

CLIMATE CHANGE IN THE INDIAN MIND

2023



YALE PROGRAM ON
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Communication

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This report is based on findings from a nationally representative survey of adults (18+) in India conducted by the [Yale Program on Climate Change Communication](#) (YPCCC) and the [Centre for Voting Opinion & Trends in Election Research](#) (CVoter). Interview dates: September 5, 2023 – November 1, 2023. Interviews: 2,178 adults. Average margin of error: +/- 2.1 percentage points at the 95% confidence level.

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Executive Summary

From September 5, 2023, to November 1, 2023, the Yale Program on Climate Change Communication and CVoter conducted a nationally representative survey of 2,178 Indian adults (18+). The study was designed to investigate current public climate change awareness, beliefs, attitudes, policy support, behavior, and self-reported vulnerability to extreme weather events.

This study builds on our prior Climate Change in the Indian Mind surveys, which were conducted in [November and December, 2011](#) (n = 4,031), and [October 2021 to January 2022](#) (n = 4,619). Where applicable, we describe differences in opinion among the Indian public since we conducted our previous surveys in 2021–2022 and 2011.

Among the key findings of this report:

Local Environmental Hazards: Vulnerability and Resilience

- Large majorities of people in India are worried about various environmental hazards harming their local areas, including agricultural pests and diseases (87%), extinction of plant and animal species (86%), severe heat waves (85%), droughts and water shortages (85%), severe air pollution (85%), famines and food shortages (83%), severe cyclones (76%), and severe floods (71%).
- 64% say they usually receive warnings ahead of time when an extreme weather event (such as a heat wave, flood, or cyclone) happens in their local area. However, 34% say they do not receive such warnings.
- A large majority of Indians say they are confident that their family and friends (78%), people in their communities (68%), or state and local government (62%) can help their local community prepare for and respond to extreme weather events such as heat waves, floods, or cyclones.
- Large majorities of people in India are already engaged or willing to engage in collective preparedness actions:
 - Asked how willing they are to encourage their family and friends to join a community emergency response team to help their local community prepare for and respond to extreme weather events such as heat waves, floods, or cyclones, 70% say they are either “already doing this” (13%), or are “definitely” willing to do it (58%).
 - Asked how willing they are to join a community response team, 68% say they are either “already doing this” (10%), or are “definitely” willing to do it (58%).
 - Asked how willing they are to ask local government officials to publicly explain their emergency response plans, 68% say they are either “already doing this” (11%), or are “definitely” willing to do it (57%).
- 34% say they have either already moved or considered moving because of weather-related disasters such as extreme heat, droughts, sea-level rise, flooding, or others.
- 75% say it would take their household several months or more to recover from a severe flood, and 85% say it would take several months or more to recover from a severe drought.

Global Warming Awareness and Beliefs

- 54% say they know either “just a little” about global warming or have never heard of it, while only 10% say they know “a lot.”

- However, when given a short definition of global warming and how it affects weather patterns, 78% say they think global warming is happening.
- 52% think global warming is caused mostly by human activities, while 38% think it is caused mostly by natural changes in the environment.
- 85% say they have experienced the effects of global warming.
- Majorities think global warming affects weather in their local area (71%) and monsoons in India (76%) either “a lot” or “some.”

Global Warming Risk Perceptions

- 91% are worried about global warming, including 59% who are “very worried.”
- Large majorities think global warming will harm plant and animal species (83%), people in India (82%), future generations of people (81%), people in their own community (78%), and themselves and their own family (74%).
- 53% think people in India are already being harmed by global warming.
- Many people in India think global warming will cause “many more” severe heat waves (60%), extinctions of plant and animal species (57%), droughts and water shortages (56%), severe cyclones (54%), famines and food shortages (50%), and severe floods (46%).
- 92% say global warming is either “extremely” (38%), “very” (35%), or “somewhat” important (20%) to them personally.

Support for Climate and Energy Policies

- 86% favor the Indian government’s commitment to reduce India’s carbon pollution to nearly zero by 2070.
- 85% say transitioning from coal to wind and solar energy to produce electricity will reduce air pollution, and 82% say doing so would reduce global warming. However, 61% say doing so will increase unemployment in India, 58% say it will cause electricity outages, and 57% say it will increase electricity prices.
- 67% say leaving most of India’s coal in the ground is the best pathway to a healthy, safe, and prosperous future for India.
- 84% favor banning the construction of new coal power plants, closing existing ones, and replacing them with solar and wind energy.
- Large majorities favor specific policies:
 - A national program to train people for new jobs in the renewable energy industry such as wind and solar (93%).
 - A national program to teach all Indians about global warming (92%).
 - A national program to fund women’s groups and Indigenous communities to protect the environment (91%).
 - Preserving or expanding forested areas, even if this means less land for agriculture or housing (79%).
 - Requiring new buildings to waste less water and energy, even if this increases their cost (77%).
- 78% say the government of India should be doing more to address global warming.

- 74% think that overall, taking action to reduce global warming will either improve economic growth and provide new jobs (51%) or have no effect on economic growth or jobs (23%). Only 21% think it will reduce economic growth and cost jobs.
- 61% think India should increase its use of renewable sources of energy, while only 14% think India should increase its use of fossil fuels.

Social Engagement with Global Warming

- 85% say they follow environmental issues in the news, and 83% say they discuss environmental issues with their family and friends.
- However, only 33% say they hear about global warming in the media at least once a week.

Willingness to Take Action to Reduce Global Warming

- Large majorities in India are either engaged or willing to engage in lifestyle changes to protect the environment:
 - Asked how willing they are to make big changes in their daily life in order to protect the environment, a large majority of people in India (93%) say they are either “already doing this” (25%) or are “definitely” willing to do it (54%).
 - Asked how willing they are to persuade their family and friends to take environment-friendly actions, a large majority of people in India (92%) say they are either “already doing this” (26%) or are “definitely” willing to do it (52%).
 - Asked how willing they are to publicly demonstrate environment-friendly actions in order to influence others, a large majority of people in India (89%) say they are either “already doing this” (20%) or are “definitely” willing to do it (51%).
- 75% say they would be willing to pay more for energy-efficient appliances to reduce both electricity bills and global warming, including 35% who would be willing to pay up to 10% more, but not more than that.
- 76% say they would be willing to pay more for an electric scooter, motorcycle, or car instead of one that uses petrol or diesel to help reduce both their travel costs and global warming, including 33% who would be willing to pay up to 10% more, but not more than that.
- 6% are already participating in, and 60% are “definitely” willing to join, a citizens’ campaign to convince elected officials to take action to reduce global warming.

Vulnerability

- 38% say they had to go without enough clean drinking water for at least one day in the past year.
- 72% say they experience electricity disruptions on a typical day.
- Only 13% say they have an air conditioner at home.
- More than half say their income does not cover their needs and they either have “some difficulties” (27%) or “great difficulties” (38%) as a result.
- 70% say they have few (1 to 5) or no friends or relatives they could count on for help if they were in trouble.

Introduction

Home to more than 1.3 billion people, India accounts for nearly 18% of the global population, but uses only 6% of the world's primary energy (IEA, 2021). For example, the per capita energy consumption in India is 0.6 tonnes of oil equivalent, which is only one-third of the global average (IEA, 2021). However, because of its large population, India was the third-largest national emitter in 2020 (behind China and the United States), emitting 2.4 gigatons of carbon dioxide (Crippa et al., 2021).

India is among the countries most vulnerable to the impacts of climate change. Climate change has already begun to alter growing seasons in India (Mani et al., 2018), and with almost 50% of Indians working in agriculture and other climate-sensitive sectors (Chand & Singh, 2022), the damage to productivity and health is significant (Mani et al., 2018). From 1901–2018, India's average temperature rose 0.7°C. During the summer monsoon season, India is experiencing both more frequent dry spells and more intense wet spells (Krishnan et al., 2020). Across all of Asia, including India, climate change will cause water shortages, which could affect more than a billion people by the 2050s (Krishnan et al., 2020).

India's population is also vulnerable to sea level rise, with up to 310 million people inhabiting low elevation coastal zones. About 30% of India's population, approximately 363 million people, are poor, and 1.77 million people are homeless (Government of India, 2016). Many Indians live in "hotspots," where changes in climate negatively affect living standards. These hotspots are growing as climate change worsens, and it is projected that by 2050, 148.3 million people in India will be living in severe hotspots (Mani et al., 2018). Additionally, more than 80 percent of India's population lives in districts highly vulnerable to extreme weather events (Mohanty & Wadhawan, 2021).

India has long been a key player in international climate negotiations and has begun implementing a diverse portfolio of policies nationally and within individual states to improve energy efficiency, develop clean energy sources, and prepare for the impacts of a changing climate. About 33 States and Union Territories have also announced state-level action plans to address climate change.

In 2015, India submitted its first climate action plan with the aim of reducing the emissions intensity of its GDP by 33–35% by 2030, generating 40% of its power from renewable energy sources, and increasing forest cover. The updated National Action Plan on Climate Change commits to reducing emissions intensity by 45% by 2030, compared with 2005, and to achieve 50% of cumulative electric power installed capacity from non-fossil-fuel-based energy resources by 2030 (PIB, 2022, Government of India, 2022). India has increased its solar capacity rapidly, ranking fifth for installed solar capacity in the 2020 Human Development Report, and plans to expand to 450 GW renewable energy capacity by 2030 (IEA, 2021).

India has also pledged to achieve net-zero emissions by 2070. However, to meet that target, India will need an estimated \$10.1 trillion in investments (ASPI, 2022). In the face of rapid urbanization and economic growth, India's actions to deal with energy and climate challenges will be key to a global clean energy transition. Even if India implements its nationally determined commitments under the Paris Agreement, it is expected to see a further 50% rise in its carbon dioxide emissions by 2040 (IEA, 2021). The majority of India's emissions are to come from infrastructure, buildings, and vehicles that do not currently exist, presenting a huge opportunity for change in the trajectory of emissions.

To support economic development and build low-carbon infrastructure, India needs to invest 1.5 times or more than advanced economies as a share of GDP today (MGI, 2022). Without international support, financing this additional investment would likely result in a 2% decline in total household consumption (ASPI, 2022). In India, about 5 million jobs in the fossil-fuel sector would be lost. While 12 million new jobs would be created in the renewable energy industry, upskilling India's future workforce remains a challenge. Initiatives like "Skill India" are expected to provide training in sectors including sustainable development for 400 million people by 2022 (Government of India, 2016). India has also set aside \$55.6 million for the National Adaptation Fund to support the adaptation of climate-sensitive sectors like forestry (Government of India, 2016).

An effective national strategy, however, must take into account the climate change and energy-related beliefs, attitudes, policy preferences, and behaviors of the Indian people, who will play a vital role in the success or failure of this strategy through their decisions and behavior as citizens, consumers, and communities. Building public acceptance, support, and demand for new policies to both limit the severity of global warming and prepare for the impacts of a changing climate will require education and communication strategies based on a clear understanding of what Indians already know, believe, and support, as well as what they currently misunderstand, disbelieve, or oppose.

In an effort to help establish a baseline understanding of public responses to these issues in India, the Yale Program on Climate Change Communication first [conducted a national survey in 2011](#) to investigate the state of public climate change awareness, beliefs, attitudes, policy support, and behaviors, as well as public observations of changes in local weather and climate patterns and self-reported vulnerability to extreme weather events. [A second nationally representative survey was conducted in 2021–2022](#) on the same themes, including many of the same questions.

This new report is based on a third nationally representative survey conducted in 2023–2024, enabling us to track changes in public responses in India over time. New survey questions on support for energy transition from coal to renewable energy, the 2070 Net Zero goal, willingness to pay more for electric vehicles and energy-efficient appliances, and enthusiasm for Prime Minister Narendra Modi's call for a global mass movement for behavior change, [Lifestyle for the Environment](#), provide a more comprehensive understanding of Indians' engagement with climate change. The new report also highlights public perceptions of local community preparedness to respond to extreme weather events.

Climate change and Indian society are both highly complex, and no single study can do service to their full richness and diversity. Nonetheless, this study takes an in-depth and rigorous look at some of the key dimensions of these issues in India. This research is intended to contribute to both scientific and public understanding and dialogue about these issues and provide useful information for the Indian climate change community.

This report provides the topline survey results. A second report is forthcoming which will segment the survey respondents into distinct audiences that would benefit from tailored climate change education and communication.

References

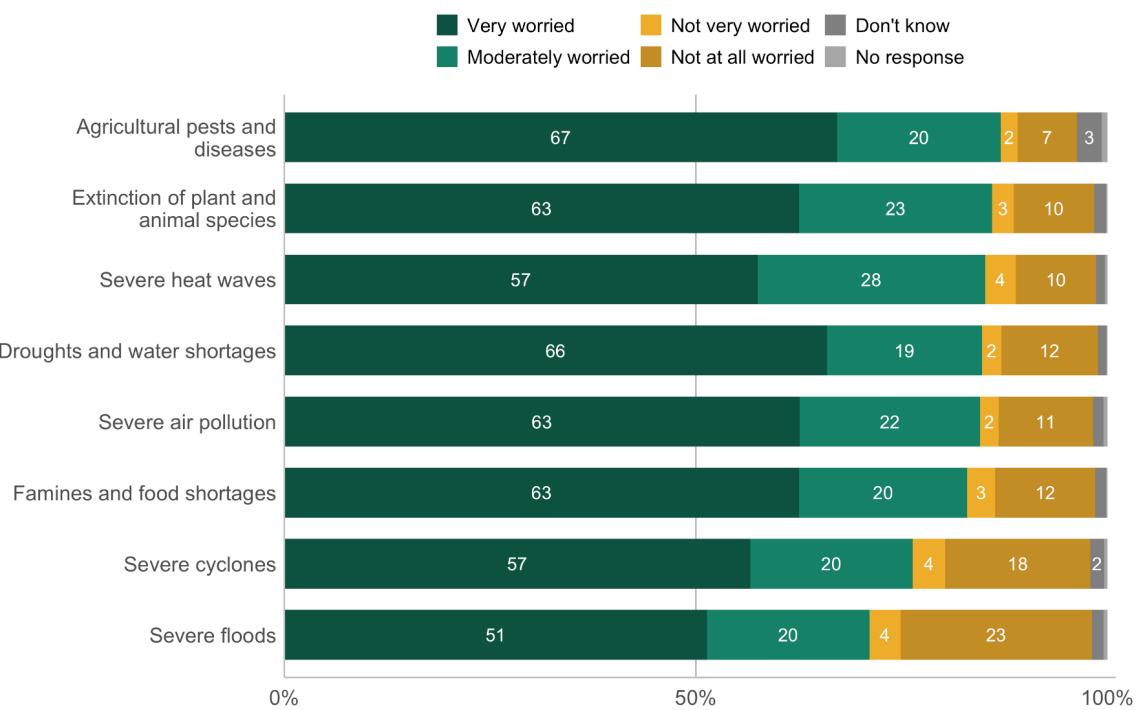
- Asia Society Policy Institute (ASPI). (2022). Getting India to Net Zero (Getting Asia to Net Zero). Asia Society Policy Institute. https://asiasociety.org/sites/default/files/2022-08/ASPI_Getting%20India%20to%20Net%20Zero.pdf
- Chand, R., & Singh, J. (2022). Workforce Changes and Employment: Some Findings from PLFS Data Series [NITI Aayog Discussion Paper]. NITI Aayog, Government of India. https://www.niti.gov.in/sites/default/files/2022-04/Discussion_Paper_on_Workforce_05042022.pdf
- Crippa, M., Guizzardi, D., Muntean, M., Schaaf, E., Monforti-Ferrario, F., Banja, M., Olivier, J. G. J., Vignati, E., Solazzo, E., & Grassi, G. (2021). GHG emissions of all world countries: 2021 report. Publications Office of the European Union. <https://doi.org/10.2760/173513>
- Government of India. (2016). India's Intended Nationally Determined Contribution: Working Toward Climate Justice (UNFCCC Nationally Determined Contributions). United Nations. <https://unfccc.int/sites/default/files/NDC/2022-06/INDIA%20INDC%20TO%20UNFCCC.pdf>
- Government of India. (2022). India's Updated First Nationally Determined Contribution Under Paris Agreement (2021-2030) (UNFCCC Nationally Determined Contributions). United Nations. <https://unfccc.int/sites/default/files/NDC/2022-08/India%20Updated%20First%20Nationally%20Determined%20Contrib.pdf>
- International Energy Agency. (2021). India Energy Outlook 2021 [World Energy Outlook Special Report]. OECD. <https://doi.org/10.1787/ec2fd78d-en>
- Krishnan, R., Sanjay, J., Gnanaseelan, C., Mujumdar, M., Kulkarni, A., & Chakraborty, S. (Eds.). (2020). Assessment of Climate Change over the Indian Region: A Report of the Ministry of Earth Sciences (MoES), Government of India. Springer Singapore. <https://doi.org/10.1007/978-981-15-4327-2>
- Mani, M., Bandyopadhyay, S., Chonabayashi, S., Markandya, A., & Mosier, T. (2018). South Asia's Hotspots: The Impact of Temperature and Precipitation Changes on Living Standards. International Bank for Reconstruction and Development / The World Bank. <https://doi.org/10.1596/978-1-4648-1155-5>
- McKinsey Global Institute (MGI). (2022). The net-zero transition: What it would cost, what it could bring. McKinsey & Company. <https://www.mckinsey.com/capabilities/sustainability/our-insights/the-net-zero-transition-what-it-would-cost-what-it-could-bring>
- Mohanty, A., & Wadhawan, S. (2021). Mapping India's Climate Vulnerability – A District Level Assessment. Council on Energy, Environment and Water. <https://www.ceew.in/sites/default/files/ceew-study-on-climate-change-vulnerability-index-and-district-level-risk-assessment.pdf>
- PIB. (2022). Cabinet approves India's Updated Nationally Determined Contribution to be communicated to the United Nations Framework Convention on Climate Change. Press Information Bureau India. <https://pib.gov.in/PressReleaseFrame.aspx?PRID=1847812>
- UNDP. (2020). The next frontier: Human development and the Anthropocene (Human Development Report 2020). United Nations Development Programme. <https://hdr.undp.org/system/files/documents//hdr2020.pdf>

1. Local Environmental Hazards: Vulnerability and Resilience

1.1 Large majorities of people in India are worried about hazards in their local area.

Large majorities of people in India are either “very worried” or “moderately worried” about various environmental hazards harming their local areas. These include agricultural pests and diseases (87%), extinction of plant and animal species (86%), severe heat waves (85%), droughts and water shortages (85%), severe air pollution (85%), famines and food shortages (83%), severe cyclones (76%), and severe floods (71%).

