

ARTICLE

Climate crisis and policy inaction in Indonesia

Allan Hsiao¹ | Nicholas Kuipers²

¹Department of Economics, Stanford University, Stanford, California, USA

²Department of Politics, Princeton University, Princeton, New Jersey, USA

Correspondence

Nicholas Kuipers, Department of Politics, Princeton University, Princeton, New Jersey, USA.

Email: nkuipers@princeton.edu

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.

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 (Hsiao, 2025; Nicholls et al., 2021; Pörtner et al., 2019), 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., 2025).

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, & 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 & 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

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 Figure A7 (Supplemental Information, p. 12).

Verification Materials: The materials required to verify the computational reproducibility of the results, procedures, and analyses in this article are available on the American Journal of Political Science Dataverse within the Harvard Dataverse Network at <https://doi.org/10.7910/DVN/OTTHXV>.

The Cornell Center for Social Sciences verified that the data and replication code submitted to the AJPS Dataverse replicates the numerical results reported in the main text of this article.

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2025, Midwest Political Science Association.

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 healthcare. 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 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 & 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 may displace progress elsewhere, and so politicians might 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 politicians' misperceptions are not sufficient for explaining policy inaction. Standard theories of political representation hold that politicians are inclined to act in 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 & Nickerson, 2011; Chu & Recchia, 2022), but only for politicians who were heavily misinformed at baseline. 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, Mildemberger, & 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, where politicians cultivate power by offering voters preferential access to government-provided goods like education and healthcare (Aspinall & Berenschot, 2019; Hicken et al., 2022). Politicians must therefore develop a keen intuition for voter demand for these services. However, 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.

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, & 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 & 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 & Tingley, 2023). Even if voters privately support environmental policy action, they may not reveal their preferences 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 a 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 a 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. Our model allows for politicians' assessment of voter preferences to be subject to potential bias from misperception. We relate to recent work in psychology on the phenomenon of "pluralistic ignorance," in which individuals act on perceived social norms that differ from actual norms (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 bias undermines demand for policy action (Geiger & Swim, 2016). Misalignment has also been documented in elites' perceptions of citizens' preferences, with perhaps more consequential effects (Mildenberger & 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 & 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 & 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. Unlike 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 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 a symmetric quadratic form. Combining expressions, politicians' perception of voter utility is

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

Many factors contribute to bias, 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, & Koski, 2020). Environmental policy is also directly costly, especially in settings with limited administrative capacity, because regulating emissions requires consistent monitoring at the 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 the same groups provide politicians with direct clientelistic support, both politically and financially, and thus weigh heavily on politicians' support for policy action. Indeed, deforestation rises when elections increase politicians' reliance on these interest groups, 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 areas 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.

Finally, politicians choose to deliver policy action or not. We model politicians who choose policy action to maximize perceived voter utility \hat{v} net of costs \hat{c} .

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

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 a 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. 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 condition (1) holds empirically, and so our experiment offers a test for condition (2).

EMPIRICAL SETTING AND RESEARCH DESIGN

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

Environmental policy in Indonesia

We focus on the case of Indonesia, which faces a range of localized environmental challenges, many of which

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.

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 is the use of fire for clearing land in advance of cultivation. This process generates tremendous carbon emissions. 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 for both industrial and smallholder cultivators because it is 20–50% less costly than alternative methods for clearing existing vegetation and sowing the soil with nutrients (Purnomo et al., 2019). 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 roughly 525,000. Since 2001, when Indonesia implemented its “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 government spending in Indonesia is carried out at the district level. Local governments thus play a key role in managing climate change.

Districts are governed by directly elected executives known as *bupati* or *wali kota*, depending on whether the district is rural or urban, respectively. Beneath each district executive is a local legislature, known as the *DPRD-II*, with 25 to 50 representatives. The exact number is a function of the district's population. Members of the *DPRD-II* are elected to 5-year terms from multimember districts using a system

of open-list proportional representation. This system incentivizes individual candidates to differentiate themselves from their co-partisans, discouraging the development of programmatic platforms (Aspinall, 2014). Consequently, 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.

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 5,236 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 by age, gender, and region. In the Supplemental Information, 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, potentially biasing population-level inference. 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 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 Figure A1 (Supplemental Information, p. 4), we benchmark our results, broken down across 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. This is identical

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%.

to the validation exercise performed by Kuipers, Toha, and Sumaktoyo (2024) using the same data.

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. To probe voters' preferences in more concrete terms, we elicited whether voters desired environmental progress even at the cost of economic growth as well as their views on the extent to which four specific issues affected their own communities: (1) short rainy seasons that affect crops, (2) very hot days that affect work, (3) flood damages, and (4) forest fire damages.

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 the top-three list positions and those from the 10 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, and the second wave 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 serious, often those who were in lower list positions (i.e., second or third). Thus, in resampling, the final sample is skewed towards respondents in the top list position in wave 1 ($N = 317$) versus those in the second or third list positions ($N = 270$ and $N = 213$). However, we obtained a recontact rate of 92.6%. When enumerators were unable to locate the initially surveyed respondent, replacements were sampled from the same district with the restriction that the new respondent be 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 that each issue was either "important" or "very important." We thus focus our attention on the share of voters and politicians who indicate an issue to be "very important." To measure second-order beliefs, we asked voters and politicians how they believed the other group would 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 aimed at combating 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.

