

Global Warming's Four Indias

AN AUDIENCE
SEGMENTATION ANALYSIS

2022



YALE PROGRAM ON
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Yale SCHOOL OF THE ENVIRONMENT

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Executive Summary

From October 21, 2021 to January 9, 2022, a research team from the [Yale Program on Climate Change Communication](#) (YPCCC) and the [Centre for Voting Opinion & Trends in Election Research](#) (CVoter) conducted a nationally representative survey of 4,619 Indian adults (18+). The study was designed to investigate the Indian public's climate change awareness, beliefs, policy support, and behavior, as well as perceptions of local weather and climate patterns and vulnerability to extreme weather events.

The first report based on this survey, [Climate Change in the Indian Mind, 2022](#), examined the climate attitudes of the Indian population as a whole. This second report identifies and describes differences among subgroups of the Indian public by conducting an audience segmentation analysis based on people's global warming beliefs, risk perceptions, and behaviors. This analysis identifies four unique audiences within the Indian population – Global Warming's Four Indias – that each respond to global warming in their own distinct way.

The segmentation analysis identified four unique global warming audiences in India: The *Alarmed*, the *Concerned*, the *Cautious*, and the *Disengaged*. The majority of the Indian population are Alarmed (54%) – the group most aware and convinced of the reality and danger of global warming. The Concerned (29%) are also convinced global warming is happening and a serious threat, but know less about it and view it as a less immediate threat than do the Alarmed. While both the Alarmed and Concerned support political and national action to address global warming and are motivated to take individual action, the Alarmed are the most supportive of taking action and motivated to do it. The two smaller segments are the Cautious (11%) and Disengaged (7%), which reflect different stages of understanding, acceptance, and engagement with global warming. The Cautious think global warming is happening but are less certain of the causes and are less likely to view it as a serious, immediate threat that will personally affect them. They support climate and energy policies but are less supportive of national action and less motivated to take individual action compared with the Alarmed and Concerned. The Disengaged know very little about global warming, rarely or never engage with the issue, and often say they don't know or provide no response to questions about it.

Average margin of error at the 95% confidence level is +/- 1.4 percentage points for the full sample. Margins of error for the four audience segments are: Alarmed +/- 1.9 percentage points; Concerned +/- 2.7 percentage points; Cautious +/- 4.6 percentage points; and Disengaged +/- 5.2 percentage points.

Among the key findings in this report:

Global Warming Awareness and Beliefs

- The Alarmed feel the most knowledgeable about global warming, with half (50%) saying they know at least “something” about it. Majorities of the Concerned (60%) and Cautious (75%) say they either know “just a little about it” or “have never heard of it.” Few of the Disengaged (11%) say they know at least “something” about global warming, while more (42%) say they either know “just a little about it” or “have never heard of it.”

- Nearly all of the Alarmed (92%) and Concerned (88%) think global warming is happening, as do a majority of the Cautious (66%). In contrast, only 30% of the Disengaged think global warming is happening.
- Most of the Alarmed (70%) and about half of the Concerned (51%) think global warming is caused mostly by human activities. In contrast, the Cautious are more likely to think global warming is caused mostly by natural changes in the environment (47%) than by human activities (33%). The Disengaged are the least likely to think global warming is caused mostly by human activities (13%) or by natural changes in the environment (13%).
- The Alarmed report the highest level of personal experience with global warming: 86% agree that they have personally experienced its effects, including 72% who “strongly agree.” Majorities of the Concerned (75%) and Cautious (54%), but few of the Disengaged (8%), agree they have personally experienced the effects of global warming.
- The Disengaged are the segment most likely to say they don’t know or to not express an opinion when asked questions about their global warming awareness and beliefs (ranging from 47% to 90% across questions).

Global Warming Risk Perceptions

- Nearly all of the Alarmed (94%) say they are worried about global warming, including 79% who are “very worried.” A large majority of the Concerned (86%) also say they are worried about global warming (17% “very worried”). Fewer of the Cautious (41%) say they are worried about global warming, while about half (52%) say they are not worried about it. Only one in five (20%) of the Disengaged say they are worried about global warming.
- The Alarmed are the most likely to view global warming as a near-term risk that will personally affect them and their family, their local community, and the nation. For example, a majority of the Alarmed think global warming is harming Indians right now (62%), while fewer of the Concerned (43%), Cautious (25%), and Disengaged (3%) think so. Additionally, nearly all of the Alarmed say global warming will cause harm to people in their community (93%), but fewer of the Concerned (63%), Cautious (36%), and Disengaged (4%) say so.
- The Alarmed and Concerned are the most likely to think global warming will cause more dangerous impacts in India over the next 20 years, including more disease epidemics (Alarmed, 86%; Concerned, 77%) and severe heat waves (84% and 73%). Fewer of the Cautious think global warming will cause more disease epidemics (52%) or severe heat waves (46%). Very few of the Disengaged think global warming will cause more disease epidemics (6%) or severe heat waves (5%).
- The Disengaged are the segment most likely to say they don’t know or to not express an opinion when asked questions about their global warming risk perceptions (ranging from 75% to 99% across questions).

Support for Climate and Energy Policies

- Majorities of the Alarmed, Concerned, and Cautious favor several climate and energy policies. The most favored policies across these three segments include developing a national program to teach Indians about global warming (91%, 88%, and 74%, respectively), developing a national program to train people for renewable energy jobs (90%, 88%, and 75%), and encouraging local

communities to build check dams to increase local water supplies (89%, 89%, and 75%). Few of the Disengaged favor these climate and energy policies (ranging from 8% to 12% across policies).

- Majorities of the Alarmed (82%), Concerned (77%), and Cautious (66%) say they favor India's participation in the Paris Climate Agreement, while only 8% of the Disengaged say so.
- Majorities of the Alarmed (74%) and Concerned (64%), and half of the Cautious (50%), say the Indian government should be doing more to address global warming, while few of the Disengaged (6%) say so.
- Majorities of the Alarmed (62%) and Concerned (56%), but just under half of the Cautious (47%) and few of the Disengaged (7%), say India should reduce its greenhouse gas emissions immediately without waiting for other countries.
- The Alarmed are the most supportive of India's transition to renewable energy – most say India should use more renewable energy (68%), including 52% who say India should use “much more” renewable energy. Most of the Concerned (58%) also say India should use more renewable energy, but the Cautious (45%) and Disengaged (7%) are less likely to say so. Similarly, the Alarmed (64%) are the most likely to say India should use less fossil fuels (e.g., oil, coal, gas), followed by 51% of the Concerned, 37% of the Cautious, and 9% of the Disengaged.
- About half of the Alarmed (52%), and less than half of the Concerned (45%), say that taking action to limit global warming will improve economic growth and provide new jobs, while fewer of the Cautious (35%) and Disengaged (5%) say so.
- The Disengaged are the segment most likely to say they don't know or to not express an opinion when asked questions about national action on global warming in India and their support for climate and energy policies (ranging from 86% to 91% across questions).

Personal and Social Engagement with Global Warming

- The Alarmed and Concerned are the audiences most engaged with global warming. Most of the Alarmed (59%) and Concerned (55%) say they hear about global warming in the media at least once a month, while just under half of the Cautious (46%) and about one in ten (9%) of the Disengaged say so.
- Majorities of the Alarmed (78%), Concerned (75%), and Cautious (60%) say they would join a citizens' campaign to convince leaders in India to take action on global warming, including large percentages who say they “definitely would” join such a campaign (Alarmed, 66%; Concerned, 55%; Cautious, 47%). By contrast, only 7% of the Disengaged say they would join such a campaign.
- Nearly all of the Alarmed (94%) and Concerned (96%), and just over half of the Cautious (55%), say global warming is at least “somewhat important” to them personally, while few of the Disengaged (7%) say so.
- The Disengaged are the segment most likely to say they don't know or to not express an opinion when asked questions about their engagement with global warming (ranging from 87% to 91% across questions).

Local Weather Events: Observations, Vulnerabilities, and Resilience

- Most people in India have noticed changes in local weather. Majorities in all four segments say the average amount of rainfall in their local area has changed (increased or decreased) over the past 10 years (Alarmed, 78%; Concerned, 76%; Cautious, 70%; Disengaged, 65%). Additionally, majorities of the Alarmed (73%), Concerned (68%), and Cautious (62%), and many of the Disengaged (41%) have noticed changes in monsoon predictability (becoming more or less predictable) compared to the past.
- People in India – particularly the Alarmed – say they have noticed an increase in hot days. The majority of the Alarmed (65%) say hot days have become more frequent in their local area compared to the past, while 48% of the Concerned and 37% of both the Cautious and Disengaged say so.
- Many people in India likely face challenges in their capacity to recover from extreme weather events. Majorities of the Alarmed (78%), Concerned (77%), and Cautious (65%) say it would take their household several months to several years to recover from a severe drought, as do 43% of the Disengaged. Similarly, majorities of the Alarmed (68%), Concerned (64%), and Cautious (52%) say it would take several months to several years for their household to recover from a severe flood, as do 39% of the Disengaged.
- Many people in India also face financial and social support challenges. Over half of the Alarmed (54%), Concerned (56%), and Cautious (57%) say their income does not cover their needs and they have difficulties, and about one in three (32%) of the Disengaged say so. When asked how many relatives and friends they could count on if they were in trouble and needed help, majorities of the Alarmed (68%), Concerned (68%), and Cautious (61%), and about one in three of the Disengaged (35%), say they have five or fewer relatives and friends they could count on.
- The Disengaged are more likely than the other segments to say they don't know or to not express an opinion when asked questions about the weather and potential challenges they may experience (ranging from 12% to 58% across questions).

Demographics and Social Characteristics

- There is a greater proportion of females (76%) among the Disengaged compared with the Alarmed (46%), Concerned (46%), and Cautious (43%).
- Each segment includes a majority of adults ages 18–44 (Alarmed, 71%; Concerned, 68%; Cautious, 62%; Disengaged, 63%).
- The Alarmed and Concerned have the highest levels of education and monthly family income among the segments:
 - 41% of the Alarmed and 29% of the Concerned have at least a higher secondary education, compared with 14% of the Cautious and 21% of the Disengaged.
 - 18% of the Alarmed, 12% of the Concerned, 11% of the Cautious, and 7% of the Disengaged earn a monthly family income of 50,000 Rupees or more.
 - The Disengaged earn the lowest average monthly income, including 20% who say they earn less than 3,000 Rupees monthly.
- The Alarmed (32%) are more likely than the Concerned (27%) and Cautious (26%) to live in urban areas, while the Concerned (58%) and Cautious (61%) are more likely than the Alarmed

(52%) to live in rural areas. The Alarmed (16%), Concerned (15%), and Cautious (13%) have similar proportions of people living in semi-urban areas, while the Disengaged are the most likely to live in semi-urban areas (26%) and the least likely to live in rural areas (45%).

Household Characteristics

- The Alarmed (43%) are more likely than the Concerned (39%), Cautious (32%), and Disengaged (14%) to live in a pucca independent house (a house made with modern materials like brick and cement).
- The Alarmed are more likely than the other segments to have the following household amenities.
 - Air conditioning: Alarmed (16%), Concerned (11%), Cautious (9%), Disengaged (1%).
 - Internet access: Alarmed (71%), Concerned (64%), Cautious (53%), Disengaged (24%).
 - Access to improved water sources (e.g., tap water, protected wells): Alarmed (86%), Concerned (83%), Cautious (78%), Disengaged (44%).
- The Disengaged are more likely than the other segments to say they don't know or to not provide a response to questions about their households (ranging from 54% to 57% across questions).

Introduction

As we describe in detail in the [Introduction](#) to our first report about this survey (*Climate Change in the Indian Mind*, 2022), India accounts for nearly 18% of the global population (IEA, 2021) and, in 2020, was the third largest national emitter of greenhouse gases, following China and the United States (Crippa et al, 2021). India is also one of the countries most vulnerable to the effects of climate change (Krishnan et al., 2020; Mani et al., 2018; Mohanty & Wadhawan, 2021).

In this report, we expand on the previous report and identify Global Warming's Four Indias: four distinct audiences within the Indian population that each respond to global warming in different ways. The four audiences were identified using a large nationally representative survey of Indian adults conducted in October 2021 through January 2022. The survey questionnaire included extensive measures of public responses to global warming, including beliefs, risk perceptions, policy preferences, behaviors, and vulnerabilities. The Four Indias are distinguishable on all these dimensions, and have different levels of engagement with the issue. We provide in-depth descriptions of the differences among the four audiences on these dimensions as well as their demographic and social characteristics.

One of the first rules of effective communication is to “know your audience.” Understanding the climate change opinions of diverse segments of the Indian population can help educators, communicators, and policymakers develop tailored communication strategies. Successfully addressing the climate crisis requires a diversity of messages, messengers, and methods, each tailored to meet the needs of different audiences to more effectively promote understanding and engagement across the Indian public.

The approach to this work is based on the established methodology of the [Global Warming's Six Americas](#) project conducted by the [Yale Program on Climate Change Communication](#) and the [George Mason University Center for Climate Change Communication](#). This approach to audience segmentation identifies and differentiates groups of people who share similar opinions and responses to climate change, and has been used by communicators such as educators, scientists, policymakers, journalists, advocates, and government agencies. Similar climate opinion segmentations have been implemented in other countries, including Australia, Germany, Singapore, Ireland, and globally.

The audience segmentation approach helps communicators identify and understand their target audiences in order to engage them more effectively in climate science and solutions. Importantly, however, this analysis cannot reflect the full diversity and complexity of Indian society, including its rich cultural, economic, political, and linguistic diversity. What distinguishes each group, however, is that its members share similar views and responses to climate change – views and responses that differ from members of each of the other groups. Importantly, these four groups are defined solely by the topic of climate change. The groups will likely shift in proportion and responses over time as public discourse and action on the issue evolves.

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A large majority of Indians – four in five – are either Alarmed or Concerned (82%) while only one in five are either Cautious or Disengaged (18%). These segments are described in detail below.



2. Global Warming Awareness and Beliefs

Questions about global warming awareness and beliefs include respondents' assessments of whether they think global warming is happening, whether they think it is primarily caused by human activities, how much they know about global warming, and their degree of personal experience with its effects.

The Alarmed

The Alarmed have the strongest acceptance and understanding of global warming. Of the four segments, the Alarmed feel most knowledgeable about global warming – half of the Alarmed (50%) say they either know “a lot” (12%) or “something” (38%) about global warming. After a brief description of global warming is provided, nearly all of the Alarmed say they think it is happening (92%). A large majority of the Alarmed (70%) think global warming is caused mostly by human activities, while only one in four (25%) think it is caused mostly by natural changes in the environment. The Alarmed also report the highest level of personal experience with global warming: a large majority (86%) either “strongly agree” (72%) or “somewhat agree” (15%) that they have personally experienced its effects.

The Concerned

The Concerned feel less knowledgeable about global warming than the Alarmed. While 37% of the Concerned say they either know “a lot” (5%) or “something” (33%) about it, the majority (60%) say they either know “just a little about it” (21%) or “have never heard of it” (39%). After a brief description of global warming is provided, a large majority of the Concerned say they think it is happening (88%). However, the Concerned are less likely than the Alarmed to think global warming is caused mostly by human activities (51%), with many thinking it is caused mostly by natural changes in the environment (41%). The Concerned report high levels of personal experience with global warming – three in four (75%) either “strongly agree” (43%) or “somewhat agree” (32%) that they have personally experienced its effects.

