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Environmental hazards and policy change in urban Pakistan

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- Climate change is a risk multiplier in urban centres in Pakistan. Citizens regularly report high rates of diseases caused by environmental degradation, including poor water quality. In some neighbourhoods, over 85% of households report that their piped water is undrinkable.
- Awareness of the impacts of climate change are high, even among low-literacy populations.
- Women bear a disproportionate burden of caregiving when other adults and children fall sick.
- When provided with information on the link between environmental degradation and health, individuals are willing to take action, including paying for legal organisations to hold policymakers accountable. Simple interventions informing communities of actionable policies are likely to have a large impact.
- Understanding political accountability in the context of environmental issues and climate change is complex. Often, political parties simply don't feature in assigning responsibility or taking action. Partisan identities prevent citizens from voting for pro-environmental justice parties, even in hypothetical/experimental settings. A more impactful pathway to climate justice is likely to be environmental and human rights lawyers, NGOs and community based organisations that can work on behalf of neighbourhood groups.
- These organisations have a history of working in Pakistan, stepping in where parties fail to offer solutions to longstanding issues. Additionally, the higher judiciary has taken *suo moto* action on civil rights and enjoys a relatively high level of success. These avenues, more than the legislative process, are good pathways towards creating information and action on climate issues.

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A few weeks after general elections in Pakistan were announced for February 2024, a schoolteacher in Lahore noticed an increase in activity in the neighbourhood he worked in. “A political party set up a camp – a *dera* – right opposite the school.” The tented encampment had posters with the party’s election symbol, and a loudspeaker that played music – typical signs of an election campaign kicking off. There was one more thing the schoolteacher, Waris, noticed: people from the neighbourhood, usually influential residents, brought a series of longstanding issues to the party representative at the encampment. And, for once, issues got resolved. Part of the campaign funds were used for cleaning up a growing pile of garbage. Low-hanging and obsolete electric wires got fixed.

In the months following the election, Waris was part of a study to inform residents in the area of a growing water crisis. Dangerous contaminants in the water are pervasive in many parts of Lahore, coliform bacteria that lead to diarrhoea and even stunting in children, and severe illness in adults. Water contaminants such as these are exacerbated by climate change-related heat intensity in Lahore. We asked individuals whether they had brought up these issues with politicians whom they had voted for. The notion of going to a politician with such a complaint seemed absurd. “You can get your issues resolved around election time, but not otherwise. Especially not if you are an ordinary person.”¹ It appears that voters are, in fact, savvy observers of the abilities of politicians, and focus their asks on well-worn channels of effectiveness. For long-standing issues such as environmental degradation, this presents a unique set of challenges.

In public opinion studies on climate change and the environment, scholars frequently focus on demand-side issues. Are voters and citizens informed enough about the deleterious effects of bad water and bad air? Are they able to identify responsibility and assign blame? Are they sidetracked by partisanship (Singh and Thachil, 2023) or ethnic identity (Alesina et al, 1999)? In the context of South Asia, the seeming unwillingness of citizens to demand better environmental action from policymakers is particularly pernicious: cities in northern India and Pakistan have some of the worst air quality in the world, and the region is at the forefront of climate change-induced crises of heatwaves and flooding. Writing during the Delhi elections in 2023, veteran social scientist Yogendra Yadav noted a puzzling absence of air pollution in election campaigns of both the incumbent and the rival party (Yadav, 2023). He suggested that political solutions to environmental degradation is beset with supply-side issues: that is, elites and parties of opposing parties collude to keep these issues off the table. Yadav’s observation is a common one in the study of environmental justice.

¹ Interview with resident, Lahore, August 2024

Citizen interest is only part of what enables complaint and mobilisation. States must induce capabilities – that is, legal, psychological and social opportunities for mobilising interests and claims.² This study suggests that if public mobilisation is examined in the context of existing capabilities, citizens are highly motivated, informed, and adept at demanding solutions. I explore the particular case of environmental degradation of water in Lahore, and ask: how do the solutions to environmental issues alter individual ability to engage in and take action on them?

While this study explores demand-side issues, it also inverts the practice of bringing the problem close to home by bringing the solution close to home. Leveraging a unique collaboration between an activist non-profit organisation and a water testing lab, the study tests the willingness of individuals to participate in a neighbourhood-level water improvement action if the scale of issue is framed as either a local or a city-wide problem. A series of pre-registered hypotheses provide proof of concept of two commonly used, individual-level theories of citizen inaction on environmental issues, plus two unique ‘institutional’-level arguments that test the core theory of this project.

