at least for the provision of

8 These results appear partly driven by an egocentric bias on the part of politicians: SI Figure A5 shows that politicians who believe environmental issues to be very important significantly *overestimate* the extent to which voters believe the same, in a reversal of the overall findings.

Figure 2—Voters' First-Order Preferences and Politicians' Second-Order Beliefs




*Note*: Black points represent the share of voters who say each issue is a "very important" problem facing Indonesia today, while the grey points represent the share of politicians who believe voters would rate each issue as a "very important" problem facing Indonesia today. First-order voter beliefs and second-order politician beliefs were measured in December and November 2023, respectively. We include 95% confidence intervals of our estimates.

traditional public goods, politicians are sensitive to strategic calculations in winning votes independent of their own preferences. We detect no such dynamic for climate change or pollution, suggesting that politicians may not place significant weight on the strategic importance of environmental issues for winning votes. We turn to this possibility in greater detail in the next section.

### 4.2 Experimental Results

A straightforward interpretation of the results presented in Figures 1 and 2 is to infer an explanation for observed policy inaction. Politicians underproduce environmental policy both because they do not believe it to be important and also because they underestimate the extent to which voters believe it to be important. If true, providing correct information to politicians about voters' true preferences should increase support for environmental policy action.

We thus turn to evaluating our informational intervention. We present our first set of results in Table 1. Providing politicians with voters' first-order beliefs causes them to upwardly update their own first-

Table 1: The Effect of Intervention on Politicians' First-Order Views

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.045 | 0.018 | 0.049 | 0.048 | 0.095** | 0.060 | 0.098** | 0.087** |
| | (0.041) | (0.041) | (0.047) | (0.046) | (0.045) | (0.040) | (0.044) | (0.041) |
| Constant | 0.724*** | 0.724*** | 0.435*** | 0.530*** | 0.332*** | 0.216*** | 0.302*** | 3.228*** |
| | (0.029) | (0.029) | (0.033) | (0.033) | (0.031) | (0.027) | (0.030) | (0.028) |
| Observations | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

order beliefs about environmental issues. To start, we find that our informational intervention led to a 9.8 percentage point increase in the probability of a politician saying that pollution was a very important issue ($p = 0.027$). Compared to those who received the report after the survey, we observe among the treated group a 6.0 percentage point increase in the likelihood of a politician stating that climate change is important, although the results are not statistically significant ($p = 0.13$). Intriguingly, we find that treated politicians are more likely to state that "minority rights" are "very important," by a margin of 9.5 percentage points ($p = 0.037$). This is likely a result of politicians updating in light of the large attitudinal gap on "civil rights" observed in the comparison of first-order attitudes between politicians and voters. Finally, indexing the two environmental outcomes together such that we capture only those respondents who indicated both pollution and climate change were very important, we find that the treatment led to a 7.2 percentage point bump ($p = 0.06$).

Next, we turn our attention to politicians' second-order beliefs about how voters perceive pollution, presenting the results of our analysis in Table 2. The informational intervention led to a 9.1 percentage point increase in the share of politicians who said that voters would rate the issue as very important ($p = 0.027$). We observe a similar pattern with the issue of climate change: the informational intervention led to a 10.5 percentage point uptick in the probability of a politician saying that climate change was very important to voters ($p < 0.01$). Again, consistent with politicians' updated first-order beliefs, we see a large uptick of 13.2 percentage points in treated respondents' probability to say "minority rights" is very important ($p = 0.002$). Our index capturing whether respondents indicate that voters believe both pollution and climate change are very important also shows a large uptick in the treated group, corresponding to a 9.3 percentage point increase in probability ($p = 0.012$).

Table 2: The Effect of Intervention on Politicians' Second-Order Views

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.026 | 0.012 | 0.074 | 0.044 | 0.132*** | 0.105*** | 0.091** | 0.087* |
| | (0.042) | (0.043) | (0.046) | (0.046) | (0.043) | (0.040) | (0.041) | (0.046) |
| Constant | 0.707*** | 0.685*** | 0.379*** | 0.543*** | 0.241*** | 0.185*** | 0.220*** | 3.149*** |
| | (0.030) | (0.030) | (0.032) | (0.033) | (0.028) | (0.026) | (0.027) | (0.029) |
| Observations | 457 | 457 | 457 | 457 | 457 | 456 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought voters thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

The results suggest that, at least with respect to the environmental issues about which we are concerned in this paper, politicians are both strong learners and keen to bring their views into accord with the voters they represent—perhaps out of fear of sanctioning at the ballot box. On other issues of common concern—the economy, health, and education—politicians possess slightly higher first-order beliefs, but are accurate in their second-order beliefs about voters' preferences on these issues. We do not find evidence that politicians downward update their first-order beliefs after observing voters' true first-order beliefs.

Are politicians more likely to support costly policy action after having received the informational intervention? To investigate this possibility, look at our outcomes which measure politicians' willingness to support costly policy by asking how urgently they believed action was needed on five environmental issues: (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, and (5) air and water pollution. Across both treatment and control groups, the belief that these issues were "somewhat important" or "very important" and merited policy attention was high, thus raising the possibility that our intervention runs up against "ceiling effects."[9] Thus, as with our earlier outcomes, we focus our attention on the share of respondents who indicated that the issue was "very important" and merited policy attention, which evinces greater variation. Importantly, these outcomes capture a "costless" policy act: there is no penalty on the part of politicians for stating that an issue "merits greater attention," meaning we interpret any movement on these outcomes as reflecting a pure preference on the part of politicians. We present the results in Table 3, finding no evidence that our intervention caused politicians to support greater environmental action.

9 For our outcomes, respectively, 93.8%, 97.1%, 89.5%, 97%, and 96.2% dichotomously agreed that the issue merited policy attention.

Table 3: The Effect of Intervention on Policy Support

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Sea Level | Deforestation | Pollution | Carbon Tax | Deforestation Ban |
| Treatment | −0.028 | 0.017 | 0.050 | −0.052 | 0.054 | −0.021 | 0.009 |
| | (0.046) | (0.047) | (0.043) | (0.047) | (0.046) | (0.047) | (0.046) |
| Constant | 0.415*** | 0.489*** | 0.276*** | 0.537*** | 0.377*** | 0.443*** | 0.571*** |
| | (0.033) | (0.033) | (0.030) | (0.033) | (0.032) | (0.033) | (0.033) |
| Observations | 454 | 456 | 452 | 456 | 456 | 450 | 455 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban. All outcomes are dichotomized to capture the most extreme response on the Likert-scale.

The results presented in Table 3 look at outcomes that capture a general sense of urgency to act on environmental problems. We also asked respondents if they would support two different specific initiatives designed to manage the impacts of climate change: (1) a carbon tax and (2) a ban on deforestation. Again, to manage concerns over ceiling effects, we focus on the percentage of politicians who indicated that the two policy proposals were "very important." We estimate the impact of our informational intervention on politicians' responses to these questions, presenting the results in Table 3. We detect no evidence that politicians who received the informational intervention are any more likely to support these specific policy proposals. We note that policy support may be a high bar. These are momentous policies with significant economic costs, and information alone may not be enough. At the same time, our measured outcome is merely a private statement of policy support. Our intervention does not induce words, let alone actions.

# 5 Three Mechanisms

Preferences among voters do not directly translate into policy action by politicians. We probe three potential mechanisms.

## 5.1 Fixed Costs to Updating

Our first explanation is that misperceptions *do* in fact matter, but only for politicians who were particularly wrong in their evaluation of voters' preferences. Updating one's policy position incurs a set of fixed costs on politicians. Appearing hypocritical, for instance, is both psychologically unpleasant and may carry an electoral penalty. Thus, the majority of politicians who hold nearly correct second-order beliefs about voter preferences may be averse to updating their policy positions even in light of new information. Politicians

Table 4: The Effect of Informational Treatment by Scale of Misperception

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Sea Level | Deforestation | Pollution | Carbon Tax | Deforestation Ban |
| Treatment ($T$) | 0.016 | 0.009 | 0.059 | −0.084 | 0.038 | −0.051 | −0.032 |
| | (0.059) | (0.054) | (0.057) | (0.052) | (0.052) | (0.057) | (0.050) |
| Misperception ($M$) | −0.085 | −0.095 | −0.249*** | −0.108* | −0.177*** | −0.099 | −0.155*** |
| | (0.072) | (0.061) | (0.060) | (0.060) | (0.059) | (0.070) | (0.054) |
| $T$ X $M$ | 0.066 | 0.143* | 0.178* | 0.160* | 0.158* | −0.005 | 0.186** |
| | (0.098) | (0.085) | (0.092) | (0.085) | (0.085) | (0.107) | (0.079) |
| Constant | 3.350*** | 3.492*** | 3.229*** | 3.551*** | 3.386*** | 3.447*** | 3.605*** |
| | (0.044) | (0.039) | (0.040) | (0.036) | (0.038) | (0.041) | (0.034) |
| Observations | 419 | 420 | 416 | 420 | 420 | 416 | 419 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban.

who hold very wrong second-order beliefs, however, may be more willing to incur the fixed costs associated with updating one's policy position on the wager that doing so improves their electoral prospects.

To investigate this possibility further, we draw on politicians' responses on the first wave of the survey to construct a measure of preference misperception that captures the difference in politicians' perceptions of voter preferences. We construct a weighted measure based on our Likert-scale question capturing voters' beliefs about the importance of climate change[10]. We construct a new variable for each politician, which is the true value of voter preferences ($C = 3.39$) described above less the numeric value of their second-order beliefs. When this index is high, individual politicians' scale of misperception is high at baseline, and vice versa.

We present the results of our analysis in Table 4. The results of this analysis indicate that informational intervention was more effective for politicians who *a priori* held inaccurate perceptions of voters' concern over climate change. For ease of interpretation, in the SI (SI Table A18), we dichotomize our misperception index into politicians with high and low levels of misperception, and further dichotomize our outcome variables to capture whether politicians agreed that issues merited policy attention and whether they supported specific policy action. The most instructive results are presented in columns (4) and (7), which

10 Specifically, we construct a numeric variable in response to the question, "In your opinion, how important is [climate change] to Indonesian voters?"

$$C_i = \begin{cases} 4 & \text{if "Very important"} \\ 3 & \text{if "Somewhat important"} \\ 2 & \text{if "Somewhat unimportant"} \\ 1 & \text{if "Very unimportant"} \end{cases}$$

deal with deforestation and provide support for the idea that larger reductions in misperceptions lead to an interest in policy action. Looking at column (4), politicians who scored high on our misperception index at baseline, upon receiving treatment, observed a near-doubling in the probability that they "strongly agree" with the statement that deforestation merits policy attention. Consistent with this, column (7) shows that politicians who scored highest on our misperception index were much more likely to support a ban on deforestation upon learning about voter preferences. We note that, for most outcomes, the coefficients do not sum to values greater than zero. That is, while our intervention does work to correct misperceptions (i.e., the negative effect of $M$), it does not induce politicians to be more supportive of environmental policy than untreated politicians without misperceptions.

### 5.2 Elite Capture

Our second mechanism considers the distortionary costs that politicians incur from policy action. These costs may be high enough to deter action, even after politicians update their preferences in the face of new evidence. In Indonesia, elite interests are often able to capture politicians through outright bribery. But the scale of this "elite capture" varies across districts. Districts with an abundance of natural resources, for instance, are often those most likely to be captured by elite interests as wealthy individuals may perceive an outsize upshot to having policies favorable to their investments. In these places, then, politicians will be less sensitive to the preferences of voters—even upon updating their second-order beliefs.

We test this possibility by drawing on administrative data collected by the Indonesian Anti-Corruption Commission (KPK).[11] The dataset draws on documents submitted by top local government officials, who all must report their total assets on a yearly basis. We take the average asset value of the top ten most senior officials in each district (the elected executive and nine senior bureaucrats), and we construct a standardized measure that captures the scale of wealth possessed by public officials in a given district. This measure captures the extent of elite capture: public officials are remunerated modestly in Indonesia, and there are few avenues for enrichment in office outside of illegal activity.