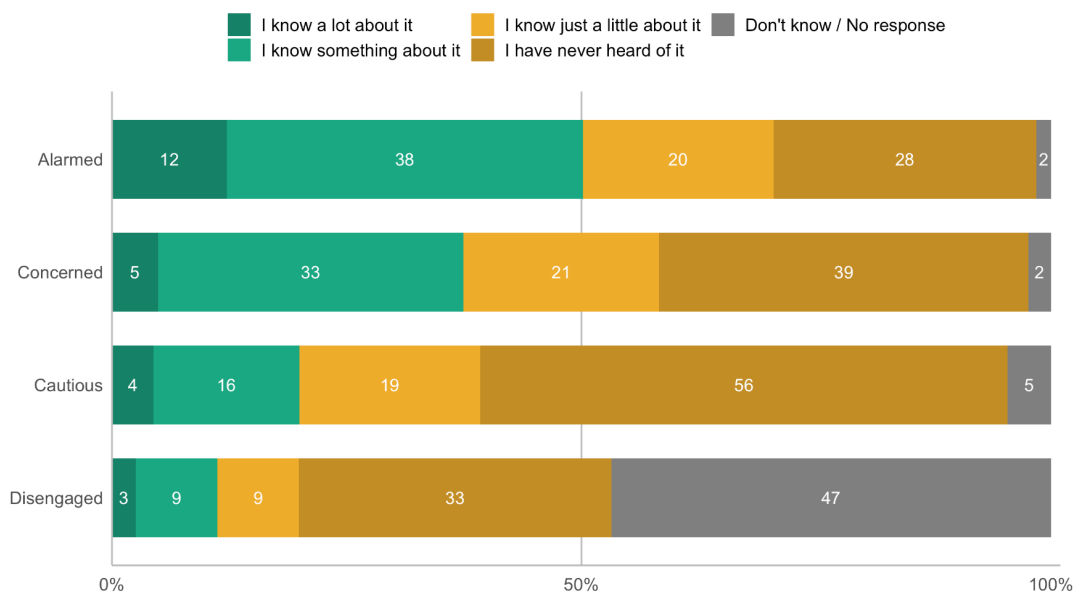
The Cautious

The Cautious feel much less knowledgeable about global warming than the Alarmed and Concerned. While 20% of the Cautious say they either know “a lot” (4%) or “something” (16%) about global warming, most (75%) say they either know “just a little about it” (19%) or “have never heard of it” (56%). After a brief description of global warming is provided, about two in three of the Cautious (66%) say they think it is happening. The Cautious are more likely to think global warming is caused mostly by natural changes in the environment (47%) than by human activities (33%). Although a majority of the Cautious (54%) either “strongly agree” (28%) or “somewhat agree” (25%) that they have personally experienced the effects of global warming, they also express the highest levels of disagreement out of all the segments, with 22% saying they “strongly disagree” that they have personally experienced global warming's effects.

The Disengaged

The Disengaged are the segment most likely to say they don't know or to not express an opinion when asked about their global warming awareness and beliefs (ranging from 47% to 90% across questions). Few of the Disengaged (11%) say they say they either know “a lot” (3%) or “something” (9%) about global warming, while 42% either say they know “just a little about it” (9%) or “have never heard of it” (33%). After a brief description of global warming is provided, the Disengaged are much less likely than the other segments to say they think global warming is happening (30%). Few of the Disengaged have an opinion about what causes global warming – 13% think global warming is caused mostly by human activities and 13% think it is caused by natural changes in the environment. Only 8% of the Disengaged say they either “strongly agree” (6%) or “somewhat agree” (2%) they have personally experienced the effects of global warming.

Many Indians across segments say they know just a little about global warming or have never heard of it

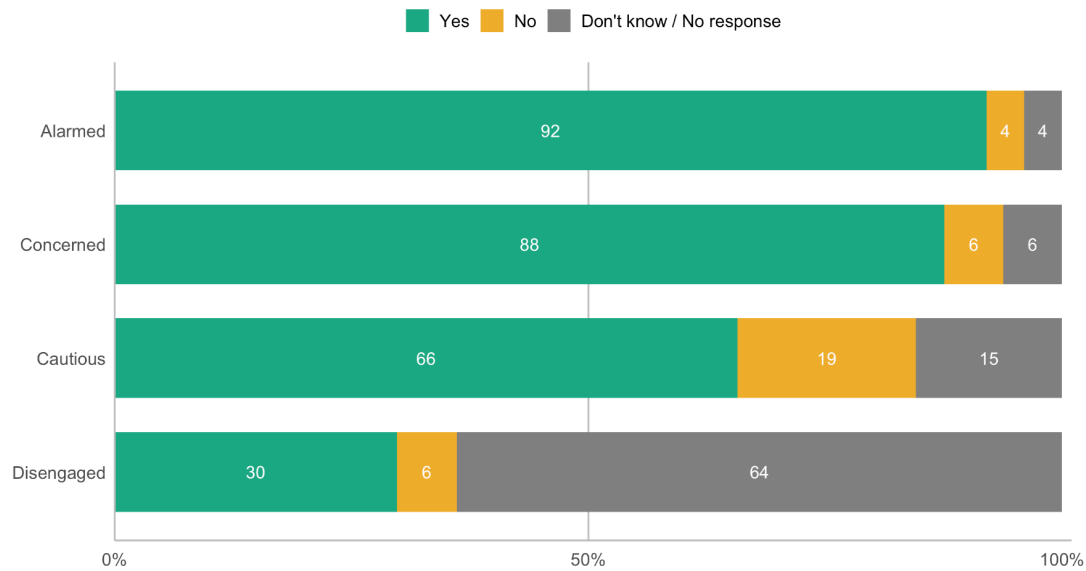


How much do you know about global warming? Do you know a lot about it, something about it, just a little about it, or have you never heard of it?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

After hearing a short description of global warming, majorities of the Alarmed, Concerned, and Cautious think it is happening

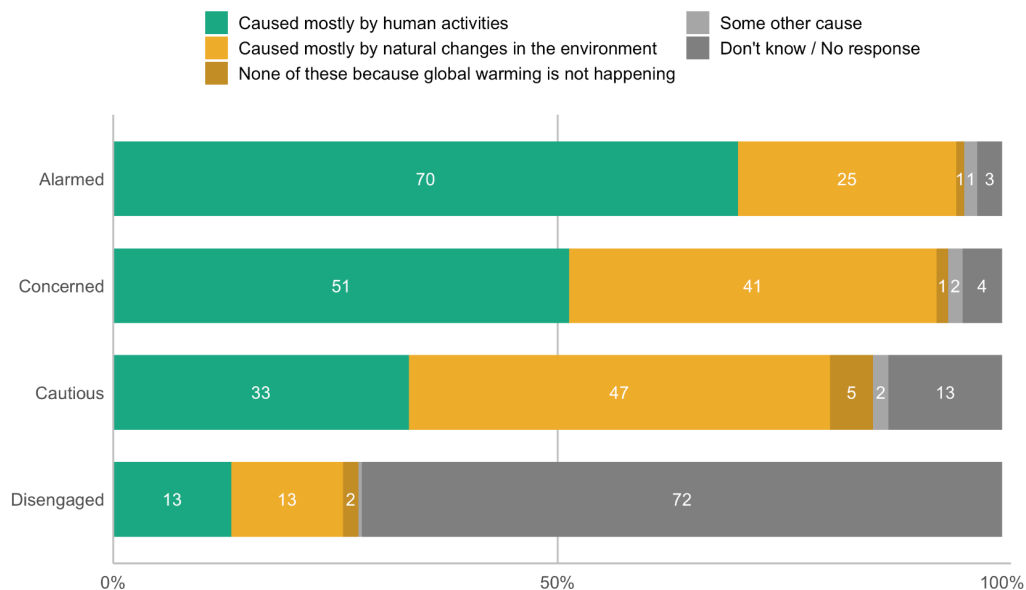


Global warming refers to the idea that the world's average temperature has been increasing over the past 150 years, may be increasing more in the future, and that the world's climate and weather patterns may change as a result. What do you think? Do you think that global warming is happening? Would you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

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

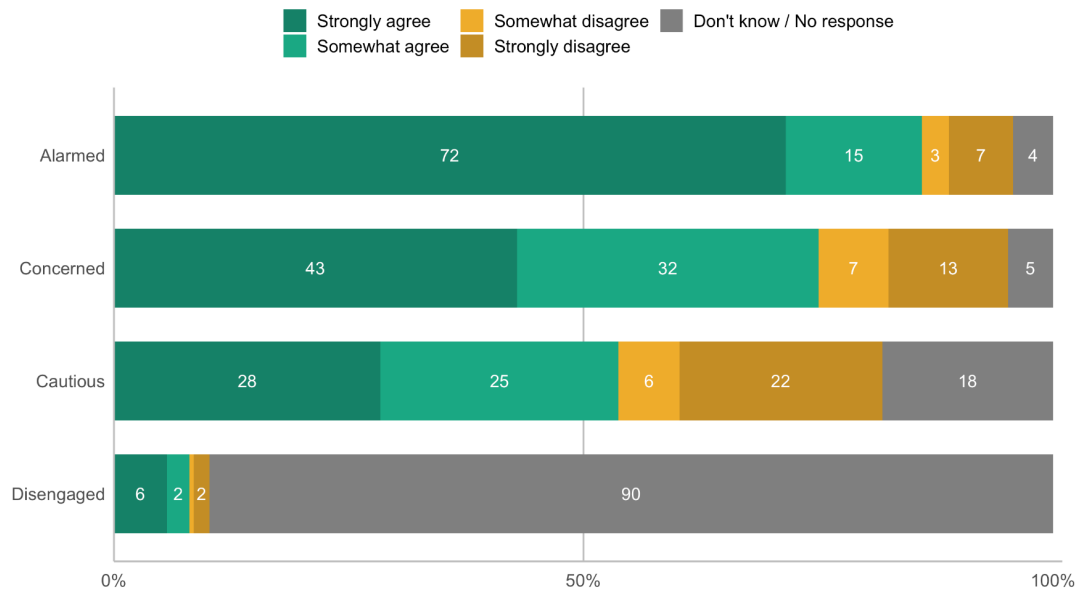
A large majority of the Alarmed think global warming is primarily human-caused



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?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious say they have personally experienced the effects of global warming

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.

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

3. Global Warming Risk Perceptions

Measures of global warming risk perceptions include levels of worry about global warming, assessments of global warming's impacts (e.g., heatwaves, droughts), and perceptions of how much it is harming or will harm various groups (e.g., people in India, future generations of people).¹

The Alarmed

The Alarmed are the most worried about global warming and have the highest levels of risk perception. Nearly all of the Alarmed (94%) say they are either “very worried” (79%) or “somewhat worried” (15%) about global warming. Nearly all of the Alarmed think global warming will cause either “a great deal” or “a moderate amount” of harm to future generations of people (97%), plants and animal species (95%), people in India (93%), people in their community (93%), and/or themselves and their family (93%). The Alarmed are also the most likely to view global warming as an urgent personal threat – the majority think global warming is harming Indians right now (62%) and an additional 17% think it will harm Indians in the next 10 years. Large majorities of the Alarmed think global warming will have either “many more” or “a few more” dangerous impacts in India over the next 20 years, including disease epidemics (86%), severe heat waves (84%), extinctions of plant and animal species (82%), severe cyclones (81%), droughts and water shortages (77%), famines and food shortages (74%), and severe floods (71%).

The Concerned

While the Concerned are less worried about global warming than the Alarmed and have lower levels of risk perception, large majorities still worry about it and view it as a serious threat. A large majority of the Concerned (86%) say they are either “very worried” (17%) or “somewhat worried” (69%) about global warming. Majorities of the Concerned think global warming will cause either “a great deal” or “a moderate amount” of harm to plants and animal species (79%), future generations of people (74%), people in India (73%), people in their community (63%), and/or themselves and their family (59%). Although the Concerned have lower personal risk perceptions and view global warming as less urgent than do the Alarmed, the majority either think that global warming is already harming Indians right now (43%) or that it will in the next 10 years (24%). Majorities of the Concerned also either think global warming will have “many more” or “a few more” dangerous impacts in India over the next 20 years, including disease epidemics (77%), severe heat waves (73%), extinctions of plant and animal species (70%), severe cyclones (67%), droughts and water shortages (65%), famines and food shortages (62%), and severe floods (60%).

¹Differences among the four segments in levels of worry about global warming and perceived risk to future generations and themselves and their family are partially driven by the use of these variables in the segmentation analysis – see Appendix: Methods

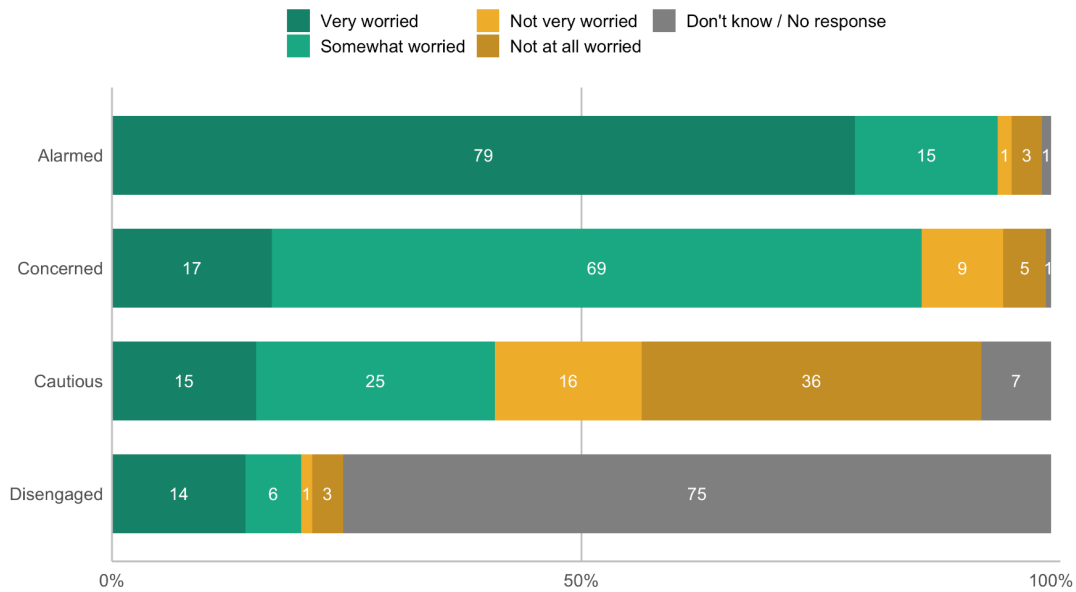
The Cautious

The Cautious are less worried about global warming than are the Alarmed and Concerned, and are less likely to perceive it as a serious threat. About four in ten Cautious (41%) say they are either “very worried” (15%) or “somewhat worried” (25%) about global warming, but about half (52%) either say they are “not very worried” (16%) or “not at all worried” (36%). While about half of the Cautious think global warming will cause “a great deal” or “a moderate amount” of harm to plants and animal species (51%) and/or people in India (48%), fewer think it will harm people in their community (36%), future generations of people (28%), and/or themselves and their family (24%). The Cautious also view global warming as a less urgent problem than do the Alarmed and Concerned – one in four (25%) think it is causing harm to Indians right now and an additional 14% think it will harm Indians in the next 10 years. The Cautious are also more uncertain in their risk perceptions than the Alarmed and Concerned. For instance, 35% of the Cautious don’t know when global warming will start to harm people in India or did not express an opinion. Although the Cautious are less likely than the Alarmed and Concerned to think the dangerous impacts of global warming in India will increase over the next 20 years, many do think there will be either “many more” or “a few more” disease epidemics (52%), famines and food shortages (47%), extinctions of plant and animal species (47%), severe heat waves (46%), severe cyclones (45%), droughts and water shortages (43%), and severe floods (41%).