Large majorities of people in India are worried about hazards in their local area



How worried are you that the following might harm your local area? Are you very worried, moderately worried, a little worried, or not at all worried?

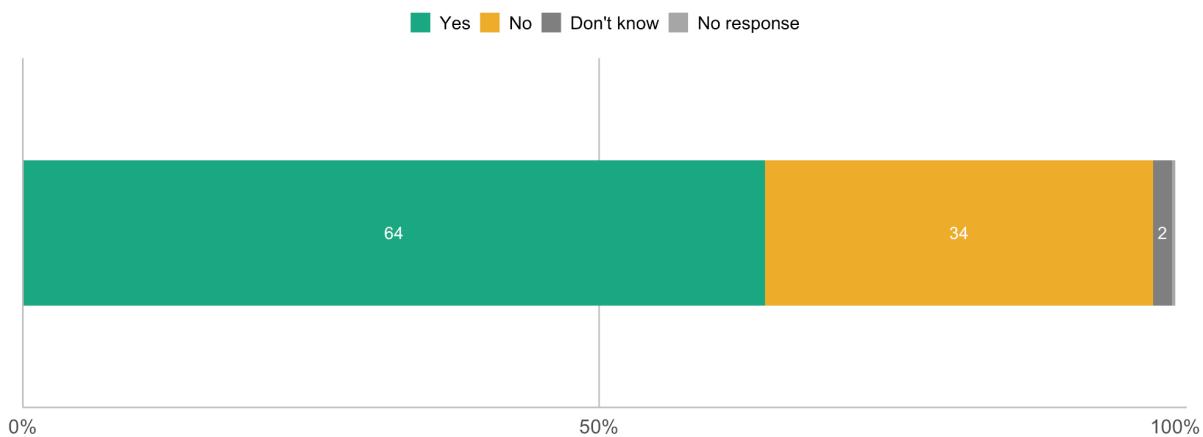
Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

1.2 About two in three people in India receive advanced warnings about extreme weather, but about one in three do not.

About two in three people in India (64%) receive warnings ahead of time when an extreme weather event (such as a heat wave, flood, or cyclone) happens in their local area. However, about one in three (34%) say they do not receive such warnings.

About two in three people in India receive advanced warnings about extreme weather, but about one in three do not



When an extreme weather event (such as a heatwave, flood, or cyclone) happens in your local area, do you usually receive a warning about it ahead of time?

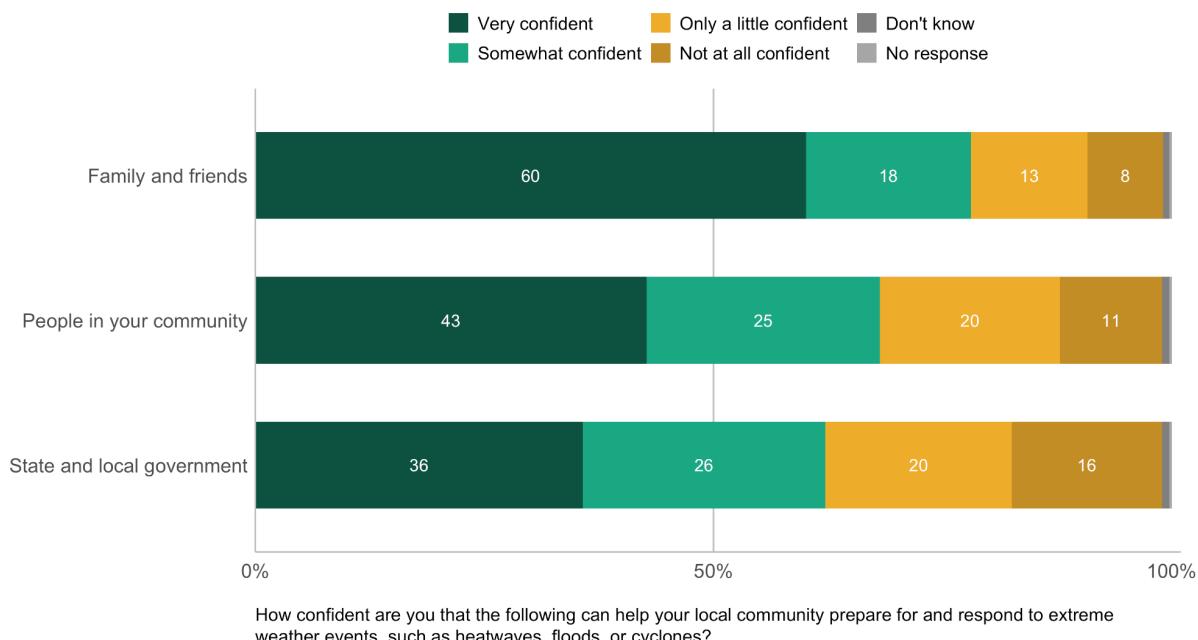
Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

1.3 A large majority of people in India are confident that their family and friends can help their local community to prepare for and respond to extreme weather events.

A large majority of Indians (78%) say they are either “very confident” or “somewhat confident” that their family and friends can help their local community to prepare for and respond to extreme weather events such as heat waves, floods, or cyclones. Large majorities are also confident that people in their communities (68%) or state and local government (62%) can play such a role.

A large majority of people in India are confident that their family and friends can help their local community to prepare for and respond to extreme weather events



Source: Yale Program on Climate Change Communication

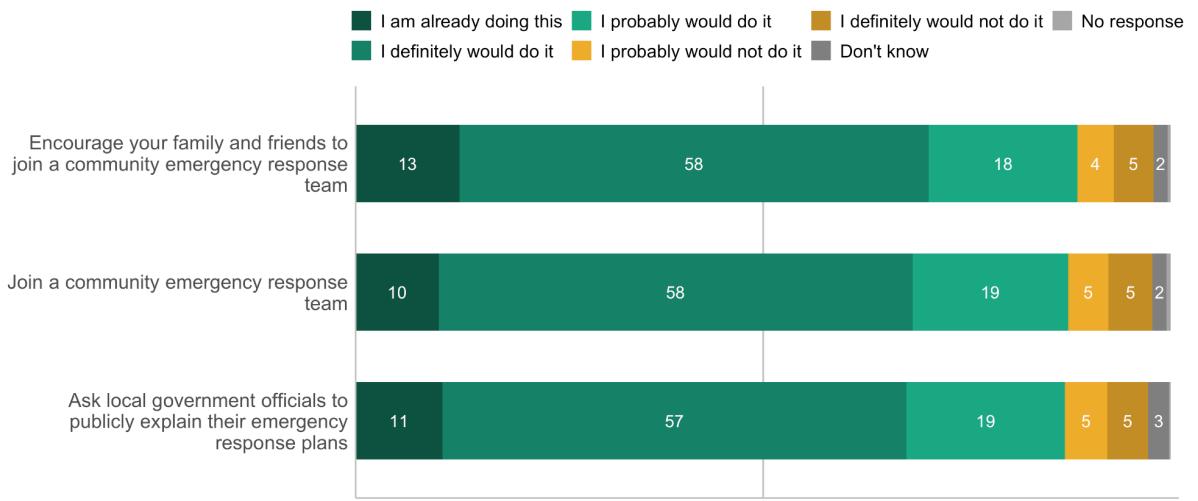
1.4 Large majorities of people in India are already engaged or willing to engage in collective preparedness actions.

Asked how willing or unwilling they are to encourage their family and friends to join a community emergency response team to help their local community prepare for and respond to extreme weather events such as heat waves, floods, or cyclones, about nine in ten people in India (89%) say they are either “already doing this” (13%), or are “definitely” (58%) or “probably” (18%) willing to do it. In contrast, few people in India (9%) say they either “probably” (4%) or “definitely” (5%) would not do it.

Asked how willing or unwilling they are to join a community response team, a large majority of people in India (87%) say they are either “already doing this” (10%), or are “definitely” (58%) or “probably” (19%) willing to do it. In contrast, few people in India (10%) say they either “probably” (5%) or “definitely” (5%) would not do it.

Asked how willing or unwilling they are to ask local government officials to publicly explain their emergency response plans, a large majority of people in India (87%) say they are either “already doing this” (11%), or are “definitely” (57%) or “probably” (19%) willing to do it. In contrast, few people in India (10%) say they either “probably” (5%) or “definitely” (5%) would not do it.

Large majorities of people in India are already engaged or willing to engage in collective preparedness actions



How willing or unwilling are you to do the following to help your local community prepare for and respond to extreme weather events, such as heatwaves, floods, or cyclones?

Sept. 2023 - Nov. 2023

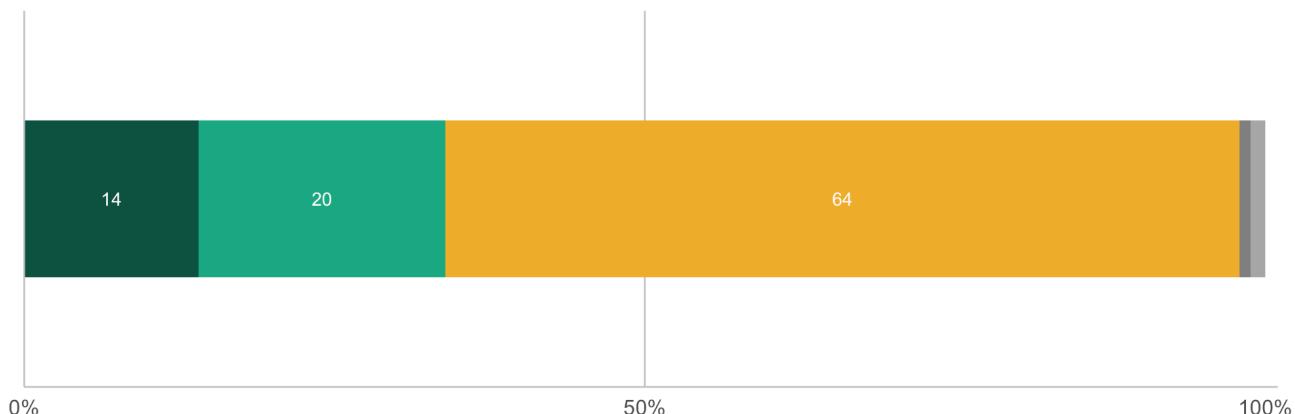
Source: Yale Program on Climate Change Communication

1.5 About one in three people in India have moved or considered moving because of weather-related disasters.

About one in three people in India (34%) say have either already moved or considered moving because of weather-related disasters such as extreme heat, droughts, sea-level rise, flooding, or others. This includes 14% who say they “have already moved because of weather-related disasters” and 20% who say they “have not moved but have considered doing so.” About two-thirds of people in India (64%) say they “have not moved or considered moving.”

About one in three people in India have moved or considered moving because of weather-related disasters





Have you ever moved or considered moving to a different village, town, or city because of weather-related disasters such as extreme heat, droughts, sea-level rise, flooding, etc.?

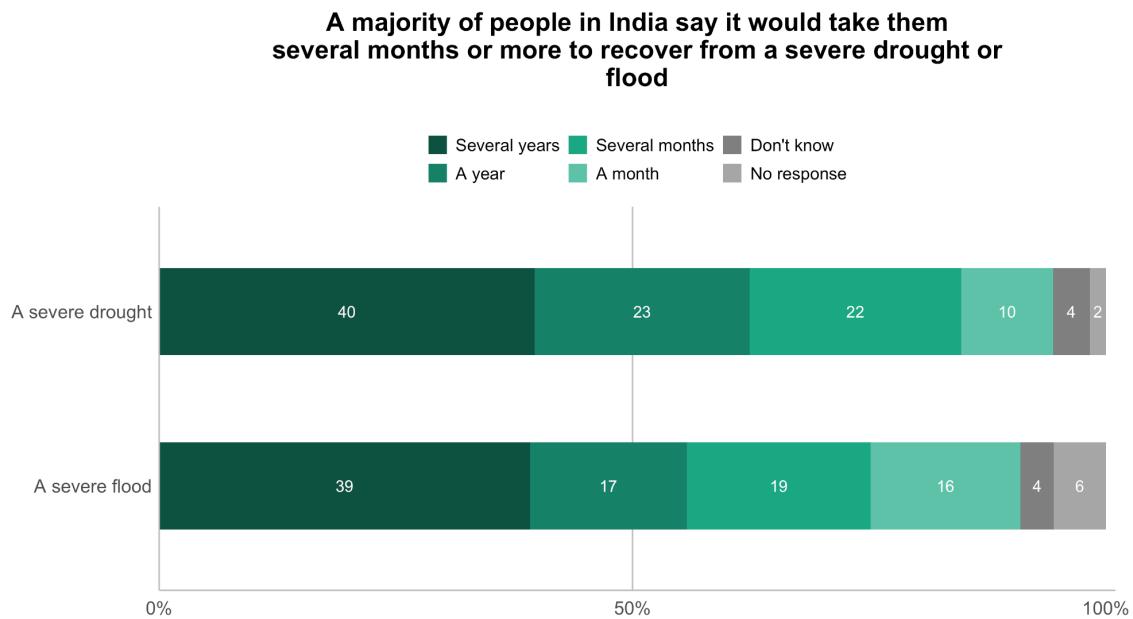
Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

1.6 A majority of people in India say it would take them several months or more to recover from a severe drought or flood.

Three in four people in India (75%) say it would take their household several months or more to recover from a severe flood. A large majority (85%) also say it would take several months or more to recover from a severe drought. This includes about four in ten respondents who say it would take them several years to recover from a severe flood (39%) or a severe drought (40%).

The percentage of people who say it would take their household several months or more to recover from a severe flood is 12 percentage points higher than in 2021–2022. The percentage of people who say it would take their household several months or more to recover from a severe drought is 11 percentage points higher than in 2021–2022.



If [X] happened in your local area, how long do you think it would take for your household to recover? Would you say it would take you a month, several months, a year, or several years?

Sept. 2023 - Nov. 2023

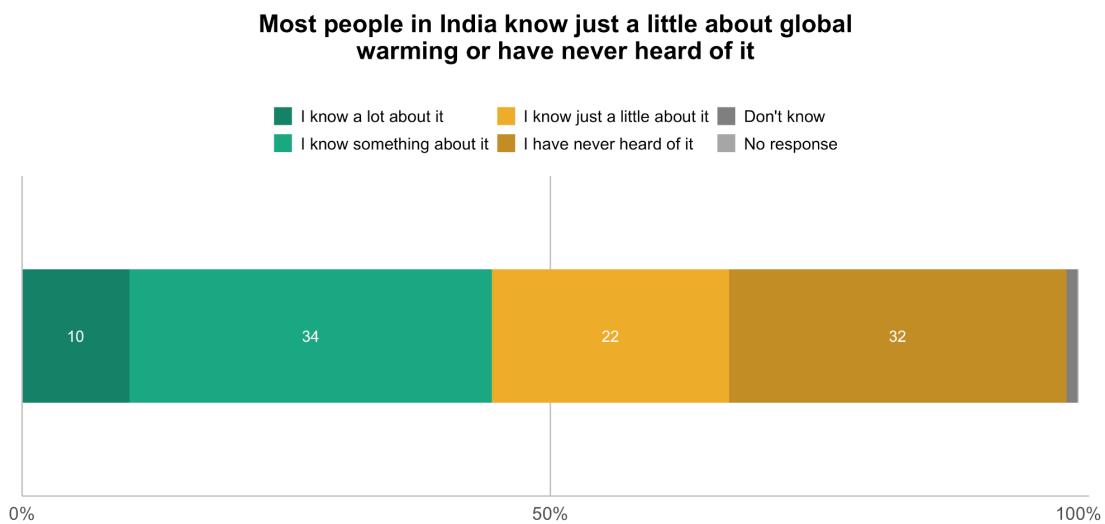
Source: Yale Program on Climate Change Communication

2. Global Warming Awareness and Beliefs

2.1 Most people in India know just a little about global warming or have never heard of it.

In order to make informed decisions about how to respond to a threat, individuals, policymakers, and societies must be aware of the threat and have at least a basic understanding of it. Only 10% of people in India say they know “a lot” about global warming, while 34% say they know “something” about it. By contrast, the majority of Indians (54%) say either that they know “just a little” about global warming (22%), or that they have “never heard of it” (32%).