This study uses a proprietary dataset of over 1,400 residential sites in Lahore that were tested by an independent lab, with seven low-income localities testing positive for coliform and heavy metal contaminants. 800 households in contaminated and non-contaminate sites are delivered a face-to-face survey, including an embedded survey vignette that provides information on local water quality, and a generic message about the quality of water in Lahore. The study measures the willingness of residents to choose improvements in quality, monitored through more frequent testing and outreach, versus a new hand pump or water tank installation. A team of three researchers who had existing networks within Chungi Amr Sidhu conducted in-depth interviews with residents. This study joins emerging literature on the ability of citizens to mobilise around issues of environmental degradation and climate change if provided adequate information and tangible alternatives.

Theoretical background

Climate change is likely to exacerbate the lack of access to clean drinking water for many of the world’s urban residents (IPCC Report 2022). In South Asia, where the presence of bacterial contaminants in water supply have offset gains from poverty reduction, climate change acts as a “risk multiplier” (World Bank 2022). The IPCC and World Bank reports suggest increased pressure on water

² The capabilities approach proposed by Sen (1996) situates development activity by the state – spending on healthcare and education, for example – as central to improving individual capabilities in citizens, including the ability to hold the state accountable. Kruks-Wisner (2014) builds on this by suggesting that the ability to make demands on the state is a process of individually induced interests and legally and socially produced capabilities.

security as the region experiences increasingly hot summers. South Asian cities such as Lahore consistently rank among the most impacted for climate change and environment-related issues, including heat waves (Gowen et al., 2023), air quality (AQLI 2024) and water.

Why don't governments prioritise clean air and water in the developing world? Several theories exist, most of them focused on why voters don't demand these public goods from their representative. In industrialising countries such as India and Pakistan, scholars often lament that the electorate takes no action to hold politicians accountable. Voters are seen as prioritising clean air and water when countries reach a certain level of industrialisation and wealth. Inaction on climate change is frequently cited as being a problem of low knowledge: public polling conducted just before the historic floods in Pakistan in August-September 2022 suggests 58% of people polled believed climate change was "not a real issue" (Gallup 2022). Leiserowitz (2007) suggested that public perceptions of risk and subsequent behaviour are consequential to climate change; he found Pakistan to have one of the lowest knowledge bases of global warming in 2006.

Recent work has contributed considerably to the intersection of climate change and political processes in the developing world. An issue that has received increasing attention is that of air pollution. Because particulate matter in the air is visible, and there are clear links to respiratory health, researchers have found links between air pollution and political action. Singh and Thachil (2023) find that voters can be motivated to support policies if there is improvement in environmental conditions, such as a reduction in air pollution. Dipoppa and Gulzar (2023) find that bureaucrats are motivated to punish crop burning when it impacts air quality in their district. These seemingly clear links between an environmental issue and policy action are attenuated by context; Singh and Thachil (2023) find that partisanship determines which party respondents blame for air pollution. Similarly, Gaikwad et al (2023) find that voters belonging to the majority category are less likely to be able to successfully lobby for access to piped water connections, because politicians rely on non-material appeals for that group – primarily, the vilification of minorities.

The tenuous nature of democratic accountability in developing countries makes the environmental and climate crisis particularly challenging. Where voters are increasingly swayed by passionate politics, that ultimately do little to meet their immediate material needs, the potential for long-term policy and programmatic politics is dire. Politicians and political parties are unlikely to offer broad-based solutions to issues such as air and water pollution that are costly to fix and offer few opportunities for targeted benefits to constituents (Yadav, 2024). Voters

might also find the costs of state-level solutions, such as upgrading infrastructure, too costly and therefore out of reach.³

Yet to assume that persistent bad air and water quality is due to individual inaction fails to acknowledge global and historic inequities in climate justice. The systematic outsourcing of pollution and waste, first to marginalised and minoritised communities in the industrialised world, and then to low-income countries in the developing world, led environmental justice pioneer Robert Bullard to coin the term “global dumping grounds” (2001: 164). Indeed, studies suggest that concern (or lack thereof) over climate issues is often a facet of perceived loss of power and status along gendered lines, particularly in the developed world (Bush and Clayton, 2023). They suggest that women and men in the developing world are equally concerned about climate change, much more so than their more privileged counterparts.