We present our results in Table 5. We focus on policy outcomes: whether politicians were inclined to believe a suite of environmental issues merited policy attention, and whether they would support specific policies. Here, we estimate a model that examines heterogeneity in our main treatment effect according to our measure of elite capture. We highlight two results. First, column (7) shows that politicians in places

11 We thank [REDACTED] for generously sharing these recently digitized data with us.

Table 5: The Effect of Intervention on Policy Support, by Level of Clientelism

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Sea Level | Deforestation | Pollution | Carbon Tax | Deforestation Ban |
| Treatment ($T$) | 0.010 | 0.028 | 0.045 | −0.042 | 0.069 | −0.033 | −0.019 |
| | (0.048) | (0.050) | (0.046) | (0.050) | (0.049) | (0.049) | (0.047) |
| Asset Index ($Z$) | −0.390** | 0.060 | 0.187 | 0.121 | 0.065 | 0.348* | 0.544*** |
| | (0.162) | (0.195) | (0.186) | (0.194) | (0.188) | (0.181) | (0.147) |
| $T$ X $Z$ | 0.736*** | 0.201 | −0.087 | 0.210 | 0.280 | −0.232 | −0.540** |
| | (0.273) | (0.296) | (0.260) | (0.305) | (0.294) | (0.266) | (0.238) |
| Constant | 0.394*** | 0.492*** | 0.286*** | 0.543*** | 0.380*** | 0.462*** | 0.600*** |
| | (0.033) | (0.034) | (0.032) | (0.034) | (0.033) | (0.034) | (0.032) |
| Observations | 454 | 456 | 452 | 456 | 456 | 450 | 455 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban. All outcomes are dichotomized to capture the most extreme response on the Likert-scale.

with high elite capture, upon receiving information about voters' high concern with environmental issues, are less likely to support restrictions on deforestation. Meanwhile, those in districts with low elite capture are more likely to support deforestation restrictions upon receiving the information. This is consistent with our hypothesis: if elites had not captured politicians, it appears our intervention would have been more successful in generating support for environmental policy action in terms of a deforestation ban. However, in contrast to our expectations, column (1) reveals that politicians in places with high levels of elite capture, despite being less inclined to support specific policy proposals in the face of voter preferences, are *more likely* to agree that extreme heat is an issue that merits policy attention when prompted with our informational intervention.

### 5.3 Voter Priorities

Our third explanation concerns the extent to which voters prioritize environmental policy in their preferences. Environmental policy may be costly in a non-distortionary sense if it displaces progress on other issues. Politicians may appreciate that voters value the environment, but also recognize that voters prioritize other issues. In this sense, politicians may be accurate in their perceptions of voters' underlying preferences. Our benchmark analysis asked voters to rate the importance of environmental concerns in *abstract* and *absolute* terms. We returned to voters with a follow-up survey in August 2024 to elicit *concrete* and *relative* preferences.

First, we asked respondents to rate the importance of various climate-related crises afflicting their

own communities. In the top panel of Figure 3, we present the share indicating that a given crisis is either "very" or "somewhat" important in their community, finding that at least 80% of respondents were concerned about four scenarios. For instance, 93.6% of respondents in our sample indicate that they are somewhat or very concerned by "property damage or health impacts from forest fires or smoke" in their community. Voters do care about environmental issues in a concrete sense.

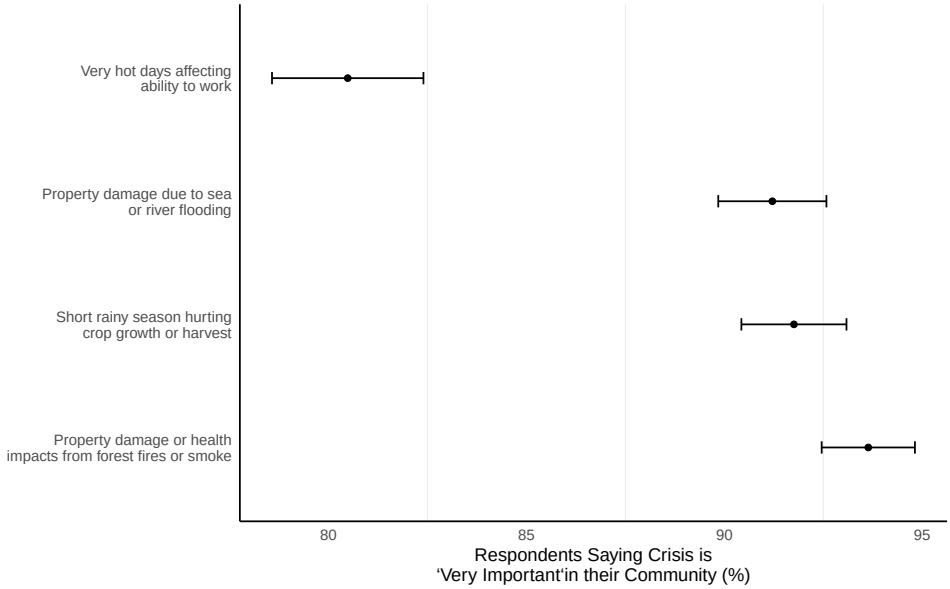
Second, we asked voters to identify which of two statements they agreed with more: whether "the Indonesian government should be more active in protecting our environment, even though it may slow down economic development" or whether "the Indonesian government should prioritize economic development, even if it means polluting our environment." We present the results in the bottom panel of Figure 3, showing that 88.0% of respondents indicate a preference for the former statement. Indonesian voters are cognizant of and willing to undertake the economic costs associated with environmental action. We benchmark our results against an analogous question in the World Values Survey and find similar results.[12]

Third, we measure voters' relative preferences for policy action with a suite of measurement strategies: (1) asking them to identify the single most important issue facing Indonesia today; (2) asking them to rank the relative importance of issues facing Indonesia today; and (3) providing them with conjoint experiment randomly varying the traits and policy platforms of two hypothetical candidates for elected office in which their platforms corresponded to the issues measured in earlier items. In Figure 4, we present a comparison of these measurements against the benchmark approach in our main analysis that uses a Likert-style question. For all measurement strategies, voters' preferences for action on climate change and pollution rank as the bottom two options.

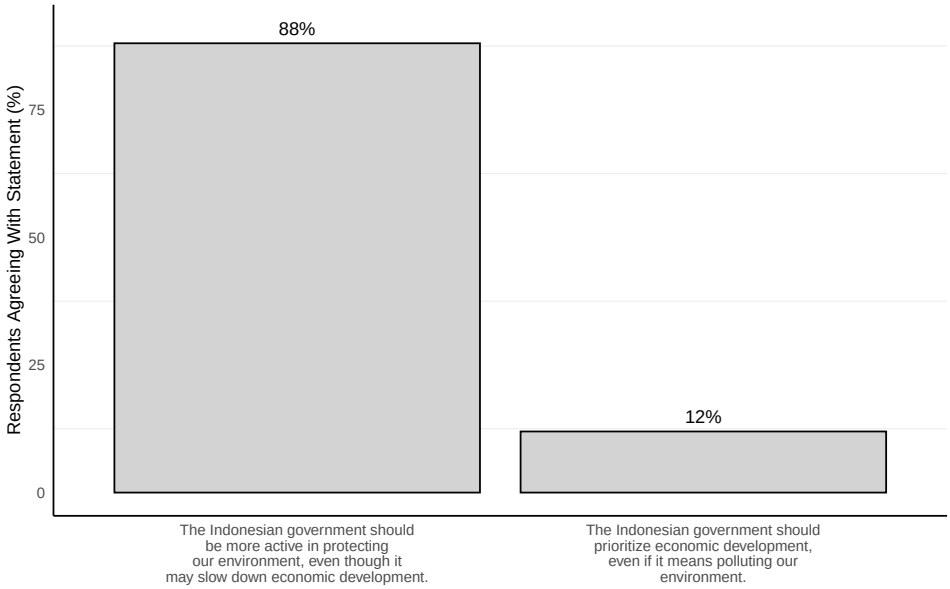
Voters hold relativistic preferences. They demand action on environmental issues, but they hold stronger preferences for other issues. For all measurement strategies other than asking voters to identify the single most important issue, we detect a consistent rank ordering of preferences across topics. Moreover, politicians' second-order beliefs of voters' preferences are accurate with respect to this rank ordering. Limited environmental policy may therefore be the natural result of low relative desire. At the same time, we note that voters' absolute support for environmental policy remains an important source of latent demand for action, particularly if economic growth lessens the constraints on policy action over time. Voters are constrained, rather than indifferent or opposed.

12 The World Values Survey question was fielded in Wave 7 of the 2018 Indonesian survey. See SI Figure A2.

Figure 3—Voter Beliefs About Concrete Issues and Trade-Offs of Policy



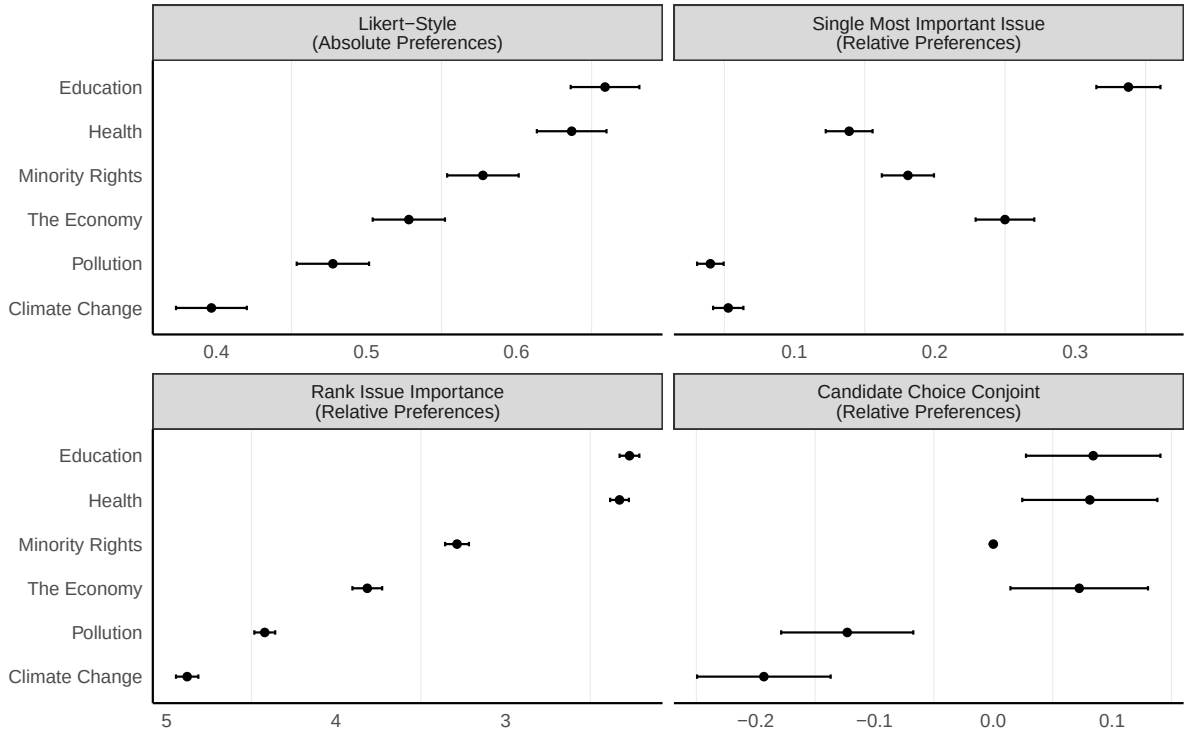

(a) Concrete Issues




(b) Environmental Action Trade-Off

*Note*: Data from an August 2024 online survey of 1,650 Indonesian adults. Quotas are imposed on region, gender, and age. The left-hand panel captures responses to a question probing respondents whether the listed issues have affected their community in the last five years. The right-hand panel asks respondents to select from the two listed statements and select the one closer to their views.