It is important to note, however, that lack of awareness of the issue does not mean that individuals are not worried about climate-related environmental hazards, as evidenced in Section 1 of this report (“Local Environmental Hazards: Vulnerability and Resilience”). This suggests that many people in India have observed changes in their local climate and weather patterns without understanding that these changes are often related to the broader issue of global warming.



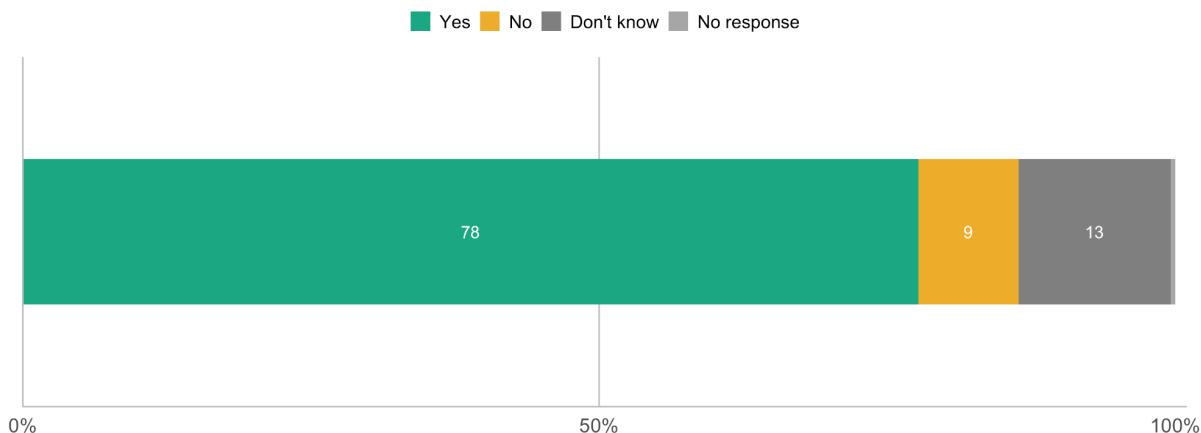
Source: Yale Program on Climate Change Communication

2.2 A large majority of people in India think global warming is happening.

After being asked about their level of knowledge about global warming, respondents were given a short definition of it: “Global warming refers to the idea that the world’s average temperature has been increasing over the past 150 years, may be increasing more in the future, and that the world’s climate and weather patterns may change as a result.” They were then asked, “What do you think? Do you think that global warming is happening?”

After reading the short description, a large majority of people in India (78%) said they think global warming is happening. By comparison, only 9% of people in India said they think global warming is not happening, while 13% said they don’t know.

A large majority of people in India think global warming is happening



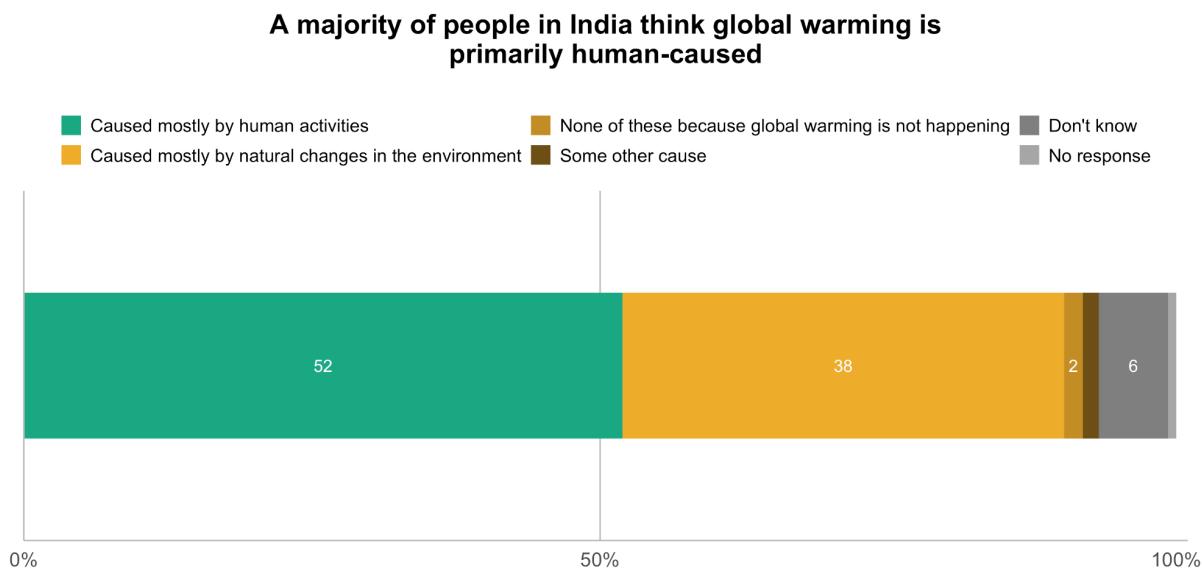
Global warming refers to the idea that the world's average temperature has been increasing over the past 150 years, may be increasing more in the future, and that the world's climate and weather patterns may change as a result. What do you think? Do you think that global warming is happening? Would you say 'yes', 'no', or 'I don't know'?

Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

2.3 A majority of people in India think global warming is primarily human-caused.

A majority of people in India say that if global warming is happening, it is caused mostly by human activities (52%), while 38% say it is caused mostly by natural changes in the environment. Few say there is some other cause (1%), that there is not any cause because it's not happening (2%), or that they don't know (6%).



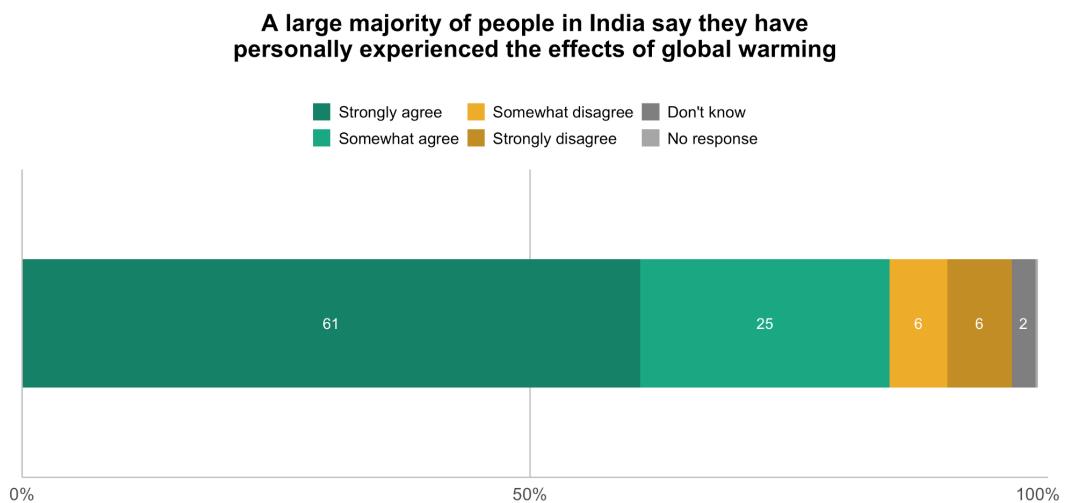
Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

2.4 A large majority of people in India say they have personally experienced the effects of global warming.

A large majority of people in India (85%) either “strongly agree” (61%) or “somewhat agree” (25%) that they have personally experienced the effects of global warming. By contrast, only 12% either “strongly disagree” (6%) or “somewhat disagree” (6%), and few (2%) say they don’t know.

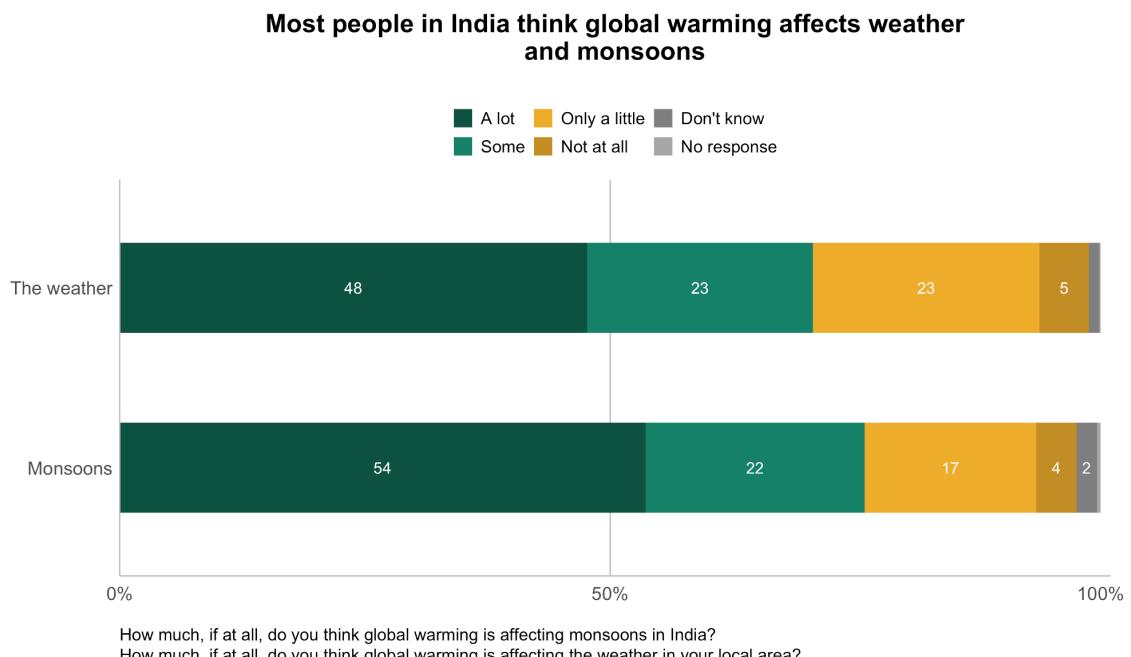
The total percentage of people in India who either “strongly” or “somewhat” agree that they have personally experienced global warming is 11 percentage points higher than in our previous survey conducted in 2021–2022. The percentage who “strongly agree” is 7 percentage points higher than in 2021–2022 and 43 percentage points higher than in our first survey in 2011.



Source: Yale Program on Climate Change Communication

2.5 Most people in India think global warming affects weather and monsoons.

Most people in India think global warming affects weather in their local area (71%) and monsoons in India (76%) either “a lot” or “some.” This includes 48% of people who say that global warming affects weather in their local area a lot and 54% of people who say that global warming affects monsoons in India a lot. By comparison, few people say that global warming does not affect weather in their local area at all (5%) or that it does not affect monsoons in India at all (4%).



Source: Yale Program on Climate Change Communication

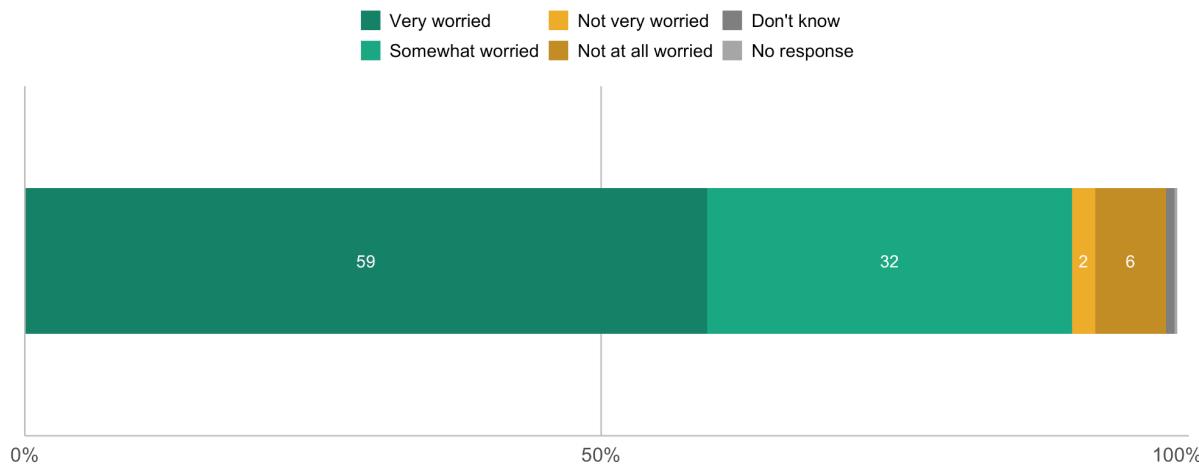
3. Global Warming Risk Perceptions

3.1 Most people in India are worried about global warming.

A large majority of Indians (91%) say they are either “very worried” (59%) or “somewhat worried” (32%) about global warming. By contrast, only 8% say they are either “not very worried” (2%) or “not at all worried” (6%) about it.

The percentage of people in India who say they are either “very” or “somewhat” worried about global warming is 10 percentage points higher than in 2021–2022. Among those, the percentage who say they are “very worried” is 9 percentage points higher than in 2021–2022 and 39% higher than in 2011.

Most people in India are worried about global warming



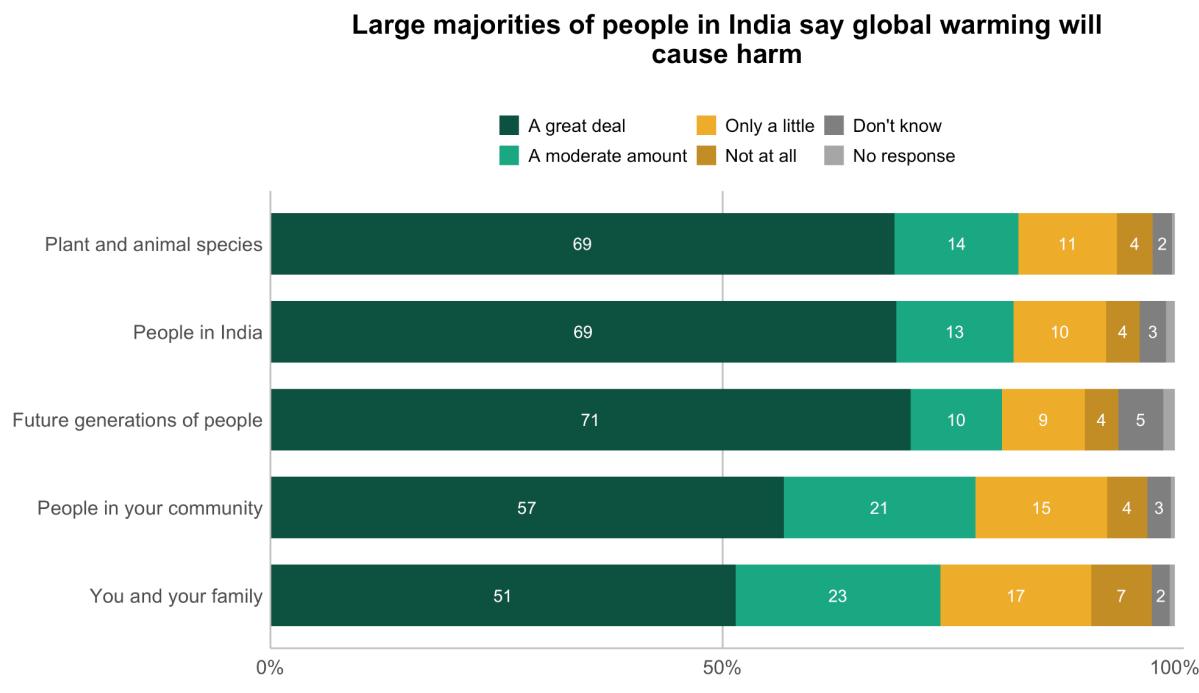
How worried are you about global warming? Would you say you are very worried, somewhat worried, not very worried, or not at all worried?

Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

3.2 Large majorities of people in India say global warming will cause harm.

Large majorities of people in India say global warming will cause either a “great deal” or a “moderate amount” of harm to plant and animal species (83%), people in India (82%), future generations of people (81%), people in their own community (78%), and themselves and their own family (74%).