The Disengaged

The Disengaged are the segment most likely to say they don’t know or to not express an opinion when asked about their global warming risk perceptions (ranging from 75% to 99% across questions). Only one in five (20%) say they are either “very worried” (14%) or “somewhat worried” (6%) about global warming. Few of the Disengaged think global warming will cause “a great deal” or “a moderate amount” of harm to plants and animal species (6%), people in India (6%), people in their community (4%), future generations of people (1%), and/or themselves and their family (1%). Very few of the Disengaged think global warming is harming Indians right now (3%) or will in the next 10 years (1%). Additionally, few of the Disengaged think the dangerous impacts of global warming in India will increase over the next 20 years, including “many more” or “a few more” famines and food shortages (8%), extinctions of plant and animal species (8%), severe cyclones (8%), droughts and water shortages (6%), disease epidemics (6%), severe floods (6%), and severe heat waves (5%).

Large majorities of the Alarmed and Concerned are worried about global warming

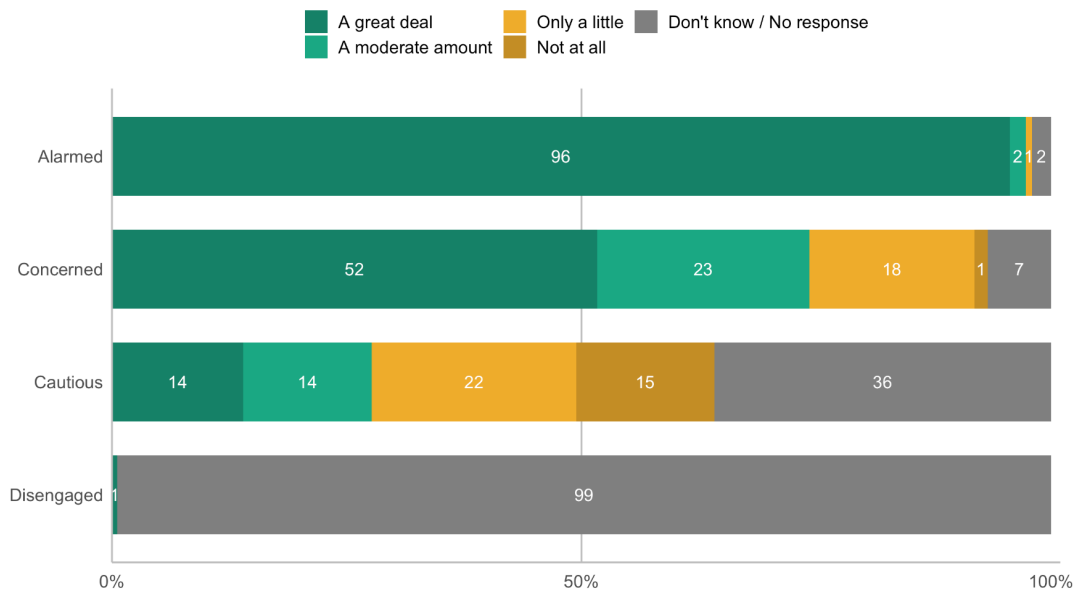


How worried are you about global warming? Would you say you are very worried, somewhat worried, not very worried, or not at all worried?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Large majorities of the Alarmed and Concerned think global warming will harm future generations of people

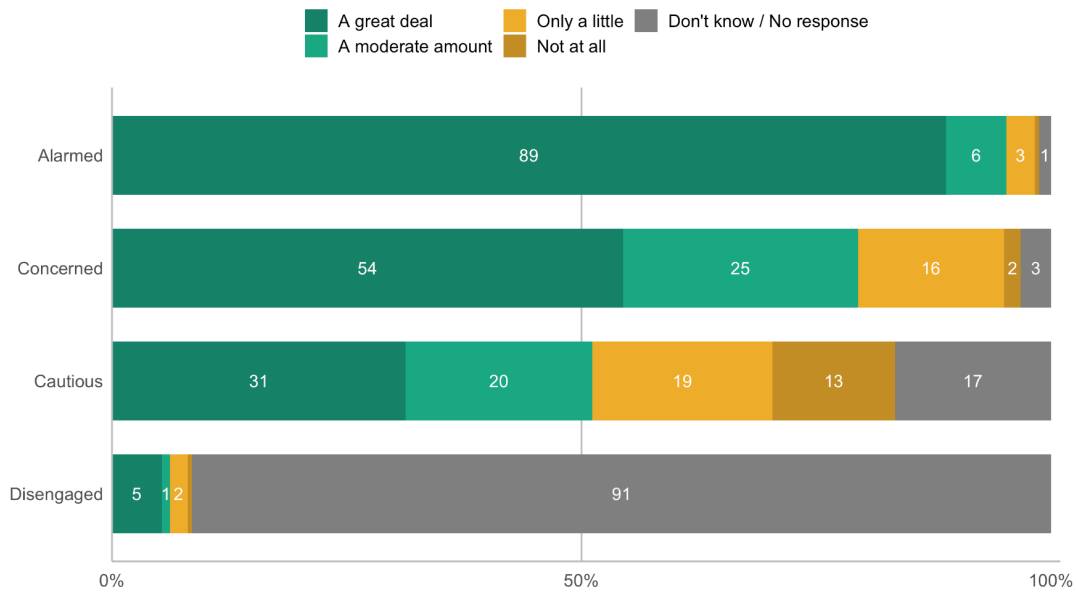


How much do you think global warming will harm [X]? Would you say a great deal, a moderate amount, only a little, not at all, or do you not know? Future generations of people

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Large majorities of the Alarmed and Concerned think global warming will harm plant and animal species

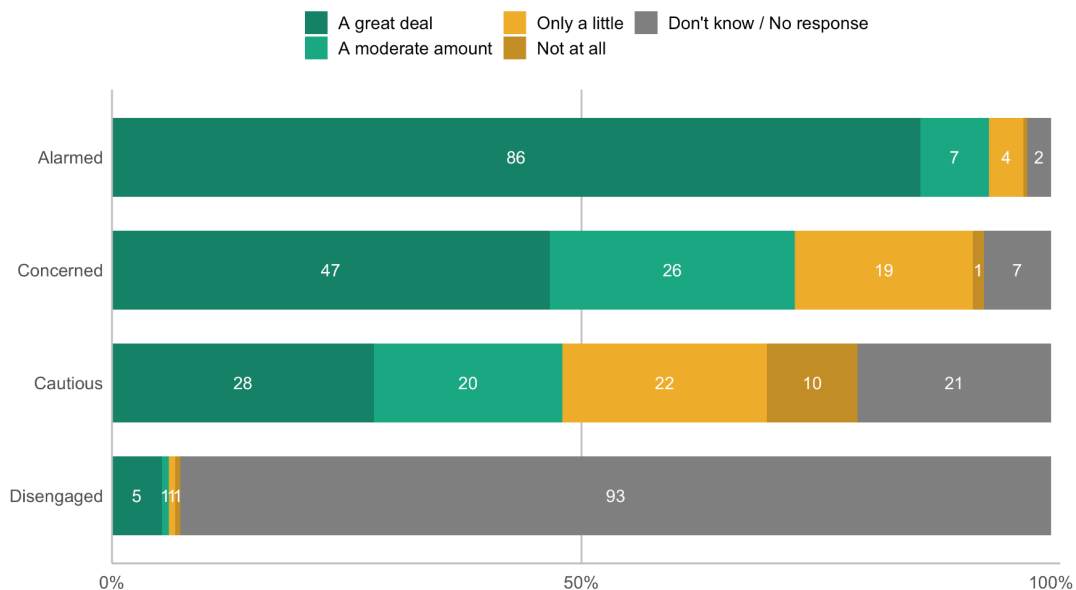


How much do you think global warming will harm [X]? Would you say a great deal, a moderate amount, only a little, not at all, or do you not know? Plant and animal species

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Large majorities of the Alarmed and Concerned think global warming will harm people in India

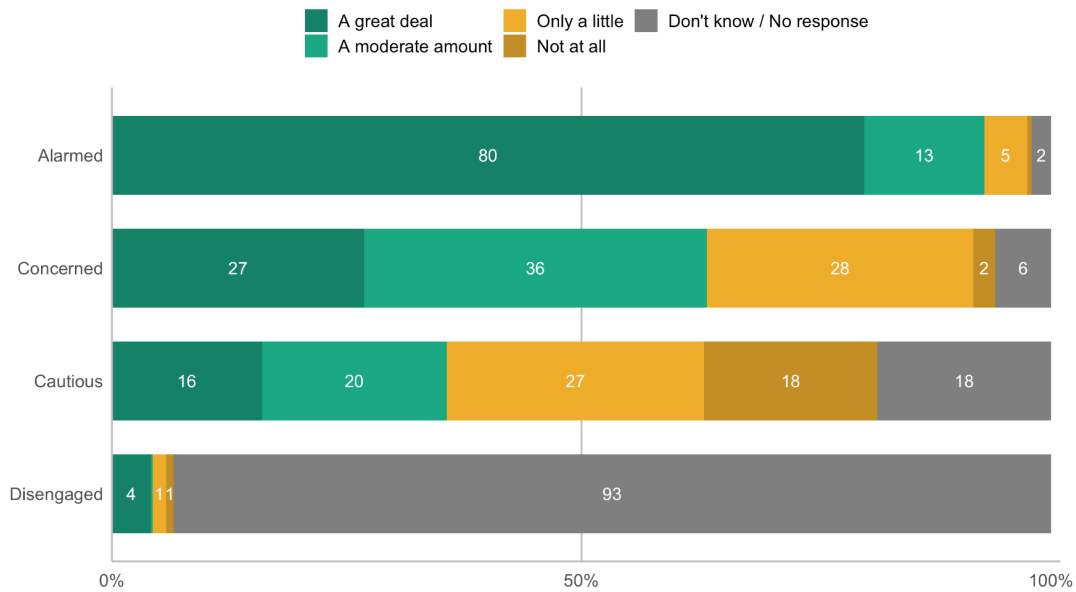


How much do you think global warming will harm [X]? Would you say a great deal, a moderate amount, only a little, not at all, or do you not know? People in India

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Nearly all of the Alarmed and a majority of the Concerned think global warming will harm people in their community

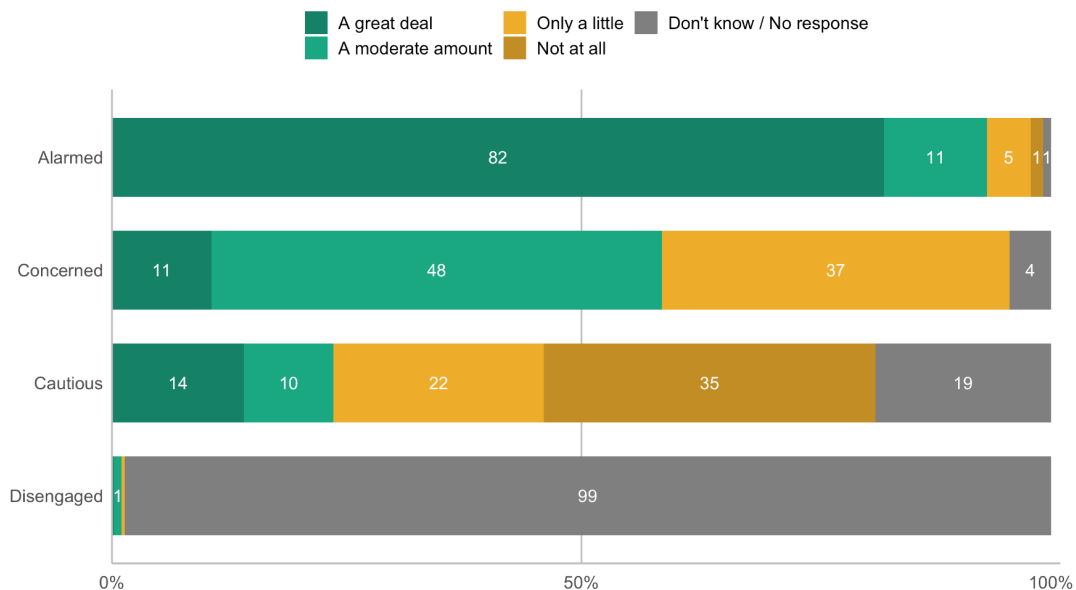


How much do you think global warming will harm [X]? Would you say a great deal, a moderate amount, only a little, not at all, or do you not know? People in your community

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Nearly all of the Alarmed and the majority of the Concerned think global warming will harm themselves and their family

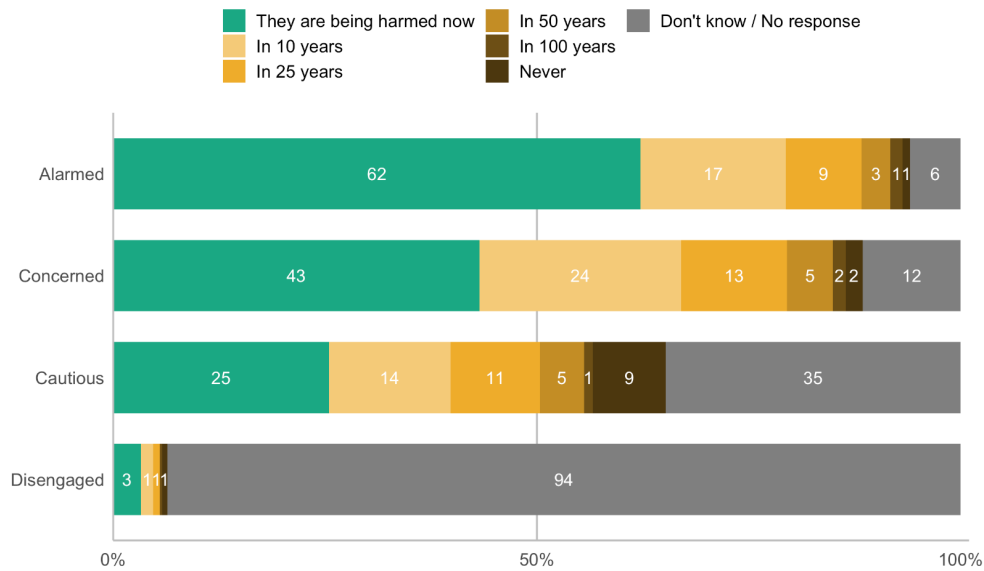


How much do you think global warming will harm [X]? Would you say a great deal, a moderate amount, only a little, not at all, or do you not know? You and your family