Figure 4—Comparison of Voters' First-Order Preferences Across Measurement Strategies




*Note*: Data is drawn from an August 2024 survey of 1,650 Indonesian adults conducted online, using quotas for gender, region, and age. The top-left panel measures the percentage of respondents indicating a given issue is "very important;" the top-right panel measures the percentage of respondents indicating each issue is the "most important" facing Indonesia today; the bottom-left panel captures the average rank of each issue according to voter; the bottom right panel captures the average marginal component effects (AMCE) of a legislative candidate emphasizing each issue on hypothetical vote choice in a conjoint experiment framework. We include 95% confidence intervals of our estimates.

## 6 Robustness and Extensions

We conduct several analyses to probe the robustness of our results, and consider extensions of our preferred interpretations. To start, we examine whether the effects of our experimental intervention are conditioned by politicians' own first-order preferences for environmental action. It might be the case, for instance, that politicians with especially strong first-order preferences are averse to updating their support for environmental policy even in light of new information about voters' preferences. We test this possibility, presenting the results in SI Table A34, finding no variation in the effect of our informational treatment according to whether politicians care a lot—or a little—about climate change.

One concern relates to the possibility of the results being driven by social desirability bias—rather than a genuine process in which politicians update their first- and second-order beliefs in light of new information. To test this possibility, we draw on a method used by Kuipers, Nellis and Weaver (2021) in the Indonesian context. We leverage natural variation in the extent to which survey respondents are primed to feel social desirability bias by splitting respondents according to whether or not someone else was present during the interview. Politicians who were interviewed with staff or family members present may have felt greater social pressures than those who were alone with the enumerator. We rerun our main analyses, interacting the treatment variable with an indicator capturing if anyone else was present during the interview. We present the results in SI Tables A31 and A32, and we find no effects.

# 7 Conclusion

We study environmental policy inaction in Indonesia. We find that voters care about environmental issues more than politicians, and that politicians underestimate voter concerns. Correcting politicians' misperceptions in an informational experiment leads to learning, but no greater support for environmental policy action. Our findings are consistent with a simple model of policymaking with costly policy action. Our informational intervention was effective in generating policy support among politicians who were heavily misinformed at baseline and for those in constituencies with low levels of clientelism, where elite capture punishes deviation from the status quo. At the same time, both voters and politicians are wary that environmental action might come at the expense of other policies. Our results speak to ongoing debates around the drivers of environmental policy inaction—and potential solutions to spur change. Our main contribution is to show that existing explanations related to preferences, perceptions, and policy costs are independently insufficient. Action instead requires progress on all fronts in combination.

We expect that our results are generalizable, especially to other low-to-middle-income countries. These findings seem likely to replicate in other patronage democracies, where the costs of policy action are especially high. In these contexts, entrenched interests antagonistic to environmental action can inflict costs on politicians who wish to deviate from the status quo. Moreover, voters and politicians may harbor mental models of environmental action that pit it against economic development and the provision of traditional public goods. Each presents headwinds to environmental action.

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# Supplementary Information


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# A Descriptive Statistics, Balance, and Preliminaries

## A.1 Ethical Considerations and Pre-Registration

We took steps to avoid potential harm that may have stemmed from our experimental intervention. To ensure that study participants in the control condition did not suffer undue harm from withholding the treatment, which constituted the form of a report on voter preferences, candidates in the control condition were given access to the report at the conclusion of the second wave of the survey. Importantly, the information contained in the report took the form of summary statistics from public opinion survey questions posed to voters. These questions were adapted from widely-used survey instruments, meaning analogous data are widely reported in the popular presses in Indonesia. Candidates not included in the study were thus not prevented from accessing the substantive content of the treatment on their own accord. Our study was reviewed and approved by the [REDACTED] International Review Board (IRB).

We also pre-registered our study on the Open Science Framework (OSF) registry. We deviate from our pre-registered specifications in three ways. First, we had pre-registered an intent to analyze our outcomes as continuous variables in their original 4-point Likert-scale form. Because our survey responses clustered on the third and fourth points of the scale, we instead analyze our outcomes as a binary variable that captures whether respondents offered the most extreme response ("4," e.g., "very important."). We also conduct our main analyses in the pre-registered specification in the SI (see SI Section B.2). Second, we pre-registered an intent to analyze the full sample of respondents. However, for reasons discussed above, we encountered several implementation challenges that diluted the impact of the treatment: (1) enumerators reported that many respondents did not understand the content of the report and (2) many respondents had already received the report from peers. To manage these concerns, we thus focus our attention on a more restrictive sample of respondents who were judged to understand the report by the enumerator and had not yet encountered the report from elsewhere. Third, we returned to voters after our experiment with another set of questions aimed at measuring preferences for environmental policy. These additional data help in disentangling competing interpretations of our experimental results.

## A.2 Outcomes and Question Text

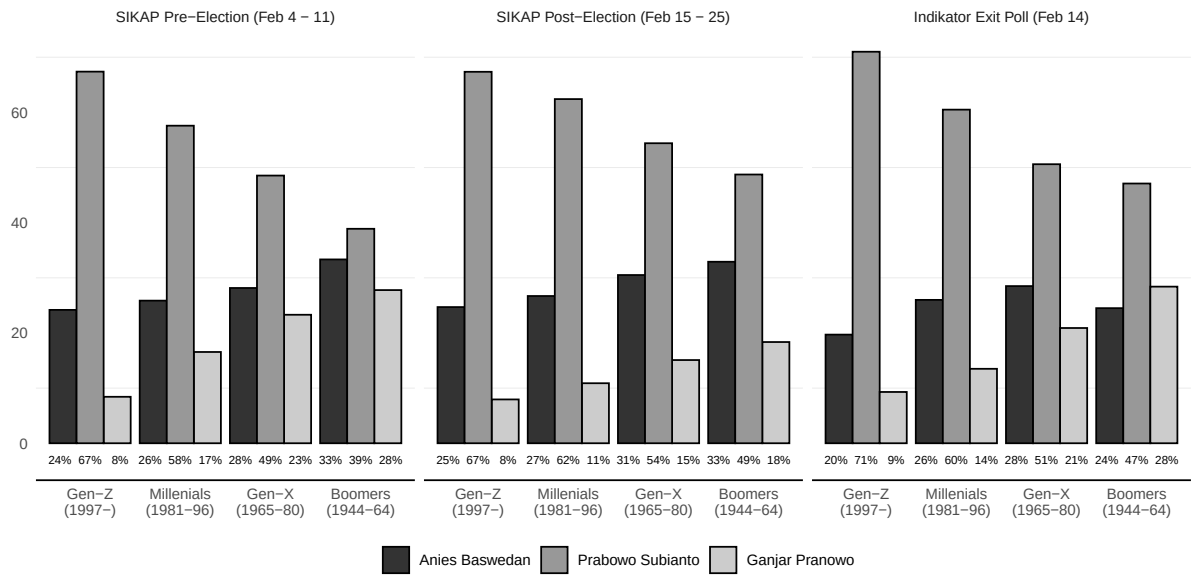
| Questions | Answer Options |
|---|---|
| **First-Order Preference Questions (Politicians/Voters)**<br>The following are some problems currently facing Indonesia. How important are these issues to you [as a person who has authority or will have the authority to make public policy][as an Indonesian citizen]?<br><br>1. Health; 2. Education; 3. Civil Rights; 4. Air/Water Pollution; 5. Minority Rights; 6. Climate Change; 7. Economy/Development | Very important; Somewhat important; Somewhat unimportant; Very unimportant |
| **Second-Order Preference Questions(Politicians/Voters):**<br>In your opinion, how important are these issues to the [voters you represent or will represent][politicians who represent you]?<br><br>1. Health; 2. Education; 3. Civil Rights; 4. Air/Water Pollution; 5. Minority Rights; 6. Climate Change; 7. Economy/Development | Very important; Somewhat important; Somewhat unimportant; Very unimportant |
| **Policy Attention Questions (Politicians):**<br>A number of people think that Indonesia is facing many problems from changes in global warming. I will show you a list of these problems and I would like you to express your views on how important these problems are.<br><br>1. Extreme Heat; 2. Floods; 3. Rising Sea Levels; 4. Deforestation; 5. Air/Water Pollution | Very important; Somewhat important; Somewhat unimportant; Very unimportant |
| **Policy Action Questions (Politicians):**<br>In recent years, policymakers around the world have proposed a number of solutions to reduce the amount of CO2 emerging from many countries. I will show you a list of some of these policies, and as a regional politician, please tell me how important you think the following policies are:<br>1. Implementation of an emissions tax so that companies that produce pollution must pay or be held responsible<br>2. Protect forests so that companies or farmers do not burn or deforest | Very important; Somewhat important; Somewhat unimportant; Very unimportant |
| **Environment Relative Preference (Voters):**<br>1. We are interested in understanding what issues Indonesian voters view as important. Please see the following list of issues. Choose one issue that you consider the most important for Indonesia today. | Health; Education; Civil rights; Air or water pollution; Climate change; Economic development |
| 2. We are interested in understanding what issues Indonesian voters view as important. Please see the following list of issues. Please rank the following issues based on how important they are for Indonesia today. | Health; Education; Civil rights; Air or water pollution; Climate change; Economic development |
| 3. Many Indonesians care about environmental issues. However, there are also those who argue that government regulations to protect the environment can hinder economic development. Which one of the following statements is more in line with your views? | a. The Indonesian government should be more active in protecting our environment from pollution, even if it may slow down economic development.<br>b. The Indonesian government should prioritize economic development, even if that means polluting our environment. |
| **Concrete Environmental Preferences (Voters):**<br>Below are several issues or problems that Indonesia is currently facing. How important or unimportant do you think each issue has been in your community in the last five years?<br>1. A short rainy season inhibiting crop growth or harvest; 2. Very hot days affecting ability to work; 3. Damage to property due to sea or river flooding; 4. Property damage or health impacts due to forest fire smoke | Very important; Somewhat important; Somewhat unimportant; Very unimportant |

## A.3 SIKAP Sample

Table A1: Sample Characteristics

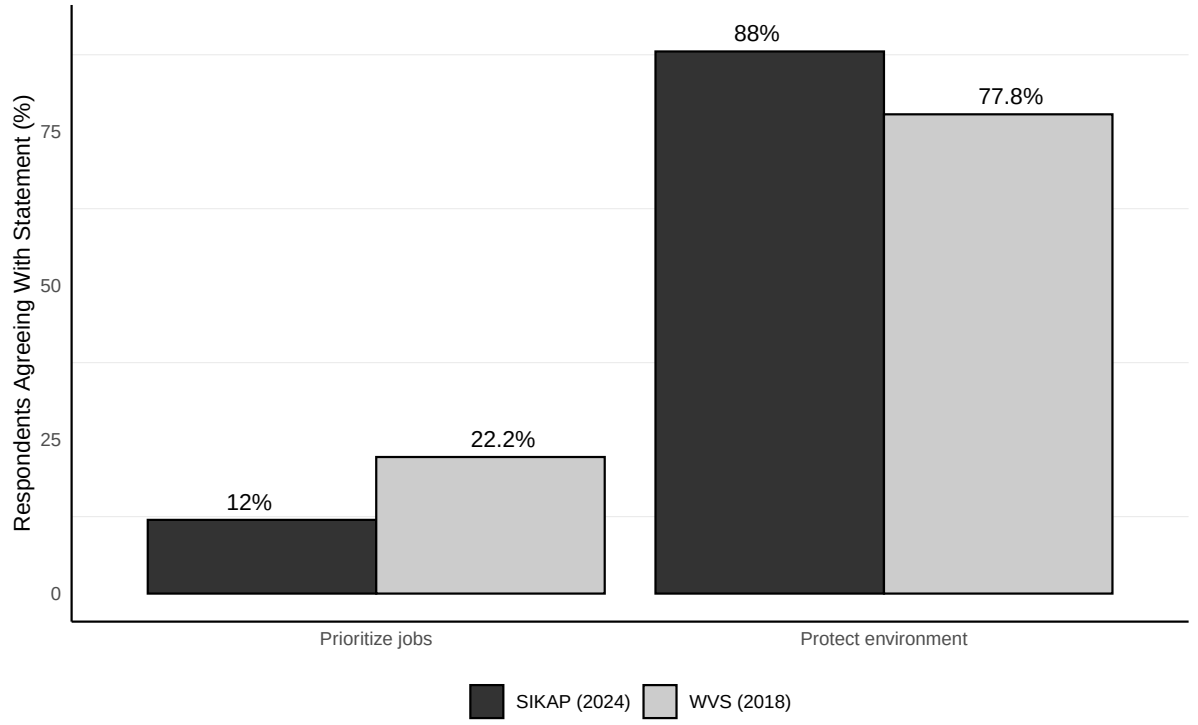
| Categories | SIKAP W1-W13 | Population |
|---|---|---|
| **Gender (Quota)** | | |
| Male | 50.4% | 49.8% |
| Female | 49.6% | 50.2% |
| **Age (Quota)** | | |
| 18-24 | 18.50% | 17.9% |
| 25-34 | 25.86% | 26.3% |
| 35-44 | 23.82% | 22.4% |
| 45-54 | 18.92% | 16.4% |
| 55+ | 12.90% | 17% |
| **Region (Quota)** | | |
| Sumatera | 19.96% | 20.4% |
| Java and Bali | 60.17% | 61.1% |
| Central and Eastern Provinces | 19.86% | 18.5% |
| **Religion** | | |
| Islam | 82.22% | 87.4% |
| Christian | 14.14% | 9.3% |
| Others | 3.64% | 2.8% |
| **Education** | | |
| Less than High School | 3.61% | 67.4% |
| High School | 36.52% | 25.3% |
| Higher than High School | 59.87% | 7.2% |