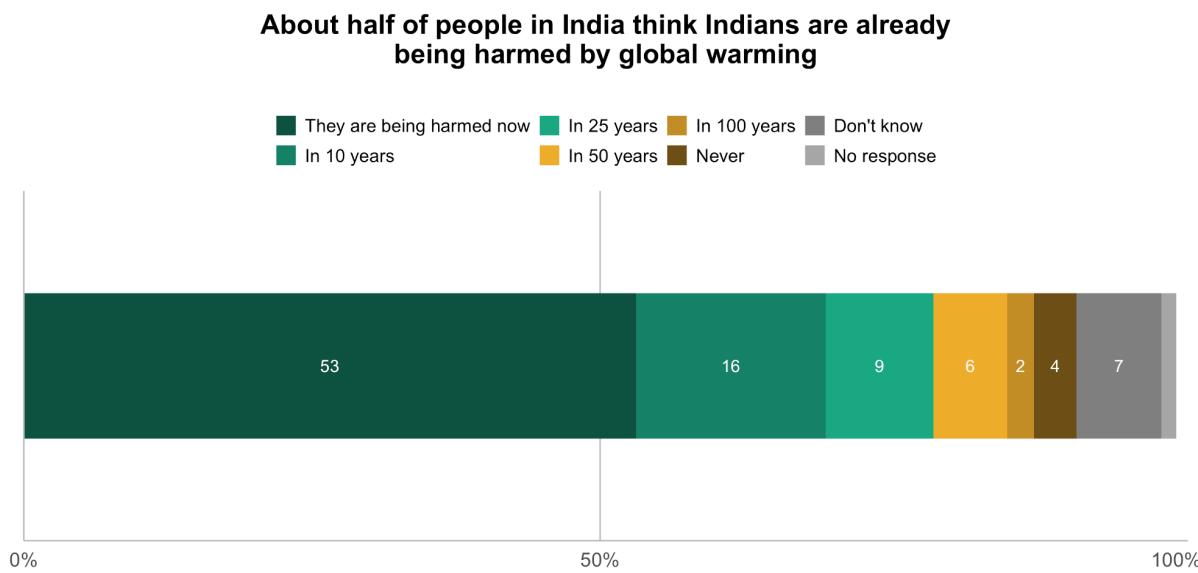


Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

3.3 About half of people in India think Indians are already being harmed by global warming.

About half of people in India think Indians are already being harmed by global warming (53%). Fewer think people in India will be harmed within 10 years (16%), 25 years (9%), 50 years (6%), or 100 years (2%), and only 4% think global warming will never harm people in India, while 7% say they don't know.

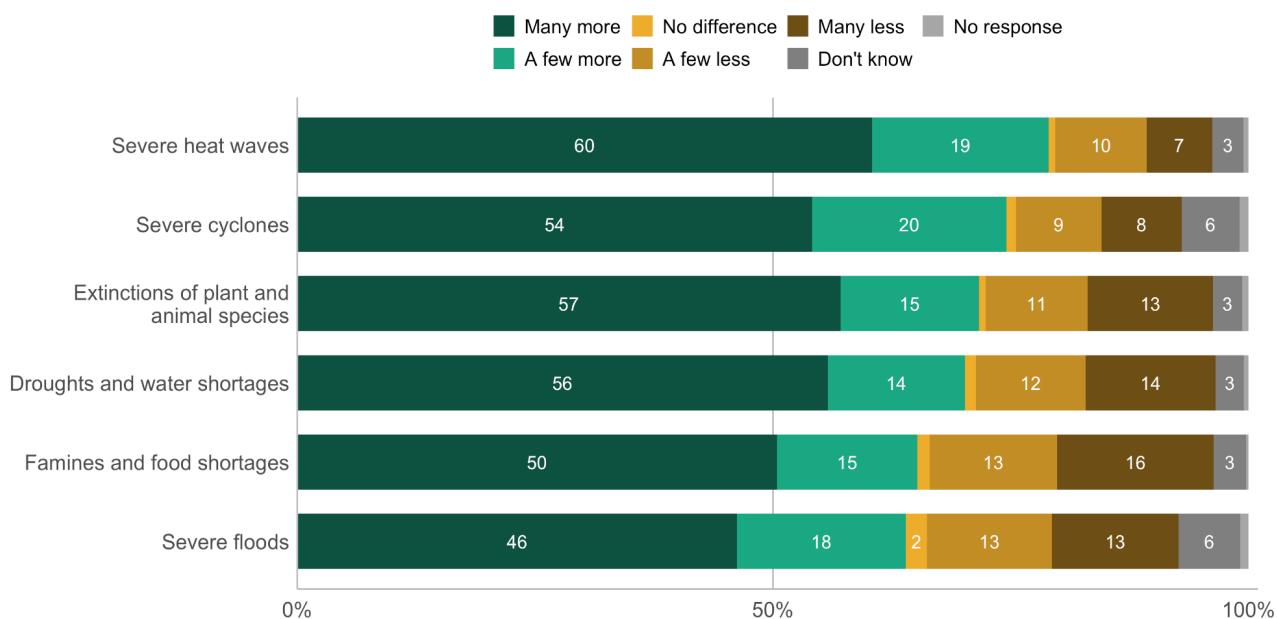


Source: Yale Program on Climate Change Communication

3.4 People in India think global warming will have dangerous impacts.

Many people in India think global warming will have a variety of dangerous impacts. Half or more think global warming will cause “many more” severe heat waves (60%), extinctions of plant and animal species (57%), droughts and water shortages (56%), severe cyclones (54%), and famines and food shortages (50%), and 46% think global warming will cause “many more” severe floods.

People in India think global warming will have dangerous impacts



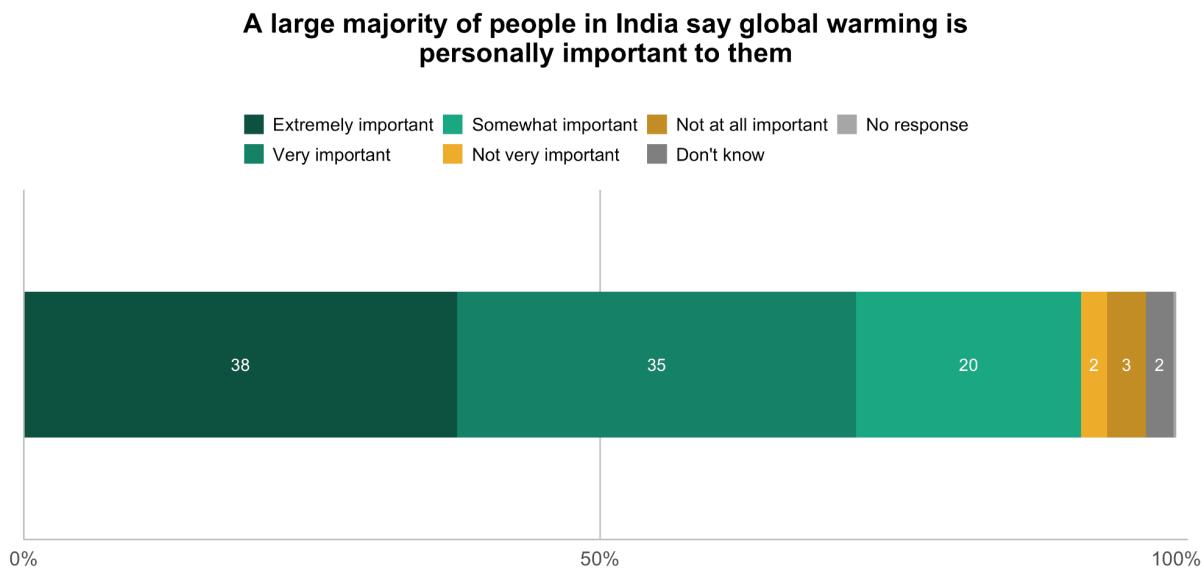
In India, over the next 20 years, please tell me if you think global warming will cause more or less of the following, if nothing is done to address it?

Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

3.5 A large majority of people in India say global warming is personally important to them.

About nine in 10 people in India (92%) say global warming is either “extremely important” (38%), “very important” (35%), or “somewhat important” (20%) to them personally. Very few say it is either “not very important” (2%) or “not at all important” (3%), while 2% say they don’t know.



Source: Yale Program on Climate Change Communication

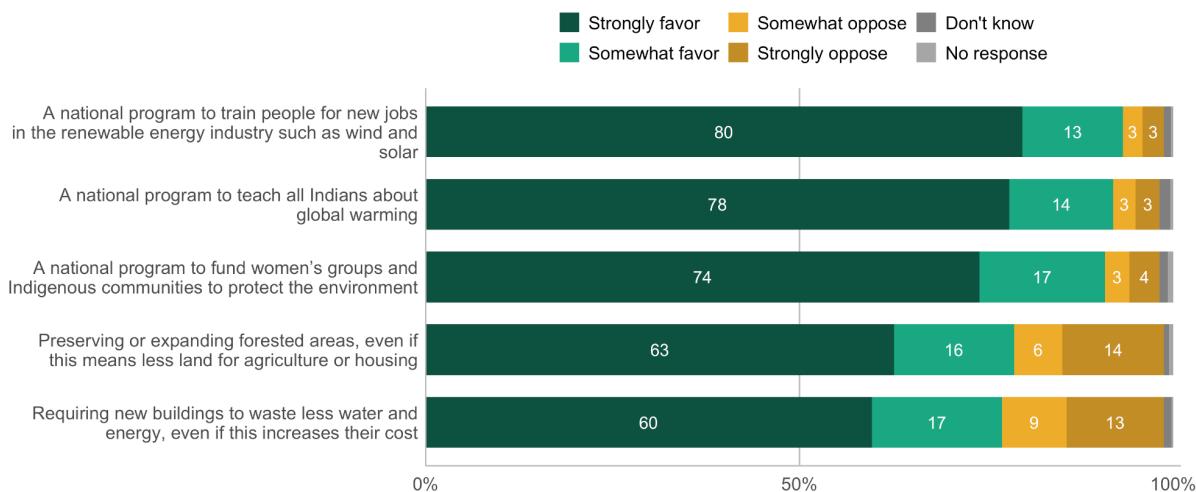
4. Support for Climate and Energy Policies

4.1 Most people in India favor policies to address environmental problems.

Large majorities of people in India either “strongly” or “somewhat” favor policies to address environmental problems in India, including:

- A national program to train people for new jobs in the renewable energy industry such as wind and solar (93%, +11 percentage points since 2021–2022).
- A national program to teach all Indians about global warming (92%, +9 percentage points since 2021–2022 and +22 percentage points since 2011).
- A national program to fund women’s groups and Indigenous communities to protect the environment (91%; not asked previously).
- Preserving or expanding forested areas, even if this means less land for agriculture or housing (79%, +9 percentage points since 2021–2022).
- Requiring new buildings to waste less water and energy, even if this increases their cost (77% +8 percentage points since 2021–2022).

Most people in India favor policies to address environmental problems



Next, please tell me how much would you favor or oppose India taking each of the following steps to help deal with environmental problems. Would you strongly favor, somewhat favor, somewhat oppose, or strongly oppose India taking this step?

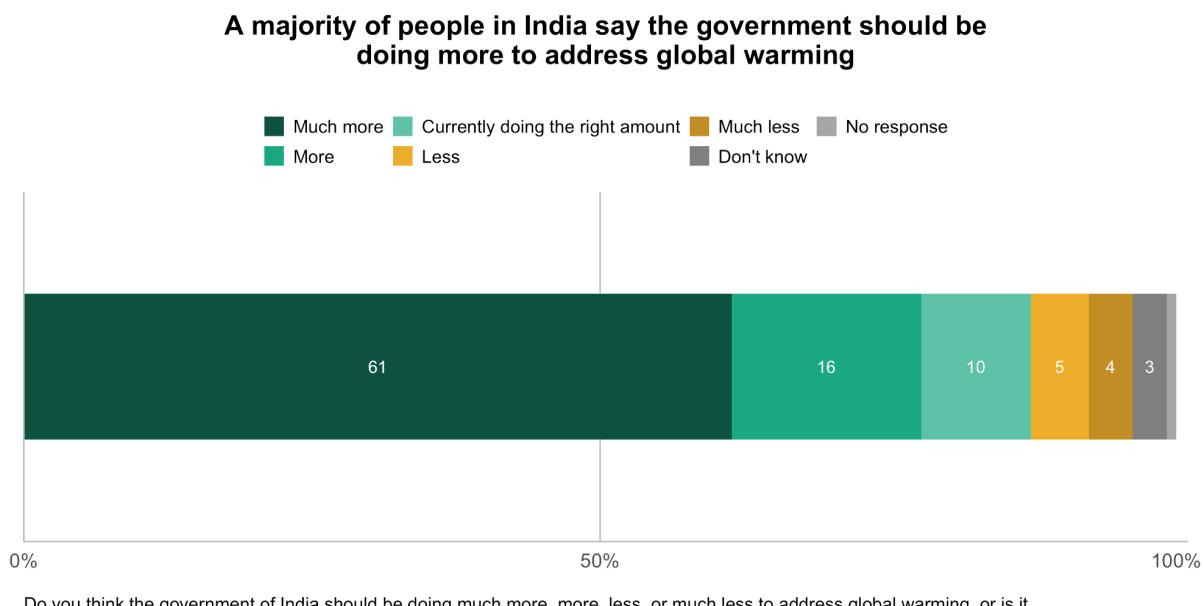
Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

4.2 A majority of people in India say the government should be doing more to address global warming.

Seventy-eight percent of people in India say the government of India should be doing either “much more” (61%) or “more” (16%) to address global warming. By contrast, only 10% say the government is currently doing the right amount to address global warming, and 9% say the government should be doing either “less” (5%) or “much less” (4%) to address the issue.

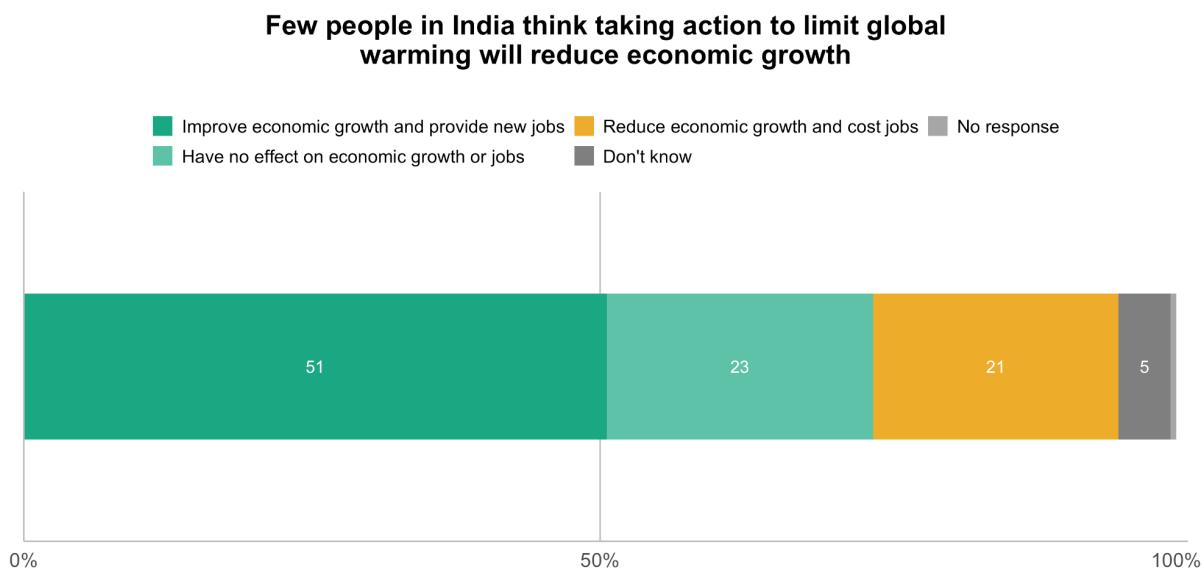
The percentage of people in India who say the government of India should be doing “much more” to address global warming is 15 percentage points higher than in 2021–2022.



Source: Yale Program on Climate Change Communication

4.3 Few people in India think taking action to limit global warming will reduce economic growth.

More than twice as many people in India think taking action to reduce global warming will improve economic growth and provide new jobs (51%) than think it will reduce economic growth and cost jobs (21%). About one in four (23%) think taking action on global warming will have no effect on economic growth or jobs.