After the 2022 floods in Pakistan, over 80% of Pakistanis polled reported that climate change was a threat, with 60% believing it was a “major threat” (Asad et al, 2023). Individuals across the country are experiencing firsthand rising temperatures and repeated flood disruptions, which are linked to human-caused global warming. There is evidence that individuals respond to degrading physical environments: low-income households spend precious resources purchasing filtered water for drinking (Haider and Siddqui 2024), and multiple studies point to public concern that air pollution is impacting student performance in schools (Asad et al, 2023). Beyond a lack of appropriate theoretical framework, a failure to engage with environmental justice frameworks frequently leads to bad metrics. For example, a World Bank study asks Pakistanis whether they would be willing to “reduce beef consumption” or use public transportation (Asad et al, 2023: 12) in a country with limited public transport infrastructure, and where beef is considered a luxury good (Hayat et al, 2023). Table 1 summarises the literature.

Table 1: Why don't voters demand environmental action?

Theory	Study	Summary
They lack information on hazards	Leiserowitz (2007)	Knowledge on the causes and consequences of climate change is generally low, even among the developed world. It is recently

³ Gaikwad, Nellis and Thomas (2023) show that individuals are more motivated by “first-mile” services, such as filing paperwork with bureaucrats, than broader political action. The latter is more difficult to gain results from, and is frequently muddled by partisanship.

gaining salience in the developed world

The problem is not immediate enough	Thachil and Singh (2023)	While individuals may have general awareness of the issue, they may not link it to costs to health and livelihood
They have information, but don't know whom to blame	Leiserowitz (2007)	They have information, but don't know whom to blame
Who they blame is shaped by partisan motivated reasoning (PMR)	Thachil and Singh (2023)	
Who they blame is shaped by competence reasoning	Graham and Singh (2024)	
The fear of costs outweighs the benefits, especially for privileged groups	Bush and Clayton (2024)	The gender gap in concern for climate change diminishes in low income contexts. However, women do more of the care work and are directly impacted when people/children in the household are unwell (Khan 2022)
Individuals prefer private solutions over ones that require collective action	Asad et al, 2023	
Haider and Siddiqui, 2023	Individuals invest in air purifiers and buy bottled water	
The institutional scale of costs is unknown	Ostrom (2000)	Will other people participate? How many people need to participate in order to make a difference?

Building off this body of work, this study proposes a series of tests of public knowledge and opinion.⁴

- Citizens have relatively high levels of knowledge about climate change and environmental degradation.
- Individuals are not aware of the impacts of these issues on their livelihoods and health. In this case, I expect that there is less awareness that contaminated bathing water from pipes, not just drinking water, can lead to gastrointestinal diseases
- Citizens will choose to act when provided information, even when action is costly
- Citizens will act when provided local, immediate solutions, with some preference for low coordination costs over higher coordination costs

Pakistan's environmental and climate crisis

According to recent studies, up to half the water used for drinking in Pakistan is contaminated by bacterial matter, typically *E. coli*, and includes piped water in urban districts (World Bank 2019, Hifza et al 2021). While most Pakistanis in the past few decades have improved access to water and toilets, there is minimal infrastructure for waste treatment. The dumping of raw sewage and fecal matter has contaminated the soil and groundwater, such that even in urban areas, much of the piped water from underground freshwater sources is unfit to drink. The World Bank estimates a chronic crisis of stunting and poor nutrition among children in Pakistan, with some of the highest rates globally.

Environmental hazards such as air and water pollution are disproportionately likely to impact poor and minority individuals. Wealthier individuals are also more likely to seek private solutions, such as indoor air purifiers and water filters.⁵ Like many environmental issues, climate change may not be a direct cause, but acts as a multiplier. Higher summer temperatures are likely to exacerbate the demand for drinking and bathing water. Studies suggest increasing bacterial and contamination content in tap water due to flooding, rising temperatures in freshwater sources, and soil degradation (IPCC 2022, Moss et al 2010).

It is no surprise that private options for drinking water are ubiquitous in the country. In Karachi, over 90% of the water is considered unsafe for drinking (Hifza et al, 2021), and households across income groups report buying

⁴ These propositions were pre-registered as hypotheses, available here: <https://osf.io/84eds/>

⁵ Indoor air purifier use has been documented in workplaces and homes (Garg et al, 2023).

drinking water, typically from a reverse osmosis filtration plant (Haider and Siddiqui, 2022). Households report spending PKR 800 on drinking water every month, or about 4% of their reported monthly income. However, it is likely that simply procuring drinking water is insufficient in areas where bacterial load is especially high – unsafe tap water can contaminate cooking utensils and be unfit for bathing as well (Zaidi 2023, also see Appendix 1).

One key finding emerging from preliminary work is that the self-reported survey data on occurrences of water-borne illnesses forms a very close correlation with contamination level laboratory results. This we see as indication of people, even those without formal education, being intimately familiar with the quality of the water they drink. Despite having this knowledge, we do not see many file complaints with utility providers or raise clean water as a priority demand during election season.