Figure A1—Vote Preference Benchmark Comparison, by Age Group




*Note*: Data drawn from week 11 (February 4 - 11, 2024) and weeks 12 and 13 (February 15 - 25, 2024) of the SIKAP project. Vote share estimates exclude respondents who indicated that they "did not know" or "did not vote", scaling percentages accordingly. The Indikator exit poll draws on a stratified random sample of 2,975 voters drawn from as many polling stations and was conducted on election day (February 14, 2024).

Figure A2—Support for Environmental Protection, SIKAP vs. WVS




*Note*: Data drawn from week 36 of the SIKAP project (2024) and wave 7 of the World Values survey (2018). Question text varies slightly. SIKAP questions asks voters which of the two statements are closer to their views: (1) "The Indonesian government should be more active in protecting our environment, even though it may slow down economic development" or (2) "The Indonesian government should prioritize economic development, even if it means polluting our environment." The WVS question text reads: "Here are two statements people sometimes make when discussing the environment and economic growth. Which of them comes closer to your own point of view? A. Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs B. Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent"

## A.4 Balance Tests

| **Characteristic** | **0**, N = 232[1] | **1**, N = 225[1] | **p-value**[2] |
|---|---|---|---|
| Gender | 0.78 (0.42) | 0.76 (0.43) | 0.7 |
| Age | 47.24 (10.42) | 43.84 (10.70) | <0.001 |
| College diploma | 0.69 (0.47) | 0.70 (0.46) | 0.8 |
| Political experience | 0.65 (0.48) | 0.59 (0.49) | 0.2 |

[1]Mean (SD)
[2]Welch Two Sample t-test

## A.5 Intervention Report

Figure A3—Intervention Report, Part One

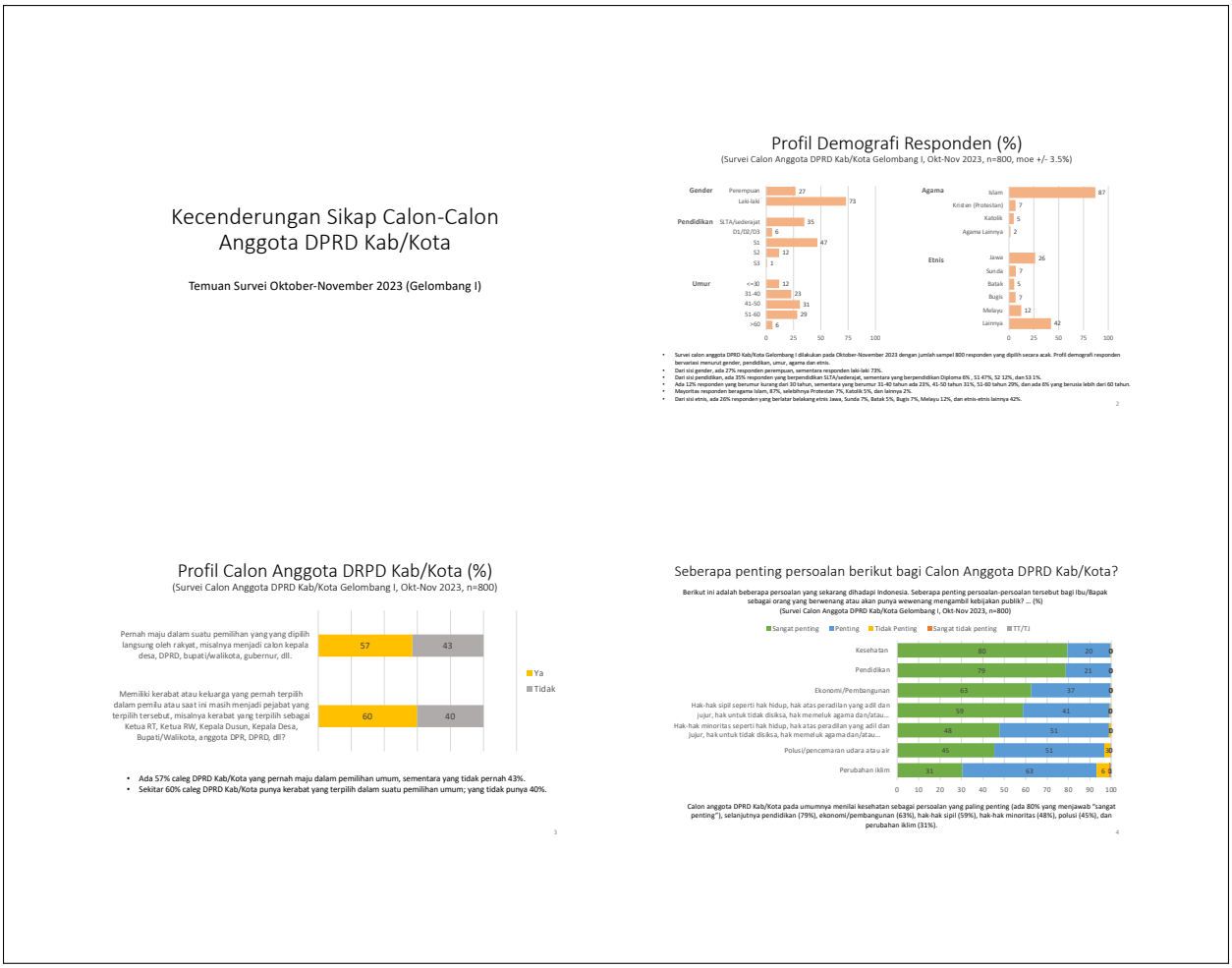
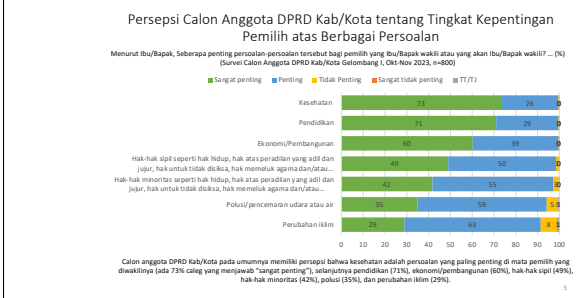
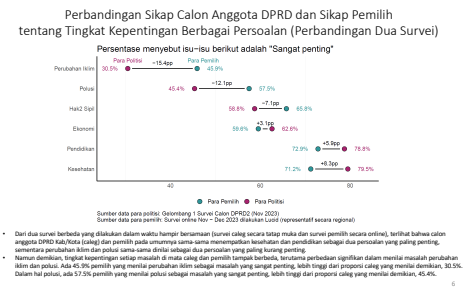
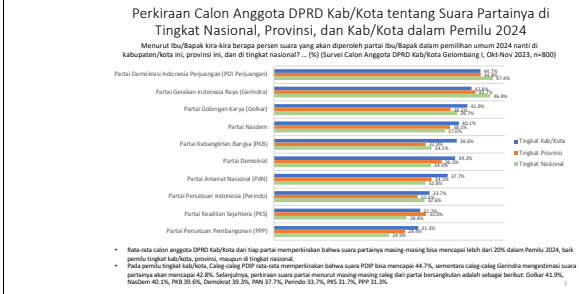
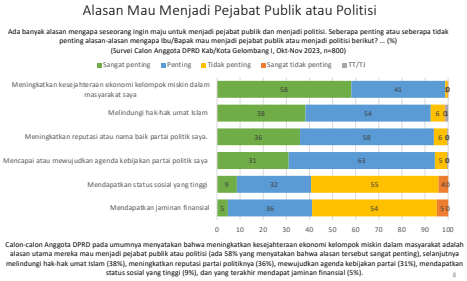


Figure A4—Intervention Report, Part Two



# B Additional Analyses

## B.1 Descriptive Analysis

Table A3: Voters First-Order and Politicians' Second-Order Beliefs, by Amount of Time Meeting With Voters

| | | Politicians' Second-Order Beliefs | | | | | |
|---|---|---|---|---|---|---|---|
| | | Time Meeting Voters | | | Difference in Beliefs | | |
| | Voters' Beliefs (V) | <1 hr (1) | 1-5 hrs (2) | 5 hrs (3) | V - (1) | V - (2) | V - (3) |
| Climate Change | 49.5% | 20.8% | 31.4% | 36.8% | 28.6% | 18.1% | 12.7% |
| Pollution | 55.3% | 24.5% | 37.5% | 46.4% | 30.8% | 17.8% | 8.9% |
| Civil Rights | 62.0% | 37.5% | 49.0% | 68.0% | 24.5% | 13.0% | −6.0% |
| Economic Development | 58.5% | 52.6% | 59.4% | 74.4% | 5.9% | −0.9% | −15.9% |
| Health | 67.3% | 67.2% | 72.3% | 83.2% | 0.2% | −4.9% | −15.9% |
| Education | 68.1% | 64.6% | 69.5% | 79.2% | 3.5% | −1.4% | −11.1% |

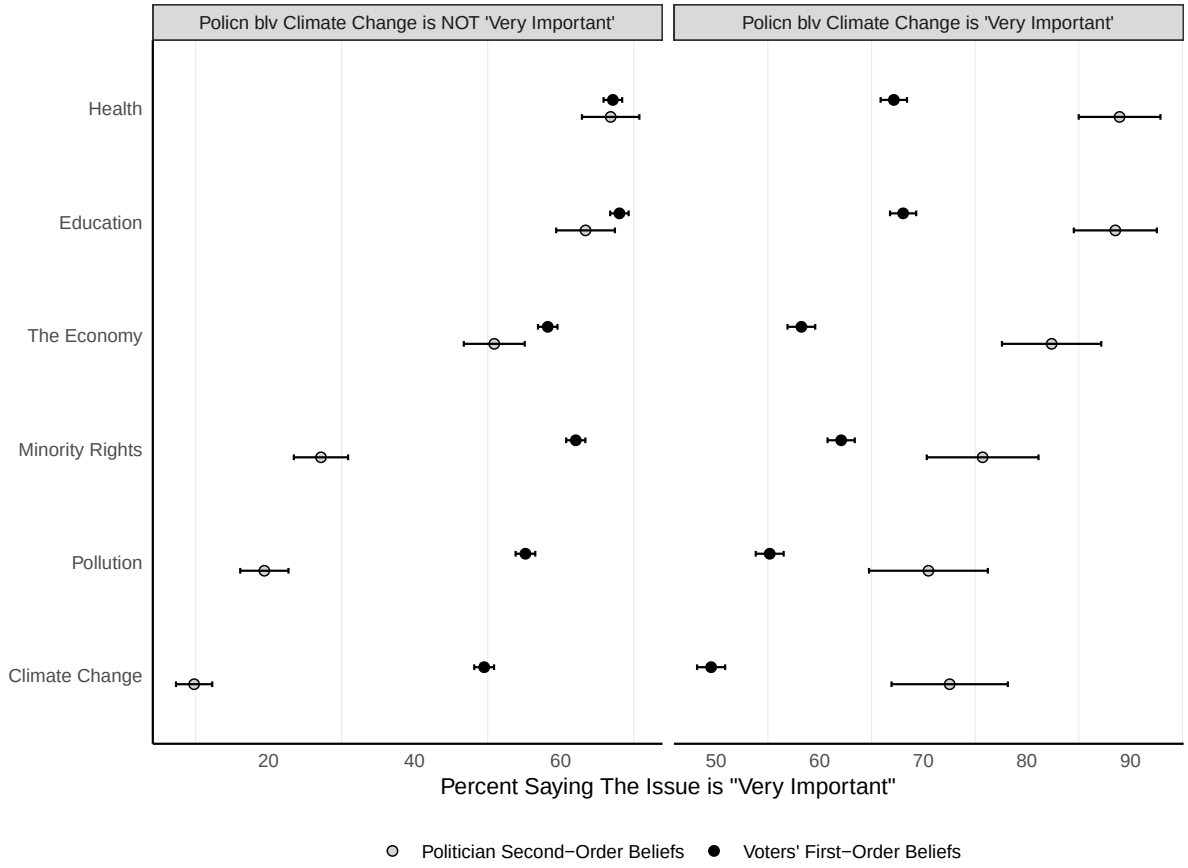
Table A4: Voters First-Order and Politicians' Second-Order Beliefs, by Amount of Money Spent