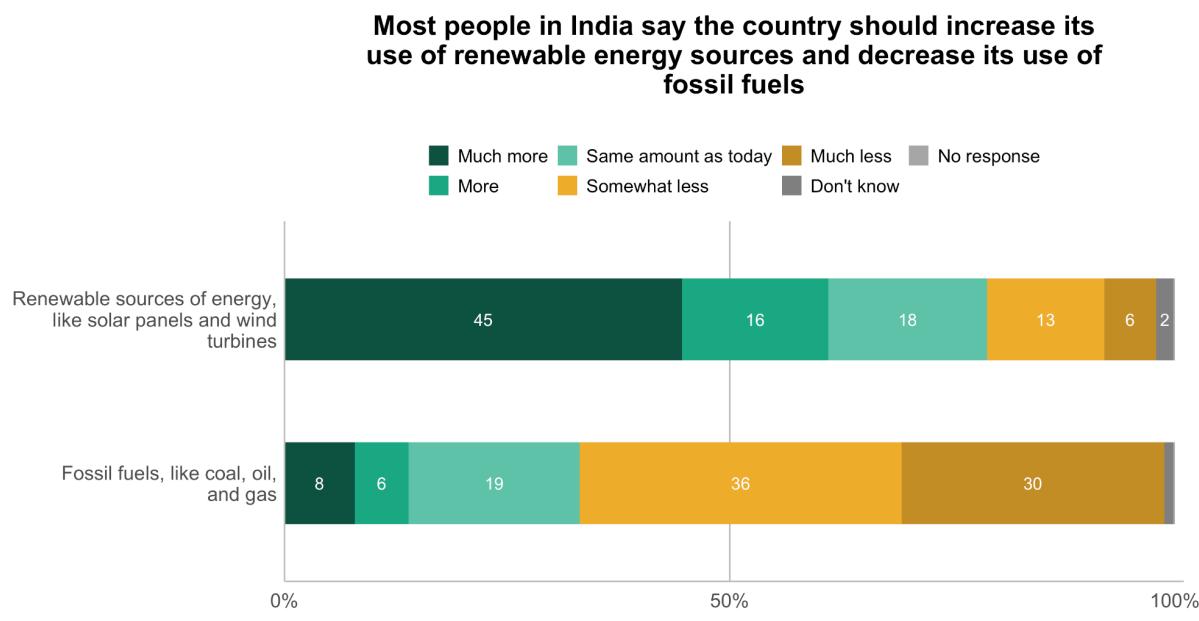


Source: Yale Program on Climate Change Communication

4.4 Most people in India say the country should increase its use of renewable energy sources and decrease its use of fossil fuels.

A majority of people in India (61%) say that in the future, India should use either “much more” (45%) or “more” (16%) renewable sources of energy, like solar panels and wind turbines, than it does today. Fewer (19%) say India should use either “much less” (6%) or “somewhat less” (13%) renewable energy, and 18% say India should use the same amount of renewable energy as it does today.

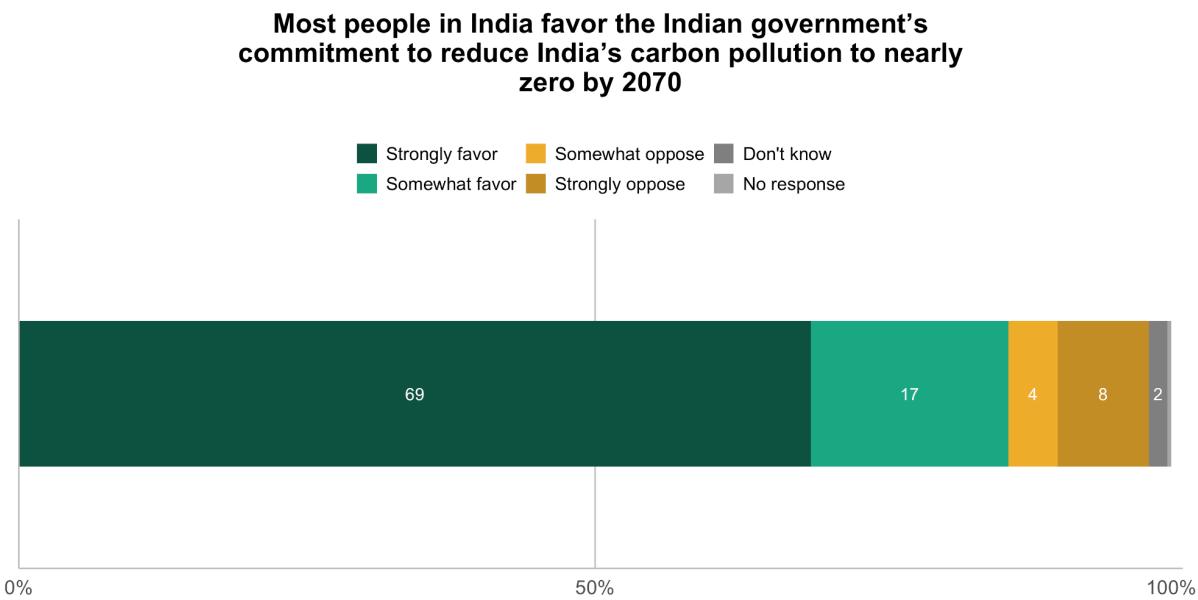
Most Indians (66%) also say India should use “much less” (30%) or “somewhat less” (36%) fossil fuels, like coal, oil, and gas, than it does today. Few (14%) say India should use “much more” (8%) or “more” (6%) fossil fuels, and 19% say India should use the same amount of fossil fuels as it does today.



Source: Yale Program on Climate Change Communication

4.5 Most people in India favor the Indian government's commitment to reduce India's carbon pollution to nearly zero by 2070.

At the 26th United Nations Framework Convention on Climate Change (COP 26) in November 2021, the Indian government announced its intention to reach net zero (or nearly zero) carbon pollution by 2070. A large majority of people in India (86%) say they either "strongly favor" (69%) or "somewhat favor" (17%) this commitment. In contrast, only 12% of Indians either "strongly oppose" (8%) or "somewhat oppose" (4%) this commitment.

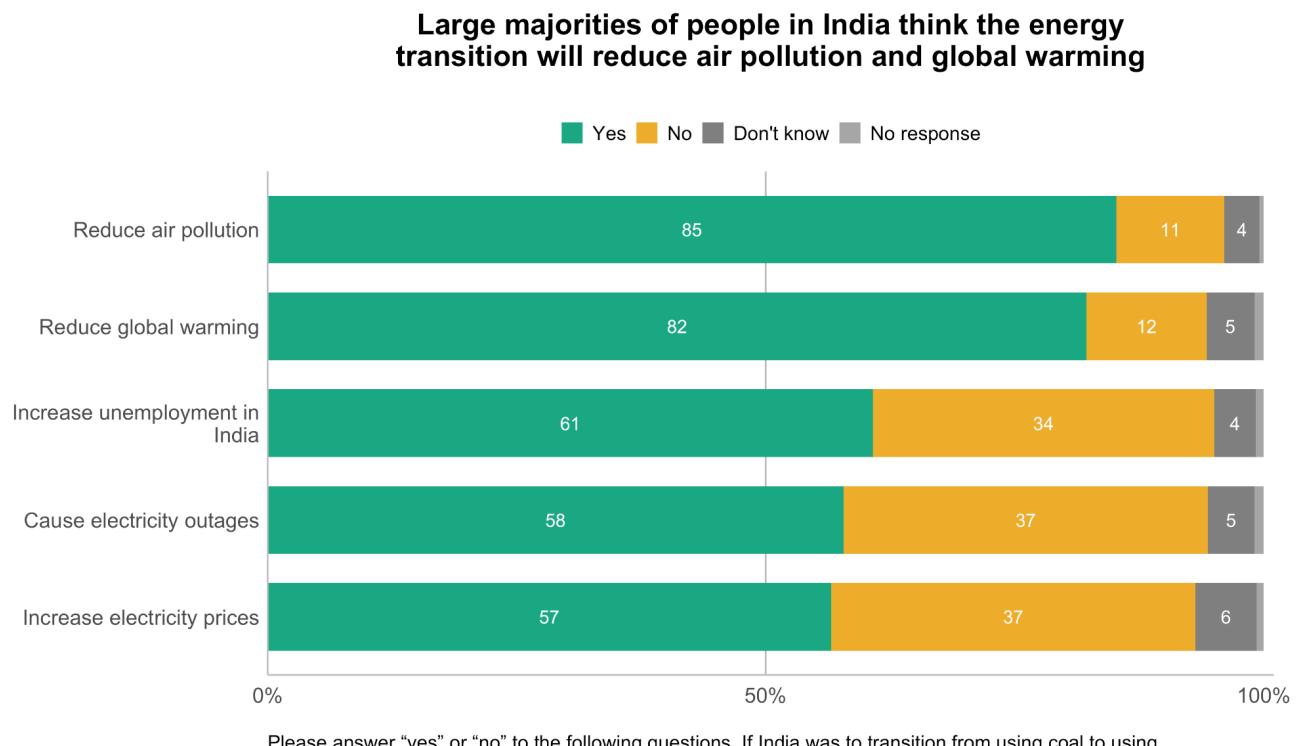


Source: Yale Program on Climate Change Communication

4.6 Large majorities of people in India think the energy transition will reduce air pollution and global warming.

People in India were asked about potential impacts if India were to transition from using coal to using wind and solar energy to produce electricity. Large majorities say doing so would reduce air pollution (85%) and reduce global warming (82%).

Many people in India, however, also think that transitioning from coal to wind and solar would increase unemployment in India (61%), cause electricity outages (58%), and increase electricity prices (57%).

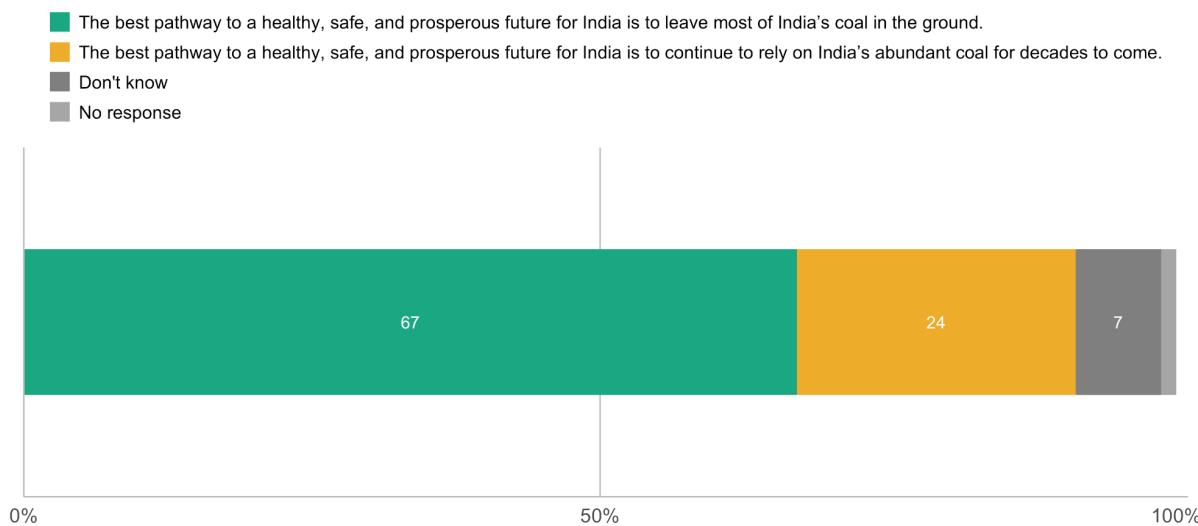


Source: Yale Program on Climate Change Communication

4.7 Two-thirds of people in India say India should leave most of its coal in the ground.

Asked about the best pathway to a healthy, safe, and prosperous future for India, about two in three (67%) people in India say it would be best to leave most of India's coal in the ground. By comparison, only one in four people in India (24%) say it would be best to rely on India's abundant coal for decades to come, while about one in ten (7%) say they don't know.

Two-thirds of people in India say India should leave most of its coal in the ground



Which of the following statements comes closest to your own view, even if neither is exactly right? "The best pathway to a healthy, safe, and prosperous future for India is to..."

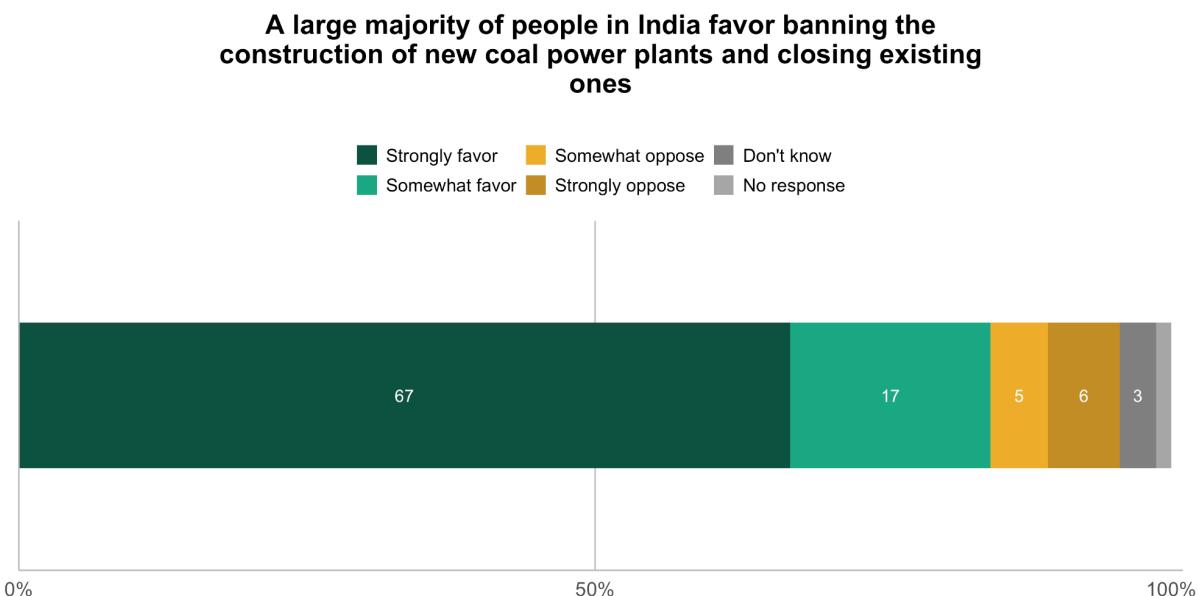
Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

4.8 A large majority of people in India favor banning the construction of new coal power plants and closing existing ones.

Respondents were presented with the following statement: “As you may know, about 75% of electricity in India comes from burning coal. But burning coal also causes air pollution and contributes to global warming.” Then, they were asked how much they favor or oppose the government banning the construction of new coal power plants, closing existing ones, and replacing them with solar and wind energy.

A large majority of people in India (84%) say they “strongly favor” (67%) or “somewhat favor” (17%) banning the construction of new coal power plants, closing existing ones, and replacing them with solar and wind energy. By comparison, only about one in ten (11%) say they “strongly oppose” (6%) or “somewhat oppose” (5%) doing so, while 3% say they don’t know.