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 preregistered our analysis, which we discuss in Section A.1 (Supplemental Information, p. 1). For our analysis, we compare the first-order beliefs of politicians and voters. Our expectation is that both politicians and voters hold the 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

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

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. These low numbers suggest that candidates generally understood the content of the survey instrument.

our point estimates of average first- and second-order beliefs among voters and politicians, and we conduct simple difference-in-means tests of our estimates to evaluate our hypotheses.

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 written report to treatment-group politicians at the beginning of the survey. Control-group politicians received the same oral presentation and written 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 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 conducted several analyses probing whether this "contamination" was correlated with respondent char-

acteristics, such that the attrition would bias our results. We present the demographic traits of contaminated and noncontaminated subjects in Table A6 (Supplemental Information, p. 13), 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 Supplemental Information, we also conducted our analyses on the unrestricted samples (see Supplemental Information Section B.2, pp. 13–16). Importantly, in the restricted sample, the distribution of respondents is unbalanced: politicians in the control group are approximately 3 years older than those in the treatment group. The magnitude of this imbalance is small, but we conduct additional tests in Section B.4.10 (Supplemental Information, p. 28) 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 again measured politicians' first- and second-order beliefs over the same suite of issues. Second, we probed politicians' support for immediate policy action on the issues as well as the extent to which they supported more specific policy proposals designed to manage environmental concerns: restrictions on deforestation and a carbon tax proposal. Third, we examined politicians' vote shares to evaluate whether, upon learning voters' preferences, politicians might update their campaign strategies and thereby secure greater vote shares.

For the first and second outcomes, we conduct a simple difference-in-means test, implemented using a bivariate ordinary least squares model, to estimate the impact of having received the report before the survey (versus after the survey) on politicians' first- and second-order beliefs as well as on their willingness to support costly political action. For the third outcome, we conducted an alternative analysis using 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

⁶ In Figure A6 (Supplemental Information, p. 11), 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 Section B.4.9 (Supplemental Information, p. 26), 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.

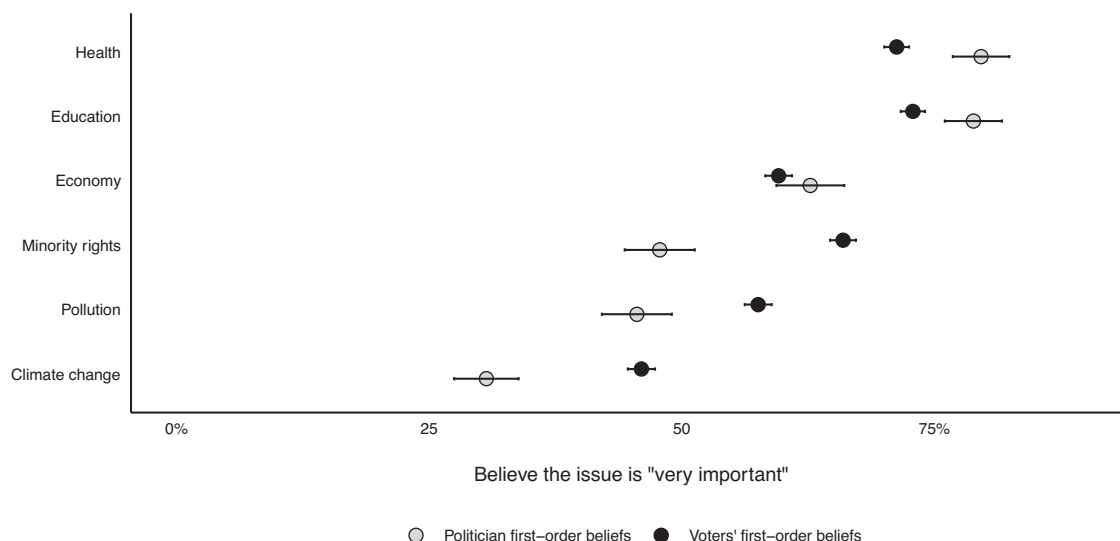


FIGURE 1 Voters and politicians' first-order preferences. *Note:* Points represent the share of voters (black) and politicians (gray) who state that each issue is a "very important" problem facing Indonesia today. First-order beliefs were measured in November 2023 for politicians and in December 2023 for voters. We include 95% confidence intervals.

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.

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.

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. Our informational invention showed this figure to politicians as a summary of voters' and politicians' first-order beliefs, alongside summary information on the demographic composition of our respondents. Relative to politicians, voters report higher first-order beliefs about the importance of environmental issues. We find that 46.0% of voters indicate that climate change is a "very important" issue compared to only 30.7% of politicians. Similarly, 57.5% of voters indicate that pollution is a "very important" issue compared to only 45.5% of politicians. This relationship reverses for more conventional material welfare issues. Relative to voters, politicians report higher first-order beliefs on non-environmental issues. We find that 79.6% and

78.8% of politicians say that health and education, respectively, are very important issues compared to 71.2% and 72.9% of voters. Voters and politicians hold statistically indistinguishable evaluations of the importance of civil rights and economic development.