| | | Politicians' Second-Order Beliefs | | | | | |
|---|---|---|---|---|---|---|---|
| | | Money Spent | | | Difference in Beliefs | | |
| | Voters' Beliefs (V) | <10m (1) | 10-50m (2) | 50m (3) | V - (1) | V - (2) | V - (3) |
| Climate Change | 49.5% | 30.6% | 26.8% | 29.6% | 18.9% | 22.6% | 19.8% |
| Pollution | 55.3% | 30.2% | 36.1% | 37.1% | 25.2% | 19.2% | 18.2% |
| Civil Rights | 62.0% | 48.8% | 45.4% | 52.1% | 13.2% | 16.6% | 9.9% |
| Economic Development | 58.5% | 59.9% | 61.5% | 60.9% | −1.5% | −3.0% | −2.5% |
| Health | 67.3% | 70.2% | 73.7% | 75.2% | −2.9% | −6.3% | −7.9% |
| Education | 68.1% | 71.5% | 70.7% | 70.0% | −3.4% | −2.6% | −1.9% |

Table A5: Voters First-Order and Politicians' Second-Order Beliefs, by List Position

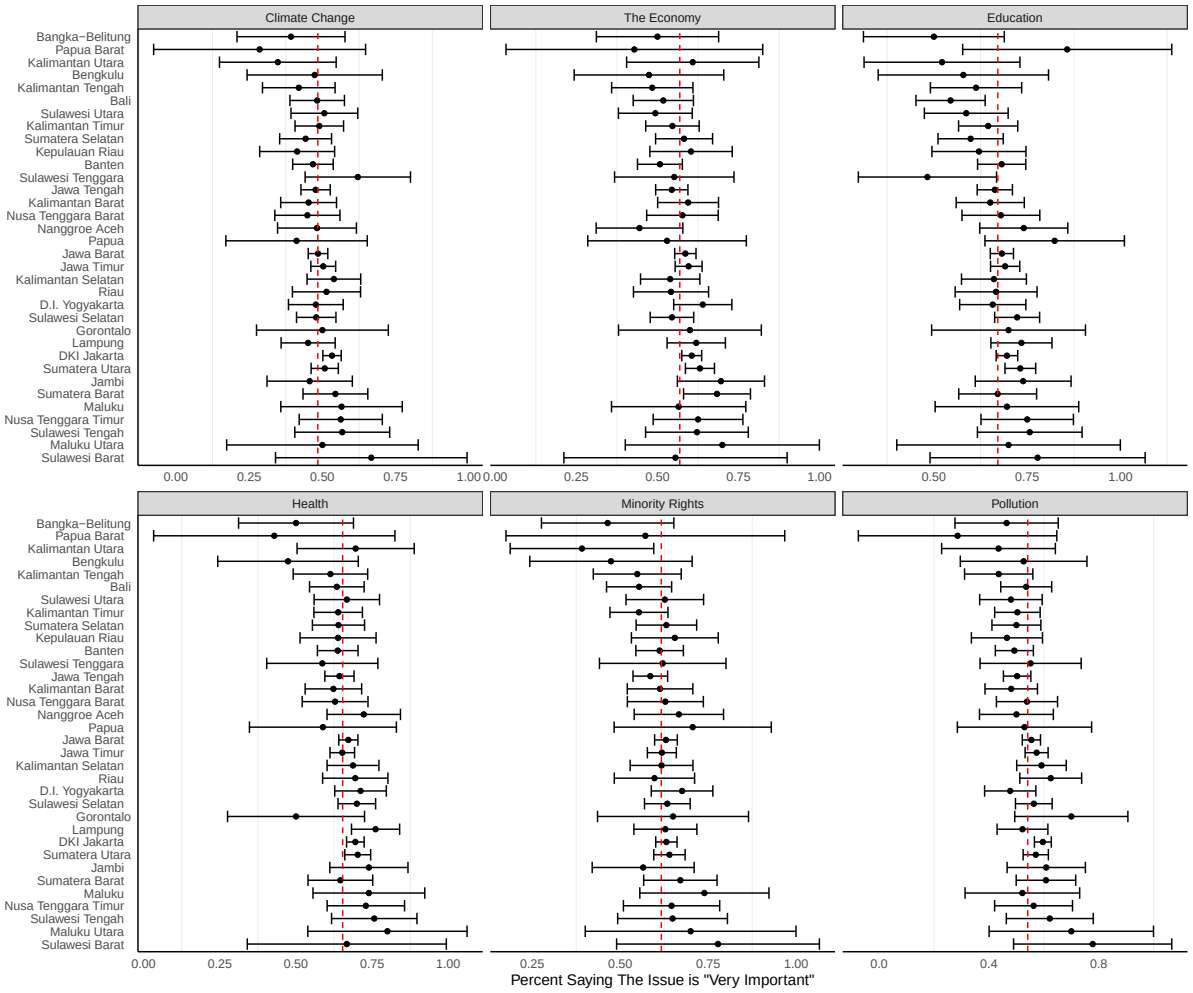
| | | Politicians' Second-Order Beliefs | | | | | |
|---|---|---|---|---|---|---|---|
| | | List Position | | | Difference in Beliefs | | |
| | Voters' Beliefs (V) | (1) | (2) | (3) | V - (1) | V - (2) | V - (3) |
| Climate Change | 49.5% | 30.0% | 30.4% | 25.0% | 19.5% | 19.1% | 24.5% |
| Pollution | 55.3% | 34.4% | 36.3% | 33.5% | 20.9% | 19.0% | 21.8% |
| Civil Rights | 62.0% | 50.8% | 49.6% | 45.3% | 11.2% | 12.4% | 16.7% |
| Economic Development | 58.5% | 60.9% | 62.2% | 56.6% | −2.4% | −3.8% | 1.9% |
| Health | 67.3% | 77.3% | 72.6% | 67.9% | −9.9% | −5.2% | −0.6% |
| Education | 68.1% | 72.9% | 71.1% | 67.9% | −4.8% | −3.0% | 0.2% |

Figure A5—Voters' First-Order Preferences and Politicians' Second-Order Beliefs, by Politicians' First-Order Beliefs




*Note*: Black points represent the share of voters who say each issue is a "very important" problem facing Indonesia today, while the grey points represent the share of politicians who believe voters would rate each issue as a "very important" problem facing Indonesia today. First-order voter beliefs and second-order politician beliefs were measured in December and November 2023, respectively. We include 95% confidence intervals of our estimates.

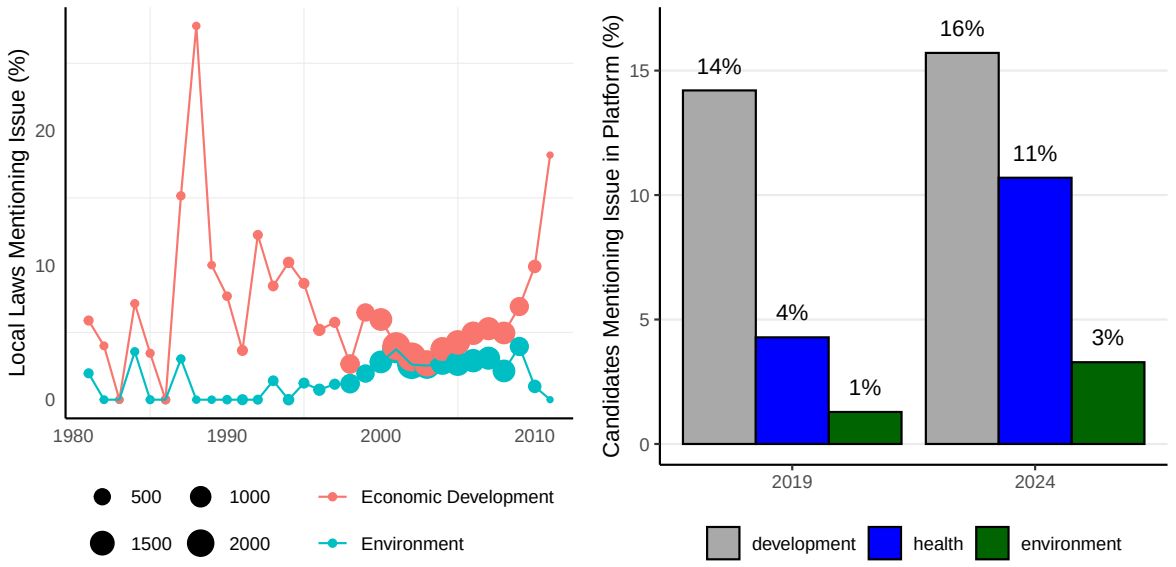
Figure A6—Voters' First-Order Preferences, by Province




*Note*: Black points represent the share of voters who say each issue is a "very important" problem facing Indonesia today, with 95% confidence intervals, for each province in Indonesia.

### B.1.1 DPRD-II Candidate Platforms and Local Laws

Figure A7—The Low Supply of Environmental Policy in Local Indonesian Politics




(a) Local Laws

(b) Candidate Platforms

*Note*: The left hand panel shows the share of local government regulations passed between 1980-2012, categorized by whether they concerned economic development (red) or environment (blue). Data scraped from the Ministry of Home Affairs website. The right hand panel shows the share of candidates for local legislative office who mention different issues in their statements for 2019 and 2024 elections. Data scraped from the Indonesian electoral commission website.