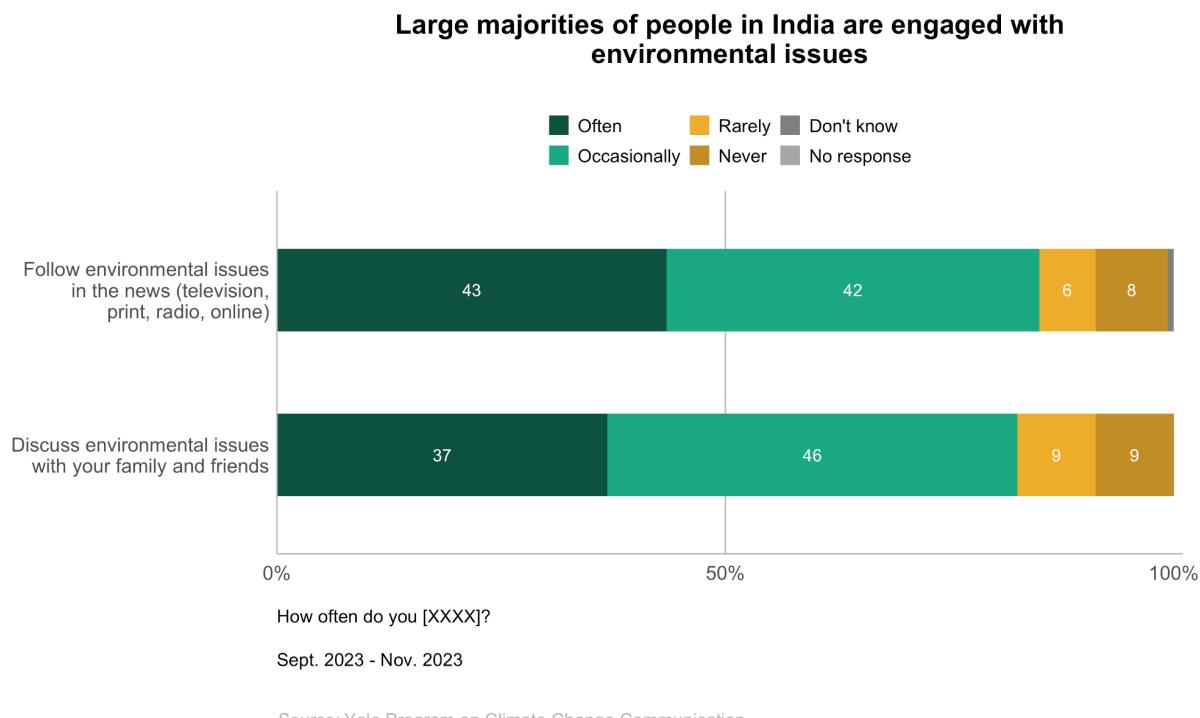
Source: Yale Program on Climate Change Communication

5. Social Engagement with Global Warming

5.1 Large majorities of people in India are engaged with environmental issues.

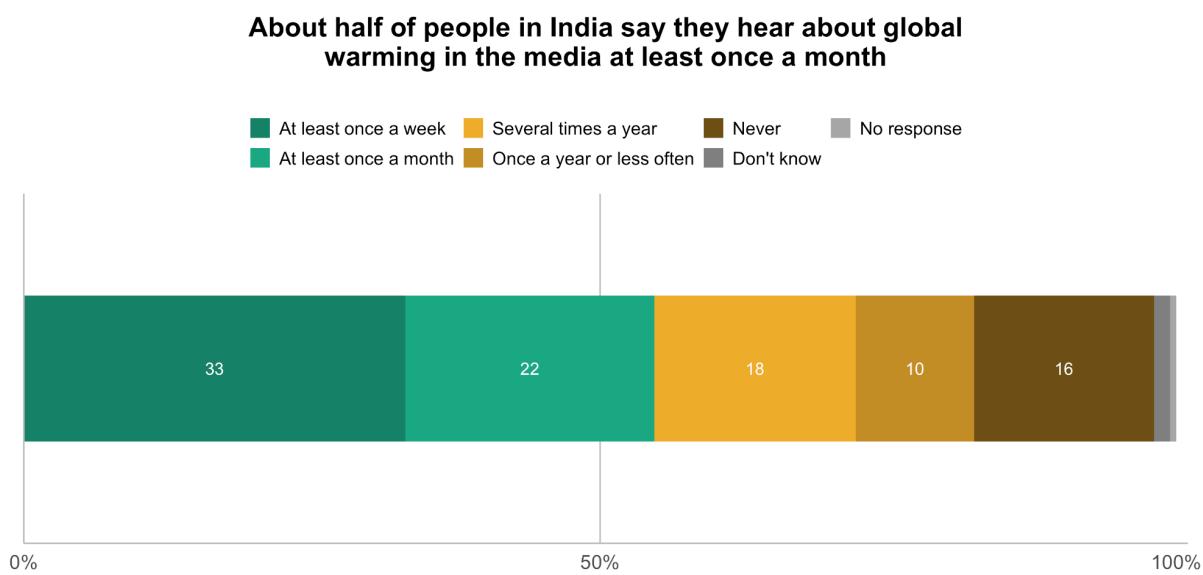
A large majority of people in India (85%) say they follow environmental issues in the news (television, print, radio, online) either “often” (43%) or “occasionally” (42%). By comparison, only 14% say they either “never” (8%) or “rarely” (6%) do so.

A large majority of people in India (83%) also say they discuss environmental issues with their family and friends either “often” (37%) or “occasionally” (46%). By comparison, only 17% say they either “never” (9%) or “rarely” (9%) engage in these discussions.



5.2 About half of people in India say they hear about global warming in the media at least once a month.

About half of people in India (55%) say they hear about global warming in the media “at least once a month” or more often, including 33% who say they hear about it “at least once a week.” In contrast, 43% say they hear about global warming in the media only “several times a year” or less often, including 16% who say they “never” hear about global warming in the media.



Source: Yale Program on Climate Change Communication

6. Willingness to Take Action to Reduce Global Warming

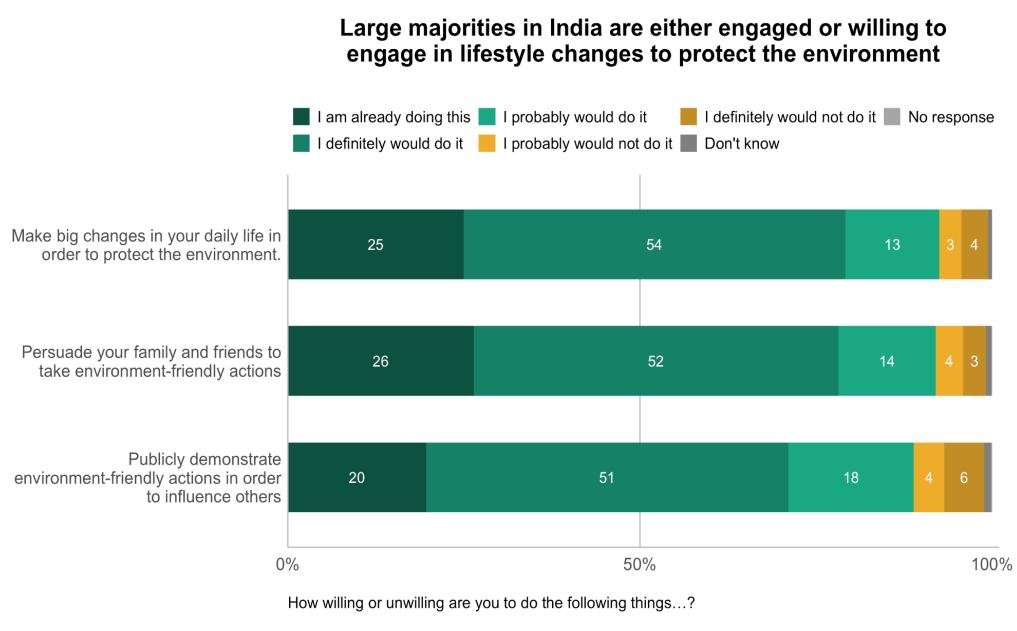
6.1. Large majorities in India are either engaged or willing to engage in lifestyle changes to protect the environment.

At COP26, Prime Minister Narendra Modi called for a global mass movement for behavior change, [Lifestyle for the Environment](#) (LiFE), and asked people to take the following three pledges: to make big changes in their daily life in order to protect the environment, to persuade their family and friends to take environment-friendly actions, and to publicly demonstrate environment-friendly actions in order to influence others.

Asked how willing or unwilling they are to make big changes in their daily life in order to protect the environment, a large majority of people in India (93%) say they are either “already doing this” (25%) or are “definitely” (54%) or “probably” (13%) willing to do it. In contrast, few people in India (7%) say they either “probably” (3%) or “definitely” (4%) would not do it.

Asked how willing or unwilling they are to persuade their family and friends to take environment-friendly actions, a large majority of people in India (92%) say they are either “already doing this” (26%) or are “definitely” (52%) or “probably” (14%) willing to do it. In contrast, few people in India (7%) say they either “probably” (4%) or “definitely” (3%) would not do it.

Asked how willing or unwilling they are to publicly demonstrate environment-friendly actions in order to influence others, a large majority of people in India (89%) say they are either “already doing this” (20%) or are “definitely” (51%) or “probably” (18%) willing to do it. In contrast, few people in India (10%) say they either “probably” (4%) or “definitely” (6%) would not do it.

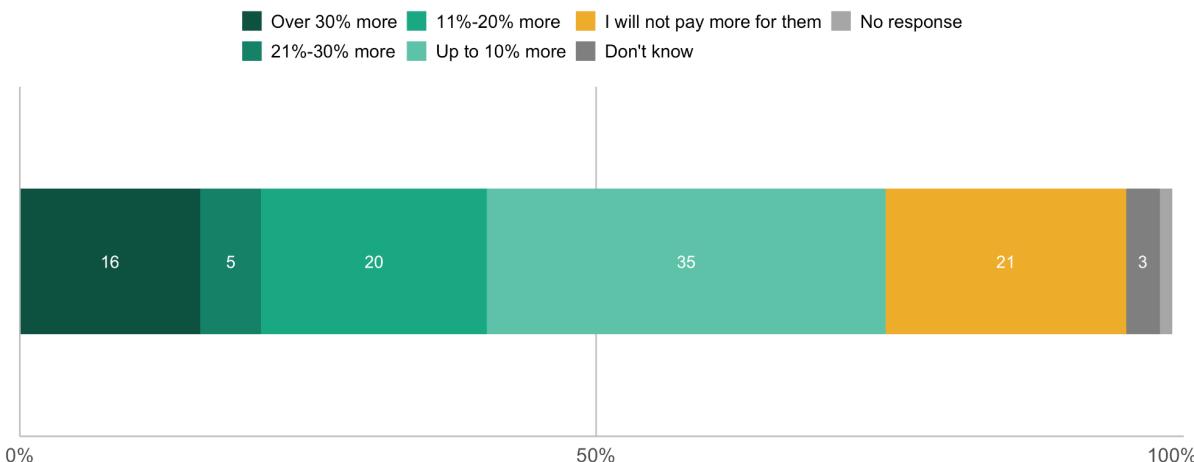


Source: Yale Program on Climate Change Communication

6.2 Three in four people in India would be willing to pay more for energy-efficient appliances to reduce electricity bills and global warming.

Respondents were presented the following statement: “Some energy efficient appliances such as 5-star rated A/Cs, fans, or refrigerators initially cost more to purchase, but in the long run, they help reduce both electricity bills and global warming.” Then, they were asked how much more they would be willing to pay for such energy-efficient appliances. Three in four people in India (75%) say they would be willing to pay more for energy-efficient appliances. This includes 16% of people who say they would be willing to pay over 30 percent more, 5% willing to pay 21–30 percent more, 20% willing to pay 11–20 percent more, and 35% willing to pay up to 10 percent more. By comparison, one in five (21%) say they are not willing to pay more for energy-efficient appliances.

Three in four people in India would be willing to pay more for energy-efficient appliances to reduce electricity bills and global warming



Some energy efficient appliances such as 5-star rated A/Cs, fans, or refrigerators initially cost more to purchase, but in the long run, they help reduce both electricity bills and global warming. How much more would be willing to pay for such energy-efficient appliances?

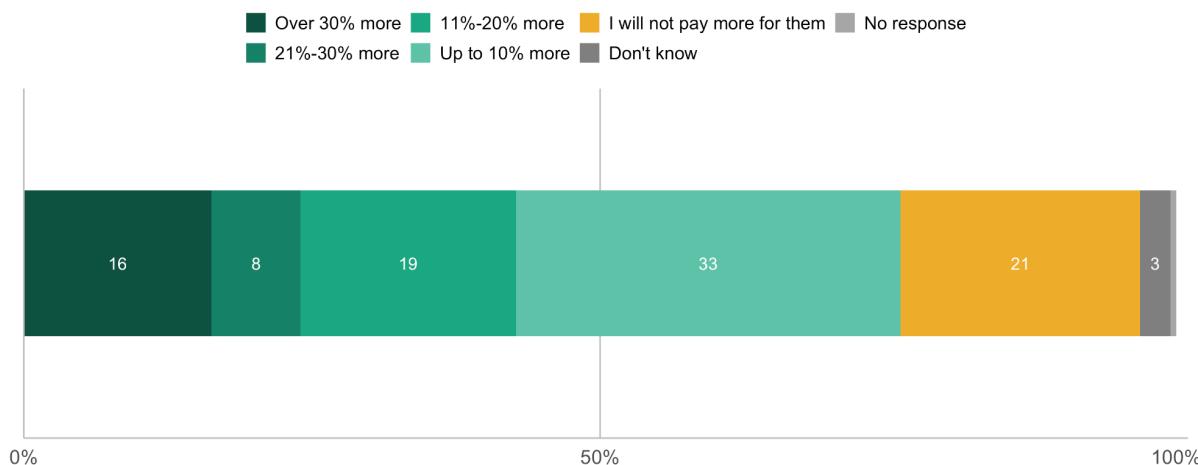
Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

6.3 Three in four people in India would be willing to pay more for an electric vehicle to reduce travel costs and global warming.

Respondents were asked how much more they would be willing to pay for an electric scooter, motorcycle, or car instead of one that uses petrol or diesel to help reduce both their travel costs and global warming. Three in four people in India (76%) say they would be willing to pay more for an electric vehicle. This includes 16% of people who say they would be willing to pay over 30 percent more, 8% willing to pay 21–30 percent more, 19% willing to pay 11–20 percent more, and 33% willing to pay up to 10 percent more. By comparison, one in five (21%) say they are not willing to pay more for an electric vehicle.

Three in four people in India would be willing to pay more for an electric vehicle to reduce travel costs and global warming



And how much more would you be willing to pay for an electric scooter, motorcycle, or car instead of one that uses petrol or diesel to help reduce both your travel costs and global warming?

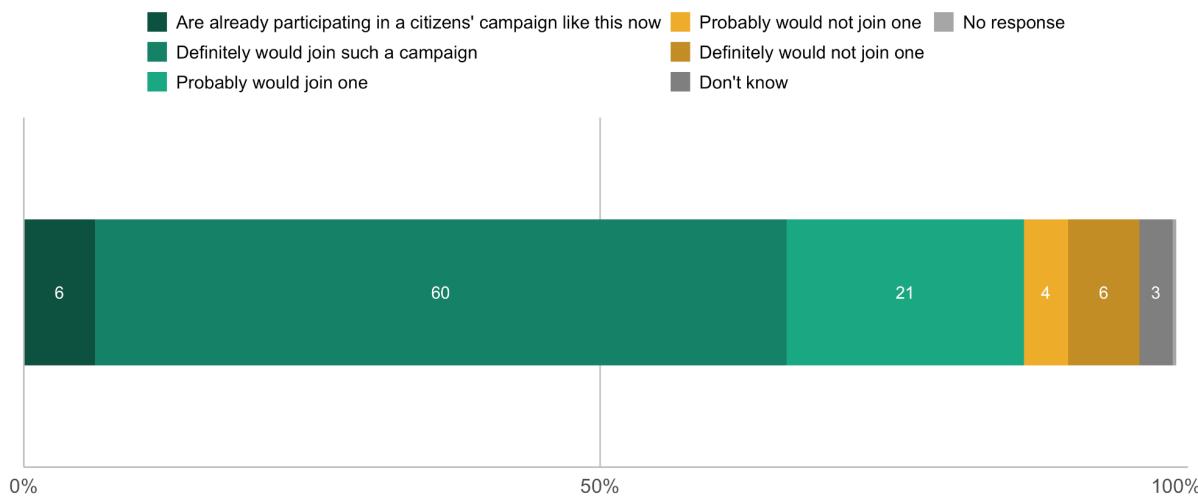
Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

6.4 Most people in India are willing to join a citizens' campaign to convince leaders in India to take action on global warming.

A large majority of people in India (87%) say they are either “already participating in” (6%) or are “definitely” (60%) or “probably” (21%) willing to join a citizens’ campaign to convince elected officials to take action to reduce global warming. In contrast, few people in India (10%) say they either “probably” (4%) or “definitely” (6%) would not join such a campaign.

Most people in India are willing to join a citizens' campaign to convince leaders in India to take action on global warming



How willing or unwilling are you to join a citizens' campaign to convince leaders in India to take action to reduce global warming?

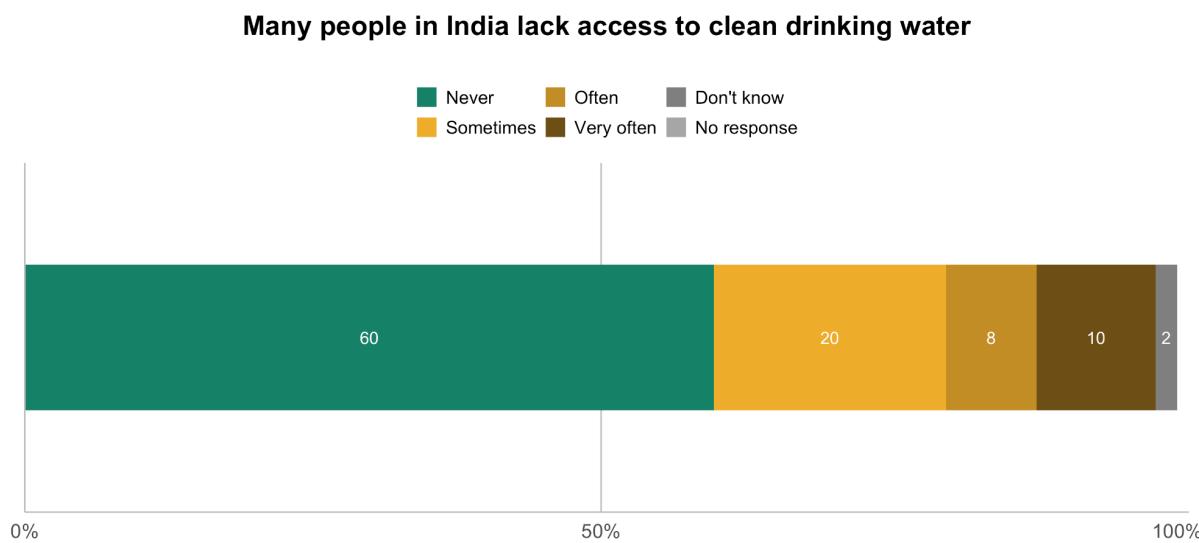
Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

7. Vulnerability

7.1 Many people in India lack access to clean drinking water.

Respondents were asked how often they or any member of their household had to go through the day without enough clean drinking water over the past year. Ten percent say it happened “very often,” 8% “often,” and 20% “sometimes,” while six in ten people in India (60%) say they or their household members have “never” faced this issue in the past year.