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

A majority of the Alarmed think Indians are already being harmed by global warming

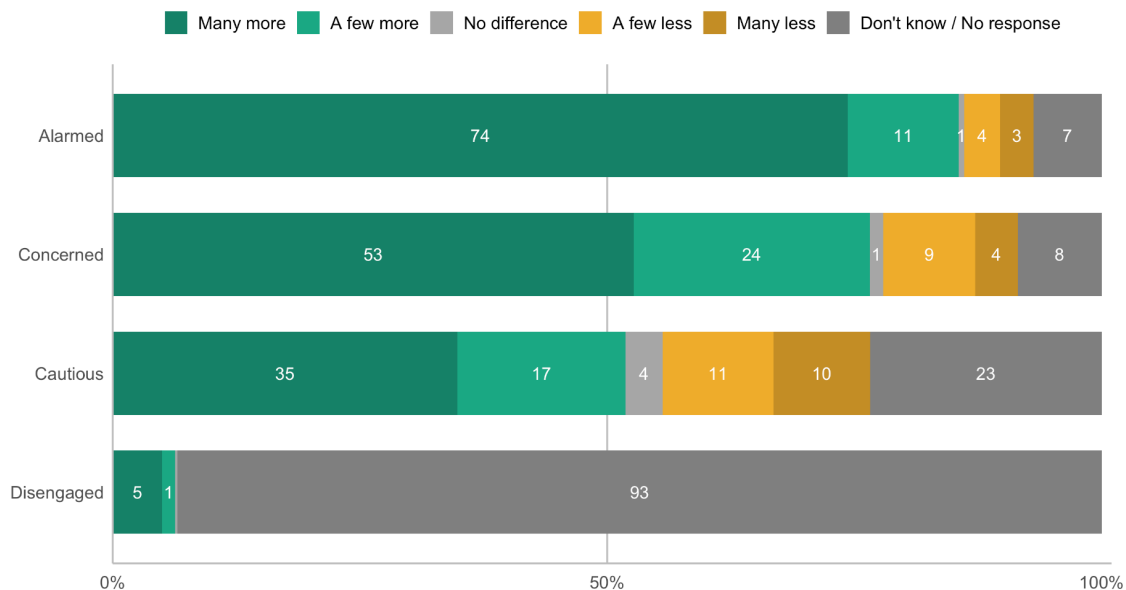


When, if ever, do you think global warming will start to harm people in India? Would you say people in India are being harmed now by global warming or people in India will start to be harmed by global warming in 10 years, in 25 years, in 50 years, in 100 years, or never?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious think global warming will cause more disease epidemics

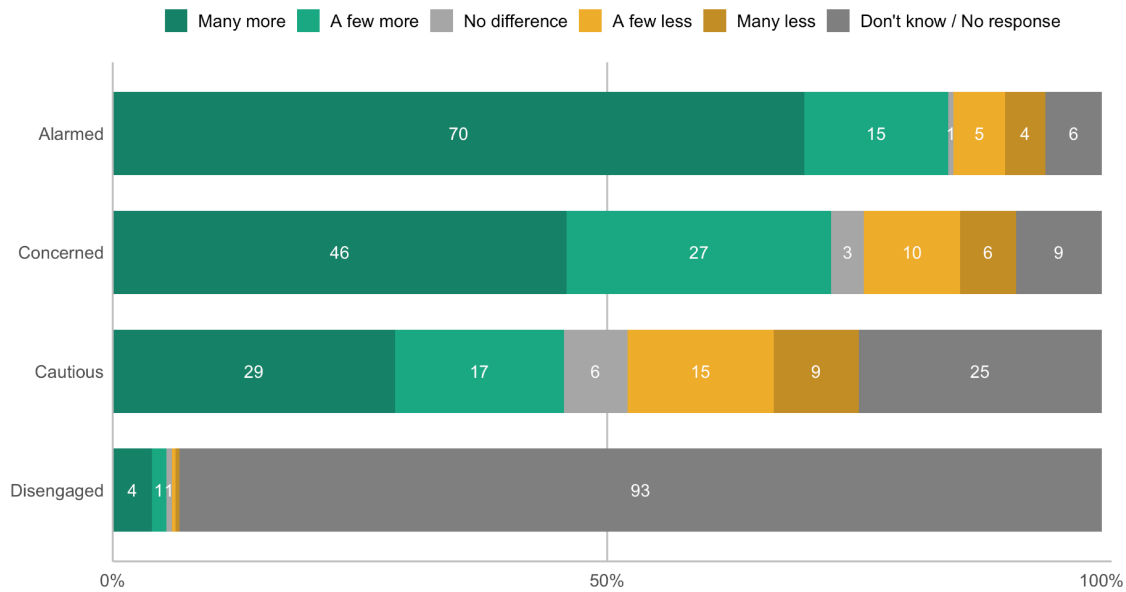


In India, over the next 20 years, please tell me if you think global warming will cause more or less of the following, if nothing is done to address it? Disease epidemics

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed and Concerned think global warming will cause more severe heat waves

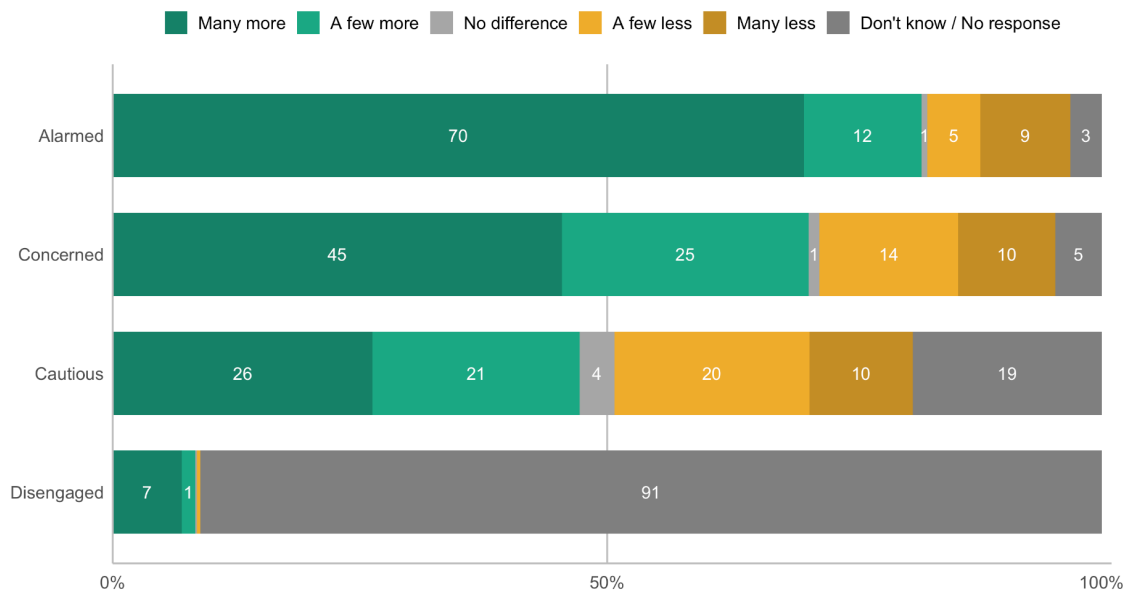


In India, over the next 20 years, please tell me if you think global warming will cause more or less of the following, if nothing is done to address it? Severe heat waves

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed and Concerned think global warming will cause more extinctions of plant and animal species

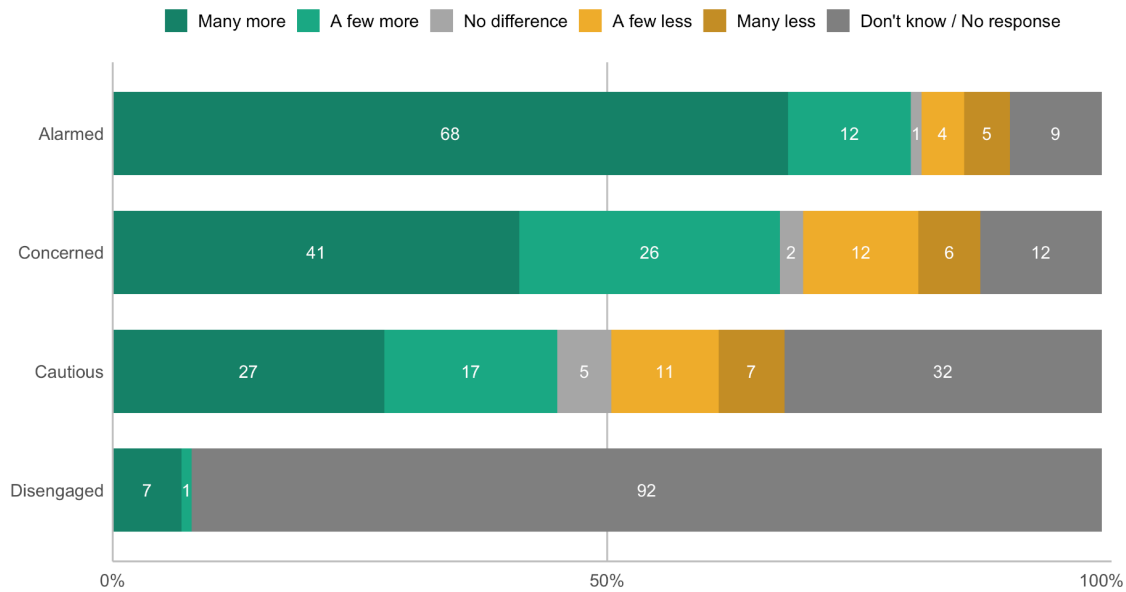


In India, over the next 20 years, please tell me if you think global warming will cause more or less of the following, if nothing is done to address it? Extinctions of plant and animal species

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed and Concerned think global warming will cause more severe cyclones

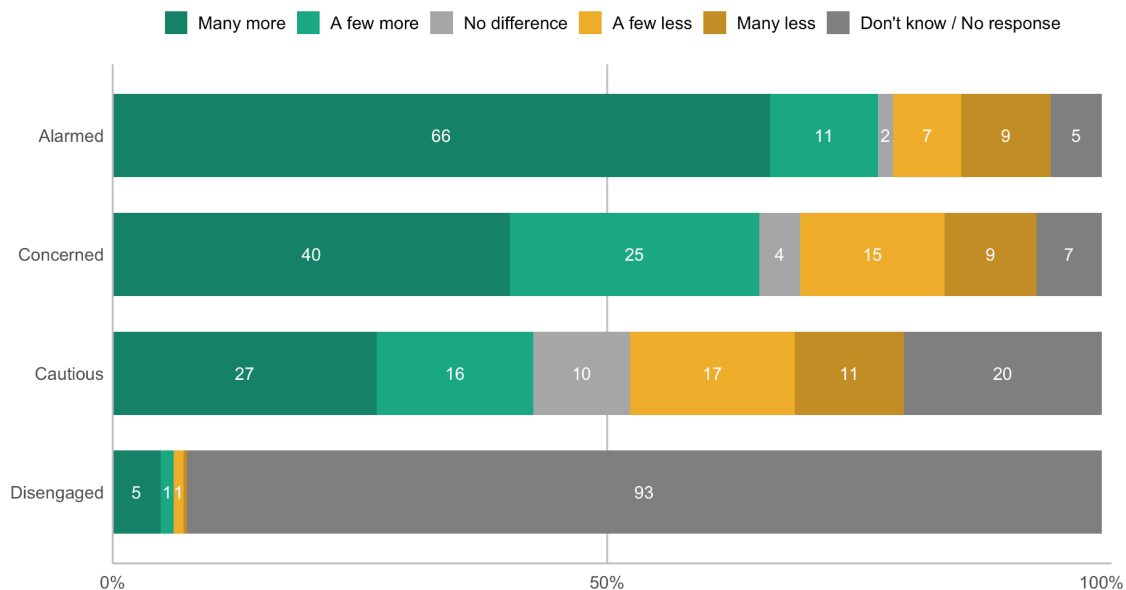


In India, over the next 20 years, please tell me if you think global warming will cause more or less of the following, if nothing is done to address it? Severe cyclones

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed and Concerned think global warming will cause more droughts and water shortages

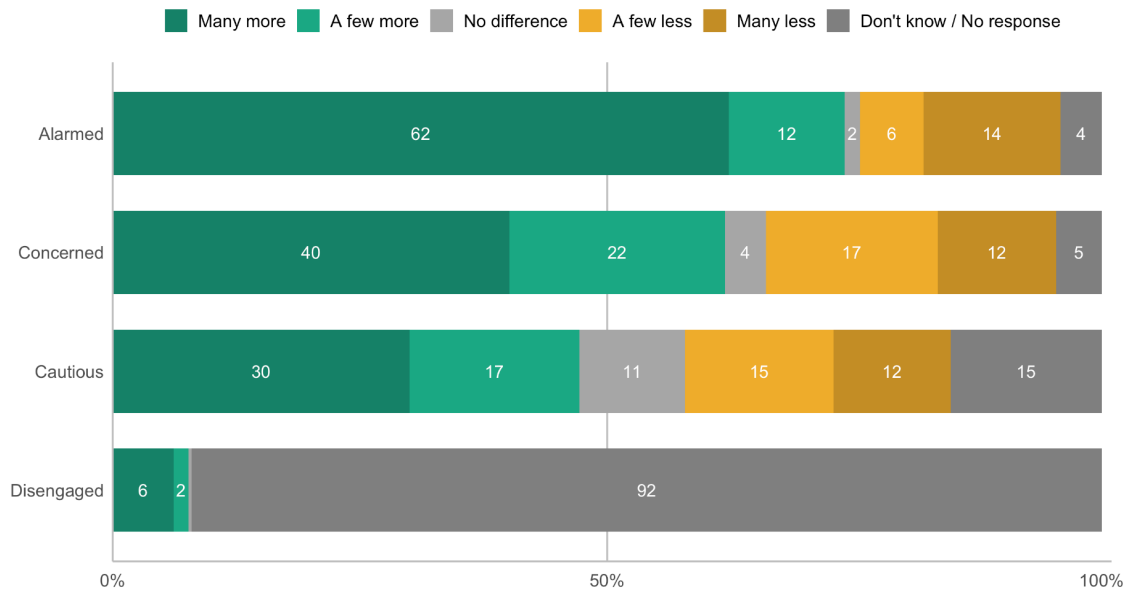


In India, over the next 20 years, please tell me if you think global warming will cause more or less of the following, if nothing is done to address it? Droughts and water shortages

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed and Concerned think global warming will cause more famines and food shortages