Public opinion and political responsiveness

Public polling conducted just before the floods in Pakistan in August-September 2022 suggests 58% of people polled believed climate change was “not a real issue” (Gallup 2022). Since the floods, however, awareness of climate change has risen rapidly. In a 2023 study, over 80% of Pakistanis polled reported that climate change was a threat (Asad et al, 2023). 64.4% of respondents reported air pollution as impacting student performance in schools, and women were found to be more aware of, and concerned by, climate change (Asad et al, 2023).

Multiple studies have shown that household priorities are gendered (Khan 2017), and that female leadership results in prioritising drinking water (Chattopaday and Duflo 2004). Khan (2017) suggests that women’s greater concern for water in urban areas does not stem from concerns of water collection, which is primarily a male role. Instead, women are motivated by disproportionate burdens of caregiving when children (and other adults) fall ill due to poor water quality. In a recent study in Lahore, it also appears that private filter water use is on the rise. It is likely that most people know that piped water from the state and well water are not safe for drinking (See Appendix 2).

How responsive are politicians in Pakistan to voters? Recent work has suggested that politicians are highly attuned to immediate needs of voters, such as water and electricity (Haider, 2020; Haider and Siddiqui, 2022; Khan, 2020). However, voters frequently lack the capacity to mobilise around policy issues, and may struggle to force meaningful competition between elites (Cheema et al, 2019). I expect that constituencies in Punjab will face greater success in pressuring their representatives due to greater economic mobility in the region (Liaqat, Cheema and Mohmand 2020). For their part, politicians are under considerable pressure to appear approachable and open to solving voter’s

needs (Liaqat, Cheema and Mohmand, 2020), and expend considerable energy using multiple platforms to communicate their awareness of voter preferences.

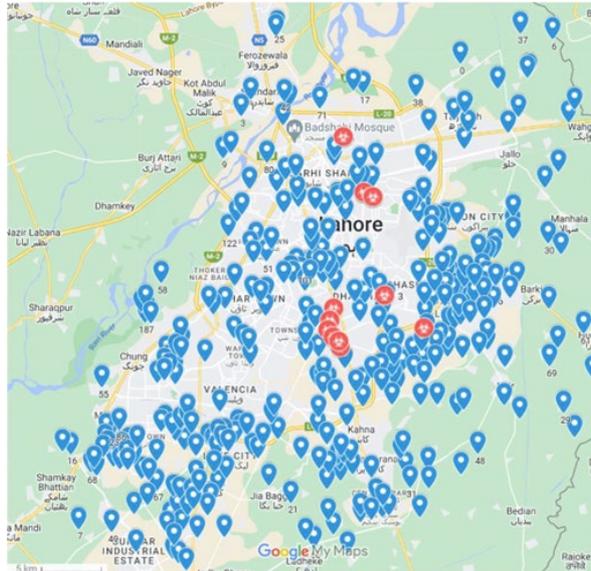
Despite seemingly open channels of communication between voters and political elites, politicians may not have a good idea of what voters value, especially women (Liaqat, Cheema and Mohmand 2020). Pakistan’s highly unequal economic landscape and strict patriarchal norms frequently result in the very poor and women being marginalised. Political patronage disproportionately favours voters with wealth and access, rewarding petitioners with highly subsidised utilities. For the very poor, relying on political patronage for basic needs erodes any ability to hold parties accountable, or implement meaningful reform (Mohmand, 2019). The context of this study, together with the theoretical framework, results in the following pre-registered hypotheses.

Individual-level argument	H1: Individuals are aware that the quality of water in their neighbourhood is low
	H2: Individuals are unaware that contaminated bathing water from pipes, not just drinking water, can lead to gastrointestinal diseases
Institutional-level argument	H3: Respondents are likely to choose action over inaction when informed of contamination in water and provided with an actionable solution.
	H4: Respondents are likely to choose local, community solutions over solutions that require broader coordination.

Research design

In order to identify a environmental issue that had local-level variation, and potentially local solutions, I conducted a series of preliminary interviews and field visits in Pakistan, including to the flood-impacted areas in Upper Sindh and in Punjab. I met the director of Action Research Collective (ARC), a research non-profit in Lahore, that had just completed a study on water quality in Lahore. Their team tested over 1,400 locations in the city, and found 7 locations to have very high levels of bacterial water contaminants, or coliforms.

Figure 1: Spatial distribution of water testing, with contamination hotspots in red. Sampling for this study took place in 2023. Source: ARC (Zaidi 2023)



This study is the result of a follow-up of ARC’s work on 1,400 residential sites in Lahore. Each site was tested by an independent lab, and seven low-income localities testing positive for coliform and heavy metal contaminants. We identified 20 locations in high-contamination areas that met the criteria for this study. 1,600 households in contaminated sites were delivered a face-to-face survey, including an embedded video-based informational vignette that provided results from local water samples. The study measures the willingness of residents to contribute part of their survey compensation to a neighbourhood fund for hiring an environmental lawyer. Additionally, willingness to invest in improvement is measured, willingness to pay for more frequent testing and outreach, and finally for voting for a pro-environment political party. The study also collected information of overall awareness of climate change and environmental issues. Ahead of the survey, another round of water testing took place in the identified localities, so that the survey vignette providing information on water testing results was accurate and up to date.

Survey experiment and vignette

One of the key components of this study was to see if individual behaviour can be shifted if information is provided on water quality and health. The survey included an embedded informational video, randomised to show either a placebo of general information about health and road safety, and two treatments on water quality and health (Figure 3). The two treatments were virtually identical, and only varied the coordination costs – that is, whether citizens in the neighbourhood could cooperate and solve the issue, or that citizens across Lahore would have to cooperate to solve water-related issues. A description of the experiment, including the vignette and the survey design is available in the Appendix.

Figure 3: Stills from Informational Video treatment (Treatment 2)



Out of sight – What citizens know, and how demands are made

What do citizens demand? In the pre-survey interviews that were conducted, the highest priority for citizens was a respite in electricity bills, and a reduction of outages. Water-borne illnesses, while acknowledged as important, tended to take a back seat. Interviews conducted in neighbourhoods that experienced high levels of water contamination did not necessarily raise poor-quality water as a major issue. In many cases, it seemed that respondents expected researchers to want to talk about electricity, since that had long been part of political campaigns.

It followed that multiple residents reported going frequently to electricity protests, or making electricity-related claims. Conversely, water-related issues were dealt with more “pragmatically”, by purchasing drinking water. “We buy water for drinking purpose at our house,” one female respondent reported. She seemed to suggest that politicians were ill equipped to deal with water issues, because of the extent of the problem: “It is very difficult for our candidate to work on water... the system is completely destroyed.”⁶ Another similarly reported seeking private solutions to the problem: “We had water issues, but we resolved them by getting groundwater, and getting solar panels to run the pump.”

It is therefore surprising that water and sanitation stand out as top priorities in the neighbourhoods that were sampled in the 2025 survey for this study, in contrast to the relative priority of electricity in the qualitative research.⁷ These priorities were reflected in the health and service delivery profile of these areas:

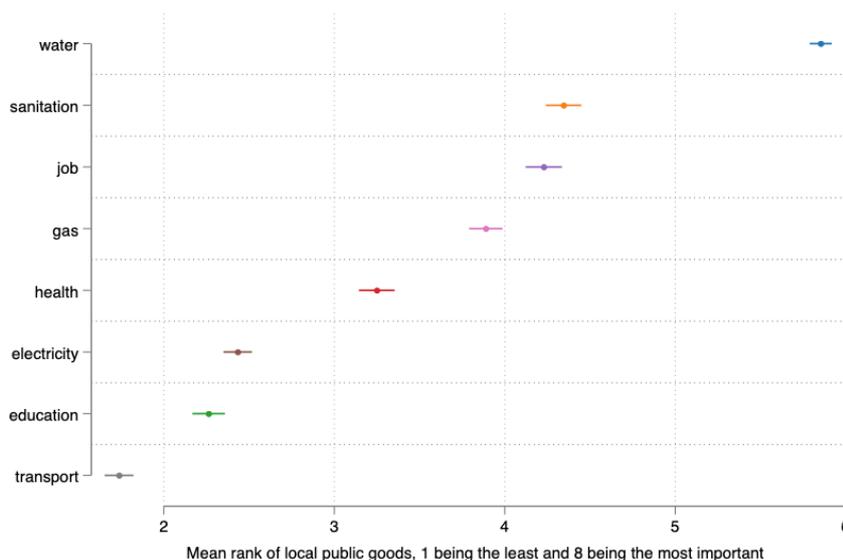
⁶ Interview with resident, Lahore, August 2024

⁷ I offer some mechanisms for this in the discussion section, that include seasonality and salience.

over 88% of the households reported that their piped water was not safe to drink. Even though the cost of getting drinking water is relatively low (about PKR 150 a week, on average), individuals reported that low-quality piped water was a major concern for them (Figure 3). Although many areas in Lahore report a mix of well water and piped (government-sourced) water, over 96% of those surveyed relied on piped water alone, and the average water bill per month was about PKR 1,700.

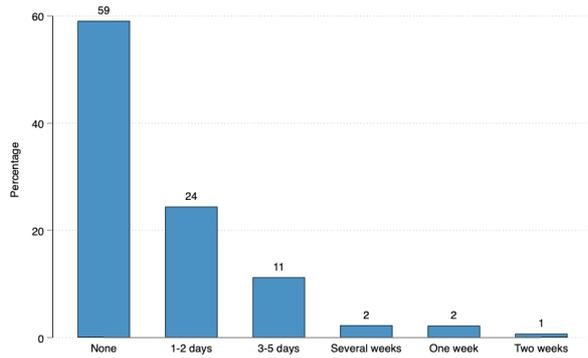
Water quality is generally considered low, and the poor quality of water is the number one complaint among residents. However, when asked about what actions they took against this issue, the majority of respondents said that they've never complained about water-related issues.

Figure 2: Ranked public goods, N=1,600



Water-testing results suggest a high incidence of water-borne diseases in these neighbourhoods. Are individuals aware of the link between poor water quality and disease incidence? 17% of the respondents reported that they had personally encountered gastrointestinal diseases in the past two months. A similarly high number of households reported these illnesses in children. Over 30% of households reported multiple days of school being missed in a two-month period due to these diseases, with some reporting several weeks of school absence (Figure 4).

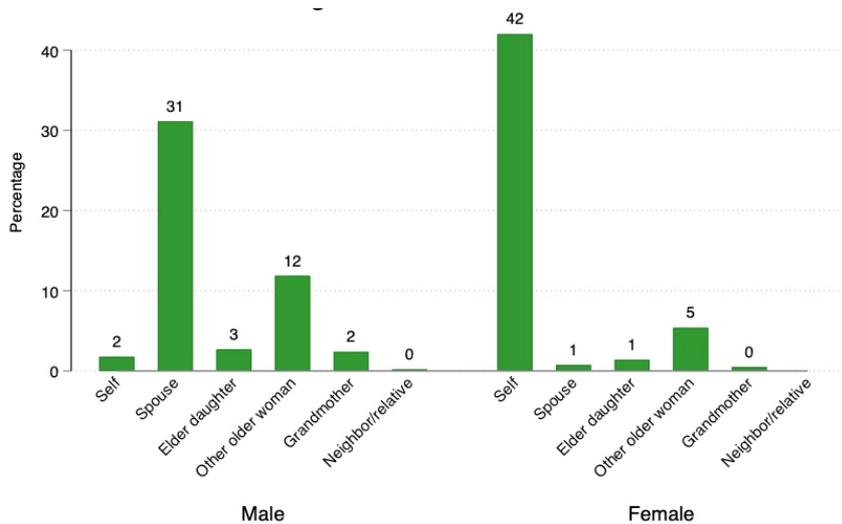
Figure 4: Reported school absence due to water-borne and air-borne disease



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Research suggests that childhood illness is a setback not just for the child’s education, but for the productivity of their caregivers (Khan, 2022). Unsurprisingly, the bulk of caregiving duties fall on women, particularly mothers, grandmothers and older daughters (Figure 5).

Figure 3: Caregivers for sick household members, by respondent gender. N=1,600



It is interesting that despite this relatively high cost of disease, loss of school and labour, many people did not have accurate information linking the poor quality of water and health impacts. When asked what they thought contributed

to gastrointestinal diseases, some correctly noted household water sources and sanitation, while many incorrectly identified “spicy or greasy food” and “eating out” as a reason. There is some indication that despite knowing water quality is generally low, understanding its impacts on health may be more complex.

Pragmatic solutions and claim-making

In the vignette at the beginning of this article, the school teacher noted that politicians were especially available immediately before elections. While many households purchase water from filter plants, others rely on community resources, and finally on patronage. There is evidence of sharing and communal use of water wells and filters, one woman reported getting “water from neighbour’s well, (since) they have installed a filter at their home.” She said that water from the piped mains smells bad, and she knew it was not safe to drink. Residents reported using filter water for drinking and cooking purposes, and piped (government-supplied) water for bathing and cleaning.