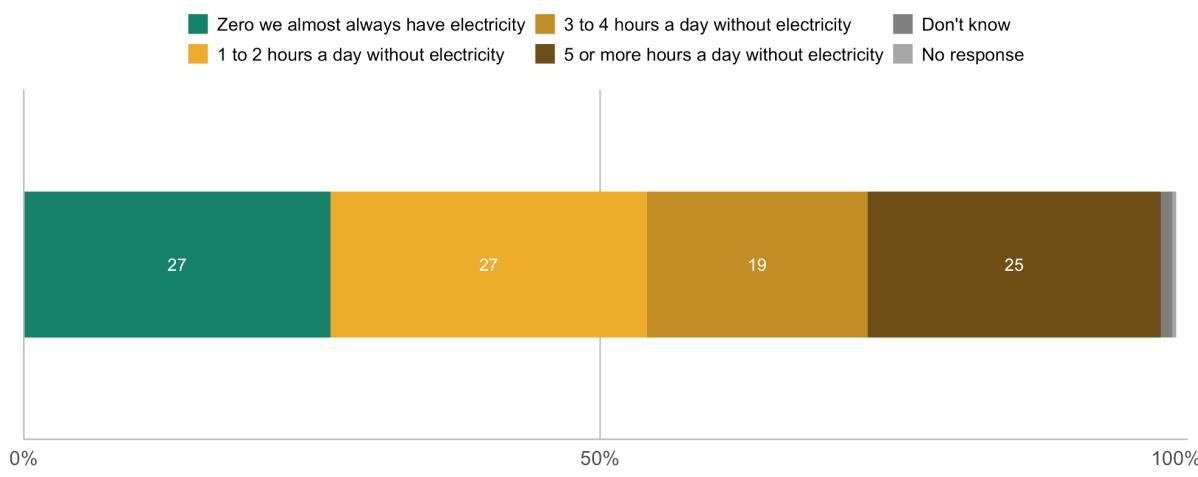
Sept. 2023 - Nov. 2023

Source: Yale Program on Climate Change Communication

7.2 A large majority of people in India experience electricity disruptions on a typical day.

A large majority of people in India (72%) experience electricity disruptions on a typical day. Twenty-seven percent say their household goes “1 to 2 hours a day without electricity,” 19% say they go “3 to 4 hours a day without electricity,” and one in four (25%) say their household goes “5 or more hours a day without electricity.” Only about one in four (27%) people in India “almost always have electricity” on a typical day.

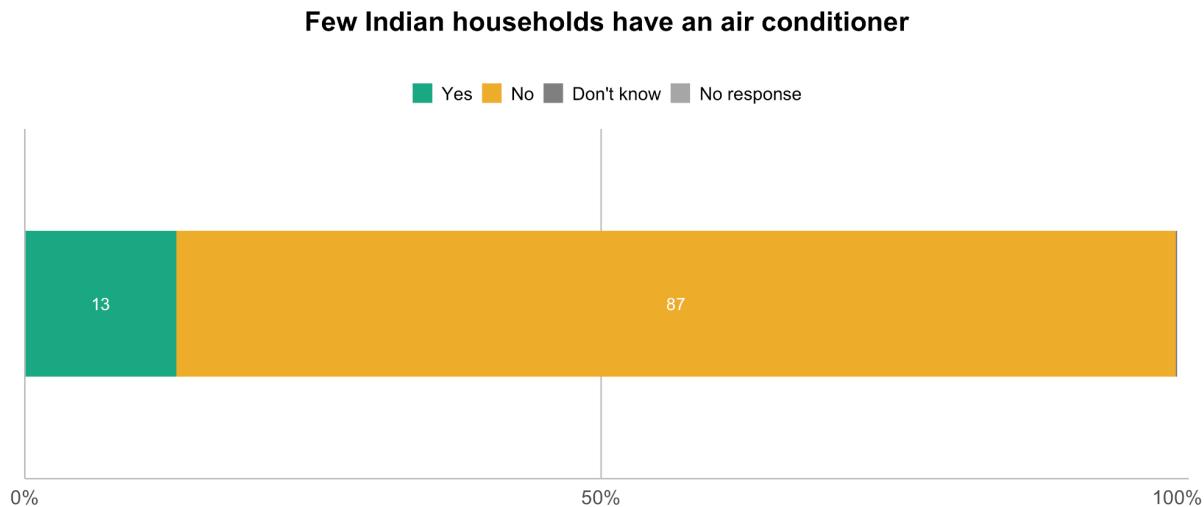
A large majority of people in India experience electricity disruptions on a typical day



Source: Yale Program on Climate Change Communication

7.3 Few Indian households have an air conditioner.

Only 13% of people in India say their household has an air conditioner. By comparison, 87% say they don't have an air conditioner.



Does your household have an air conditioner? Please answer 'yes' or 'no'.

Sept. 2023 - Nov. 2023

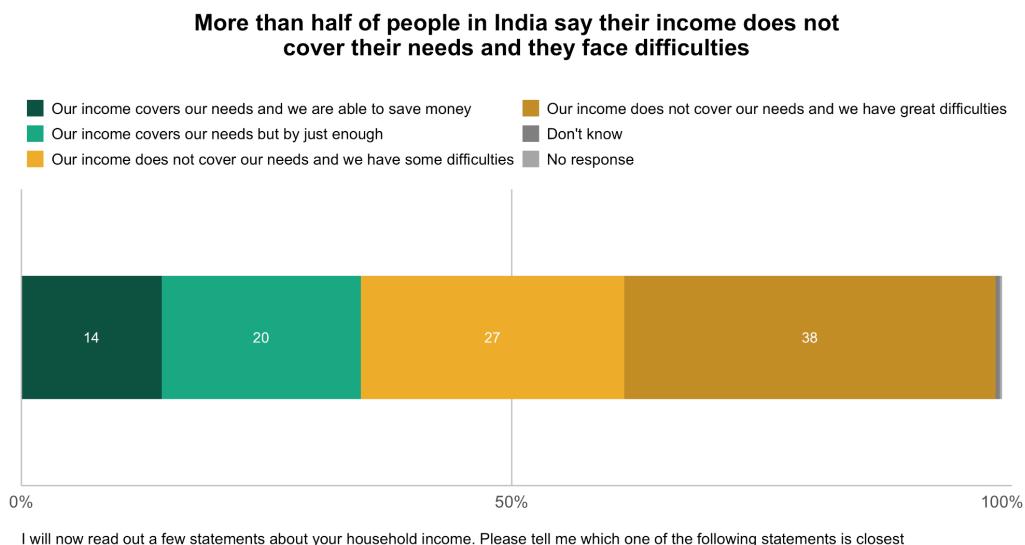
Source: Yale Program on Climate Change Communication

7.4 More than half of people in India say their income does not cover their needs and they face difficulties.

Only 14% of people in India say their household income covers their needs and they are able to save money, and another 20% say their income covers their needs, but by just enough. In contrast, more than half of people in India say their income does not cover their needs and that they either have “some difficulties” (27%) or “great difficulties” (38%).

The percentage of people in India who say their income does not cover needs and they have great difficulties is 11 percentage points higher than it was in 2021–2022.

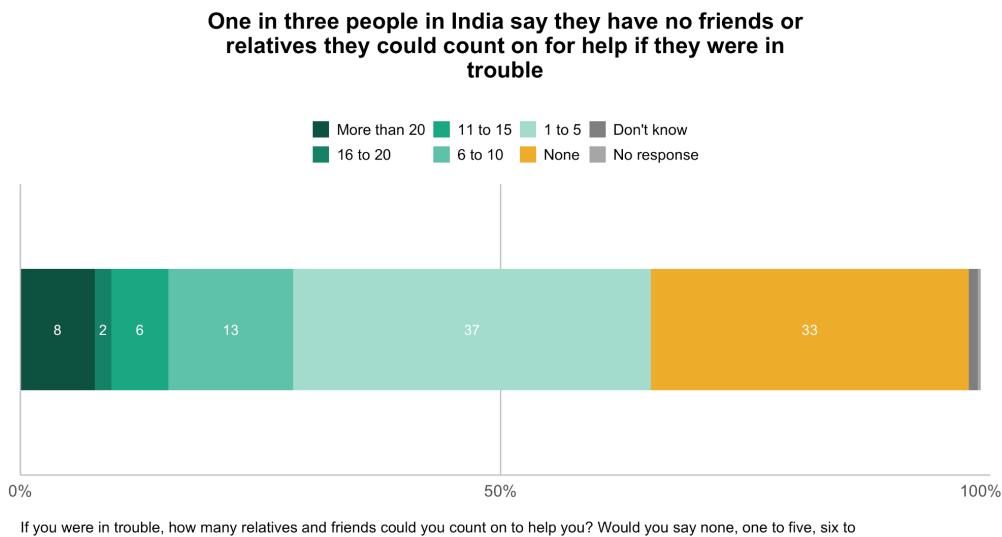
Despite struggling to manage family and household budgets, a majority are willing to pay more for appliances and vehicles that are more energy-efficient and help curb global warming (refer to Sections 6.2 & 6.3).



Source: Yale Program on Climate Change Communication

7.5 One in three people in India say they have no friends or relatives they could count on for help if they were in trouble.

When asked how many relatives and friends they could count on if they were in trouble and needed help, one-third of people in India (33%) say they have “none.” A large percentage (37%) say they have “1 to 5” friends or relatives they could count on to help them, while only about three in ten (28%) say they have either “6 to 10” (13%) or more than that (15%).



Source: Yale Program on Climate Change Communication

Appendix I: Methods

This report is based on findings from a nationally representative survey of adults (18+) in India conducted by the [Yale Program on Climate Change Communication](#) and [CVoter](#), an international survey company headquartered in Delhi, India. A nationally representative sample of respondents was contacted by mobile telephone using predictive dialing technology and computer-assisted telephone interviewing (CATI). The survey was translated into 12 languages (Hindi, Punjabi, Gujarati, Marathi, Kannada, Malayalam, Tamil, Telugu, Odiya, Bangla, Asamiya, and English) and respondents received the survey in one of those languages based on their geographic location in India. National Census-based demographic parameters were used to create sampling targets for gender, education, and socioeconomic status. The results were also weighed after completion of the data collection period to adjust the final sample to match national demographic parameters on gender, age, education, income, religion, and urbanicity. Interview dates: September 5, 2023 – November 1, 2023. Interviews: 2,178 adults (18+). Average margin of error: +/- 2.1 percentage points at the 95% confidence level.

In the data tables, bases specified are unweighted while percentages are weighted to match national population parameters. For tabulation purposes, percentage points are rounded to the nearest whole number. As a result, percentages in a given chart may total slightly higher or lower than 100%. Summed response categories (e.g., “strongly agree” + “somewhat agree”) are rounded after sums are calculated. For example, in some cases, the sum of 25% + 25% might be reported as 51% (e.g., $25.3\% + 25.3\% = 50.6\%$, which, after rounding, would be reported as $25\% + 25\% = 51\%$).

The survey instrument was designed by Anthony Leiserowitz, Seth Rosenthal, Jennifer Carman, Jennifer Marlon, Matthew Ballew, Matt Goldberg, and Marija Verner of Yale University, Jagadish Thaker of the University of Queensland, and Yashwant Deshmukh and Gaura Shukla of CVoter. All graphics (charts and tables) in the report were created by Emily Goddard of Yale University.

Appendix II: Data Tables

Table Notes:

- In all tables, the base is all Indians age 18+.
- In the first row of each table, “Unweighted Base” refers to the unweighted number of respondents in each column.
- Percentages reported are weighted to match India Census parameters.
- A dash (“-”) denotes that there were no responses in that cell, and “0” denotes that the cell value is greater than 0 but less than 0.50.
- If a dash (“-”) appears for all possible responses for a given question and wave, then that question was not asked in that survey wave.

1.1 How worried are you that the following might harm your local area? Are you very worried, moderately worried, a little worried, or not at all worried?

Severe cyclones

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very worried (%)	57	-	-
Moderately worried (%)	20	-	-
Not very worried (%)	4	-	-
Not at all worried (%)	18	-	-
Don't know (%)	2	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Extinction of plant and animal species

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very worried (%)	63	-	-
Moderately worried (%)	23	-	-
Not very worried (%)	3	-	-
Not at all worried (%)	10	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Famines and food shortages

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very worried (%)	63	-	-
Moderately worried (%)	20	-	-
Not very worried (%)	3	-	-
Not at all worried (%)	12	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Droughts and water shortages

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very worried (%)	66	-	-
Moderately worried (%)	19	-	-
Not very worried (%)	2	-	-
Not at all worried (%)	12	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Severe heat waves

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very worried (%)	57	-	-
Moderately worried (%)	28	-	-
Not very worried (%)	4	-	-
Not at all worried (%)	10	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Severe floods

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very worried (%)	51	-	-
Moderately worried (%)	20	-	-
Not very worried (%)	4	-	-
Not at all worried (%)	23	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Severe air pollution

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very worried (%)	63	-	-
Moderately worried (%)	22	-	-
Not very worried (%)	2	-	-
Not at all worried (%)	11	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Agricultural pests and diseases

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very worried (%)	67	-	-
Moderately worried (%)	20	-	-
Not very worried (%)	2	-	-
Not at all worried (%)	7	-	-
Don't know (%)	3	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

1.2 When an extreme weather event (such as a heatwave, flood, or cyclone) happens in your local area, do you usually receive a warning about it ahead of time?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Yes (%)	64	-	-
No (%)	34	-	-
Don't know (%)	2	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

1.3 How confident are you that the following can help your local community prepare for and respond to extreme weather events, such as heatwaves, floods, or cyclones?

State and local government

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very confident (%)	36	-	-
Somewhat confident (%)	26	-	-
Only a little confident (%)	20	-	-
Not at all confident (%)	16	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

People in your community

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very confident (%)	43	-	-
Somewhat confident (%)	25	-	-
Only a little confident (%)	20	-	-
Not at all confident (%)	11	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Family and friends

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very confident (%)	60	-	-
Somewhat confident (%)	18	-	-
Only a little confident (%)	13	-	-
Not at all confident (%)	8	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

1.4 How willing or unwilling are you to do the following to help your local community prepare for and respond to extreme weather events, such as heatwaves, floods, or cyclones?

Join a community emergency response team

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
I am already doing this (%)	10	-	-
I definitely would do it (%)	58	-	-
I probably would do it (%)	19	-	-
I probably would not do it (%)	5	-	-
I definitely would not do it (%)	5	-	-
Don't know (%)	2	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

Encourage your family and friends to join a community emergency response team

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
I am already doing this (%)	13	-	-
I definitely would do it (%)	58	-	-
I probably would do it (%)	18	-	-
I probably would not do it (%)	4	-	-
I definitely would not do it (%)	5	-	-
Don't know (%)	2	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Ask local government officials to publicly explain their emergency response plans

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
I am already doing this (%)	11	-	-
I definitely would do it (%)	57	-	-
I probably would do it (%)	19	-	-
I probably would not do it (%)	5	-	-
I definitely would not do it (%)	5	-	-
Don't know (%)	3	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

1.5 Have you ever moved or considered moving to a different village, town, or city because of weather-related disasters such as extreme heat, droughts, sea-level rise, flooding, etc.?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
I have already moved because of weather-related disasters (%)	14	-	-
I have not moved but have considered doing so (%)	20	-	-
I have not moved or considered moving (%)	64	-	-
Don't know (%)	1	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

1.6 If [X] happened in your local area, how long do you think it would take for your household to recover? Would you say it would take you a month, several months, a year, or several years?