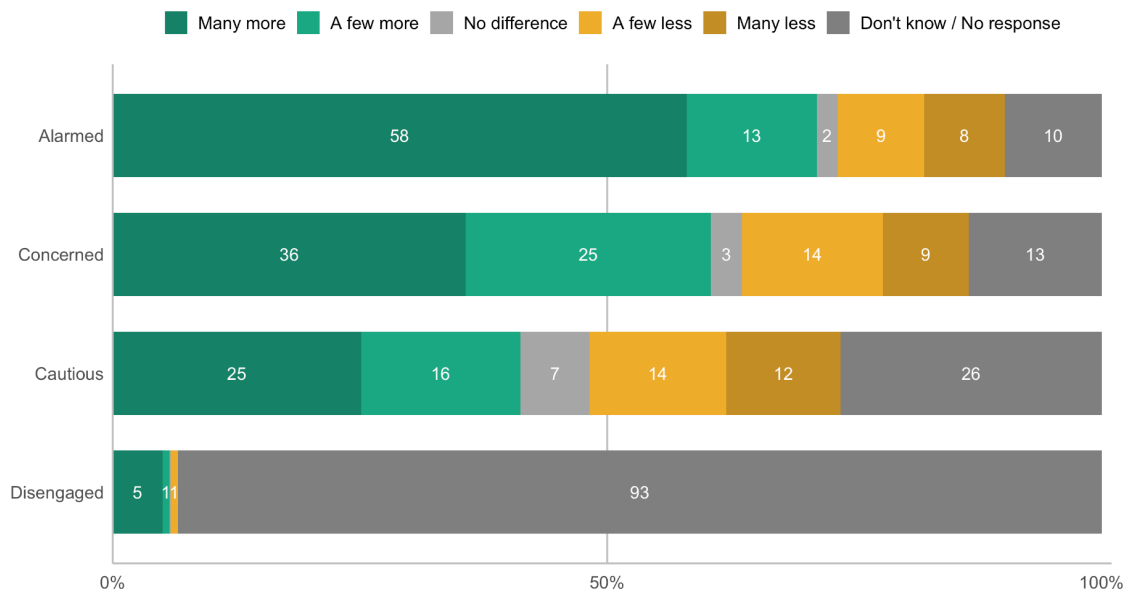


In India, over the next 20 years, please tell me if you think global warming will cause more or less of the following, if nothing is done to address it? Famines and food shortages

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed and Concerned think global warming will cause more severe floods



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 floods

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

4. Support for Climate and Energy Policies

Measures of support for climate and energy policies include opinions about policies to address environmental problems, the extent to which India should take action on global warming (e.g., reduce greenhouse gas emissions, use more renewable energy), the economic impacts of taking action, and India's participation in the Paris Climate Agreement.²

The Alarmed

The Alarmed are the audience segment most supportive of India taking national action on global warming. Large majorities of the Alarmed either “strongly” or “somewhat” favor climate and energy policies including developing a national program to teach Indians about global warming (91%), developing a national program to train people for renewable energy jobs (90%), encouraging local communities to build check dams to increase local water supplies (89%), preserving or expanding forested areas (77%), requiring new buildings to waste less water and energy (76%), and requiring that new automobiles be more fuel efficient (73%). Additionally, a large majority of the Alarmed (82%) largely favor India's participation in the Paris Climate Agreement, including 70% who “strongly favor” it.

About three in four of the Alarmed (74%) say the Indian government should be doing either “much more” (58%) or “more” (16%) to address global warming, and about six in ten (62%) say India should reduce its greenhouse gas emissions immediately without waiting for other countries to act. The Alarmed are also most supportive of India's transition to renewable energy – majorities say India should use more renewable energy (68%, including 52% who say “much more”) and less fossil fuels (64%, including 28% who say “much less”). About half of the Alarmed (52%) also think taking action to limit global warming will improve economic growth and provide new jobs, while fewer (20%) think it will reduce economic growth and cost jobs.

The Concerned

Similar to the Alarmed, majorities of the Concerned also support national action on global warming, but to a lesser extent. Large majorities of the Concerned either “strongly” or “somewhat” favor climate and energy policies, including encouraging local communities to build check dams to increase local water supplies (89%), developing a national program to teach Indians about global warming (88%), developing a national program to train people for renewable energy jobs (88%), preserving or expanding forested areas (72%), requiring new buildings to waste less water and energy (71%), and requiring that new automobiles be more fuel efficient (69%). A large majority of the Concerned (77%) also favor India's participation in the Paris Climate Agreement, including 55% who “strongly favor” it.

A majority of the Concerned (64%) say the Indian government should be doing either “much more” (41%) or “more” (22%) to address global warming, and that India should reduce its greenhouse gas

²In December 2015 at the United Nations Climate Change Conference in Paris, officials from 197 countries – nearly every country in the world – negotiated an international agreement to limit global warming. On Earth Day, April 22, 2016, India and 174 other countries signed the Paris Climate Agreement, with the remaining countries signing shortly after. India then deposited its instrument of ratification with the United Nations on October 2, 2016, the birth anniversary of Mahatma Gandhi: <https://unfccc.int/news/india-deposits-instrument-of-ratification-of-paris-agreement>

emissions immediately without waiting for other countries to act (56%). The Concerned are supportive of India's transition to renewable energy, although less so than the Alarmed – a majority of the Concerned (58%) say India should use more renewable energy than it does today (including 37% who say “much more”), and about half (51%) say India should use less fossil fuels (including 20% who say “much less”). A plurality of the Concerned (45%) think taking action to limit global warming will improve economic growth and provide new jobs, while fewer (23%) think it will reduce economic growth and cost jobs.

The Cautious

The Cautious are less supportive than the Alarmed and Concerned of national action on global warming. However, majorities of the Cautious still either “strongly” or “somewhat” favor climate and energy policies, including encouraging local communities to build check dams to increase local water supplies (75%), developing a national program to train people for renewable energy jobs (75%), developing a national program to teach Indians about global warming (74%), preserving or expanding forested areas (66%), requiring new buildings to waste less water and energy (66%), and requiring that new automobiles be more fuel efficient (58%). Furthermore, two-thirds (66%) of the Cautious favor India's participation in the Paris Climate Agreement, including 51% who “strongly favor” it.

Half (50%) of the Cautious say the Indian government should be doing either “much more” (32%) or “more” (18%) to address global warming, and more than four in ten (47%) say India should reduce its greenhouse gas emissions immediately without waiting for other countries to act. The Cautious are less supportive of India's renewable energy transition than are the Alarmed and Concerned – 45% of the Cautious say India should use more renewable energy than it does today (including 31% who say “much more”) and 37% say India should use less fossil fuels (including 15% who say “much less”). The Cautious are less certain than the Alarmed and Concerned about the economic impact of taking action to limit global warming – about one in three Cautious (35%) think taking action will improve the economy, while 16% think it will harm the economy, 22% think it will have no effect, and 28% say they don't know or did not respond.

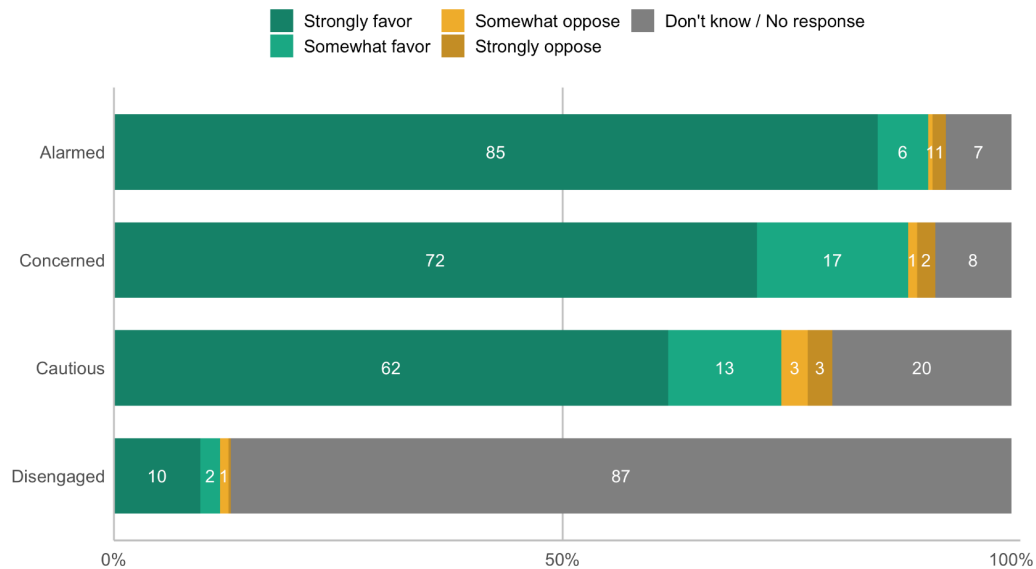
The Disengaged

Of the four segments, the Disengaged are the least likely to support national action on global warming in India, and are the most likely to say they don't know or to not express an opinion (ranging from 86% to 91% across questions). Few of the Disengaged either “strongly” or “somewhat” favor climate and energy policies, including developing a national program to train people for renewable energy jobs (12%), developing a national program to teach Indians about global warming (12%), encouraging local communities to build check dams to increase local water supplies (11%), requiring new buildings to waste less water and energy (9%), requiring that new automobiles be more fuel efficient (9%), and preserving or expanding forested areas (8%). Only 8% of the Disengaged say they either “strongly” or “somewhat” favor India's participation in the Paris Climate Agreement.

Very few (6%) of the Disengaged say the Indian government should be doing more to address global warming. Additionally, only 7% say India should reduce its greenhouse gas emissions immediately without waiting for other countries to act. Similarly, only 7% say India should use more renewable

energy than it does today, and only 9% say it should use less fossil fuels. Only 5% of the Disengaged think taking action to limit global warming will improve economic growth and provide new jobs.

Majorities of the Alarmed, Concerned, and Cautious favor a national program to teach all Indians about global warming

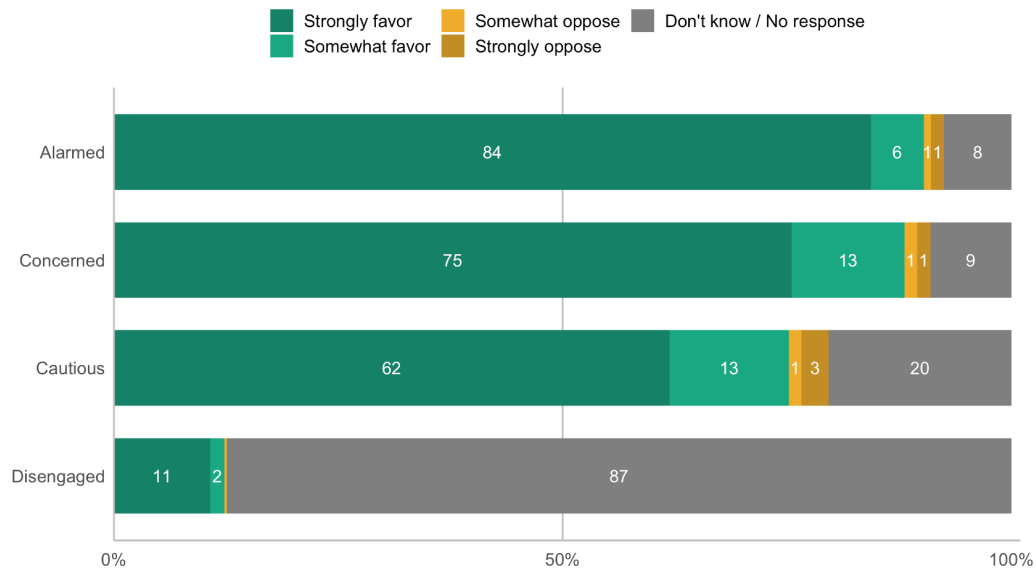


Next, please tell me how much would you favor or oppose India taking each of the following steps to help deal with environmental problems. Would you strongly favor, somewhat favor, somewhat oppose, or strongly oppose India taking this step? A national program to teach all Indians about global warming

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious favor a national program to train people for new jobs in the renewable energy industry

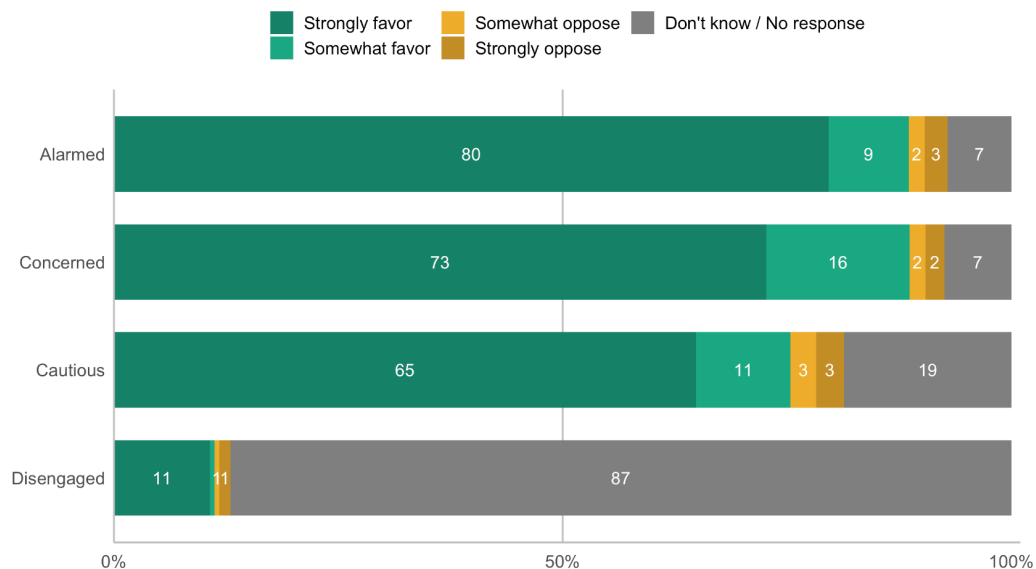


Next, please tell me how much would you favor or oppose India taking each of the following steps to help deal with environmental problems. Would you strongly favor, somewhat favor, somewhat oppose, or strongly oppose India taking this step? A national program to train people for new jobs in the renewable energy industry such as wind and solar

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious favor encouraging local communities to build check dams to increase local water supplies

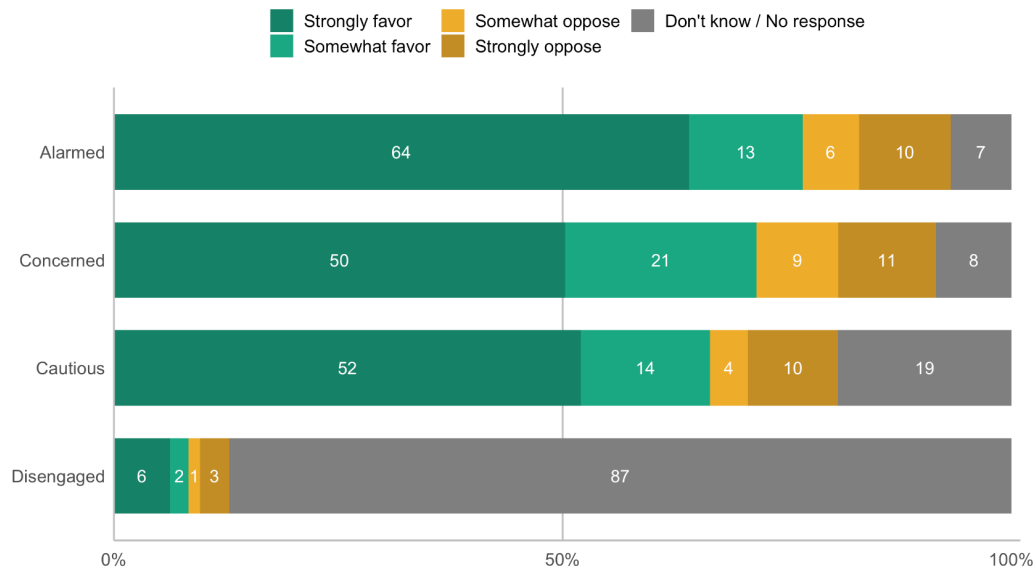


Next, please tell me how much would you favor or oppose India taking each of the following steps to help deal with environmental problems. Would you strongly favor, somewhat favor, somewhat oppose, or strongly oppose India taking this step? Encouraging local communities to build check dams to increase local water supplies