### B.1.2 SUTVA Violation Descriptive Statistics

Table A6: SUTVA Violations, by Demographic Characteristics

| Group | Contaminated (report obtained early) | N | Male (%) | College (%) | Age | Islam (%) | Run Before (%) |
|---|---|---|---|---|---|---|---|
| Control | No | 314 | 75.8% | 58.6% | 47.2 | 88.2% | 59.7% |
| Control | Yes | 89 | 73.0% | 59.6% | 43.4 | 82.0% | 51.7% |
| Treated | No | 291 | 73.2% | 59.8% | 44.1 | 88.3% | 56.4% |
| Treated | Yes | 106 | 71.7% | 62.3% | 42.3 | 85.8% | 53.8% |

### B.1.3 Climate Change Misperceptions, Descriptive Statistics

Table A7: Misperceptions, by Demographic Characteristics

| Misperception | N | Male (%) | College (%) | Age | Islam (%) | Run Before (%) | HH (avg) | List (avg) |
|---|---|---|---|---|---|---|---|---|
| High | 122 | 73.0% | 54.1% | 43.98 | 91.8% | 52.5% | 0.14 | 1.86 |
| Low | 1408 | 73.4% | 60.2% | 45.03 | 86.6% | 57.5% | 0.15 | 1.87 |

## B.2 Unrestricted samples

### B.2.1 First-order Beliefs Outcomes

**Full restriction sample:**

Table A8: The Effect of Intervention on Politicians' First-Order Views

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.045 | 0.018 | 0.049 | 0.048 | 0.095** | 0.060 | 0.098** | 0.087** |
| | (0.041) | (0.041) | (0.047) | (0.046) | (0.045) | (0.040) | (0.044) | (0.041) |
| Constant | 0.724*** | 0.724*** | 0.435*** | 0.530*** | 0.332*** | 0.216*** | 0.302*** | 3.228*** |
| | (0.029) | (0.029) | (0.033) | (0.033) | (0.031) | (0.027) | (0.030) | (0.028) |
| Observations | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

## No report sample:

Table A9: The Effect of Intervention on Politicians' First-Order Views

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.007 | −0.020 | 0.007 | 0.004 | 0.054 | 0.047 | 0.056 | 0.054 |
| | (0.035) | (0.036) | (0.040) | (0.041) | (0.039) | (0.034) | (0.039) | (0.036) |
| Constant | 0.742*** | 0.745*** | 0.443*** | 0.525*** | 0.338*** | 0.197*** | 0.322*** | 3.226*** |
| | (0.025) | (0.025) | (0.028) | (0.028) | (0.027) | (0.022) | (0.026) | (0.024) |
| Observations | 605 | 605 | 605 | 605 | 605 | 605 | 605 | 605 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

## No restriction sample:

Table A10: The Effect of Intervention on Politicians' First-Order Views

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | −0.009 | −0.014 | −0.014 | 0.003 | 0.018 | 0.016 | 0.023 | 0.026 |
| | (0.031) | (0.032) | (0.035) | (0.035) | (0.034) | (0.029) | (0.033) | (0.031) |
| Constant | 0.739*** | 0.717*** | 0.429*** | 0.524*** | 0.340*** | 0.208*** | 0.325*** | 3.226*** |
| | (0.022) | (0.022) | (0.025) | (0.025) | (0.024) | (0.020) | (0.023) | (0.022) |
| Observations | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

### B.2.2 Second-order Beliefs Outcomes

## Full restriction sample:

Table A11: The Effect of Intervention on Politicians' Second-Order Views

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.026 | 0.012 | 0.074 | 0.044 | 0.132*** | 0.105*** | 0.091** | 0.087* |
| | (0.042) | (0.043) | (0.046) | (0.046) | (0.043) | (0.040) | (0.041) | (0.046) |
| Constant | 0.707*** | 0.685*** | 0.379*** | 0.543*** | 0.241*** | 0.185*** | 0.220*** | 3.149*** |
| | (0.030) | (0.030) | (0.032) | (0.033) | (0.028) | (0.026) | (0.027) | (0.029) |
| Observations | 457 | 457 | 457 | 457 | 457 | 456 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought voters thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

## No report sample:

Table A12: The Effect of Intervention on Politicians' Second-Order Views

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | −0.029 | −0.031 | 0.044 | 0.021 | 0.109*** | 0.077** | 0.023 | 0.033 |
| | (0.037) | (0.038) | (0.040) | (0.041) | (0.037) | (0.033) | (0.036) | (0.039) |
| Constant | 0.717*** | 0.694*** | 0.379*** | 0.525*** | 0.252*** | 0.178*** | 0.245*** | 3.159*** |
| | (0.025) | (0.026) | (0.027) | (0.028) | (0.024) | (0.022) | (0.024) | (0.025) |
| Observations | 605 | 605 | 605 | 605 | 605 | 604 | 605 | 605 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought voters thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

## No restriction sample:

Table A13: The Effect of Intervention on Politicians' Second-Order Views

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | −0.017 | −0.020 | 0.003 | −0.009 | 0.054* | 0.041 | −0.004 | 0.016 |
| | (0.033) | (0.034) | (0.034) | (0.035) | (0.032) | (0.028) | (0.030) | (0.035) |
| Constant | 0.695*** | 0.667*** | 0.362*** | 0.510*** | 0.261*** | 0.179*** | 0.246*** | 3.141*** |
| | (0.023) | (0.023) | (0.024) | (0.025) | (0.022) | (0.019) | (0.021) | (0.024) |
| Observations | 800 | 800 | 800 | 799 | 800 | 798 | 799 | 800 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought voters thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

### B.2.3 Policy Outcomes

## Full restriction sample:

Table A14: The Effect of Intervention on Policy Outcomes

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Rising Sea Levels | Deforestation | Air Pollution | Carbon Tax | Deforestation Ban |
| Treatment | −0.028 | 0.017 | 0.050 | −0.052 | 0.054 | −0.021 | 0.009 |
| | (0.046) | (0.047) | (0.043) | (0.047) | (0.046) | (0.047) | (0.046) |
| Constant | 0.415*** | 0.489*** | 0.276*** | 0.537*** | 0.377*** | 0.443*** | 0.571*** |
| | (0.033) | (0.033) | (0.030) | (0.033) | (0.032) | (0.033) | (0.033) |
| Observations | 454 | 456 | 452 | 456 | 456 | 450 | 455 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban.

## No report sample:

Table A15: The Effect of Intervention on Policy Outcomes

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Rising Sea Levels | Deforestation | Air Pollution | Carbon Tax | Deforestation Ban |
| Treatment | −0.016 | −0.009 | 0.025 | −0.020 | 0.025 | −0.022 | 0.001 |
| | (0.040) | (0.041) | (0.037) | (0.041) | (0.040) | (0.041) | (0.040) |
| Constant | 0.392*** | 0.497*** | 0.278*** | 0.513*** | 0.378*** | 0.434*** | 0.559*** |
| | (0.028) | (0.028) | (0.025) | (0.028) | (0.027) | (0.028) | (0.028) |
| Observations | 599 | 603 | 596 | 602 | 602 | 595 | 602 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban.

## No restriction sample:

Table A16: The Effect of Intervention on Policy Outcomes

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Rising Sea Levels | Deforestation | Air Pollution | Carbon Tax | Deforestation Ban |
| Treatment | −0.056 | −0.017 | −0.014 | −0.035 | −0.002 | −0.049 | −0.018 |
| | (0.034) | (0.035) | (0.032) | (0.035) | (0.034) | (0.035) | (0.035) |
| Constant | 0.385*** | 0.486*** | 0.275*** | 0.490*** | 0.363*** | 0.437*** | 0.540*** |
| | (0.024) | (0.025) | (0.022) | (0.025) | (0.024) | (0.025) | (0.025) |
| Observations | 790 | 795 | 789 | 796 | 795 | 780 | 795 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban.

## B.3 Electoral Outcomes

Table A17: The Effect of Intervention on Electoral Outcomes

| | Vote Share (%): | | Ranking | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Treatment | 0.005 | 0.006 | −0.031 | −0.031 |
| | (0.007) | (0.007) | (0.023) | (0.023) |
| List Position: 2 | −0.222*** | −0.222*** | 0.686*** | 0.686*** |
| | (0.005) | (0.004) | (0.014) | (0.014) |
| List Position: 3 | −0.326*** | −0.326*** | 1.383*** | 1.383*** |
| | (0.004) | (0.004) | (0.013) | (0.013) |
| Constant | 0.397*** | | 1.310*** | |
| | (0.004) | | (0.009) | |
| Observations | 11007 | 11007 | 11355 | 11355 |
| Fixed Effects | N | Y | N | Y |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first two columns examine individual candidates' within-party vote shares. The second two columns look at candidates' party list ranking as a function of their vote share.

## B.4 Heterogeneous Treatment Effects

### B.4.1 Baseline Misperceptions—Dichotomous

Table A18: The Effect of Informational Treatment by Scale of Misperception

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Sea Level | Deforestation | Pollution | Carbon Tax | Deforestation Ban |
| Treatment ($T$) | −0.031 | −0.008 | 0.030 | −0.090* | 0.028 | −0.055 | −0.030 |
| | (0.050) | (0.051) | (0.047) | (0.050) | (0.050) | (0.051) | (0.050) |
| High Misperception ($H - M$) | −0.032 | −0.133 | −0.234*** | −0.116 | −0.140 | −0.032 | −0.090 |
| | (0.126) | (0.126) | (0.069) | (0.129) | (0.114) | (0.129) | (0.130) |
| $T$ X $H - M$ | 0.256 | 0.366** | 0.308** | 0.519*** | 0.322* | 0.218 | 0.463*** |
| | (0.182) | (0.174) | (0.148) | (0.160) | (0.174) | (0.184) | (0.149) |
| Constant | 0.407*** | 0.508*** | 0.297*** | 0.554*** | 0.390*** | 0.469*** | 0.590*** |
| | (0.035) | (0.036) | (0.033) | (0.036) | (0.035) | (0.036) | (0.035) |
| Observations | 419 | 420 | 416 | 420 | 420 | 416 | 419 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban.

### B.4.2 Education

Table A19: The Effect of Informational Treatment by Education (First-order Beliefs)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.066 | −0.015 | −0.016 | 0.011 | 0.015 | 0.027 | 0.046 | 0.069 |
| | (0.106) | (0.107) | (0.113) | (0.108) | (0.114) | (0.100) | (0.116) | (0.099) |
| Education ($Z$) | 0.058** | 0.043* | 0.055* | 0.039 | 0.002 | 0.023 | 0.024 | 0.046* |
| | (0.026) | (0.026) | (0.029) | (0.028) | (0.029) | (0.026) | (0.030) | (0.026) |
| Treatment X $Z$ | −0.010 | 0.012 | 0.025 | 0.034 | 0.032 | 0.013 | 0.0002 | 0.006 |
| | (0.037) | (0.038) | (0.042) | (0.041) | (0.043) | (0.038) | (0.043) | (0.037) |
| Constant | 0.583*** | 0.618*** | 0.301*** | 0.208*** | 0.328*** | 0.160** | 0.473*** | 3.118*** |
| | (0.074) | (0.073) | (0.078) | (0.074) | (0.078) | (0.068) | (0.080) | (0.070) |
| Observations | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Standard errors were calculated using the Huber-White (HC0) correction. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A20: The Effect of Informational Treatment by Education (Second-order Beliefs)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | −0.011 | −0.112 | −0.122 | 0.025 | −0.003 | −0.034 | −0.111 | 0.053 |
| | (0.106) | (0.108) | (0.113) | (0.102) | (0.107) | (0.101) | (0.115) | (0.107) |
| Education ($Z$) | 0.013 | −0.019 | −0.001 | 0.018 | −0.001 | −0.010 | −0.007 | 0.005 |
| | (0.027) | (0.028) | (0.029) | (0.026) | (0.026) | (0.025) | (0.030) | (0.027) |
| Treatment X $Z$ | 0.015 | 0.051 | 0.079* | 0.026 | 0.054 | 0.056 | 0.063 | 0.014 |
| | (0.039) | (0.040) | (0.042) | (0.039) | (0.040) | (0.038) | (0.042) | (0.042) |
| Constant | 0.675*** | 0.732*** | 0.382*** | 0.177*** | 0.245*** | 0.210*** | 0.560*** | 3.136*** |
| | (0.073) | (0.073) | (0.079) | (0.067) | (0.070) | (0.066) | (0.080) | (0.072) |
| Observations | 457 | 457 | 457 | 457 | 457 | 456 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Standard errors were calculated using the Huber-White (HC0) correction. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A21: The Effect of Informational Treatment by Education (Policy Outcomes)

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Sea Level | Deforestation | Pollution | Carbon Tax | Deforestation Ban |
| Treatment | 0.050 | 0.067 | 0.143 | 0.014 | 0.067 | 0.011 | 0.217* |
| | (0.112) | (0.116) | (0.108) | (0.116) | (0.112) | (0.116) | (0.114) |
| Education ($Z$) | 0.076*** | 0.052* | 0.038 | 0.053* | 0.042 | 0.037 | 0.095*** |
| | (0.029) | (0.030) | (0.027) | (0.030) | (0.029) | (0.030) | (0.029) |
| Treatment X $Z$ | −0.033 | −0.021 | −0.038 | −0.028 | −0.006 | −0.014 | −0.086** |
| | (0.042) | (0.043) | (0.041) | (0.043) | (0.042) | (0.044) | (0.042) |
| Constant | 0.230*** | 0.364*** | 0.185*** | 0.409*** | 0.275*** | 0.353*** | 0.341*** |
| | (0.076) | (0.079) | (0.068) | (0.080) | (0.075) | (0.079) | (0.078) |
| Observations | 454 | 456 | 452 | 456 | 456 | 450 | 455 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban.