Our chief interest is in understanding the extent to which politicians correctly evaluate the importance that voters privately attach to different issues. Figure 2 shows that, consistent with our preregistered hypotheses, politicians underestimate voters' first-order beliefs about the importance of climate change and pollution. Specifically, politicians estimated that 29.0% and 35.1% of voters would rate climate change and pollution as "very important," respectively; in fact, 46.0% and 57.5% of voters rated these issues as "very important." However, politicians hold accurate second-order beliefs about non-environmental issues. Politicians underestimated voters' first-order beliefs about the importance of education by only 1.8 percentage points (71.1% vs. 72.9%) and overestimated voters' first-order beliefs about health by only 2.1 percentage points (73.3% 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. This finding suggests that, at least for the provision of traditional public goods,

⁸ These results appear to be partly driven by an egocentric bias on the part of politicians. Figure A5 (Supplemental Information, p. 10) 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.

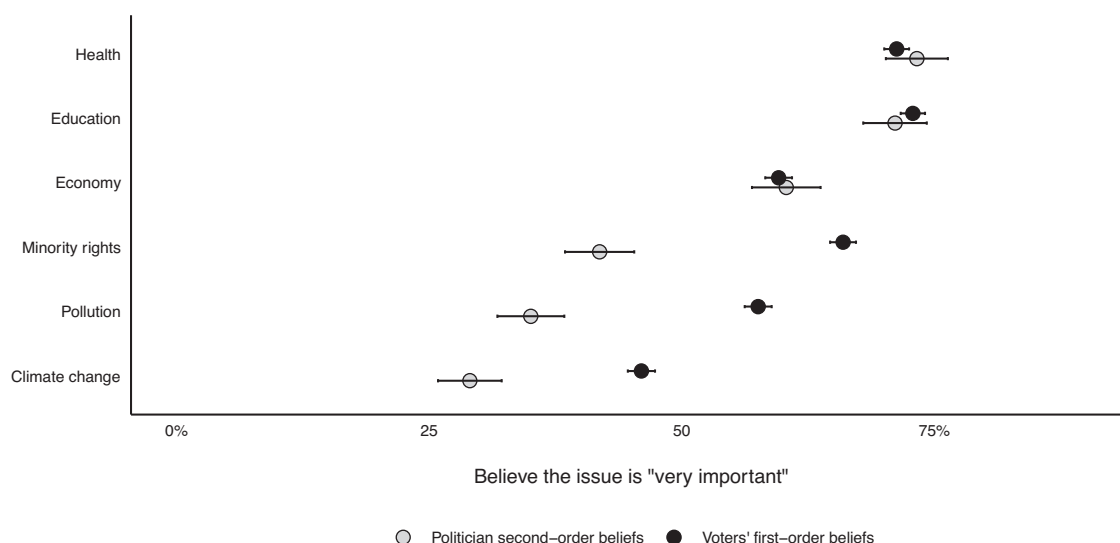


FIGURE 2 Voters' first-order preferences and politicians' second-order beliefs. *Note:* Black points represent the share of voters who state that each issue is a "very important" problem facing Indonesia today. Gray points represent the share of politicians who believe voters would rate each issue as 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.

TABLE 1 The effect of intervention on politicians' first-order preferences.

	Non-environmental issues					Environmental issues		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	0.045 (0.041)	0.018 (0.041)	0.049 (0.047)	0.048 (0.046)	0.095* (0.045)	0.060 (0.040)	0.098* (0.044)	0.087* (0.041)
Constant	0.724** (0.029)	0.724** (0.029)	0.435** (0.033)	0.530** (0.033)	0.332** (0.031)	0.216** (0.027)	0.302** (0.030)	3.228** (0.028)
Observations	457	457	457	457	457	457	457	457

Note: Coefficients from ordinary least squares 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, and (8) environment (index). [†] $p < .1$; * $p < .05$; ** $p < .01$.

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.

Experimental results

A straightforward interpretation of the results presented in Figures 1 and 2 is to infer an explanation for observed policy inaction. Politicians underprovide environmental policy both because they do not believe it to be important and because they underestimate the extent to which voters believe it to be important. If so, 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-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 stating that pollution is a very important issue ($p = .027$). 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 very important, although the results are not statistically significant ($p = .136$). 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 ($p = .037$), perhaps as politicians update in light of the large attitudinal gap on civil rights observed in the comparison of first-order attitudes between politicians and voters. Finally, we combine the two environmental

TABLE 2 The effect of intervention on politicians' second-order beliefs.

	Non-environmental issues					Environmental issues		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	0.026 (0.042)	0.012 (0.043)	0.074 (0.046)	0.044 (0.046)	0.132** (0.043)	0.105** (0.040)	0.091* (0.041)	0.087† (0.046)
Constant	0.707** (0.030)	0.685** (0.030)	0.379** (0.032)	0.543** (0.033)	0.241** (0.028)	0.185** (0.026)	0.220** (0.027)	3.149** (0.029)
Observations	457	457	457	457	457	456	457	457

Note: Coefficients from ordinary least squares 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, and (8) environment (index). † $p < .1$; * $p < .05$; ** $p < .01$.

outcomes with an index that captures respondents who indicated that both pollution and climate change were very important. We find that the treatment led to an 8.7 percentage point increase ($p = .035$).

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 stated that voters would rate the issue as very important ($p = .027$). We observe a similar pattern with the issue of climate change: the informational intervention led to a 10.5 percentage point increase in the probability of a politician stating that climate change was very important to voters ($p < .01$). Again, consistent with politicians' updated first-order beliefs, we see a large increase of 13.2 percentage points in treated respondents' probability of stating that minority rights were very important ($p < .01$). Our combined environmental index also shows a large increase for the treated group, corresponding to an 8.7 percentage point increase in probability ($p = .058$).