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious favor preserving or expanding forested areas

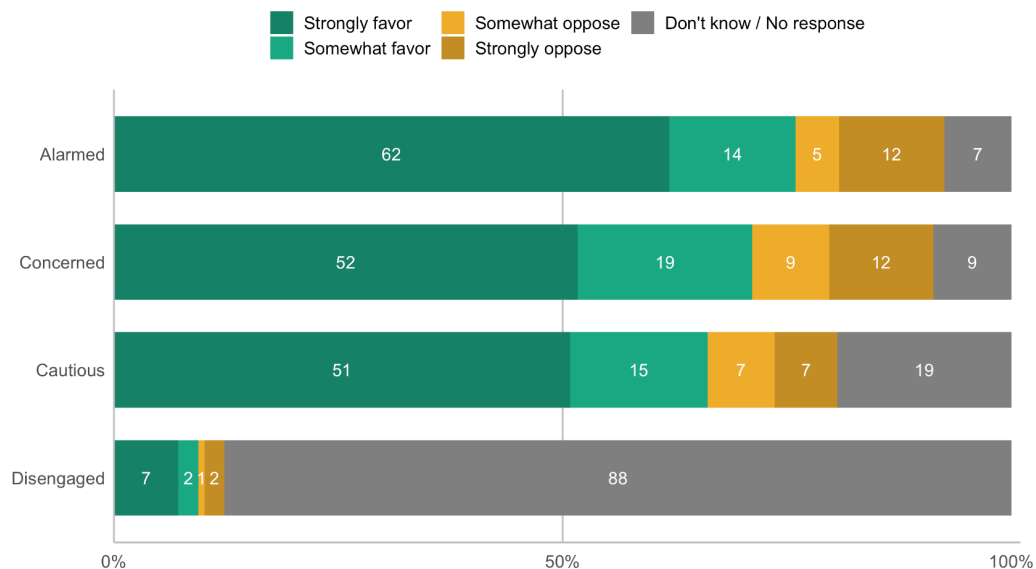


Next, please tell me how much would you favor or oppose India taking each of the following steps to help deal with environmental problems. Would you strongly favor, somewhat favor, somewhat oppose, or strongly oppose India taking this step? Preserving or expanding forested areas, even if this means less land for agriculture or housing

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious favor requiring new buildings to waste less water and energy

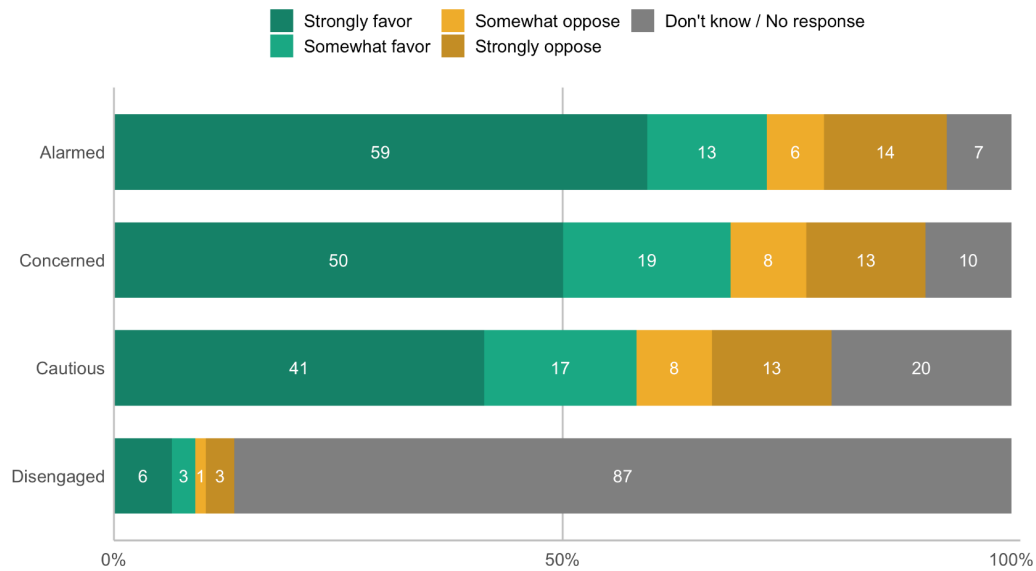


Next, please tell me how much would you favor or oppose India taking each of the following steps to help deal with environmental problems. Would you strongly favor, somewhat favor, somewhat oppose, or strongly oppose India taking this step? Requiring new buildings to waste less water and energy, even if this increases their cost

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious favor requiring new automobiles to be more fuel efficient

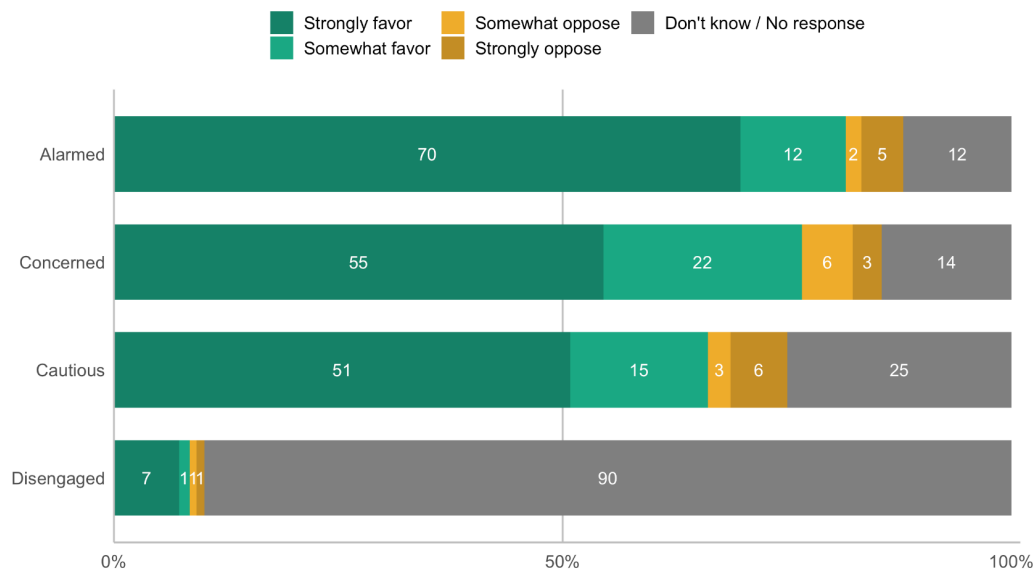


Next, please tell me how much would you favor or oppose India taking each of the following steps to help deal with environmental problems. Would you strongly favor, somewhat favor, somewhat oppose, or strongly oppose India taking this step? Requiring that new automobiles be more fuel efficient, even if this increases the cost of cars and bus fare

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious favor India's participation in the Paris Climate Agreement

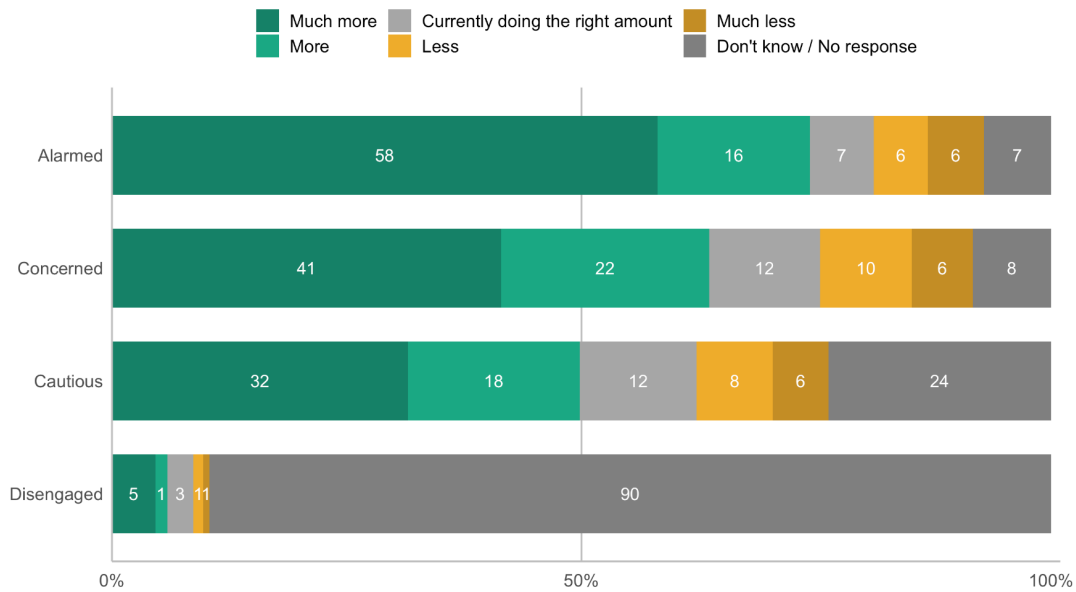


In 2015, India signed an international agreement in Paris with 196 other countries to limit the pollution that causes global warming. Do you strongly support, somewhat support, somewhat oppose, or strongly oppose India's participation in the Paris Agreement?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed and Concerned, and half of the Cautious, say the Indian government should be doing more to address global warming

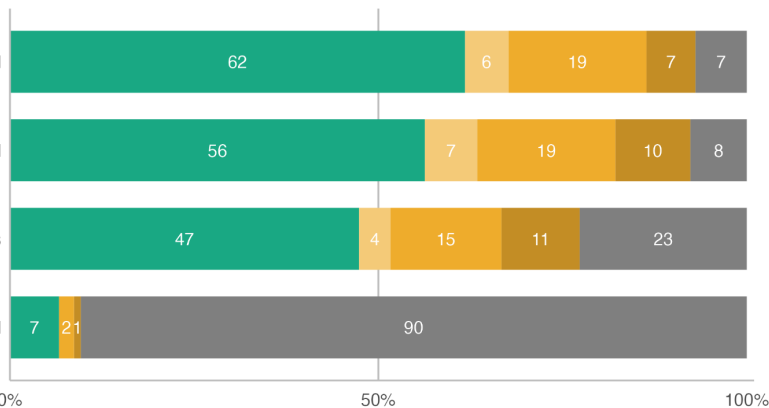
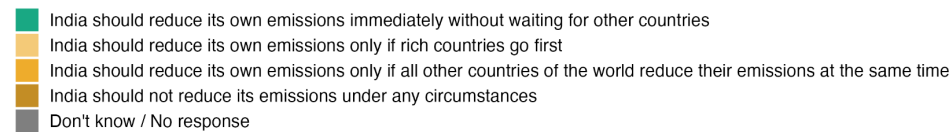


Do you think the government of India should be doing much more, more, less, or much less to address global warming, or is it currently doing the right amount?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed and Concerned say India should reduce its greenhouse gas emissions without waiting for other countries to act

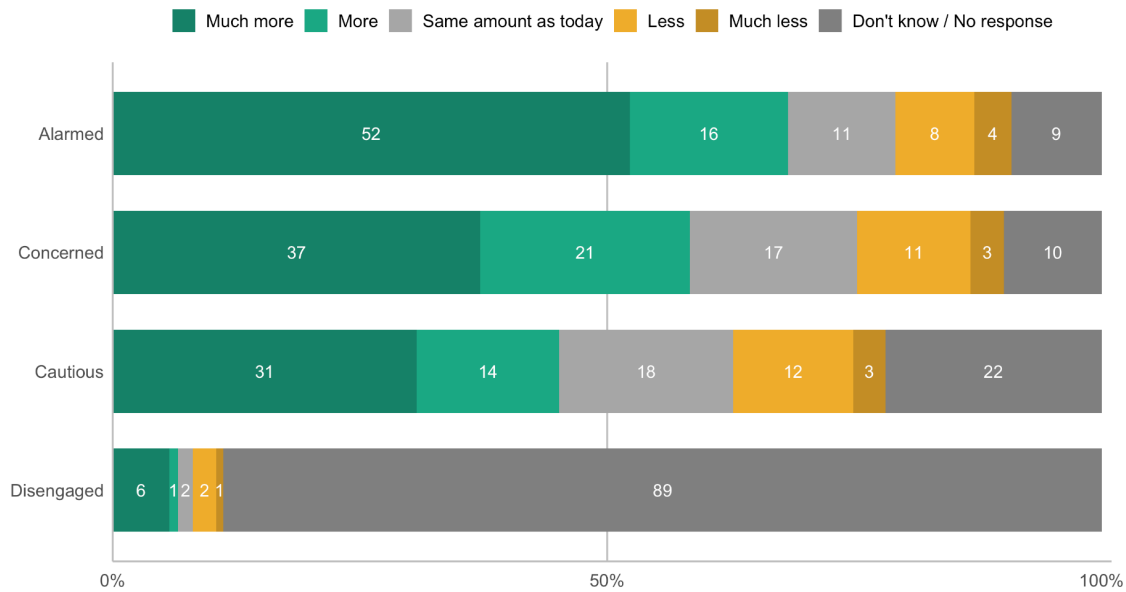


People disagree about when India should reduce its own emissions of these gases. Which one of the following statements comes closest to your own point of view?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed and Concerned say India should use more renewable energy

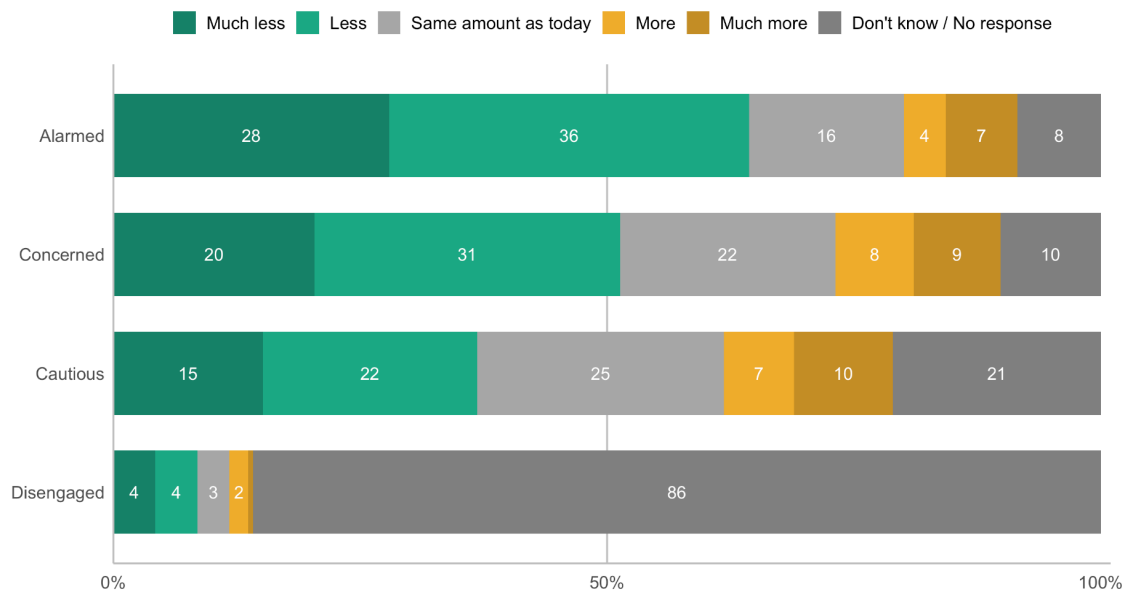


Do you think that in the future India should use more, less, or about the same amount of [X], as it does today?
Renewable sources of energy, like solar panels and wind turbines