### B.4.3 Political Experience

Table A22: The Effect of Informational Treatment by Political Experience (First-order Beliefs)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.055 | −0.013 | 0.042 | 0.122* | 0.052 | 0.041 | −0.064 | 0.102 |
| | (0.068) | (0.069) | (0.075) | (0.071) | (0.072) | (0.065) | (0.075) | (0.067) |
| Political Experience ($Z$) | 0.045 | 0.007 | 0.032 | 0.033 | 0.023 | −0.006 | −0.085 | 0.033 |
| | (0.062) | (0.062) | (0.068) | (0.062) | (0.064) | (0.057) | (0.068) | (0.059) |
| Treatment X $Z$ | −0.013 | 0.053 | 0.015 | −0.037 | 0.074 | 0.031 | 0.180* | −0.023 |
| | (0.085) | (0.086) | (0.096) | (0.091) | (0.092) | (0.083) | (0.095) | (0.085) |
| Constant | 0.695*** | 0.720*** | 0.415*** | 0.280*** | 0.317*** | 0.220*** | 0.585*** | 3.207*** |
| | (0.051) | (0.050) | (0.054) | (0.050) | (0.051) | (0.046) | (0.054) | (0.048) |
| Observations | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Standard errors were calculated using the Huber-White (HC0) correction. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A23: The Effect of Informational Treatment by Political Experience (Second-order Beliefs)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.059 | 0.017 | 0.034 | 0.107 | 0.069 | 0.109* | −0.007 | 0.130* |
| | (0.070) | (0.072) | (0.075) | (0.067) | (0.069) | (0.065) | (0.075) | (0.069) |
| Political Experience ($Z$) | 0.075 | 0.060 | −0.017 | 0.0005 | −0.042 | −0.015 | −0.028 | −0.006 |
| | (0.064) | (0.065) | (0.067) | (0.057) | (0.060) | (0.054) | (0.068) | (0.061) |
| Treatment X $Z$ | −0.048 | −0.002 | 0.067 | −0.026 | 0.103 | −0.009 | 0.082 | −0.074 |
| | (0.088) | (0.090) | (0.095) | (0.085) | (0.088) | (0.082) | (0.096) | (0.092) |
| Constant | 0.659*** | 0.646*** | 0.390*** | 0.220*** | 0.268*** | 0.195*** | 0.561*** | 3.152*** |
| | (0.052) | (0.053) | (0.054) | (0.046) | (0.049) | (0.044) | (0.055) | (0.049) |
| Observations | 457 | 457 | 457 | 457 | 457 | 456 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Standard errors were calculated using the Huber-White (HC0) correction. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A24: The Effect of Informational Treatment by Political Experience (Policy Outcomes)

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Sea Level | Deforestation | Pollution | Carbon Tax | Deforestation Ban |
| Treatment | −0.072 | −0.019 | 0.072 | −0.022 | 0.034 | −0.079 | −0.051 |
| | (0.074) | (0.076) | (0.068) | (0.076) | (0.075) | (0.075) | (0.075) |
| Political Experience ($Z$) | −0.008 | 0.021 | 0.046 | 0.057 | −0.021 | −0.031 | −0.003 |
| | (0.068) | (0.069) | (0.061) | (0.069) | (0.067) | (0.068) | (0.068) |
| Treatment X $Z$ | 0.073 | 0.064 | −0.033 | −0.047 | 0.033 | 0.096 | 0.102 |
| | (0.095) | (0.096) | (0.088) | (0.096) | (0.095) | (0.096) | (0.096) |
| Constant | 0.420*** | 0.476*** | 0.247*** | 0.500*** | 0.390*** | 0.463*** | 0.573*** |
| | (0.055) | (0.055) | (0.048) | (0.055) | (0.054) | (0.055) | (0.055) |
| Observations | 454 | 456 | 452 | 456 | 456 | 450 | 455 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban.

### B.4.4 Pro-sociality Index

Table A25: The Effect of Informational Treatment by Pro-sociality (First-order Beliefs)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | −0.021 | −0.282 | −0.004 | −0.140 | −0.481 | −0.225 | 0.366 | −0.360 |
| | (0.312) | (0.314) | (0.368) | (0.356) | (0.355) | (0.320) | (0.351) | (0.323) |
| Pro-sociality Index ($Z$) | 0.230*** | 0.190** | 0.199** | 0.097 | 0.096 | 0.071 | 0.303*** | 0.045 |
| | (0.075) | (0.075) | (0.094) | (0.088) | (0.093) | (0.077) | (0.088) | (0.078) |
| Treatment X $Z$ | 0.022 | 0.100 | 0.018 | 0.079 | 0.191 | 0.094 | −0.105 | 0.148 |
| | (0.099) | (0.100) | (0.121) | (0.117) | (0.117) | (0.106) | (0.114) | (0.107) |
| Constant | 0.028 | 0.150 | −0.166 | 0.007 | 0.041 | 0.0003 | −0.388 | 3.092*** |
| | (0.236) | (0.234) | (0.288) | (0.266) | (0.284) | (0.233) | (0.270) | (0.234) |
| Observations | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Standard errors were calculated using the Huber-White (HC0) correction. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A26: The Effect of Informational Treatment by Pro-sociality (Second-order Beliefs)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | −0.151 | −0.279 | −0.089 | 0.144 | −0.260 | −0.391 | 0.290 | −0.018 |
| | (0.328) | (0.322) | (0.370) | (0.330) | (0.349) | (0.328) | (0.369) | (0.376) |
| Pro-sociality Index ($Z$) | 0.165** | 0.227*** | 0.200** | 0.196** | 0.117 | 0.095 | 0.254*** | 0.195** |
| | (0.075) | (0.076) | (0.096) | (0.081) | (0.087) | (0.080) | (0.091) | (0.085) |
| Treatment X $Z$ | 0.059 | 0.097 | 0.054 | −0.017 | 0.130 | 0.164 | −0.081 | 0.035 |
| | (0.105) | (0.102) | (0.122) | (0.110) | (0.116) | (0.110) | (0.120) | (0.124) |
| Constant | 0.207 | −0.003 | −0.226 | −0.375 | −0.112 | −0.103 | −0.227 | 2.557*** |
| | (0.235) | (0.238) | (0.291) | (0.241) | (0.264) | (0.242) | (0.281) | (0.260) |
| Observations | 457 | 457 | 457 | 457 | 457 | 456 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Standard errors were calculated using the Huber-White (HC0) correction. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A27: The Effect of Informational Treatment by Pro-sociality (Policy Outcomes)

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Sea Level | Deforestation | Pollution | Carbon Tax | Deforestation Ban |
| Treatment | −0.571 | −0.395 | −0.242 | −0.315 | −0.522 | −0.217 | −0.354 |
| | (0.367) | (0.367) | (0.359) | (0.366) | (0.368) | (0.364) | (0.371) |
| Pro-sociality Index ($Z$) | 0.027 | 0.115 | 0.009 | 0.144 | 0.095 | 0.183** | 0.147 |
| | (0.093) | (0.093) | (0.085) | (0.090) | (0.091) | (0.091) | (0.094) |
| Treatment X $Z$ | 0.180 | 0.137 | 0.096 | 0.087 | 0.191 | 0.065 | 0.121 |
| | (0.121) | (0.120) | (0.118) | (0.119) | (0.121) | (0.119) | (0.121) |
| Constant | 0.333 | 0.142 | 0.250 | 0.102 | 0.088 | −0.110 | 0.126 |
| | (0.283) | (0.283) | (0.258) | (0.275) | (0.278) | (0.277) | (0.286) |
| Observations | 454 | 456 | 452 | 456 | 456 | 450 | 455 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban.

### B.4.5 Support for Democracy

Table A28: The Effect of Informational Treatment by Support for Democracy (First-order Beliefs)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | −0.039 | 0.495 | 0.286 | 0.263 | −0.253 | 0.573 | 0.160 | 0.375 |
| | (0.332) | (0.327) | (0.432) | (0.388) | (0.410) | (0.360) | (0.422) | (0.384) |
| Democratic Support Index ($Z$) | 0.290*** | 0.385*** | 0.239** | 0.222*** | 0.128 | 0.184** | 0.155* | 0.192*** |
| | (0.076) | (0.064) | (0.101) | (0.080) | (0.098) | (0.076) | (0.092) | (0.074) |
| Treatment X $Z$ | 0.035 | −0.184 | −0.091 | −0.063 | 0.138 | −0.200 | −0.043 | −0.111 |
| | (0.124) | (0.124) | (0.168) | (0.153) | (0.160) | (0.141) | (0.164) | (0.150) |
| Constant | −0.020 | −0.265 | −0.178 | −0.269 | 0.003 | −0.258 | 0.133 | 2.736*** |
| | (0.205) | (0.173) | (0.262) | (0.201) | (0.253) | (0.192) | (0.240) | (0.185) |
| Observations | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Standard errors were calculated using the Huber-White (HC0) correction. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A29: The Effect of Informational Treatment by Support for Democracy (Second-order Beliefs)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.662** | 1.062*** | 0.323 | 0.602 | 0.143 | 0.745** | 0.209 | 0.713* |
| | (0.333) | (0.340) | (0.432) | (0.376) | (0.423) | (0.364) | (0.428) | (0.413) |
| Democratic Support Index ($Z$) | 0.238*** | 0.337*** | 0.160 | 0.192** | 0.093 | 0.120 | 0.114 | 0.134 |
| | (0.076) | (0.069) | (0.100) | (0.084) | (0.100) | (0.074) | (0.094) | (0.092) |
| Treatment X $Z$ | −0.247* | −0.409*** | −0.096 | −0.199 | −0.003 | −0.250* | −0.064 | −0.245 |
| | (0.128) | (0.131) | (0.168) | (0.147) | (0.165) | (0.142) | (0.167) | (0.162) |
| Constant | 0.096 | −0.180 | −0.031 | −0.274 | 0.002 | −0.122 | 0.250 | 2.805*** |
| | (0.203) | (0.183) | (0.260) | (0.214) | (0.257) | (0.189) | (0.244) | (0.233) |
| Observations | 457 | 457 | 457 | 457 | 457 | 456 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Standard errors were calculated using the Huber-White (HC0) correction. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A30: The Effect of Informational Treatment by Support for Democracy (Policy Outcomes)

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Sea Level | Deforestation | Pollution | Carbon Tax | Deforestation Ban |
| Treatment | 0.269 | −0.552 | −0.580 | −0.032 | 0.229 | −0.451 | −0.269 |
| | (0.505) | (0.471) | (0.433) | (0.463) | (0.475) | (0.471) | (0.452) |
| Democratic Support Index ($Z$) | 0.194 | 0.034 | −0.124 | 0.100 | 0.022 | −0.064 | 0.048 |
| | (0.144) | (0.125) | (0.111) | (0.121) | (0.126) | (0.122) | (0.118) |
| Treatment X $Z$ | −0.114 | 0.224 | 0.246 | −0.007 | −0.068 | 0.168 | 0.109 |
| | (0.196) | (0.183) | (0.168) | (0.179) | (0.184) | (0.183) | (0.175) |
| Constant | −0.084 | 0.402 | 0.597** | 0.278 | 0.319 | 0.609* | 0.447 |
| | (0.374) | (0.323) | (0.289) | (0.315) | (0.325) | (0.315) | (0.308) |
| Observations | 454 | 456 | 452 | 456 | 456 | 450 | 455 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban.