The results suggest that, at least with respect to the environmental issues that we study 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, including 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 update their first-order beliefs downward after observing voters' true first-order beliefs.

Are politicians more likely to support costly policy action after having received the informational intervention? We asked politicians whether five environmental issues were important and merited policy attention: (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.⁹ 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 exhibits 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,” and so 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 spurred environmental action.

We also asked politicians whether they would support two specific policy proposals: (1) a carbon tax and (2) a ban on deforestation. We again focus on the percentage of politicians who indicated that the policy proposals were “very important.” We estimate the impact of our informational intervention on politicians' responses, presenting the results in Table 3. We detect no evidence that treated politicians were more likely to support these policies. Policy support may be a high bar: information alone may be insufficient to generate support for these momentous policies, which have significant economic costs. At the same time, our measured outcome is merely a private statement of policy support. Our intervention does not induce statements, let alone actions.

Three mechanisms

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

Fixed costs to updating

Our first explanation is that misperceptions do matter, but only for politicians who were particularly wrong in

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)
Treatment	−0.028 (0.046)	0.017 (0.047)	0.050 (0.043)	−0.052 (0.047)	0.054 (0.046)	−0.021 (0.047)	0.009 (0.046)
Constant	0.415** (0.033)	0.489** (0.033)	0.276** (0.030)	0.537** (0.033)	0.377** (0.032)	0.443** (0.033)	0.571** (0.033)
Observations	454	456	452	456	456	450	455

Note: Coefficients from ordinary least squares regression. Robust and unclustered standard errors. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, and (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. [†] $p < .1$; * $p < .05$; ** $p < .01$.

their evaluation of voters' preferences. Updating one's policy position can improve electoral prospects, but it also imposes a set of fixed costs. Appearing hypocritical, for instance, is both psychologically unpleasant and may carry electoral penalties. The majority of politicians hold relatively accurate second-order beliefs about voter preferences, and so they may be averse to updating their policy positions, even in light of new information. Politicians who hold very inaccurate second-order beliefs, however, may be more willing to incur the costs of updating their policy positions.

To investigate this possibility further, we draw on politicians' responses on the first wave of the survey to measure preference misperception. We compute the difference between voters' preferences and politicians' perceptions as follows. We construct a weighted measure based on our Likert-scale question that captures average voter preferences about the importance of climate change ($C = 3.39$).¹⁰ Then, for each politician, we calculate the difference between this measure of voter preferences and the numeric value of their own second-order beliefs at baseline. When this index is high, individual politicians greatly underestimate voter concern and thus have large misperceptions.

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.¹¹ The most instructive results are presented in columns (4) and (7), which deal with deforestation and provide support for the idea that larger reductions in misperceptions lead to an interest in policy action. The interaction coefficient of column (4) shows that politicians with large misperceptions at baseline were more likely to agree that deforestation merited policy attention upon learning about voter

preferences. Column (7) shows that the same holds for supporting a ban on deforestation. We note that, for most outcomes, the sum of the treatment, misperception, and interaction coefficients does not exceed 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.

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. The potential for corruption can allow elite interests to capture politicians, but the scale of this "elite capture" varies across districts. Districts with an abundance of natural resources, for instance, are most prone to capture as wealthy individuals may perceive large gains from policies that are favorable to their investments. In these places, politicians may be less sensitive to the preferences of voters, even after updating their second-order beliefs.

We test this possibility with administrative data collected by the Indonesian Anti-Corruption Commission (*KPK*).¹² 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 10 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 each district. This measure captures the extent of elite capture: public officials are remunerated modestly in Indonesia, and so their wealth is suggestive of enrichment by other means.

We present our results in Table 5. We focus on policy outcomes: whether politicians were inclined to believe

¹⁰ Specifically, we construct a numeric variable in response to the question, "In your opinion, how important is [climate change] to Indonesian voters?" The variable C_i takes a value of 4 for "very important," 3 for "somewhat important," 2 for "somewhat unimportant," and 1 for "very unimportant."

¹¹ For ease of interpretation, we dichotomize our misperception index and our policy outcomes in Table A18 (Supplemental Information, p. 17).

¹² We thank Vincent Tanutama for generously sharing these recently digitized data.

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)
Treatment (<i>T</i>)	0.016 (0.059)	0.009 (0.054)	0.059 (0.057)	−0.084 (0.052)	0.038 (0.052)	−0.051 (0.057)	−0.032 (0.050)
Misperception (<i>M</i>)	−0.085 (0.072)	−0.095 (0.061)	−0.249** (0.060)	−0.108 [†] (0.060)	−0.177** (0.059)	−0.099 (0.070)	−0.155** (0.054)
<i>T</i> × <i>M</i>	0.066 (0.098)	0.143 [†] (0.085)	0.178 [†] (0.092)	0.160 [†] (0.085)	0.158 [†] (0.085)	−0.005 (0.107)	0.186* (0.079)
Constant	3.350** (0.044)	3.492** (0.039)	3.229** (0.040)	3.551** (0.036)	3.386** (0.038)	3.447** (0.041)	3.605** (0.034)
Observations	419	420	416	420	420	416	419

Note: Coefficients from ordinary least squares regression. Robust and unclustered standard errors. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, and (5) pollution. The final two columns measure support for (6) a carbon tax and (7) a deforestation ban. [†] *p* < .10; * *p* < .05; ** *p* < .01.

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)
Treatment (<i>T</i>)	0.010 (0.048)	0.028 (0.050)	0.045 (0.046)	−0.042 (0.050)	0.069 (0.049)	−0.033 (0.049)	−0.019 (0.047)
Asset index (<i>Z</i>)	−0.390* (0.162)	0.060 (0.195)	0.187 (0.186)	0.121 (0.194)	0.065 (0.188)	0.348 [†] (0.181)	0.544** (0.147)
<i>T</i> × <i>Z</i>	0.736** (0.273)	0.201 (0.296)	−0.087 (0.260)	0.210 (0.305)	0.280 (0.294)	−0.232 (0.266)	−0.540* (0.238)
Constant	0.394** (0.033)	0.492** (0.034)	0.286** (0.032)	0.543** (0.034)	0.380** (0.033)	0.462** (0.034)	0.600** (0.032)
Observations	454	456	452	456	456	450	455

Note: Coefficients from ordinary least squares regression. Robust and clustered standard errors at the kabupaten level. The first five outcomes measure perceived urgency of action required on (1) extreme heat, (2) flooding, (3) rising sea levels, (4) deforestation, and (5) 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. [†] *p* < .10; * *p* < .05; ** *p* < .01.

a suite of environmental issues merited policy attention, and whether they would support specific policies. We examine heterogeneity in our main treatment effect by our measure of elite capture. We highlight two results. First, consistent with our hypothesis, column (7) shows that politicians in districts with high elite capture are less likely to support deforestation restrictions after receiving information about voters’ environmental concerns, while those in districts with low elite capture are more likely to support deforestation restrictions. If elites had not captured politicians, then our intervention would have been more successful in generating support for policy action. Second, column (1) reveals that politicians in places with high levels of elite capture, despite being less inclined to support specific policy proposals, are more likely to agree that extreme heat is an issue that merits policy attention when informed of voter preferences. This result is not inconsistent with our hypothesis, as policy action on extreme heat relief need not

impede the natural resource extraction that drives elite capture.

Voter priorities

Our third mechanism concerns the extent to which voters prioritize environmental policy in their preferences. Environmental policy may be costly in a non-distortionary manner if it displaces progress on other issues. Politicians may appreciate that voters value the environment, while also recognizing 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.

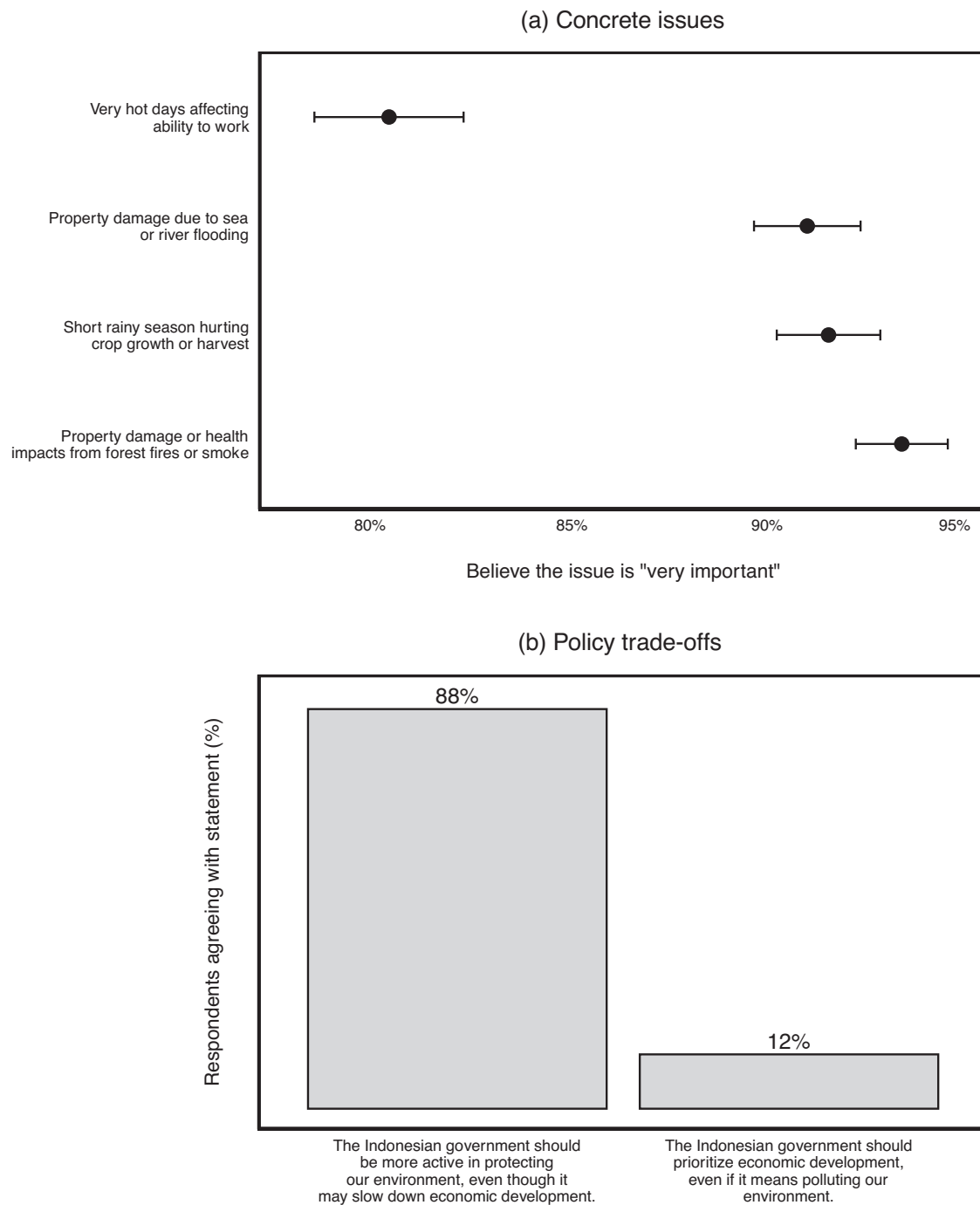


FIGURE 3 Voter beliefs about concrete issues and policy trade-offs. *Note:* Data from an August 2024 online survey of 1,650 Indonesian adults. Quotas are imposed on region, gender, and age. The top panel captures responses to a question asking respondents whether the listed issues have affected their community in the last 5 years. The bottom panel asks respondents to select from the two listed statements and select the one closer to their views.

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 communities. Voters 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

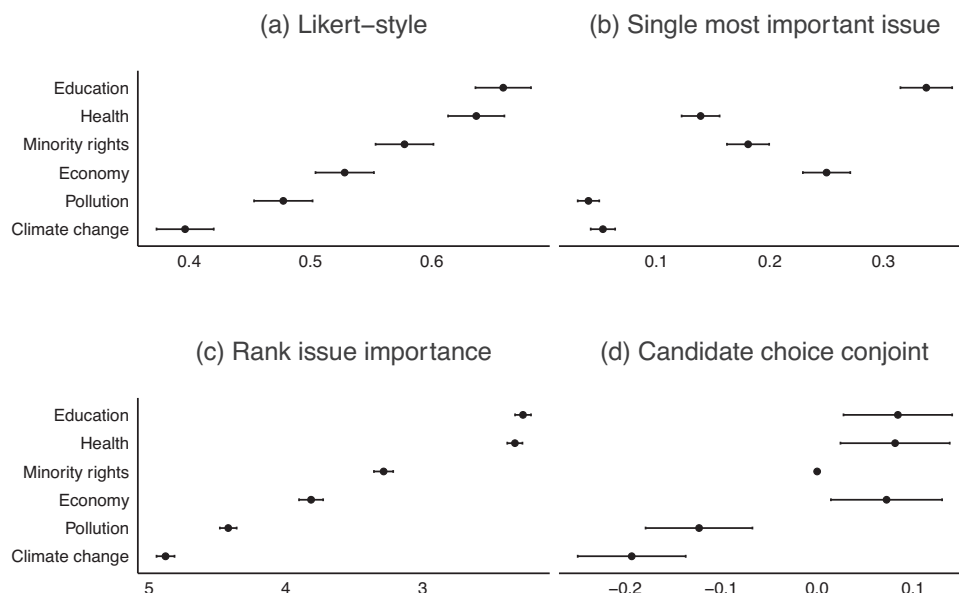


FIGURE 4 Comparison of voters' first-order preferences across measurement strategies. *Note:* Data are drawn from an August 2024 survey of 1,650 Indonesian adults conducted online, using quotas for gender, region, and age. The top-left panel measures the percentage of respondents indicating a given issue 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 voters; the bottom-right panel captures the average marginal component effects of a legislative candidate emphasizing each issue on hypothetical vote choice in a conjoint experiment framework. We include 95% confidence intervals.

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% 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.¹³

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) a conjoint experiment with randomly varied traits and policy platforms of two hypothetical candidates for elected office. In Figure 4, we present a comparison of these measurements against the benchmark approach of our main, Likert-style analysis. 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 sin-

gle 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.

Robustness and extensions

We conduct several analyses to probe the robustness of our results, and we 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 when informed about voters' preferences. We test this possibility and present the results in Table A34 (Supplemental Information, p. 2), finding no variation in the effect of our informational treatment according to whether politicians care a lot—or a little—about climate change.

¹³ The World Values Survey question was fielded in Wave 7 of the 2018 Indonesian survey. See Figure A2 (Supplemental Information, p. 5).

Another concern relates to the possibility that the results are driven by social desirability bias, rather than genuine belief updating 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 others were 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 in Tables A31 and A32 (Supplemental Information, p. 24), interacted with an indicator capturing the presence of others during the interview, and we find no effects.

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. 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 requires progress on all fronts in combination.

We expect that our results are generalizable, especially to other lower and 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.

ACKNOWLEDGMENTS

This research was supported by the National University of Singapore Presidential Young Professor

Whitespace Fund (WBS-A-8000553-01-00) and the Singaporean Ministry of Education through the ARC MOE Tier 2 Grant (MOE-T2EP40123-0001). The data collection protocols were approved by the National University of Singapore Institutional Review Board (NUS-IRB-2023-458 & NUS-IRB-2023-798). Xilin Fan, Putri Hening Graha, and Wenqing Yu provided excellent research assistance. For implementation assistance, we thank the staff at Saiful Mujani Research and Consulting, especially Saiful Mujani, Deni Irvani, and Hendro Prasetyo. For generous comments on earlier versions of this paper, we thank Robin Burgess, Michael Callen, Alexander Gazmararian, Johnny Guy, Rema Hanna, Kelsey Jack, Rohini Pande, Eve Warburton, and seminar participants at the Australian National University, City University of Hong Kong, London School of Economics, and University of Chicago. An anonymized version of the pre-analysis plan associated with this research can be found at https://osf.io/y6gr8?view_only=549338a183224faeb3f22c24305efc91.

REFERENCES

- Adolph, Christopher, Christian Breunig, and Chris Koski. 2020. "The Political Economy of Budget Trade-offs." *Journal of Public Policy* 40(1): 25–50.
- Andre, Peter, Teodora Boneva, Felix Chopra, and Armin Falk. 2024. "Globally Representative Evidence on the Actual and Perceived Support for Climate Action." *Nature Climate Change* 14(3): 253–59.
- Aspinall, Edward. 2014. "Parliament and Patronage." *Journal of Democracy* 25: 96.
- Aspinall, Edward, and Ward Berenschot. 2019. *Democracy for Sale: Elections, Clientelism, and the State in Indonesia*. Ithaca, NY: Cornell University Press.
- Balboni, Clare, Robin Burgess, Anton Heil, Jonathan Old, and Benjamin Olken. 2021. "Cycles of Fire? Politics and Forest Burning in Indonesia." *AEA Papers and Proceedings* 111: 415–19.
- Balboni, Clare, Robin Burgess, and Benjamin Olken. 2024. "The Origins and Control of Forest Fires in the tropics." London School of Economics and Political Science, Working Paper.
- Broockman, David, and Christopher Skovron. 2018. "Bias in Perceptions of Public Opinion Among Political Elites." *American Political Science Review* 112(3): 542–63.
- Burgess, Robin, Matthew Hansen, Benjamin Olken, Peter Potapov, and Stefanie Sieber. 2012. "The Political Economy of Deforestation in the Tropics." *Quarterly Journal of Economics* 127(4): 1707–54.
- Busch, Jonah, Kali Ferretti-Gallon, Jens Engelmann, Max Wright, Kemen Austin, Fred Stolle, Svetlana Turubanova, Peter Potapov, Belinda Margono, Matthew Hansen, and Alessandro Baccini. 2015. "Reductions in Emissions From Deforestation From Indonesia's Moratorium on New Oil Palm, Timber, and Logging Concessions." *Proceedings of the National Academy of Sciences* 112: 1328–33.
- Butler, Daniel, and David Nickerson. 2011. "Can Learning Constituency Opinion Affect How Legislators Vote? Results From a Field Experiment." *Quarterly Journal of Political Science* 6(1): 55–83.
- Chu, Jonathan, and Stefano Recchia. 2022. "Does Public Opinion Affect the Preferences of Foreign Policy Leaders? Experimental Evidence From the UK Parliament." *The Journal of Politics* 84(3): 1874–77.