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

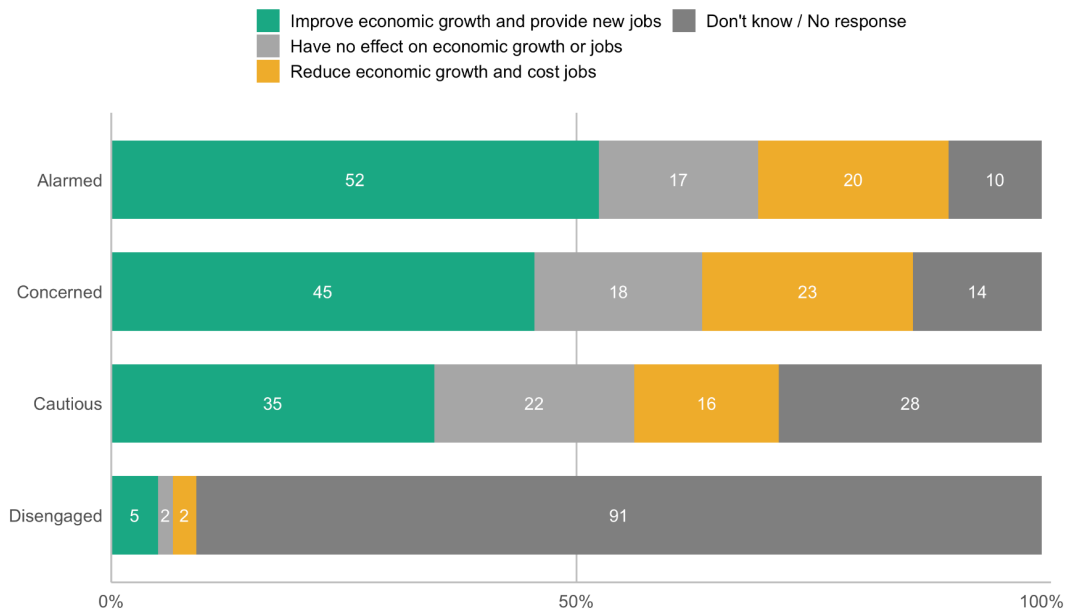
A majority of the Alarmed and about half of the Concerned say India should use less fossil fuels



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

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Few of the Alarmed, Concerned, or Cautious think taking action to limit global warming will reduce economic growth and cost jobs

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

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

5. Personal and Social Engagement with Global Warming

Measures of personal and social engagement with global warming include how often people in India hear about global warming in the media, willingness to join a citizen's campaign to take action on global warming, and how personally important global warming is as an issue.³

The Alarmed

The Alarmed are the segment most engaged with global warming. The majority of the Alarmed (59%) say they hear about global warming in the media either “at least once a week” (40%) or “at least once a month” (19%), and only 9% say they “never” hear about it. The Alarmed are also the most motivated segment to join a citizens' campaign to convince leaders in India to take action on global warming. A large majority of the Alarmed (85%) say they are either already participating in such a campaign (7%) or that they “definitely would” (66%) or “probably would” (12%) join one. The Alarmed also have the highest levels of issue importance – nearly all of the Alarmed (94%) say global warming is either “extremely important” (54%), “very important” (37%), or “somewhat important” (3%) to them personally.

The Concerned

The Concerned are also highly engaged with global warming, but to a lesser extent than the Alarmed. The majority of the Concerned (55%) say they hear about global warming in the media either “at least once a week” (36%) or “at least once a month” (18%), and only 11% say they “never” hear about it. Furthermore, the majority of the Concerned are motivated to join a citizens' campaign to convince leaders in India to take action on global warming. Eight in ten of the Concerned (80%) say they are either already participating in such a campaign (5%) or that they “definitely would” (55%) or “probably would” (19%) join one. Nearly all of the Concerned (96%) say global warming is at least somewhat personally important. However, they are much more likely than the Alarmed to say it is “somewhat important” (41%), while fewer say it is “extremely important” (29%) or “very important” (26%) to them personally.

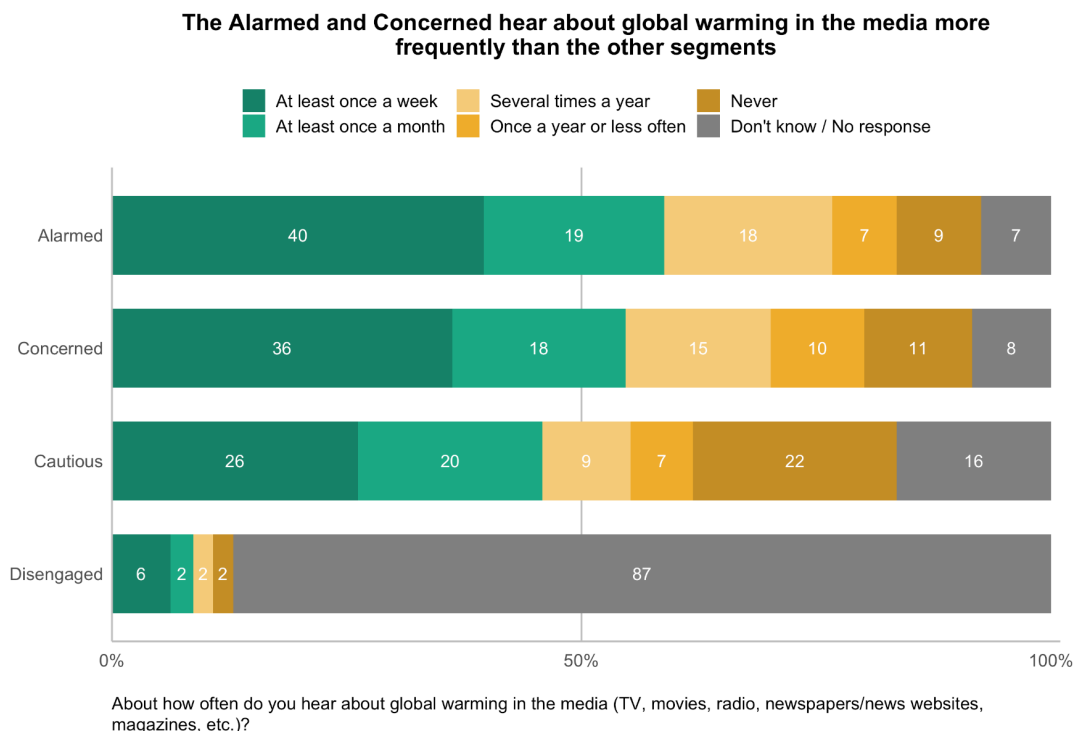
The Cautious

While the Cautious are less engaged with global warming than are the Alarmed and Concerned, a considerable percentage do show interest in the issue. More than four in ten (46%) say they hear about global warming in the media either “at least once a week” (26%) or “at least once a month” (20%), while 22% say they “never” hear about it. The majority of the Cautious (64%) say they are either already participating in a citizens' campaign to convince leaders in India to take action on global warming (5%), or that they “definitely would” (47%) or “probably would” (12%) join one. A majority of the Cautious (55%) say global warming is personally important (“extremely important,” 14%; “very important,” 15%; “somewhat important,” 26%), however, about one in four (24%) say global warming is either “not very important” (11%) or “not at all important” (14%) to them personally.

³Differences between the four segments in personal importance is partially driven by the use of that variable in the segmentation analysis – see Appendix: Methods

The Disengaged

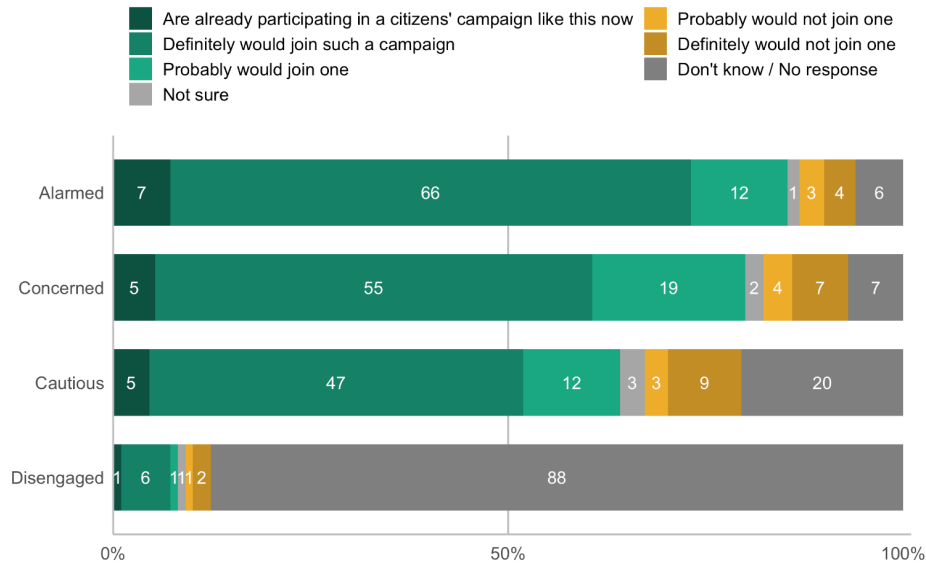
The Disengaged are the least engaged with global warming of the segments and are the most likely to say they don't know or to not to express an opinion when asked about it (ranging from 87% to 91% across questions). Few (9%) say they hear about global warming in the media either "at least once a week" (6%) or "at least once a month" (2%). Only 8% of the Disengaged say they are either already participating in a citizens' campaign to convince leaders in India to take action on global warming (1%), or that they "definitely would" (6%) or "probably would" (1%) join one. Additionally, only 7% of the Disengaged say global warming is either "extremely important" (6%), "very important" (1%), or "somewhat important" (1%) to them personally.



Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious are participating in, or are willing to join, a citizens' campaign to convince leaders in India to take action on global warming

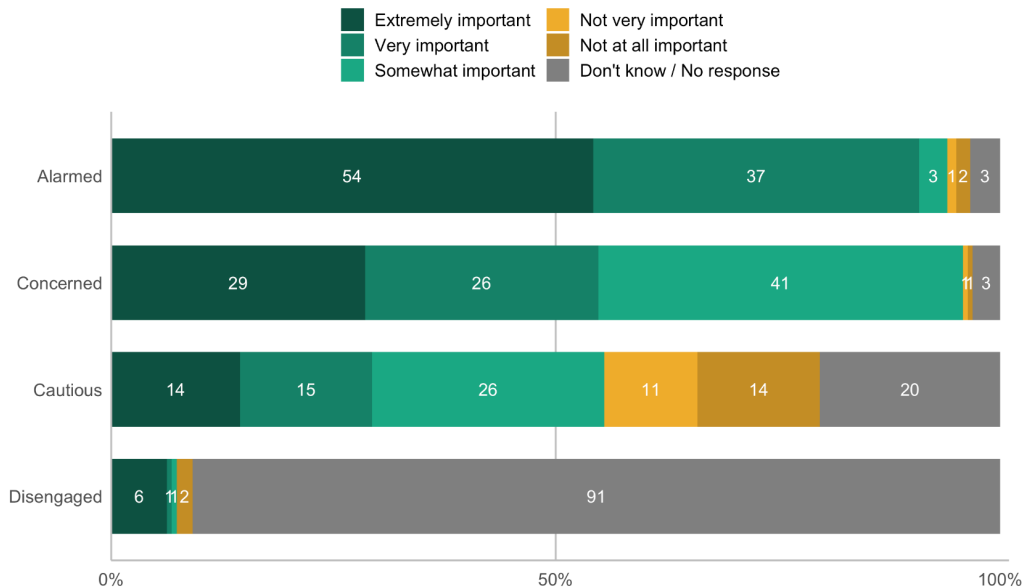


How willing or unwilling are you to join a citizens' campaign to convince leaders in India to take action to reduce global warming?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious say global warming is at least somewhat important to them personally



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?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

6. Local Weather Events: Observations, Vulnerabilities, and Resilience

India is a geographically diverse country. Different areas experience different levels of heat, rainfall, and extreme weather. Questions about local weather events, vulnerabilities, and resilience include observations about changes in local weather (e.g., average rainfall), frequency of extreme local weather events (e.g., droughts), and capacity to recover from extreme weather events (e.g., length of recovery time, financial challenges).

The Alarmed

Most people in India have noticed changes in local weather, and the Alarmed have noticed changes to a slightly greater extent than the other segments, particularly the Cautious and Disengaged. More than three-quarters of the Alarmed (78%) say the average amount of rainfall in their local area has changed over the past ten years (increased, 44%; decreased, 34%), while about one in five (21%) say it has stayed about the same. The majority of the Alarmed (73%) have noticed changes in monsoon predictability compared to the past – 28% say the monsoon in their local area has become less predictable, while 46% say it has become more predictable (23% say it has not changed). The Alarmed are also more likely than the other segments to have noticed an increase in hot days (65%), droughts (34%), severe storms (29%), and floods (26%) in their local area compared to the past.

The Alarmed perceive challenges in their capacity to recover from extreme weather events to a greater extent than do the Cautious and Disengaged. Majorities of the Alarmed say it would take their household several months to several years to recover from a severe drought (78%) and/or a severe flood (68%). Additionally, many of the Alarmed say they face financial and social support challenges. Over half of the Alarmed (54%) say their income does not cover their needs, resulting in either “great difficulties” (29%) or “some difficulties” (25%). Furthermore, when asked about how many relatives and friends they could count on if they were in trouble and needed help, most of the Alarmed (68%) say either “1 to 5” (35%) or “none” (34%), while about one in four (24%) say they have at least six or more relatives and friends they could count on.

The Concerned

Like the Alarmed, majorities of the Concerned have noticed changes in local weather. About three-quarters of the Concerned (76%) say the average amount of rainfall in their local area has changed over the past 10 years (increased, 50%; decreased, 26%), while 23% say it has stayed about the same. The majority of the Concerned (68%) say the monsoon in their local area has become either less (28%) or more (41%) predictable compared to the past, while 27% say it has not changed. Many of the Concerned have also noticed an increase in extreme local weather events compared to the past, including hot days (48%), floods (27%), droughts (23%), and severe storms (23%).