### B.4.6 Observer Present for Interview

Table A31: The Effect of Intervention on Politicians' First-Order Views, by Observer Present

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment ($T$) | 0.019 | 0.014 | 0.062 | 0.082 | 0.099* | 0.045 | 0.123** | 0.099** |
| | (0.047) | (0.048) | (0.053) | (0.053) | (0.051) | (0.045) | (0.049) | (0.047) |
| Observer ($O$) | −0.010 | 0.057 | 0.065 | 0.162** | 0.092 | 0.002 | 0.178** | 0.119* |
| | (0.067) | (0.065) | (0.075) | (0.072) | (0.072) | (0.062) | (0.072) | (0.062) |
| $T$ X $O$ | 0.118 | 0.032 | −0.045 | −0.128 | 0.001 | 0.072 | −0.077 | −0.030 |
| | (0.091) | (0.092) | (0.110) | (0.108) | (0.109) | (0.098) | (0.108) | (0.097) |
| Constant | 0.727*** | 0.709*** | 0.419*** | 0.488*** | 0.308*** | 0.215*** | 0.256*** | 3.198*** |
| | (0.034) | (0.035) | (0.038) | (0.038) | (0.035) | (0.031) | (0.033) | (0.033) |
| Observations | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A32: The Effect of Intervention on Policy Support, by Observer Present

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Sea Level | Deforestation | Pollution | Carbon Tax | Deforestation Ban |
| Treatment ($T$) | −0.045 | 0.020 | 0.038 | −0.031 | 0.069 | −0.019 | 0.024 |
| | (0.052) | (0.054) | (0.049) | (0.054) | (0.052) | (0.053) | (0.053) |
| Observer ($O$) | −0.011 | 0.049 | 0.006 | 0.099 | 0.063 | −0.004 | 0.075 |
| | (0.074) | (0.075) | (0.069) | (0.074) | (0.074) | (0.075) | (0.073) |
| $T$ X $O$ | 0.075 | −0.004 | 0.057 | −0.079 | −0.055 | −0.008 | −0.055 |
| | (0.109) | (0.111) | (0.104) | (0.110) | (0.109) | (0.111) | (0.109) |
| Constant | 0.418*** | 0.477*** | 0.275*** | 0.512*** | 0.360*** | 0.444*** | 0.552*** |
| | (0.038) | (0.038) | (0.034) | (0.038) | (0.037) | (0.038) | (0.038) |
| Observations | 454 | 456 | 452 | 456 | 456 | 450 | 455 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban. All outcomes are dichotomized to capture the most extreme response on the Likert-scale.

### B.4.7 List Position

Table A33: The Effect of Informational Treatment by List Position (First-order Beliefs)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment ($T$) | −0.041 | 0.077 | 0.057 | 0.137 | 0.190 | 0.189* | 0.261** | 0.118 |
| | (0.101) | (0.102) | (0.119) | (0.113) | (0.115) | (0.100) | (0.117) | (0.101) |
| List Position ($L$) | −0.054 | −0.018 | −0.003 | 0.026 | 0.036 | 0.042 | 0.043 | 0.009 |
| | (0.039) | (0.038) | (0.043) | (0.041) | (0.041) | (0.035) | (0.042) | (0.038) |
| $T$ X $L$ | 0.047 | −0.033 | −0.006 | −0.023 | −0.054 | −0.073 | −0.118** | −0.019 |
| | (0.052) | (0.053) | (0.060) | (0.058) | (0.059) | (0.051) | (0.059) | (0.053) |
| Constant | 0.822*** | 0.756*** | 0.441*** | 0.254*** | 0.266*** | 0.140** | 0.453*** | 3.211*** |
| | (0.074) | (0.074) | (0.084) | (0.079) | (0.079) | (0.067) | (0.084) | (0.068) |
| Observations | 456 | 456 | 456 | 456 | 456 | 456 | 456 | 456 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Standard errors were calculated using the Huber-White (HC0) correction. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

### B.4.8 Politician First Order Preferences

Table A34: The Effect of Intervention on Policy Support, by Politician First-Order Beliefs

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution |
| Treatment ($T$) | −0.006 | 0.022 | 0.023 | −0.050 | 0.069 | −0.048 | 0.011 |
| | (0.050) | (0.054) | (0.046) | (0.054) | (0.050) | (0.053) | (0.054) |
| Pol. First Order ($C$) | 0.467*** | 0.295*** | 0.272*** | 0.208*** | 0.413*** | 0.200** | 0.266*** |
| | (0.068) | (0.073) | (0.078) | (0.075) | (0.073) | (0.078) | (0.069) |
| $T$ X $C$ | −0.177* | −0.081 | 0.036 | −0.053 | −0.140 | 0.054 | −0.065 |
| | (0.099) | (0.103) | (0.106) | (0.105) | (0.102) | (0.107) | (0.098) |
| Constant | 0.313*** | 0.425*** | 0.218*** | 0.492*** | 0.287*** | 0.400*** | 0.514*** |
| | (0.035) | (0.037) | (0.031) | (0.037) | (0.034) | (0.037) | (0.037) |
| Observations | 454 | 456 | 452 | 456 | 456 | 450 | 455 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban. All outcomes are dichotomized to capture the most extreme response on the Likert-scale.

### B.4.9 Regional Deviations from National Preferences

Table A35: The Effect of Intervention on Politicians' First-Order Views, by Regional Voter First-Order Beliefs

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment ($T$) | 0.049 | 0.022 | 0.043 | 0.047 | 0.088* | 0.051 | 0.099** | 0.085** |
| | (0.041) | (0.042) | (0.047) | (0.047) | (0.045) | (0.040) | (0.044) | (0.041) |
| Regional First Order ($D$) | 1.612*** | 1.821*** | 0.171 | −0.242 | 0.692 | 0.473 | 0.375 | 0.508 |
| | (0.605) | (0.516) | (0.611) | (0.647) | (0.576) | (0.471) | (0.561) | (0.479) |
| $T$ X $D$ | −1.054 | −1.273* | 0.933 | 1.617* | 1.154 | 1.060 | 1.640** | 0.919 |
| | (0.803) | (0.740) | (0.843) | (0.834) | (0.811) | (0.723) | (0.800) | (0.783) |
| Constant | 0.715*** | 0.715*** | 0.431*** | 0.525*** | 0.329*** | 0.219*** | 0.290*** | 3.224*** |
| | (0.029) | (0.029) | (0.033) | (0.033) | (0.031) | (0.027) | (0.030) | (0.029) |
| Observations | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A36: The Effect of Intervention on Politicians' Second-Order Views, by Regional Voter First-Order Beliefs

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment ($T$) | 0.028 | 0.014 | 0.064 | 0.044 | 0.128*** | 0.101** | 0.083** | 0.081* |
| | (0.042) | (0.043) | (0.046) | (0.047) | (0.042) | (0.039) | (0.040) | (0.044) |
| Regional First Order ($D$) | 1.433** | 1.387** | 0.640 | −0.408 | 1.678*** | 0.541 | 0.576 | 0.574 |
| | (0.631) | (0.654) | (0.590) | (0.652) | (0.541) | (0.461) | (0.480) | (0.450) |
| $T$ X $D$ | −0.520 | −0.456 | 0.784 | 1.395 | 0.217 | 1.379* | 1.759** | 0.958 |
| | (0.835) | (0.880) | (0.814) | (0.881) | (0.792) | (0.729) | (0.731) | (0.904) |
| Constant | 0.698*** | 0.676*** | 0.382*** | 0.538*** | 0.239*** | 0.184*** | 0.219*** | 3.153*** |
| | (0.030) | (0.031) | (0.032) | (0.033) | (0.028) | (0.026) | (0.027) | (0.029) |
| Observations | 450 | 450 | 450 | 450 | 450 | 449 | 450 | 450 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression. Robust and unclustered standard errors. Outcomes capturing whether respondents thought voters thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A37: The Effect of Intervention on Policy Support, by Regional Voter First-Order Beliefs

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Sea Level | Deforestation | Pollution | Carbon Tax | Deforestation Ban |
| Treatment ($T$) | −0.035 | 0.005 | 0.034 | −0.058 | 0.047 | −0.021 | −0.0004 |
| | (0.046) | (0.047) | (0.043) | (0.047) | (0.046) | (0.047) | (0.047) |
| Regional First Order ($D$) | 1.103* | 0.017 | −0.667 | −0.676 | −0.705 | −0.522 | 0.010 |
| | (0.636) | (0.637) | (0.509) | (0.643) | (0.580) | (0.620) | (0.653) |
| $T$ X $D$ | −0.411 | 0.313 | 0.951 | 0.871 | 1.100 | 0.863 | 0.359 |
| | (0.847) | (0.871) | (0.735) | (0.875) | (0.821) | (0.855) | (0.890) |
| Constant | 0.413*** | 0.496*** | 0.284*** | 0.537*** | 0.377*** | 0.441*** | 0.580*** |
| | (0.033) | (0.033) | (0.030) | (0.033) | (0.032) | (0.033) | (0.033) |
| Observations | 447 | 449 | 445 | 449 | 449 | 443 | 448 |

*Note*: *p<0.1; **p<0.05; ***p<0.01.Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban. All outcomes are dichotomized to capture the most extreme response on the Likert-scale.

### B.4.10 Inverse Propensity Weights for Attrition

Table A38: The Effect of Intervention on Politicians' First-Order Views (Inverse Propensity Weighted)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.042 | 0.012 | 0.035 | 0.042 | 0.090* | 0.053 | 0.087* | 0.079* |
| | (0.042) | (0.042) | (0.047) | (0.047) | (0.046) | (0.041) | (0.045) | (0.042) |
| Constant | 0.721*** | 0.727*** | 0.442*** | 0.536*** | 0.334*** | 0.221*** | 0.305*** | 3.232*** |
| | (0.030) | (0.030) | (0.033) | (0.033) | (0.031) | (0.028) | (0.031) | (0.029) |
| Observations | 457 | 457 | 457 | 457 | 457 | 457 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression with inverse propensity weights. Robust and unclustered standard errors. Outcomes capturing whether respondents thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A39: The Effect of Intervention on Politicians' Second-Order Views (Inverse Propensity Weighted)

| | Non-Environmental Issues: | | | | | Environmental Issues: | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Health | Education | Civ. Rights | Economy | Min. Rights | Clim. Change | Pollution | Env. Index |
| Treatment | 0.036 | 0.013 | 0.072 | 0.043 | 0.131*** | 0.105*** | 0.082** | 0.080* |
| | (0.043) | (0.044) | (0.047) | (0.047) | (0.043) | (0.040) | (0.041) | (0.046) |
| Constant | 0.702*** | 0.683*** | 0.383*** | 0.546*** | 0.242*** | 0.184*** | 0.221*** | 3.148*** |
| | (0.031) | (0.031) | (0.032) | (0.033) | (0.029) | (0.026) | (0.028) | (0.030) |
| Observations | 457 | 457 | 457 | 457 | 457 | 456 | 457 | 457 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression with inverse propensity weights. Robust and unclustered standard errors. Outcomes capturing whether respondents thought voters thought the following issues were very important: (1) health, (2) education, (3) civil rights, (4) economy, (5) minority rights, (6) climate change, (7) pollution (8) environment (index).

Table A40: The Effect of Intervention on Policy Outcomes (Inverse Propensity Weighted)

| | Does Issue Merit Policy Attention: | | | | | Support For Policy: | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Extreme Heat | Flooding | Rising Sea Levels | Deforestation | Air Pollution | Carbon Tax | Deforestation Ban |
| Treatment | −0.032 | 0.017 | 0.053 | −0.048 | 0.054 | −0.032 | 0.010 |
| | (0.047) | (0.047) | (0.044) | (0.047) | (0.047) | (0.047) | (0.047) |
| Constant | 0.426*** | 0.495*** | 0.278*** | 0.538*** | 0.380*** | 0.450*** | 0.577*** |
| | (0.033) | (0.033) | (0.030) | (0.033) | (0.032) | (0.033) | (0.033) |
| Observations | 454 | 456 | 452 | 456 | 456 | 450 | 455 |

*Note*: *p<0.1; **p<0.05; ***p<0.01. Coefficients from OLS regression with inverse propensity weights. Standard errors were calculated using the Huber-White (HC0) correction. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, (5) air pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban.