

# Understanding Socioeconomic Factors in Climate Change Awareness and Action<sup>§</sup>

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## KEY TAKEAWAYS

**Overall, 8 in 10 people in Pakistan are concerned about impacts of climate change, with females and educated people being more concerned.**

- Climate change is more likely to be perceived as a pressing issue when presented with economic issues.
- People with the least education are more likely to distrust all sources of climate-related information.
- Parents have high demand for climate change education for their children; however, only a fraction of them engage in discussions about it at home.
- Despite the high levels of concern about climate change, support for personal and government action is low.
- Strategies to motivate action on climate actions should focus on effectively encouraging behavioral change by highlighting financial savings rather than climate impact.

**Climate change has profoundly affected Pakistan, manifesting in altered weather patterns and devastating floods.**

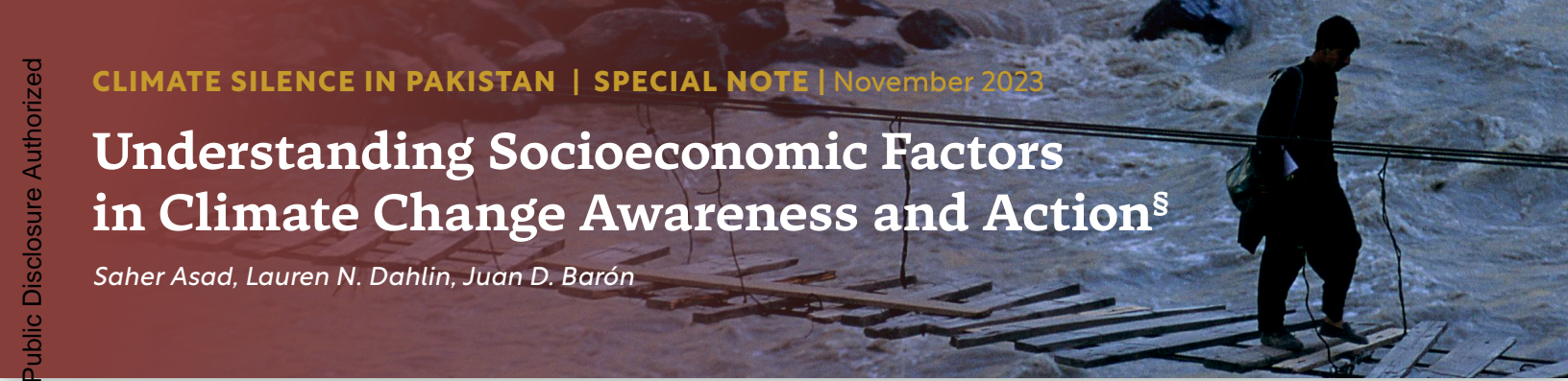
According to projections, Pakistan's GDP is expected to decrease by a minimum of 18 to 20 percent by 2050 due to severe climate-related occurrences, environmental deterioration, and air contamination (World Bank, 2022).

**The 2022 Intergovernmental Panel on Climate Change (IPCC) report states that modifying the lifestyles and behaviors of people could result in a 40–70 percent decrease in greenhouse gas emissions by 2050 (IPCC, 2022).** The significance of altering behaviors and lifestyles to combat climate change is emphasized in the 2023 IPCC report (IPCC, 2023).

**This policy note presents findings from a phone survey that explores the socio-economic factors influencing the level of concern and likelihood of action regarding climate change.**

The survey collected nationally representative data from 2000 households/people (one respondent per household) who are parents of school-aged children. This group is particularly pertinent and sizeable in Pakistan, given the recent catastrophic floods and their implications (Barón et al., 2022; Dahlin & Barón, 2023) and the country's rapidly increasing population. According to the 2023 IPCC report, the repercussions of climate change are predicted to have a far more pronounced impact on the lives of today's children and their future offspring than the current generation of adults. Furthermore, given that children are projected to bear the brunt of climate change, the degree of concern exhibited by their parents plays a pivotal role in fostering proactive measures to address this global issue.

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**Various socioeconomic factors can impact climate concerns and action.** Bergquist et al. (2023) suggest that the most effective interventions for inducing climate actions are ones based on social comparison to others and those based on financial incentives. Tolpannen (2022) highlights the role of a climate education-based intervention in helping improve action. The evidence on the impacts of gender on climate concern and action is mixed (see, e.g., Vicente-Molina et al., 2018; Xiao & McCright, 2015). The Pew Global Survey (Fagan & Huang, 2019) also suggests that in some countries women and younger people are more concerned about climate change, while people with higher levels of education tend to exhibit greater concern for the issue. Lawson et al. (2018) suggest that intergenerational pathways for climate communication and action are essential.

**As with many developing nations, Pakistan is grappling with the effects of climate change, such as rising temperatures and a surge in natural calamities, including floods.** However, despite substantial evidence highlighting the consequences of climate change, there needs to be a more analytical insight into the drivers of individual perceptions and behaviors in relation to climate change in Pakistan. To bridge this gap, this policy note explores the role of socio-economic factors that shape people's perception of climate change and the actions that influence its impact.

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## TARGETING INTERVENTIONS

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Using data to understand what drives people's climate behavior can help policymakers target interventions to bridge the gap between concern and action.

This policy note is centered around **three primary areas** that offer insights into understanding people's behavior toward climate change in Pakistan.

**Firstly, the report delves into the determinants of concern and priority that people place on climate change by using the data collected through the survey.** This provides a comprehensive understanding of the key factors influencing people's attitudes toward climate change and their perception of its importance. By exploring these determinants, policymakers can develop targeted interventions and strategies that encourage people to prioritize climate change and take proactive measures to address it.

**Secondly, the note analyzes the factors that impact people's trust in climate-related information.** Given the abundance of misinformation surrounding climate change, understanding the factors influencing trust in information is crucial in promoting accurate and reliable information to encourage informed decisions.

**Thirdly, the note focuses on the determinants of climate action and how they compare to other concerns.** By examining the factors that drive people's climate-related behavior, policymakers can identify the key areas that require intervention to encourage proactive climate change action. This analysis can also highlight discrepancies between individuals' levels of concern and their actions, highlighting areas requiring further research and intervention.

## A. Do people express concern about climate change and its impacts?

The awareness and significance of climate change are influenced by several factors, including concern for its impact on children, recognition of climate change as a significant issue, and personal interest. The survey covered these aspects and revealed that women and people with higher education exhibit the highest levels of concern for the impacts of climate change. Hence, gender and education serve as important determinants of climate change awareness.

### Box 1

#### Concern/Threat for Climate Change—A Global Comparison<sup>1</sup>

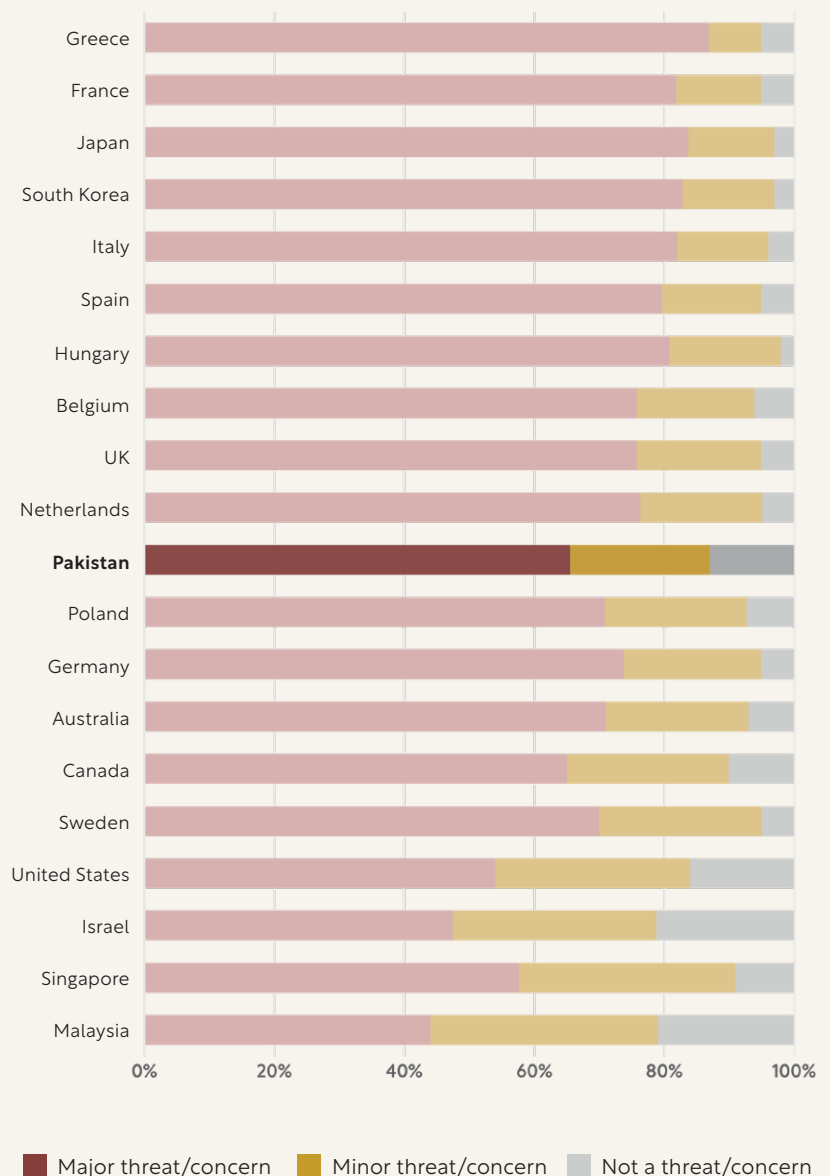
A global comparison involving 19 countries was conducted to gain a deeper understanding of the attitudes towards climate change. A specific question, carefully derived from Pew survey (Fagan & Huang, 2019), has emerged as an important indicator of the concern for climate change.

The survey asked respondents: To what degree do you consider climate change a threat/concern?

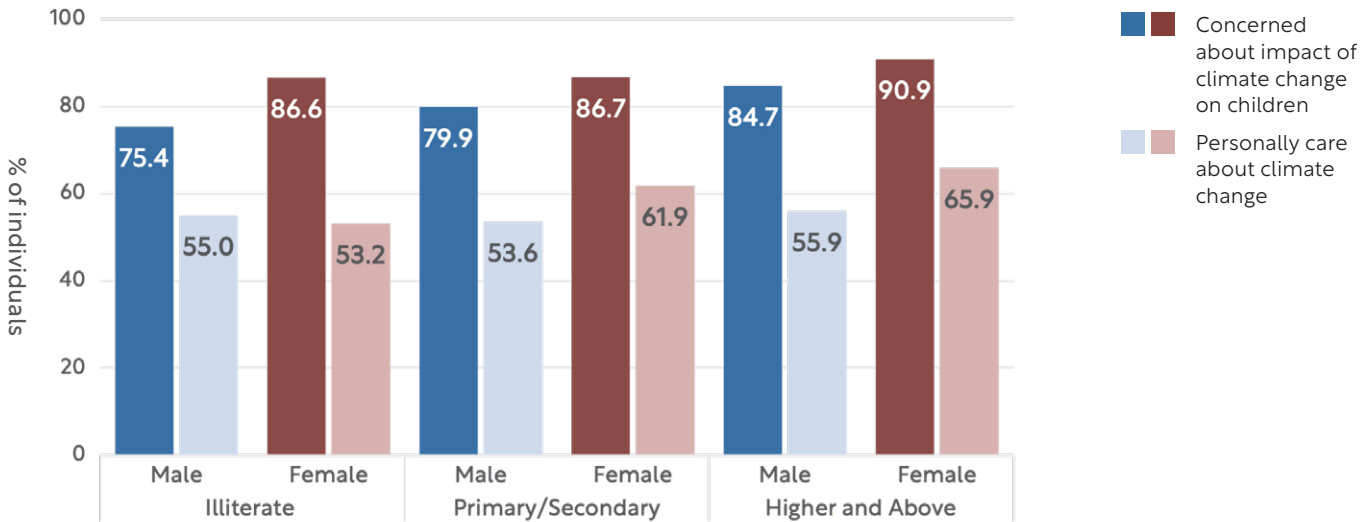
**The outcomes of this question reveal that Pakistan's values lie somewhere in the middle when compared to the other 19 countries.**

<sup>1</sup> Although there is a slight variation in wording between the original Pew survey, which used 'thread,' and the translated version in the context of Pakistan, where 'concern' was used, the phrasings convey similar meaning.