Another source of clean water for some low-income residents is direct patronage. A private water filter system, installed by a political leader or influential individual, is a one-time, immediate source of relief for many families. It also reinforces ties between voters and politicians. However, outside of simply investing in a water purification system, politicians are not forthcoming with system-level solutions on how to resolve environmental degradation or prevent contamination. When asked to think how politicians might resolve issues of water quality, residents were frequently stumped. Some suggested that water contamination was simply too complex to fix. For others, the intermittency of water is a bigger issue:

“For the past few months, we haven’t paid our water bills because there is no point as we don’t get water. This was our way of rebelling, but the officer from WASA (the Water and Sanitation Authority of Lahore) showed up the other day and threatened to cut our water pipeline, but that doesn’t matter because there’s no water anyway. Then he threatened to fine us, so I think we will pay the bill. We have also complained to WASA by having men in the neighbourhood go to their office.”⁸

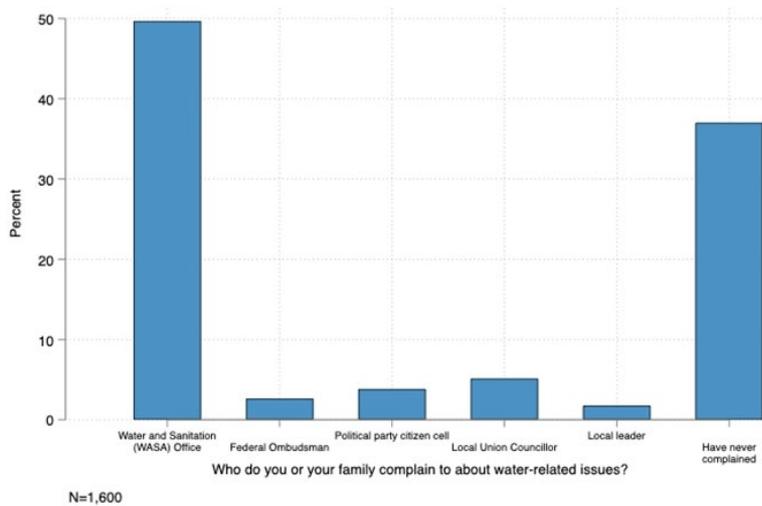
In Lahore, voters have complex patterns of claim-making. On the one hand, certain issues have a high amount of salience, and are the source of vigorous campaigning. Lahore’s ethnically homogenous polity results in high levels of competition (leading parties to court voters across the city) and very few safe seats. On the other hand, many issues such as chronic air pollution are not part of political platforms, and neither party has made efforts to hold rivals

⁸ Interview with resident, Lahore, August 2024

accountable for improving air quality. Voters suggest that candidates are unlikely to take on complex issues, or those which require long-term planning.

One consistent outlet for complaint appears to be the bureaucracy. While many issues are resolved through a combination of bureaucratic effort and political pressure, the visibility of municipal agencies such as the Water and Sanitation Agency (WASA) and the Lahore Electricity Supply Corporation (Lesco) means that many complaints go directly to these institutions (Figure 6). The next section turns to the survey experiment.

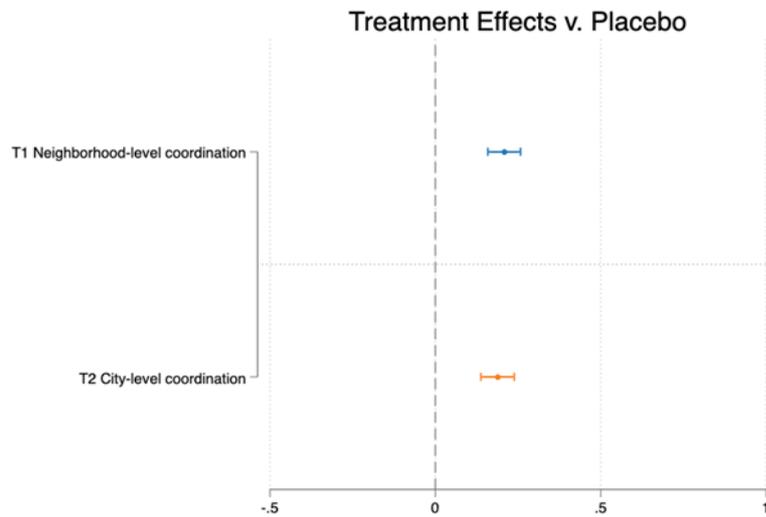
Figure 4: Results from survey question on claim-making.



Results from the survey experiment

The survey experiment had two goals: first, to measure the effect of information on environmental action; second, to examine whether individuals are deterred by the scale of the solution. The experiment was highly effective at motivating participants to contribute to local-level efforts for policy action. Both treatments showed significant and positive results versus the placebo (Figure 7).