A severe flood

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
A month (%)	16	14	15
Several months (%)	19	20	22
A year (%)	17	17	21
Several years (%)	39	26	21
Don't know (%)	4	7	14
No response (%)	1	5	-
Not applicable (%)	5	11	7

A severe drought

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
A month (%)	10	9	13
Several months (%)	22	25	21
A year (%)	23	21	22
Several years (%)	40	28	20
Don't know (%)	4	7	15
No response (%)	1	5	-
Not applicable (%)	1	5	8

2.1 How much do you know about global warming? Do you know a lot about it, something about it, just a little about it, or have you never heard of it?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
I know a lot about it (%)	10	9	7
I know something about it (%)	34	32	24
I know just a little about it (%)	22	20	25
I have never heard of it (%)	32	35	24
Don't know (%)	1	2	15
No response (%)	0	3	3

2.2 Global warming refers to the idea that the world's average temperature has been increasing over the past 150 years, may be increasing more in the future, and that the world's climate and weather patterns may change as a result. What do you think? Do you think that global warming is happening? Would you say 'yes', 'no', or 'I don't know'?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Yes (%)	78	84	69
No (%)	9	6	11
Don't know (%)	13	6	16
No response (%)	0	4	5

2.3 If global warming is happening, do you think it is caused mostly by human activities, by natural changes in the environment, some other cause, or none of these because it is not happening?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Caused mostly by human activities (%)	52	57	53
Caused mostly by natural changes in the environment (%)	38	31	30
Some other cause (%)	1	1	5
None of these because global warming is not happening (%)	2	2	0
Don't know (%)	6	4	2
No response (%)	1	5	11

2.4 I will now read you a statement. Please tell me how much you agree or disagree with it.

I have personally experienced the effects of global warming.

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Strongly agree (%)	61	54	18
Somewhat agree (%)	25	20	32
Somewhat disagree (%)	6	4	18
Strongly disagree (%)	6	10	13
Don't know (%)	2	2	19
No response (%)	0	10	-

2.5 How much, if at all, do you think global warming is affecting [XXXX] in India?

Monsoons

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
A lot (%)	54	-	-
Some (%)	22	-	-
Only a little (%)	17	-	-
Not at all (%)	4	-	-
Don't know (%)	2	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

The weather

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
A lot (%)	48	-	-
Some (%)	23	-	-
Only a little (%)	23	-	-
Not at all (%)	5	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

3.1 How worried are you about global warming? Would you say you are very worried, somewhat worried, not very worried, or not at all worried?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very worried (%)	59	50	20
Somewhat worried (%)	32	31	40
Not very worried (%)	2	5	20
Not at all worried (%)	6	7	8
Don't know (%)	1	2	9
No response (%)	0	5	3

3.2 How much do you think global warming will harm [X]? Would you say a great deal, a moderate amount, only a little, not at all, or do you not know?

You and your family

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
A great deal (%)	51	49	30
A moderate amount (%)	23	21	27
Only a little (%)	17	16	23
Not at all (%)	7	4	8
Don't know (%)	2	4	11
No response (%)	1	6	-
Not applicable (%)	0	0	1

People in your community

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
A great deal (%)	57	53	32
A moderate amount (%)	21	19	28
Only a little (%)	15	14	20
Not at all (%)	4	3	6
Don't know (%)	3	4	12
No response (%)	0	7	-
Not applicable (%)	-	0	2

People in India

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
A great deal (%)	69	63	39
A moderate amount (%)	13	14	25
Only a little (%)	10	10	16
Not at all (%)	4	2	7
Don't know (%)	3	5	11
No response (%)	1	7	-
Not applicable (%)	0	0	2

Future generations of people

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
A great deal (%)	71	68	46
A moderate amount (%)	10	9	19
Only a little (%)	9	8	15
Not at all (%)	4	2	5
Don't know (%)	5	7	12
No response (%)	1	7	-
Not applicable (%)	0	0	2

Plant and animal species

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
A great deal (%)	69	67	46
A moderate amount (%)	14	13	19
Only a little (%)	11	8	13
Not at all (%)	4	2	7
Don't know (%)	2	3	13
No response (%)	0	6	-
Not applicable (%)	0	0	2

3.3 When, if ever, do you think global warming will start to harm people in India? Would you say people in India are being harmed now by global warming or people in India will start to be harmed by global warming in 10 years, in 25 years, in 50 years, in 100 years, or never?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
They are being harmed now (%)	53	49	20
In 10 years (%)	16	18	21
In 25 years (%)	9	10	14
In 50 years (%)	6	4	12
In 100 years (%)	2	1	8
Never (%)	4	2	6
Don't know (%)	7	9	14
No response (%)	1	8	5

3.4 In India, over the next 20 years, please tell me if you think global warming will cause more or less of the following, if nothing is done to address it?

Severe cyclones

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Many more (%)	54	52	32
A few more (%)	20	16	27
No difference (%)	1	2	1
A few less (%)	9	7	17
Many less (%)	8	5	14
Don't know (%)	6	10	9
No response (%)	1	8	-

Extinctions of plant and animal species

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Many more (%)	57	54	48
A few more (%)	15	16	22
No difference (%)	1	1	1
A few less (%)	11	9	12
Many less (%)	13	9	9
Don't know (%)	3	3	8
No response (%)	1	8	-

Famines and food shortages

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Many more (%)	50	49	46
A few more (%)	15	14	22
No difference (%)	1	3	2
A few less (%)	13	10	14
Many less (%)	16	12	7
Don't know (%)	3	3	9
No response (%)	0	8	-

Droughts and water shortages

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Many more (%)	56	50	45
A few more (%)	14	15	21
No difference (%)	1	3	3
A few less (%)	12	10	14
Many less (%)	14	9	7
Don't know (%)	3	4	10
No response (%)	1	9	-

Severe heat waves

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Many more (%)	60	54	45
A few more (%)	19	17	22
No difference (%)	1	2	3
A few less (%)	10	7	13
Many less (%)	7	5	7
Don't know (%)	3	6	10
No response (%)	1	9	-

Severe floods

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Many more (%)	46	44	35
A few more (%)	18	16	23
No difference (%)	2	3	3
A few less (%)	13	10	15
Many less (%)	13	8	11
Don't know (%)	6	9	14
No response (%)	1	10	-

3.5 How important is the issue of global warming to you personally? Would you say it is very important, somewhat important, not very important, or not at all important?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Extremely important (%)	38	39	-
Very important (%)	35	29	31
Somewhat important (%)	20	16	32
Not very important (%)	2	2	16
Not at all important (%)	3	3	7
Don't know (%)	2	2	8
No response (%)	0	9	4

4.1 Next, please tell me how much would you favor or oppose India taking each of the following steps to help deal with environmental problems. Would you strongly favor, somewhat favor, somewhat oppose, or strongly oppose India taking this step?

Preserving or expanding forested areas, even if this means less land for agriculture or housing

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Strongly favor (%)	63	55	28
Somewhat favor (%)	16	15	29
Somewhat oppose (%)	6	7	19
Strongly oppose (%)	14	10	16
Don't know (%)	1	1	8
No response (%)	1	13	-

Requiring new buildings to waste less water and energy, even if this increases their cost

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Strongly favor (%)	60	54	28
Somewhat favor (%)	17	15	29
Somewhat oppose (%)	9	6	20
Strongly oppose (%)	13	11	12
Don't know (%)	1	1	12
No response (%)	0	13	-

A national program to teach all Indians about global warming

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Strongly favor (%)	78	74	47
Somewhat favor (%)	14	9	23
Somewhat oppose (%)	3	1	12
Strongly oppose (%)	3	2	6
Don't know (%)	1	1	12
No response (%)	0	13	-

A national program to train people for new jobs in the renewable energy industry such as wind and solar

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Strongly favor (%)	80	74	-
Somewhat favor (%)	13	8	-
Somewhat oppose (%)	3	1	-
Strongly oppose (%)	3	2	-
Don't know (%)	1	1	-
No response (%)	0	13	-
Not asked (%)	-	-	100

A national program to fund women's groups and Indigenous communities to protect the environment

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Strongly favor (%)	74	-	-
Somewhat favor (%)	17	-	-
Somewhat oppose (%)	3	-	-
Strongly oppose (%)	4	-	-
Don't know (%)	1	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

4.2 Do you think the government of India should be doing much more, more, less, or much less to address global warming, or is it currently doing the right amount?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Much more (%)	61	47	24
More (%)	16	17	16
Currently doing the right amount (%)	10	9	8
Less (%)	5	7	18
Much less (%)	4	6	17
Don't know (%)	3	4	14
No response (%)	1	11	4

4.3 Overall, do you think that taking action to reduce global warming will... ?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Improve economic growth and provide new jobs (%)	51	45	-
Have no effect on economic growth or jobs (%)	23	17	-
Reduce economic growth and cost jobs (%)	21	19	-
Don't know (%)	5	6	-
No response (%)	0	12	-
Not asked (%)	-	-	100

4.4 Do you think that in the future India should use more, less, or about the same amount of renewable sources of energy, like solar panels and wind turbines, as it does today?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Much more (%)	45	42	-
More (%)	16	16	-
Same amount as today (%)	18	13	-
Somewhat less (%)	13	9	-
Much less (%)	6	3	-
Don't know (%)	2	3	-
No response (%)	0	13	-
Not asked (%)	-	-	100

- Do you think that in the future India should use more, less, or about the same amount of fossil fuels, like coal, oil, and gas, as it does today?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Much more (%)	8	8	-
More (%)	6	5	-
Same amount as today (%)	19	18	-
Somewhat less (%)	36	31	-
Much less (%)	30	23	-
Don't know (%)	1	2	-
No response (%)	0	13	-
Not asked (%)	-	-	100

4.5 The Indian government has committed to reduce India's carbon pollution – caused by burning coal, petrol, and diesel to produce energy – to nearly zero by 2070. How much do you favor or oppose this commitment?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Strongly favor (%)	69	-	-
Somewhat favor (%)	17	-	-
Somewhat oppose (%)	4	-	-
Strongly oppose (%)	8	-	-
Don't know (%)	2	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

4.6 Please answer “yes” or “no” to the following questions. If India was to transition from using coal to using wind and solar energy to produce electricity, do you think doing so would...?

Reduce air pollution

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Yes (%)	85	-	-
No (%)	11	-	-
Don't know (%)	4	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Reduce global warming

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Yes (%)	82	-	-
No (%)	12	-	-
Don't know (%)	5	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

Increase unemployment in India

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Yes (%)	61	-	-
No (%)	34	-	-
Don't know (%)	4	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

Cause electricity outages

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Yes (%)	58	-	-
No (%)	37	-	-
Don't know (%)	5	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

Increase electricity prices

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Yes (%)	57	-	-
No (%)	37	-	-
Don't know (%)	6	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

4.7 Which of the following statements comes closest to your own view, even if neither is exactly right?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
The best pathway to a healthy, safe, and prosperous future for India is to continue to rely on India's abundant coal for decades to come. (%)	24	-	-
The best pathway to a healthy, safe, and prosperous future for India is to leave most of India's coal in the ground. (%)	67	-	-
Don't know (%)	7	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

4.8 As you may know, about 75% of electricity in India comes from burning coal. But burning coal also causes air pollution and contributes to global warming. How much do you favor or oppose the government banning the construction of new coal power plants, closing existing ones, and replacing them with solar and wind energy?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Strongly favor (%)	67	-	-
Somewhat favor (%)	17	-	-
Somewhat oppose (%)	5	-	-
Strongly oppose (%)	6	-	-
Don't know (%)	3	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

5.1 How often do you [XXXX]?

Discuss environmental issues with your family and friends

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Often (%)	37	-	-
Occasionally (%)	46	-	-
Rarely (%)	9	-	-
Never (%)	9	-	-
Don't know (%)	0	-	-
Not asked (%)	-	100	100

Follow environmental issues in the news (television, print, radio, online)

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Often (%)	43	-	-
Occasionally (%)	42	-	-
Rarely (%)	6	-	-
Never (%)	8	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

5.2 About how often do you hear about global warming in the media (TV, movies, radio, newspapers/news websites, magazines, etc.)?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
At least once a week (%)	33	35	-
At least once a month (%)	22	18	-
Several times a year (%)	18	15	-
Once a year or less often (%)	10	7	-
Never (%)	16	11	-
Don't know (%)	1	1	-
No response (%)	1	13	-
Not asked (%)	-	-	100

6.1 How willing or unwilling are you to do the following things...?

Make big changes in your daily life in order to protect the environment.

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
I am already doing this (%)	25	-	-
I definitely would do it (%)	54	-	-
I probably would do it (%)	13	-	-
I probably would not do it (%)	3	-	-
I definitely would not do it (%)	4	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Persuade your family and friends to take environment-friendly actions

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
I am already doing this (%)	26	-	-
I definitely would do it (%)	52	-	-
I probably would do it (%)	14	-	-
I probably would not do it (%)	4	-	-
I definitely would not do it (%)	3	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

Publicly demonstrate environment-friendly actions in order to influence others

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
I am already doing this (%)	20	-	-
I definitely would do it (%)	51	-	-
I probably would do it (%)	18	-	-
I probably would not do it (%)	4	-	-
I definitely would not do it (%)	6	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

6.2 Some energy efficient appliances such as 5-star rated A/Cs, fans, or refrigerators initially cost more to purchase, but in the long run, they help reduce both electricity bills and global warming. How much more would be willing to pay for such energy-efficient appliances?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Over 30% more (%)	16	-	-
21%-30% more (%)	5	-	-
11%-20% more (%)	20	-	-
Up to 10% more (%)	35	-	-
I will not pay more for them (%)	21	-	-
Don't know (%)	3	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

6.3 And how much more would you be willing to pay for an electric scooter, motorcycle, or car instead of one that uses petrol or diesel to help reduce both your travel costs and global warming?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Over 30% more (%)	16	-	-
21%-30% more (%)	8	-	-
11%-20% more (%)	19	-	-
Up to 10% more (%)	33	-	-
I will not pay more for them (%)	21	-	-
Don't know (%)	3	-	-
No response (%)	1	-	-
Not asked (%)	-	100	100

6.4 How willing or unwilling are you to join a citizens' campaign to convince leaders in India to take action to reduce global warming?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Are already participating in a citizens' campaign like this now (%)	6	6	-
Definitely would join such a campaign (%)	60	57	-
Probably would join one (%)	21	14	-
Not sure (%)	1	2	-
Probably would not join one (%)	4	3	-
Definitely would not join one (%)	6	5	-
Don't know (%)	1	1	-
No response (%)	0	12	-
Not asked (%)	-	-	100

7.1 Over the past one year, how often did you or any member of your household have to go without enough clean drinking water in a day? Would you say very often, often, sometimes, or never?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Very often (%)	10	-	3
Often (%)	8	-	7
Sometimes (%)	20	-	30
Never (%)	60	-	55
Don't know (%)	2	-	3
No response (%)	0	-	1
Not asked (%)	-	100	-

7.2 On a typical day, about how many hours does your household not have electricity?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Zero we almost always have electricity (%)	27	-	-
1 to 2 hours a day without electricity (%)	27	-	-
3 to 4 hours a day without electricity (%)	19	-	-
5 or more hours a day without electricity (%)	25	-	-
Don't know (%)	1	-	-
No response (%)	0	-	-
Not asked (%)	-	100	100

7.3 Does your household have an air conditioner? Please answer ‘yes’ or ‘no’.

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Yes (%)	13	13	10
No (%)	87	75	75
Don’t know (%)	0	0	2
No response (%)	0	12	13

7.4 I will now read out a few statements about your household income. Please tell me which one of the following statements is closest to your situation.

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
Our income covers our needs and we are able to save money (%)	14	16	30
Our income covers our needs but by just enough (%)	20	21	38
Our income does not cover our needs and we have some difficulties (%)	27	26	17
Our income does not cover our needs and we have great difficulties (%)	38	27	10
Don’t know (%)	0	0	2
No response (%)	0	9	3

7.5 If you were in trouble, how many relatives and friends could you count on to help you? Would you say none, one to five, six to ten, eleven to fifteen, sixteen to twenty, or more than twenty?

	2023	2022	2011
Unweighted Base	2,178	4,619	4,031
More than 20 (%)	8	6	4
16 to 20 (%)	2	3	3
11 to 15 (%)	6	5	6
6 to 10 (%)	13	10	14
1 to 5 (%)	37	33	36
None (%)	33	32	28
Don’t know (%)	1	2	5
No response (%)	0	10	3

Appendix III: Sample Demographics

	<i>n</i> (unweighted)	% (weighted)
Total	2,178	100
Male	1141	52
Female	1037	48
Other	0	0
Refused	0	0
Generation Z (1997 -)	390	19
Millennials (1981 - 1996)	1019	45
Generation X (1965 - 1980)	536	23
Baby Boomers (1946 - 1964)	195	11
Silent (1928 - 1945)	38	2
Not literate	82	4
Literate without formal schooling	138	7
Literate but below primary	139	8
Primary	219	13
Middle	258	14
Secondary	358	20
Higher secondary	379	15
Diploma/certificate course	99	5
Graduate	315	8
Post graduate and above	188	6
Refused	3	0
Don't know	0	0
<\$3K	254	11
\$3K-\$6K	427	18
\$6K-\$10K	446	18
\$10K-\$20K	479	23
\$20K-\$50K	328	14
\$50K-\$100K	73	10
\$100K+	43	5
Scheduled Tribe	148	10
Other Backward Classes	793	54
Refused	35	2
Don't know	147	11
Scheduled Caste	363	24
Central	523	25
Eastern	488	21
North Eastern	93	4
Northern	304	13
Southern	478	23
Western	292	15

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