**Figure 1. Concern for Climate Change—A Global Comparison**



**Figure 2. Climate Change Concern by Education and Gender**



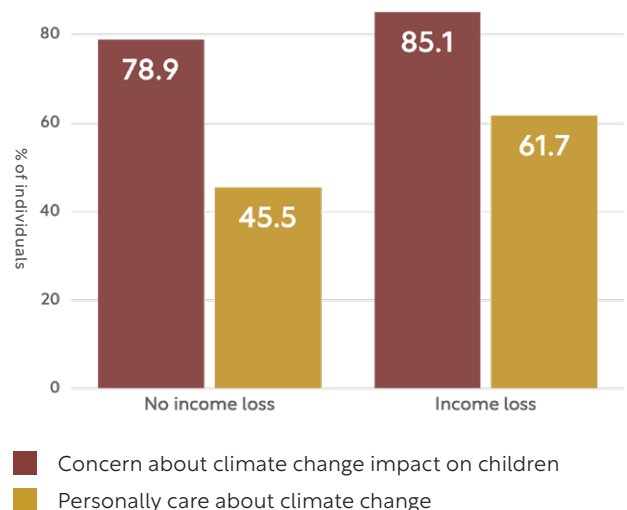
**Overall, 8 in 10 Pakistanis in the survey express deep concern on impacts of climate change on children.** A majority of people in different groups express concern, though gender and education are significant factors in determining the level of concern for climate change (Figure 2).

Women are generally more concerned about climate change, particularly its potential impact on children. This gender disparity in climate change concern may stem from women’s role as primary caregivers for children. Education is also critical in shaping people’s attitudes towards climate change. The more educated an individual is, the more likely they are to be aware of climate change’s causes and consequences and view it as a significant threat to the planet. The most educated people are the most concerned about the impact of climate change. This correlation between education and climate change concern highlights the importance of education and knowledge about climate change as one of the factors to foster a more sustainable future for all.

**People’s perception of climate change can be affected by their experiences of income shocks.**

Those people who have experienced income loss due to events such as the COVID-19 pandemic or floods are more likely to be concerned about the impacts of climate change (Figure 3). It is worth noting that this effect is observed even if the individual has not directly experienced the effects of climate change, such as inundation, highlighting the importance of understanding the indirect impacts of climate change on people’s lives.

**Figure 3. Concern About Climate Change by Income Loss**



Although people express concern about climate change and its impacts when asked specifically about it, it does not necessarily rank high on their list of priorities to address. For example, the survey participants were asked to select the top three issues facing Pakistan. While almost 80 percent or more (Figure 4) reported being worried about the effects of climate change on children, less than a quarter included climate change among the top three problems. This suggests that while there is deep concern about climate change, it may not be a primary concern for people in terms of priority.

The survey also determined the relative importance of different issues, including climate change. People were randomized into groups and presented with a list of issues: poverty, inequality, inflation, climate change and pollution, peace and justice, health, and education. One group was presented with economic issues first, while the other was presented with social issues first. Despite the order in which the issues were presented, the position on climate change was the same.

According to the results, there is a 4 percentage point statistically significant increase in the likelihood of people considering climate change as an important issue when economic issues are presented first as compared to when social issues are presented first. This can be attributed to the perception of climate change and pollution as an economic problem, which increases attention towards it when economic issues are emphasized first. Furthermore, the difference in the prioritization of climate change between the two groups, based on the order of issues presented, is more prominent among people with higher levels of education (Figure 5).

Figure 4. Concern for Climate Change versus Priority for Climate Change

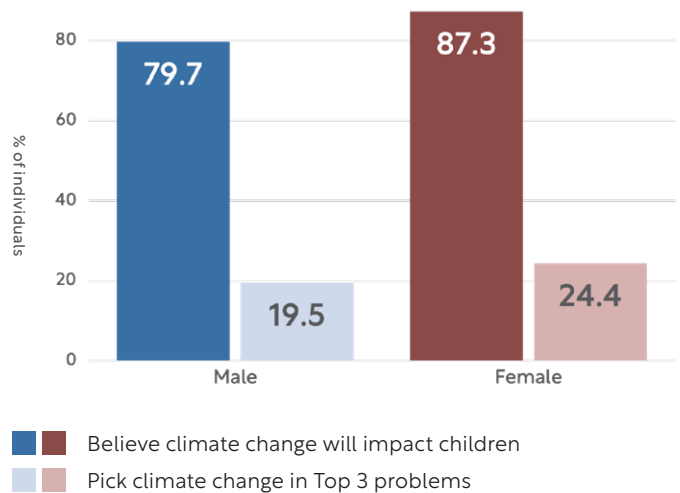
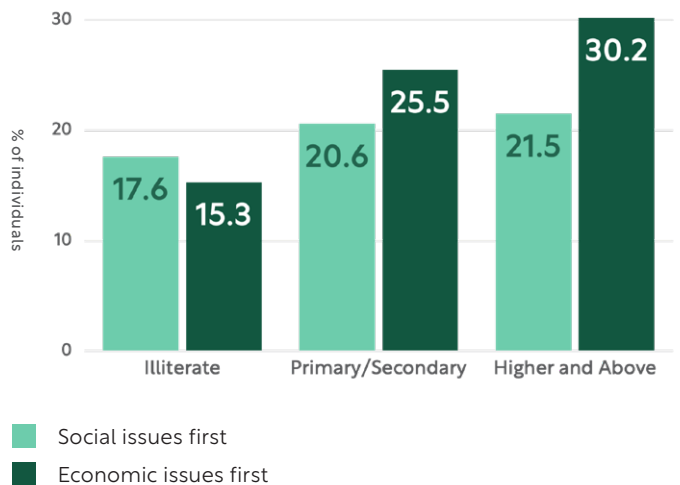


Figure 5. Effect of Priming through an Order by Education



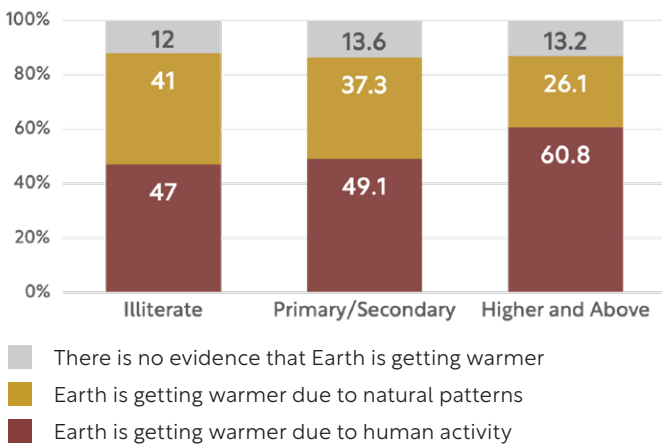


## B. How informed are people on climate change?

The survey collected data on people’s knowledge of climate issues and their trust in various sources of climate information. Less than half the people believe that climate change is caused by human activity. People with higher levels of education tend to be more knowledgeable about climate change issues (**Figure 6**).

When asked about global warming, only 47 percent of illiterate people believe that the earth is getting warmer due to natural activity. This percentage is slightly higher for people with primary and secondary education at 49 percent and higher for those with higher education or above, with 60 percent believing that human activity causes global warming.

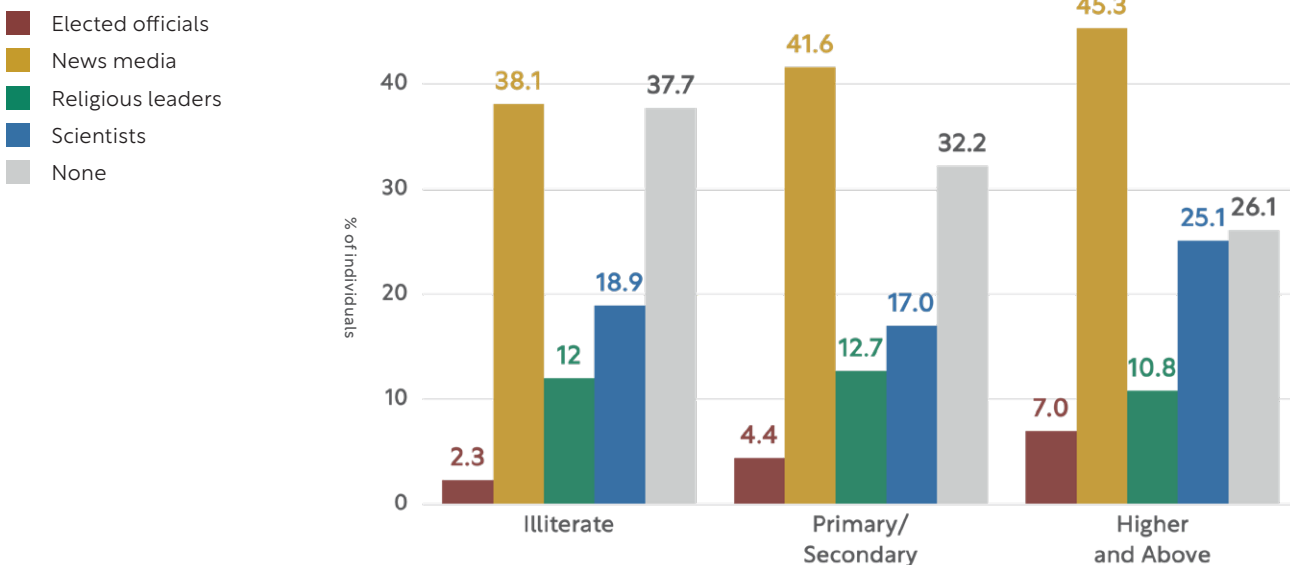
**Figure 6. Information on Climate Change by Education**



**While educating people on climate change is emerging as an important finding, the survey findings also indicate that educating people about climate change is far from easy.** Findings presented in **Figure 7**, show that while the news/media is the most trusted, there are still significant numbers who do not trust any source of information at all. Importantly, elected officials and religious leaders have the least credibility, with less than 1/5 of people trusting scientists. This emphasizes the lack of trust in traditional sources of leadership on climate change. The media, although trusted the most, maybe spreading a considerable amount of poor-quality information.

**The results further showed that the least educated people are the most likely to distrust any sources of climate information (Figure 7).** This presents a complex problem in developing effective policies to improve the information for this group, which is also the least informed and has the lowest level of trust in all presented sources of information.

**Figure 7. Sources that People Trust on Climate Information by Education**



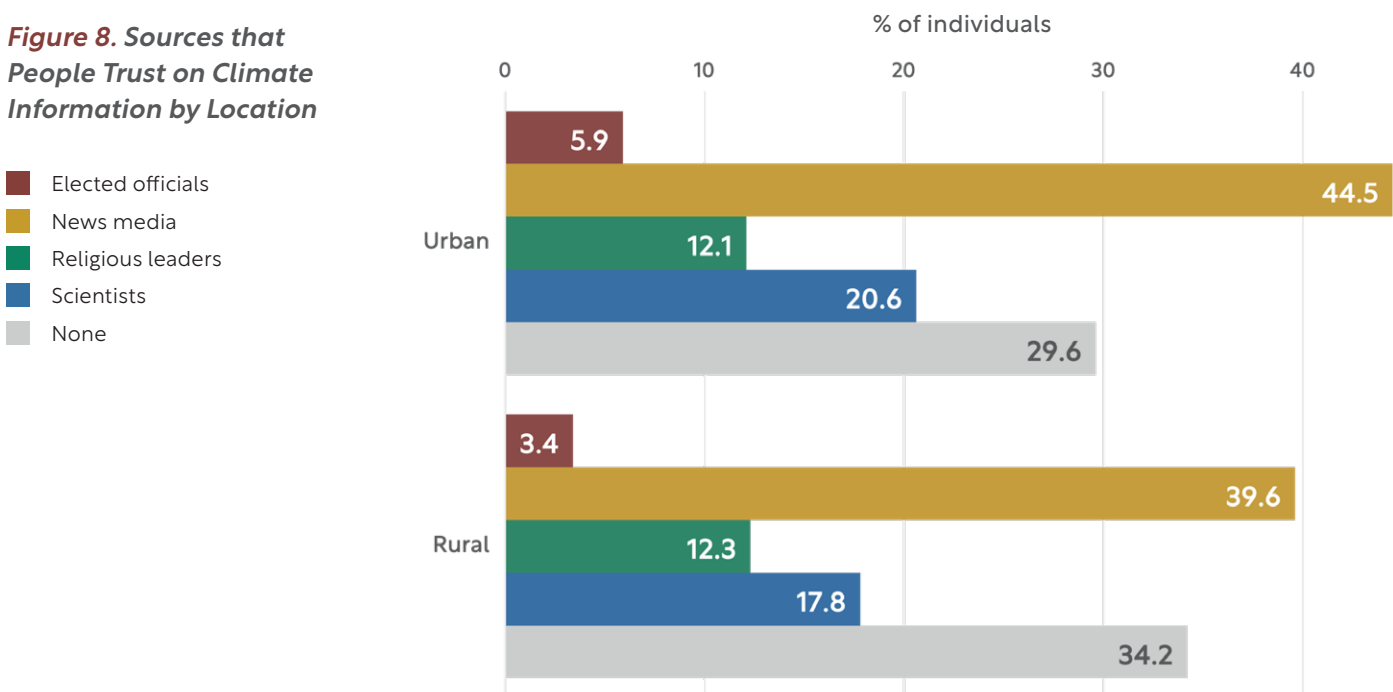
Notably, 37.7 percent of illiterate people do not trust any of the sources presented, while this number decreases to 26.1 percent for people with higher education or above. This suggests that the level of education is critical in shaping people’s trust in climate information sources. However, it also highlights the need for alternative strategies to reach those with limited education and low trust in climate change information. Developing innovative and targeted communication campaigns and partnering with trusted actors and organizations may be effective ways to improve climate change awareness among the least educated and skeptical people.

**Trust in sources of information also varies depending on the location of the people, with rural areas being more skeptical (Figure 8).** This presents an important challenge as these people need to trust the most used sources of information for climate change. Furthermore, it is noteworthy that trust in elected officials is generally low, while trust in news media is relatively high. However, 34.2 percent in rural areas and 29.6 percent in urban areas do not trust any sources of climate change information, making it difficult to convey the necessary information to them through traditional channels. Thus, it is crucial to identify the most effective means of communicating with these people to address their skepticism and promote awareness of climate change.



**of respondents do not trust any source of climate change information**

**Figure 8. Sources that People Trust on Climate Information by Location**



## C. Is there support for Climate Change Action?

### C.1. Introducing Climate Change in Education

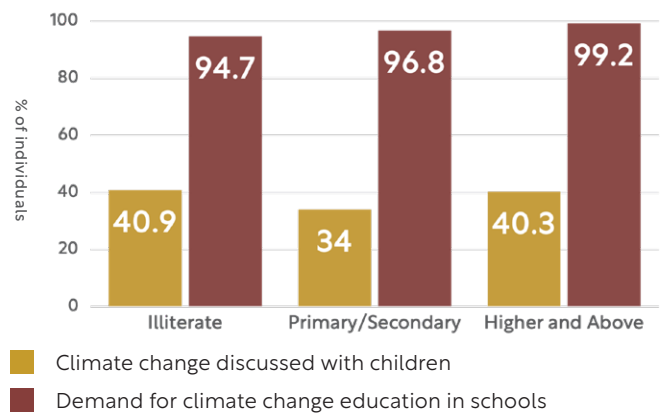
Understanding what prevents people from acting on climate change is crucial in creating effective policies and programs. One important factor to consider is the level of household communication and discussion about climate change. While the data shows that many people support introducing climate-related education in schools, less than half discuss climate change with their children at home (**Figure 9**). This suggests that there may be a gap between awareness and action and that more efforts are needed to promote discussions and actions at the household level. Additionally, it highlights the potential role of schools in promoting conversations and educating families on climate change issues.

**The high demand for introducing climate change education in schools suggests a useful approach in driving action toward climate change.** However, the effectiveness of such education may be limited if these discussions are not taking place at home. This is a concern that remains consistent across all education levels. Even though there are slightly more discussions about climate change occurring in urban areas compared to rural areas (**Figure 10**), the overall lack of discussions about climate change at home could hinder the potential for schools to influence students in taking action towards mitigating climate change. Therefore, it is crucial to develop strategies to promote discussions about climate change in schools and at home.

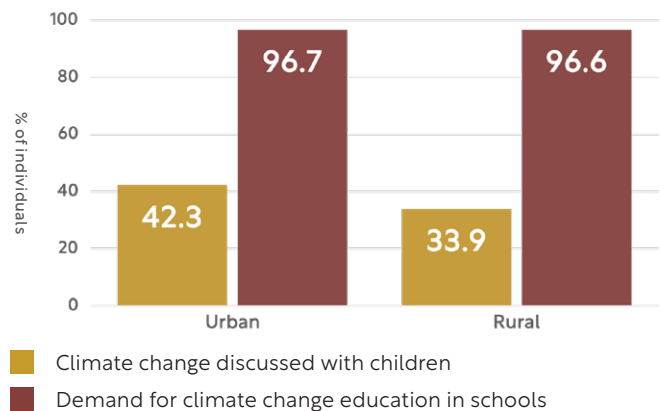
#### PROMOTE DISCUSSION, INFLUENCE ACTION

Despite widespread support for climate education in schools, **less than half of parents discuss climate change** with their children at home.

**Figure 9. Demand for Climate Change Education and Discussions on Climate Change with Children**



**Figure 10. Climate Change Discussion at Home versus Demand for Climate Change Education by Location**





## Box 2

### Choking on Beliefs: The Harsh Reality of Air Pollution in the Face of Inaction

#### In Pakistan, air pollution is a critical environmental hazard.

Over the past few years, urban regions of the country have experienced deteriorating air quality, leading to smog during the winter season.

This increase in air pollution can be attributed to various human activities, including higher vehicular and factory emissions, and crop burning. In the survey, participants were questioned about their perceptions of how air pollution affects them. According to the survey 46 percent of individuals believe air pollution can cause heart disease and 70 percent believe it can cause asthma.

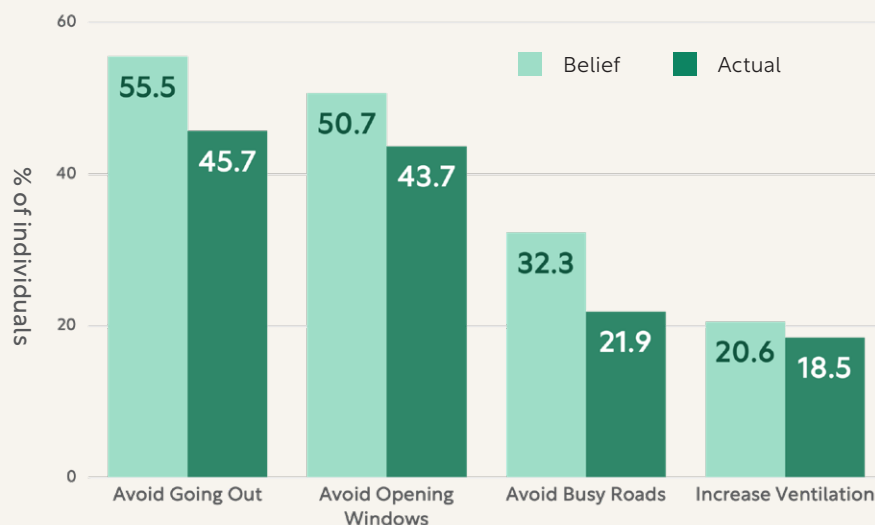
The effects of air pollution on children's health are well-documented (Brumberg & Karr, 2021). Air pollution can damage the respiratory, immune, and cardiovascular systems of

children, and increase the risk of cancer, especially leukemia and lymphoma. Moreover, air pollution can impair children's brain development and function, leading to lower cognition, learning difficulties, behavioral problems, and mental disorders.

The survey results indicate that people believe air pollution can have a negative impact on the attendance and performance of students and workers; specifically, 64.4 percent of respondents believe it affects student performance, 50 percent believe it affects student attendance, 49.2 percent believe it affects worker performance, and 53.2 percent believe it affects worker attendance, according to the data.

The survey also inquired about their knowledge of effective measures to reduce the impact of air pollution on individuals.

Figure 11. Belief versus Actual Action to Reduce Effects of Air Pollution



Participants were asked whether they believed that actions such as avoiding going outside, keeping windows shut, avoiding busy roads, or changing ventilation had any impact on reducing the impact of air pollution.

Additionally, the survey asked how many people had taken this action in the last 30 days. There is a significant discrepancy between beliefs and actions (Figure 11).

While many individuals acknowledge that taking such measures can help mitigate the effects of air pollution, relatively few actually implement them.

**This presents a significant challenge in terms of promoting behavioral change, as simply altering beliefs may not be sufficient to induce corresponding changes in actions.**

## C.2. Support for Individual and Government Climate Action

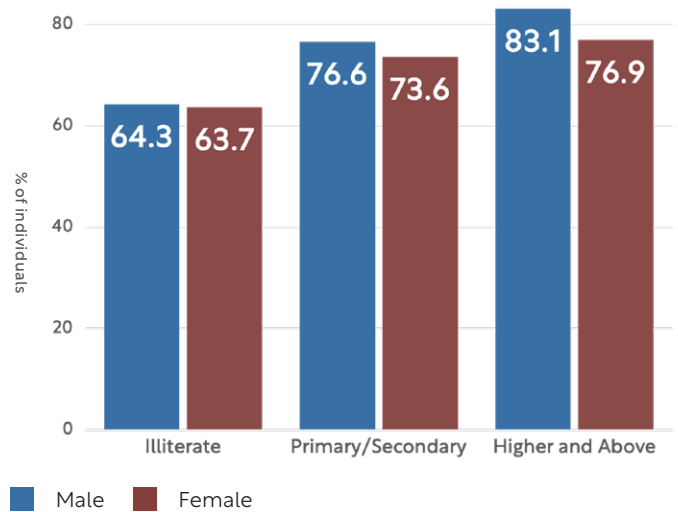
Climate change is a complex issue that requires understanding the various factors influencing individual support for climate action. Therefore, as part of the survey, various questions were asked to measure individual support for climate action, which shed light on variables that help unpack what exactly this support means and how much of it is likely to result in action.

**The survey included questions to measure people's level of support for climate action.** One question was about the willingness to pay for environmentally friendly goods. The results show that more than two-thirds of people were prepared to pay for environmentally friendly goods. There are, however, differences in demand based on education level, with higher demand among the more educated people (**Figure 12**).

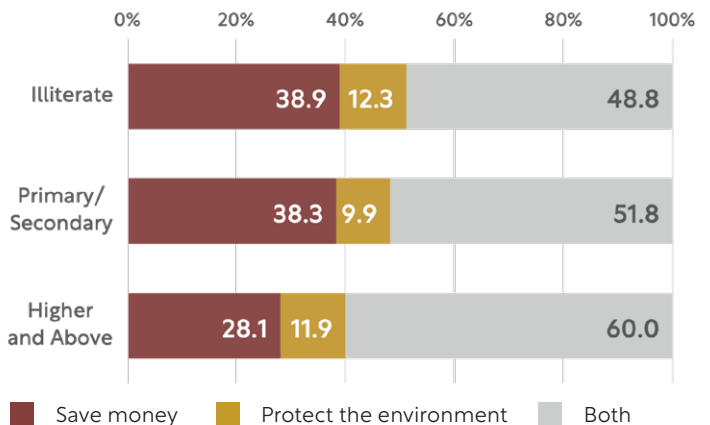
**One of the questions in the survey was about people's views on energy conservation.** The results showed that 92 percent of individuals consider conserving energy somewhat or very important. However, their reasons for conserving energy tended to vary and were not necessarily linked to environmental support and protection.

**Very few people across all education groups mentioned they support energy conservation for environmental reasons.** However, a lot more educated people said that they support energy conservation for saving money and for environmental reasons, compared to less educated people who only support it for saving money (**Figure 13**). This suggests that while education helps inform people about the importance of environmental conservation, more is needed to translate into a greater concern for the environment.

**Figure 12. Percentage of People Willing to Pay for Environmentally Friendly Goods by Education**



**Figure 13. Reasons for Energy Conservation by Education**



Less than  
**15%**

**of respondents wish to conserve energy for environmental reasons**

Overall, the survey results highlight the need for a nuanced approach to addressing climate change, considering the factors influencing individual support for climate action. For example, in addition to examining people’s willingness to pay for environmentally friendly goods, the survey also asked about their willingness to contribute income to protect the environment or support raising taxes for environmental protection. The percentage of people willing to contribute income or pay taxes for the environment appears to be substantial, surpassing half of the people. However, when compared to overall concern for the environment, this figure is relatively lower. Furthermore, upon examining the data (Figure 14a), it was noticed that individuals with higher levels of education exhibited greater support for such policies.

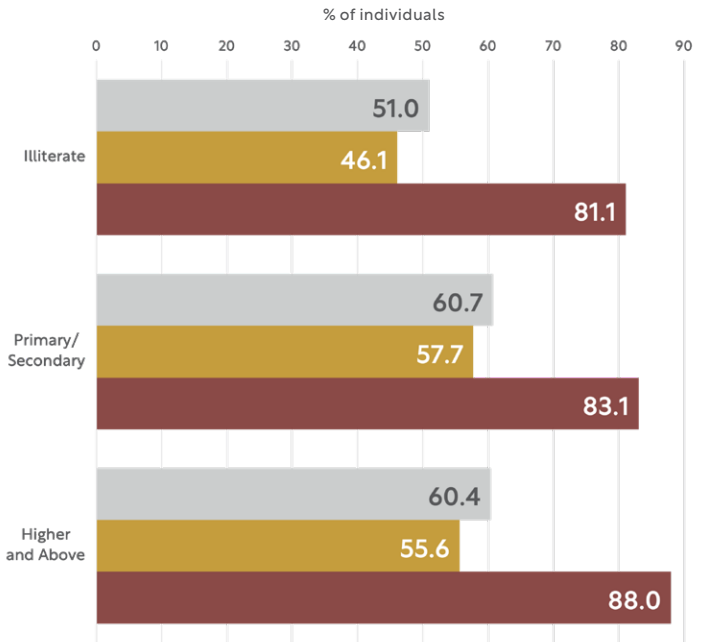
However, it is important to note that even among the more educated groups, the level of support for these policies is not as strong as their concern for climate change’s impacts. This indicates that while education may play a role in shaping people’s attitudes toward environmental policies, other factors may also be at play in determining their level of support. When the data is broken down by gender (Figure 14b), similar to the earlier finding, it shows that although women express higher levels of concern for climate change, their support for action is relatively lower.

The survey also examines the relationship between concern for climate change impacts and self-reported action. The results show that people are more likely to take energy-saving actions that lead to financial savings, such as turning off the lights when not in use. However, the support for other actions that may have a greater impact on reducing climate change, such as using public transportation, carpooling, or reducing meat consumption, is much lower (Figure 15).

Figure 14. Comparison of Concern for Climate Change Impacts and Support for Climate Action Policies

Give income for environment    Pay higher taxes for environment    Concerned about impact of climate change on children

A. By education



B. By gender

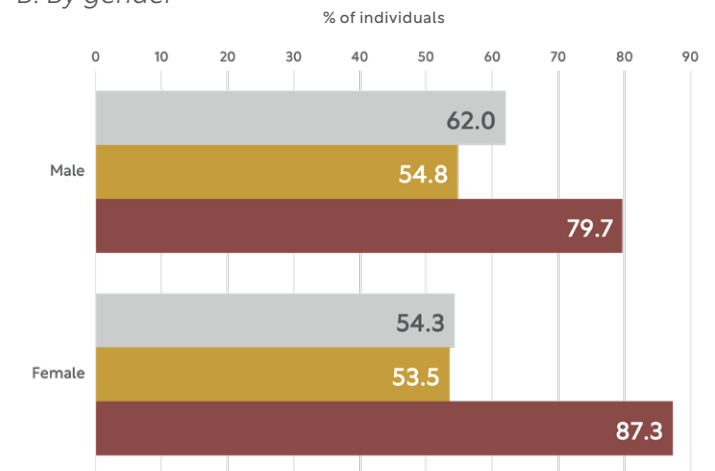
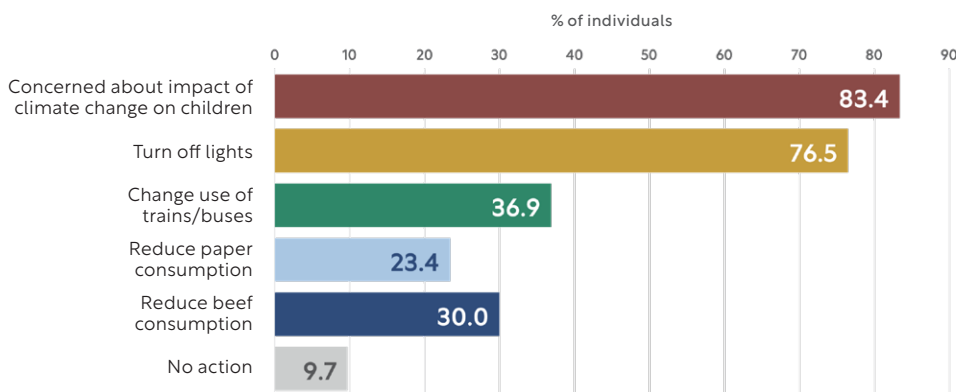


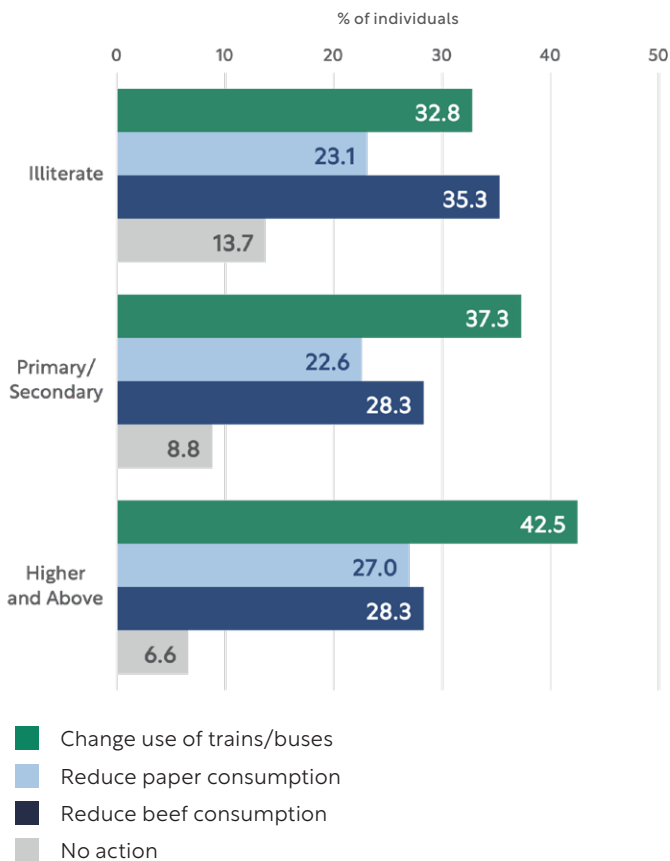
Figure 15. Concern for Climate Change and Climate Action