Figure 7: Experiment results: would you be willing to contribute towards taking action?



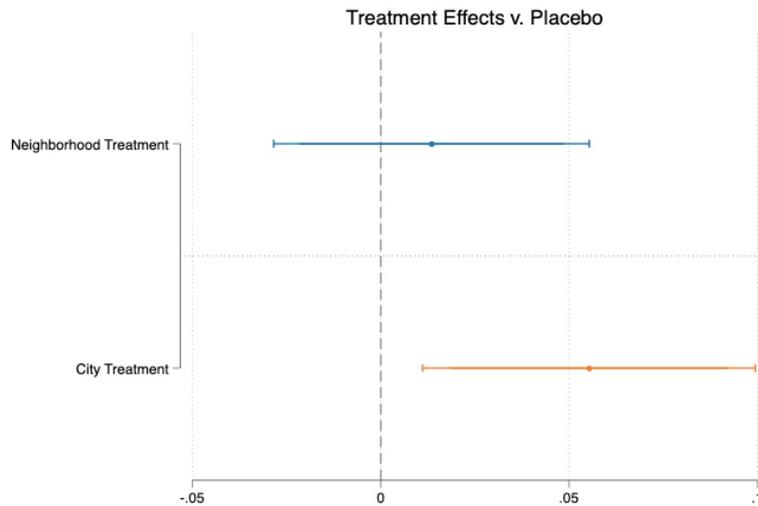
Treatment 1 (a neighbourhood-wide effort) v. Placebo, Treatment 2 (a city-wide effort) v. Placebo

Individuals were indifferent between the scale of the effort it would take to coordinate a policy solution. It appears that being provided information, and making the link between environmental hazards of low-quality household water, was sufficient to motivate them to take action. 82% of the respondents expressed interest in regular water testing in their neighbourhood, although they were significantly price-sensitive to paying for water testing. While the experiment treatments did motivate respondents to contribute part of their survey compensation towards a policy action, they did not improve willingness to pay for water treatment.

There is some evidence that the prompts did motivate individuals to vote for a hypothetical pro-environmental justice party. The second prompt seemed to be particularly persuasive. There was significant difference between the first and second treatments ($p < 0.1$).

Figure 8: Experiment results: Would you be willing to vote for “Pakistan

Environmental Party”?



Treatment 1 (a neighbourhood-wide effort) v. Placebo, Treatment 2 (a city-wide effort) v. Placebo

Discussion and conclusion

The qualitative and survey evidence presented here suggests that residents in Lahore are aware of the issues with water quality. However, they are reluctant to ‘waste’ precious opportunities of claim-making – an election, for example – trying to get politicians to fix something they may not have the capacity for or interest in.

Environmental and human rights have a long history in Pakistan, from Supreme Court judges taking an active interest in missing persons cases, to human rights lawyers being visible public figures in the media (Kureshi 2023). Furthermore, NGOs and non-profits have a large roles in service provision, providing parallel public services such as education and clinics, but also setting up subsidised filter plants. This study brings these layered and overlapping institutional fronts to a unique problem – that of environmental degradation. I find that individuals are willing to take costly actions to support local-level solutions. Additionally, they seem indifferent to the scale of the coordination effort: the fact that NGOs might have to coordinate across Lahore’s 11 million residents is not a cause for concern.

Understanding political accountability in the context of environmental issues and climate change is complex. Often, political parties simply do not feature in assigning responsibility or taking action. Partisan identities prevent citizens from voting for pro-environmental justice parties, even in hypothetical/experimental settings. A more impactful pathway to climate justice is likely to be environmental and human rights lawyers, NGOs and community-based organisations that can work on behalf of neighbourhood groups.

When provided information on the link between environmental degradation and health, individuals are willing to take action, including paying for legal organisations to hold policymakers accountable. There is no preference for local, semi-private solutions over larger, city-wide infrastructural solutions. Simple interventions that inform communities about actionable policies are likely to have a large impact.

This is a heartening finding, in the face of multiple climate crises. Climate change is a risk multiplier in urban centers in Pakistan. Citizens regularly report high rates of diseases caused by environmental degradation, including poor water quality. In some neighbourhoods, over 85% of households report that their piped water is undrinkable. Reports suggest that bathing with contaminated water is a source of illnesses, including stomach and skin infections, and long-term impacts on childhood growth and development.

Awareness of the impacts of climate change are high, even among low-literacy populations. Women bear a disproportionate burden of caregiving when other adults and children fall sick. Over 30% of households reported children missing school for one-two days due to illnesses.

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