- Cramb, Rob, and John McCarthy. 2016. *The Oil Palm Complex: Smallholders, Agribusiness, and the State in Indonesia and Malaysia*. Ithaca, NY: Cornell University Press.
- Dabla-Norris, Era, Salma Khalid, Giacomo Magistretti, and Alexandre Sollaci. 2023. *Public Support for Climate Change Mitigation Policies: A Cross Country Survey*. Washington, DC: International Monetary Fund.
- Dechezleprêtre, Antoine, Adrien Fabre, Tobias Kruse, Bluebery Planterose, Ana Sanchez Chico, and Stefanie Stantcheva. 2024. "Fighting Climate Change: International Attitudes Toward Climate Policies." National Bureau of Economic Research, Working Paper 30225.
- Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: Harper and Row.
- Ebenstein, Avraham. 2012. "The Consequences of Industrialization: Evidence From Water Pollution and Digestive Cancers in China." *Review of Economics and Statistics* 94(1): 186–201.
- Egan, Patrick, and Megan Mullin. 2017. "Climate Change: US Public Opinion." *Annual Review of Political Science* 20(1): 209–27.
- Fossati, Diego, Edward Aspinall, Burhanuddin Muhtadi, and Eve Warburton. 2020. "Ideological Representation in Clientelistic Democracies: The Indonesian Case." *Electoral Studies* 63: 102111.
- Gazmararian, Alexander, and Dustin Tingley. 2023. *Uncertain Futures: How to Unlock the Climate Impasse*. Cambridge, UK: Cambridge University Press.
- Geiger, Nathaniel, and Janet Swim. 2016. "Climate of Silence: Pluralistic Ignorance as a Barrier to Climate Change Discussion." *Journal of Environmental Psychology* 47: 79–90.
- Hallegatte, Stéphane. 2016. *Shock Waves: Managing the Impacts of Climate Change on Poverty*. Washington, DC: World Bank Publications.
- Hertel-Fernandez, Alexander, Matto Mildenerberger, and Leah Stokes. 2019. "Legislative Staff and Representation in Congress." *American Political Science Review* 113(1): 1–18.
- Hicken, Allen, Edward Aspinall, Meredith Weiss, and Burhanuddin Muhtadi. 2022. "Buying Brokers: Electoral Handouts Beyond Clientelism in a Weak-Party State." *World Politics* 74(1): 77–120.
- Hsiao, Allan. 2025. "Sea Level Rise and Urban Adaptation in Jakarta." Stanford University, Working Paper.
- Hsiao, Allan. 2024. "Coordination and Commitment in International Climate Action: Evidence From Palm Oil." Stanford University, Working Paper.
- Jayachandran, Seema. 2009. "Air Quality and Early-life Mortality: Evidence From Indonesia's Wildfires." *Journal of Human Resources* 44(4): 916–54.
- Jones, Matthew, Glen Peters, Thomas Gasser, Robbie Andrew, Clemens Schwingshackl, Johannes Gütschow, Richard Houghton, Pierre Friedlingstein, Julia Pongratz, and Corinne Le Quéré. 2024. "National Contributions to Climate Change Due to Historical Emissions of Carbon Dioxide, Methane and Nitrous Oxide." <https://doi.org/10.5281/zenodo.14054503>.
- Kalla, Joshua, and Ethan Porter. 2021. "Correcting Bias in Perceptions of Public Opinion Among American Elected Officials: Results From Two Field Experiments." *British Journal of Political Science* 51(4): 1792–800.
- Kuipers, Nicholas, Gareth Nellis, and Michael Weaver. 2021. "Does Electing Extremist Parties Increase Violence and Intolerance?" *British Journal of Political Science* 51(3): 1340–47.
- Kuipers, Nicholas, Risa Toha, and Nathanael Gratias Sumaktoyo. 2024. "Third Time's the Charm: The Youth Vote and Prabowo's Victory in the 2024 Indonesian Presidential Election." *Pacific Affairs* 97(3): 563–85.
- Mansbridge, Jane. 2003. "Rethinking Representation." *American Political Science Review* 97(4): 515–28.
- Mildenerberger, Matto, Alexander Sahn, Chris Miljanich, Michelle Hummel, Mark Lubell, and Jennifer Marlon. 2024. "Unintended Consequences of Using Maps to Communicate Sea-level Rise." *Nature Sustainability* 7: 1018–26.
- Mildenerberger, Matto, and Dustin Tingley. 2019. "Beliefs About Climate Beliefs: The Importance of Second-order Opinions for Climate Politics." *British Journal of Political Science* 49(4): 1279–307.
- Nasution, Anwar. 2017. "The Government Decentralization Program in Indonesia." In *Central and Local Government Relations in Asia*, 276–305. Cheltenham: Edward Elgar.
- Nicholls, Robert, Daniel Lincke, Jochen Hinkel, Sally Brown, Athanasios Vafeidis, Benoit Meyssignac, Susan Hanson, Jan-Ludolf Merckens, and Jiayi Fang. 2021. "A Global Analysis of Sub-sidence, Relative Sea-level Change and Coastal Flood Exposure." *Nature Climate Change* 11(4): 338–42.
- Pereira, Miguel. 2021. "Understanding and Reducing Biases in Elite Beliefs About the Electorate." *American Political Science Review* 115(4): 1308–24.
- Pereira, Miguel, Nathalie Giger, Maria Perez, and Kaya Axelsson. 2025. "Encouraging Politicians to Act on Climate: A Field Experiment With Local Officials in Six Countries." *American Journal of Political Science* 69(1): 148–63.
- Pitkin, Hanna. 1967. *The Concept of Representation*. Berkeley: University of California Press.
- Pörtner, Hans-Otto, Debra Roberts, Valérie Masson-Delmotte, Panmao Zhai, Melinda Tignor, Elvira Poloczanska, Katja Mintenbeck, Andres Alegria, Maïke Nicolai, Andrew Okem, Jan Petzold, Bardhyl Rama, and Nora Weyer. 2019. "The Ocean and Cryosphere in a Changing Climate." In IPCC Special Report on the Ocean and Cryosphere in a Changing Climate 1155. Geneva: IPCC.
- Przeworski, Adam, Susan Stokes, and Bernard Manin. 1999. *Democracy, Accountability, and Representation*. Cambridge, UK: Cambridge University Press.
- Purnomo, Herry, B. Okarda, B. Shantiko, R. Achdiawan, A. Dermawan, H. Kartodihardjo, and A. A. Dewayani. 2019. "Forest and Land Fires, Toxic Haze and Local Politics in Indonesia." *International Forestry Review* 21(4): 486–500.
- Ruggeri, Kai, Bojana Večkalov, Lana Bojanić, Thomas Andersen, Sarah Ashcroft-Jones, Nélida Ayacaxli, Paula Barea-Arroyo, et al. 2021. "The General Fault in Our Fault Lines." *Nature Human Behaviour* 5(10): 1369–80.
- Sanford, Luke. 2023. "Democratization, Elections, and Public Goods: The Evidence From Deforestation." *American Journal of Political Science* 67(3): 748–63.
- Sevenans, Julie. 2021. "How Public Opinion Information Changes Politicians' Opinions and Behavior." *Political Behavior* 43(4): 1801–23.
- Stokes, Leah. 2016. "Electoral Backlash Against Climate Policy: A Natural Experiment on Retrospective Voting and Local Resistance to Public Policy." *American Journal of Political Science* 60(4): 958–74.
- Warburton, Eve. 2023. *Resource Nationalism in Indonesia: Booms, Big Business, and the State*. Ithaca, NY: Cornell University Press.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Hsiao, Allan, and Nicholas Kuipers. 2025. "Climate crisis and policy inaction in Indonesia." *American Journal of Political Science* 1–17.
<https://doi.org/10.1111/ajps.70002>