The findings suggest that while people may be concerned about the impacts of climate change, they may not necessarily translate this concern into action. This may be due to several factors, including a need for knowledge about the most effective actions, inconvenience, or lack of incentives. Therefore, it is important to consider individual beliefs and attitudes toward climate change and the broader societal and structural factors that may influence behavior.

Furthermore, education and awareness-raising campaigns that provide information on the most effective actions people can take may also be effective in bridging the gap between concern and action. For instance, campaigns highlighting the financial savings achieved through sustainable behaviors or the health benefits of reducing meat consumption may be more effective in encouraging people to act.

**Figure 16. Climate Action by Education**



Overall, the findings suggest that while concern for climate change is high, the support for action may be lower, particularly for actions that may be less convenient or require more effort. Therefore, addressing the barriers to acting and providing incentives for sustainable behaviors may be key to promoting meaningful action on climate change.

When considering support for climate action, it is important to analyze specific actions beyond simply turning off the lights. In doing so, it becomes apparent that different actions receive varying levels of support depending on the population's education level. For example, actions related to transportation tend to have higher support among more educated people, while the support for reducing beef consumption is higher among the illiterate population (Figure 16).

However, it is also important to note that the least educated people are likelier to take no action (Figure 16). This highlights the need for education to be utilized to inform and drive climate action. In this way, education can be a critical component in the fight against climate change. Efforts to increase education access and improve quality can significantly impact the global response to this pressing issue.

**SHARE KNOWLEDGE, ENCOURAGE ACTION**

Education and awareness campaigns that highlight the benefits of sustainable actions, such as financial savings and health benefits, can bridge the gap between concern and action.



## CONCLUSION

Females and educated people are more concerned about climate change and its impacts. **People are more likely to view climate change as a pressing issue when it is presented alongside economic issues.** However, those with the least education are more likely to distrust all sources of climate-related information.

**Climate change education is in high demand across all groups, but the survey found that only some parents discuss climate change with their children at home.** This indicates a need for more education and awareness about climate change, especially in households with less access to information.

**Opportunity.** The recent floods appear to have heightened public awareness of climate change-related issues. As beliefs often drive actions, this moment presents a valuable opportunity to galvanize efforts toward meaningful change. However, it is necessary to explore alternative approaches for climate change awareness and action as there is a lack of trust in traditional agents of change.

**Despite the serious concern about climate change, there is limited support for personal and government action.** This highlights the need for more effective communication and education about the specific actions people and governments can take to address climate change. There is a pressing need to bridge the gap between concern and action and ensure that people are equipped with the necessary knowledge to take meaningful steps towards combating climate change.

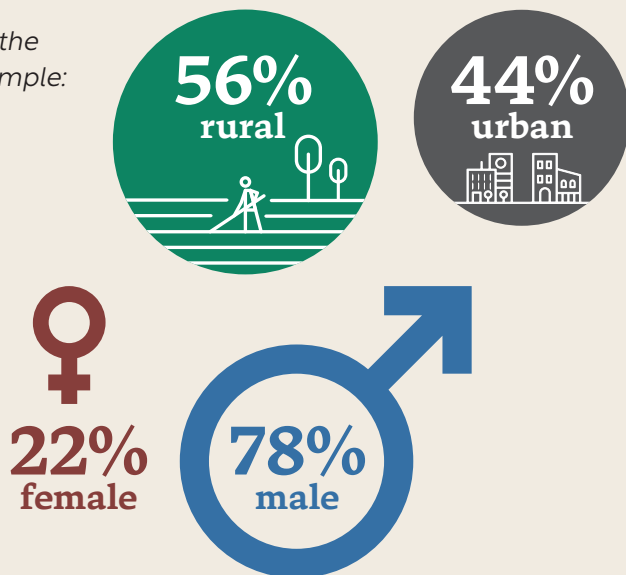
## Methodology

The data used in this note come from a nationally representative phone survey by Gallup Pakistan. Data collection was carried out in March 2023. The World Bank team designed the questionnaire used in the survey.

The survey was carried out using random digit dialing (RDD) of mobile phones using all four telecom providers with active numbers across Pakistan. Approximately 93 percent of households have access to a mobile phone (Government of Pakistan 2021).

Each random number was called to survey households until a call was answered (with a maximum of three attempts). Calls were placed at different times on different days of the week to maximize the response rate. Once an individual was contacted on his or her mobile phone, consent was obtained, a screening questionnaire was administered, and a unique study identification number was generated for the respondent. Next, interviewers entered data into a tablet with Survey CTO software that had the preloaded questionnaire with automatic skipping patterns (Computer Assisted Telephone Interviewing, CATI).

In the sample:



# 2,000

### Completed surveys in the study

The survey's target population was parents or caregivers of children ages 5 to 17. The survey collected information on basic demographics, concerns related to climate change, information related to climate change and its impacts, and the likelihood of taking climate change action. A limited set of sociodemographic characteristics was also collected, including parents' education, assets, gender, family composition, rural, urban, district, and province.

The survey randomly called 31,375 numbers, reaching 12,140 individuals who answered the phone, of which 3,296 agreed to the interview, 1,296 with incomplete surveys, and 2,000 that have a complete survey (used for analysis in this note). To better capture the aggregate impact, weights are created using quintiles from province, rural/urban, gender, and education of household head.

**CAVEAT ON INTERPRETATION OF RESULTS** | Phone surveys are known to miss families at the bottom of the income distribution who usually do not have mobile phones or live in hard-to-reach areas (where cellphone coverage is limited). Thus, the results and interpretations in this note should be taken with those factors in mind.



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