The Concerned perceive challenges in their capacity to recover from extreme weather events to a greater extent than do the Cautious and Disengaged. Like the Alarmed, majorities of the Concerned say it would take their household several months to several years to recover from a severe drought (77%) and/or a severe flood (64%). Additionally, many of the Concerned say they face financial and social support challenges. Like the Alarmed, the majority of the Concerned (56%) say their income does not cover their

needs, resulting in either “great difficulties” (26%) or “some difficulties” (31%). Furthermore, the majority of the Concerned (68%) say they have few relatives and friends they could count on if they were in trouble and needed help (“1 to 5,” 37%; “none,” 31%), while about one in four (24%) say they have at least six or more relatives and friends they could count on for support.

The Cautious

Majorities of the Cautious have noticed changes in local weather, but to a lesser extent than the Alarmed and Concerned. Seven in ten of the Cautious (70%) say the average amount of rainfall in their local area has changed over the past 10 years (increased, 48%; decreased, 21%), while 27% say it has stayed about the same. The majority of the Cautious (62%) say they have also noticed changes in monsoon predictability compared to the past – 29% say it has become less predictable, while 33% say the monsoon has become more predictable (33% say it has not changed). Compared to the Alarmed and Concerned, fewer of the Cautious say they have noticed an increase in extreme local weather events compared to the past, including hot days (37%), droughts (23%), floods (21%), and severe storms (17%).

The Cautious perceive challenges in their capacity to recover from extreme weather events, but to a lesser extent than do the Alarmed and Concerned. The majority of the Cautious (65%) say it would take their household several months to several years to recover from a severe drought, and about half (52%) say it would take that long to recover from a severe flood. Like the Alarmed and Concerned, many of the Cautious say they face financial and social support challenges. The majority of the Cautious (57%) say their income does not cover their needs, resulting in either “great difficulties” (29%) or “some difficulties” (28%). Furthermore, the majority of the Cautious (61%) say they have few relatives and friends they could count on if they were in trouble and needed help (“1 to 5,” 25%; “none,” 36%), while about one in four (26%) say they have at least six or more relatives and friends they could count on for support.

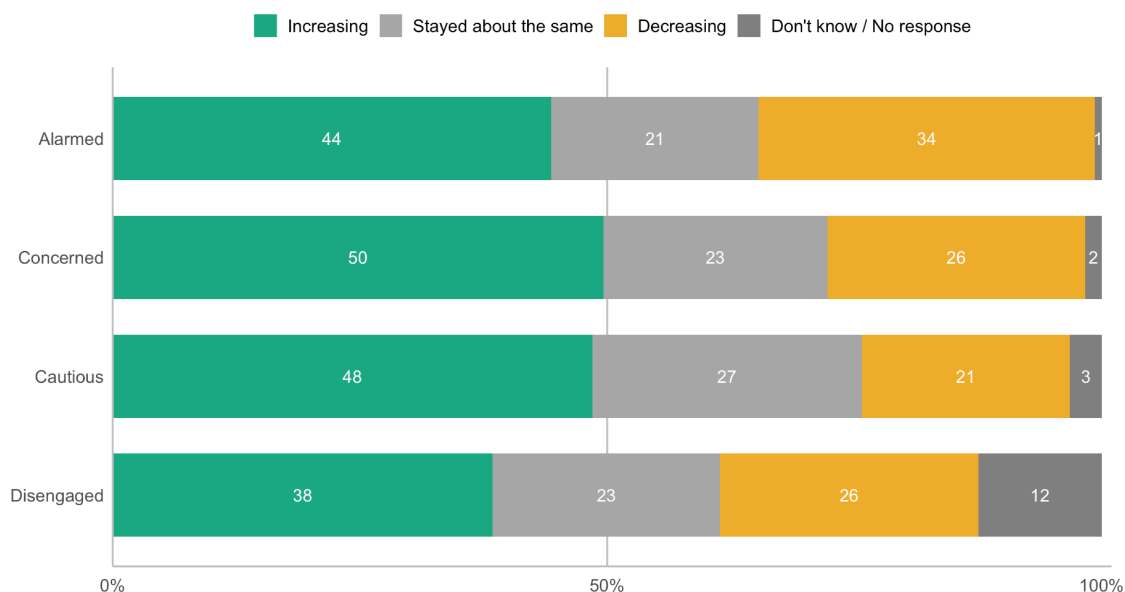
The Disengaged

The Disengaged are less likely than the other segments to report noticing changes in local weather, and they are more likely to say they don’t know or to not provide a response when asked questions about the weather and potential challenges they may experience (ranging from 12% to 58% across questions). However, more of the Disengaged express an opinion about these questions than most of the other questions in the survey. The majority of the Disengaged (65%) say the average amount of rainfall in their local area has changed over the past 10 years (increased, 38%; decreased, 26%), while 23% say it has stayed about the same. Fewer (41%) have noticed changes in monsoon predictability compared to the past, including 16% who say the monsoon in their local area has become less predictable and 25% who say it has become more predictable (27% say it has not changed). Similar to the Cautious, the Disengaged are less likely than the Alarmed and Concerned to have noticed an increase in extreme local weather events compared to the past, including hot days (37%), droughts (19%), floods (19%), and severe storms (17%).

Many of the Disengaged perceive challenges in their capacity to recover from extreme weather events, but to a lesser extent than the other segments. About four in ten Disengaged say it would take their

household several months to several years to recover from a severe drought (43%), and/or a severe flood (39%). About one in three of the Disengaged (32%) say their income does not cover their needs, resulting in either “great difficulties” (15%) or “some difficulties” (17%). When asked about how many relatives and friends they could count on if they were in trouble and needed help, 35% say they either have “1 to 5” (14%) or “none” (21%), while only 7% say they have at least six or more.

Majorities in all segments say the amount of rainfall in their local area has changed over the past 10 years

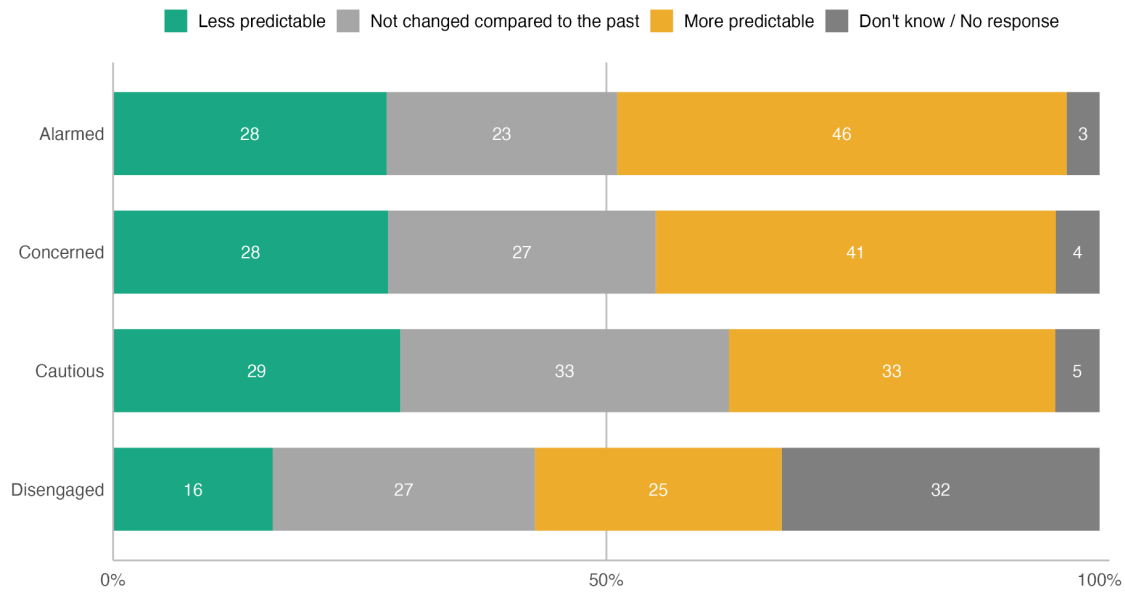


Over the past ten years, would you say that the average amount of rainfall each year in your local area has been increasing, decreasing, or has it stayed about the same?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Many of the Alarmed, Concerned, and Cautious say the monsoon in their local area has become less predictable than in the past

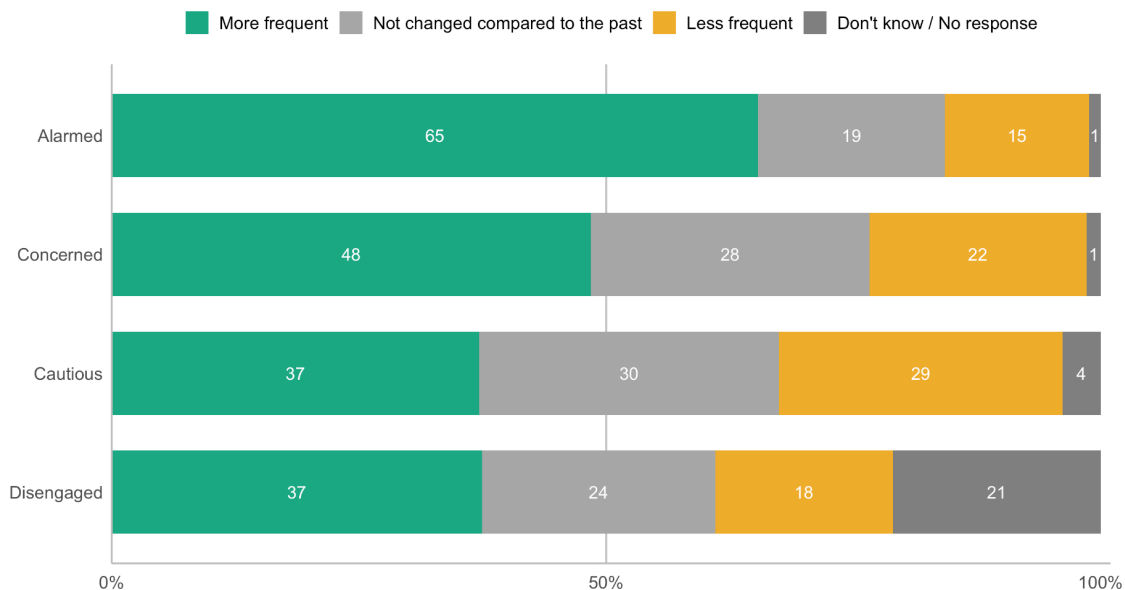


In your local area, does the monsoon seem more predictable, less predictable, or has it not changed compared to the past?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

The Alarmed are the most likely to say hot days in their local area have become more frequent than in the past

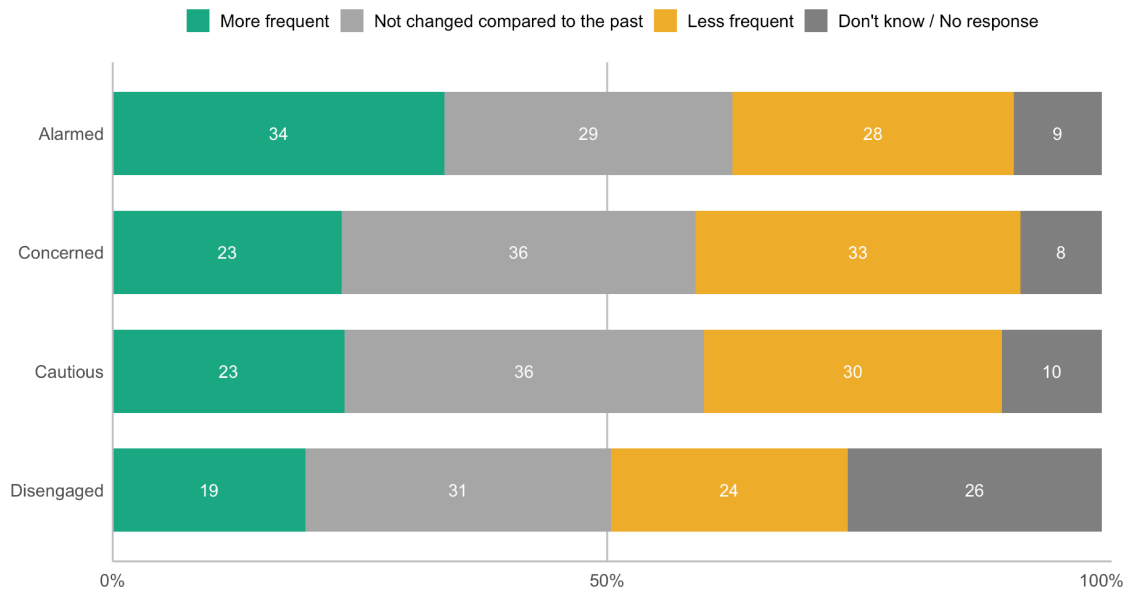


In your local area, have the following become more frequent, less frequent, or have they not changed compared to the past? Hot days

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

The Alarmed are the most likely to say droughts in their local area have become more frequent than in the past

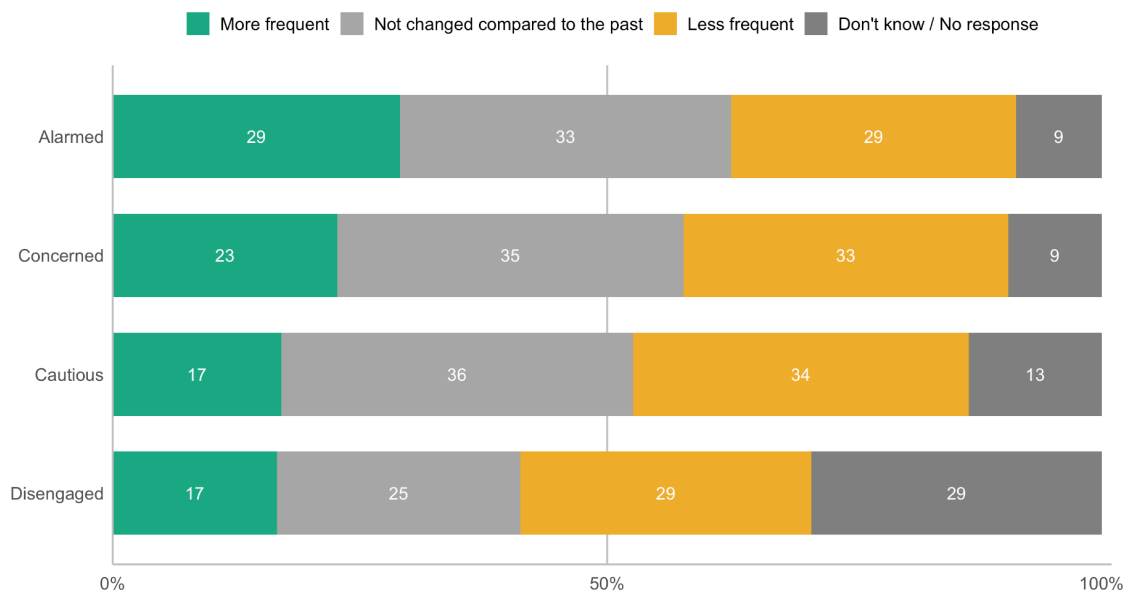


In your local area, have the following become more frequent, less frequent, or have they not changed compared to the past? Droughts

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

The Alarmed are the most likely to say severe storms in their local area have become more frequent than in the past

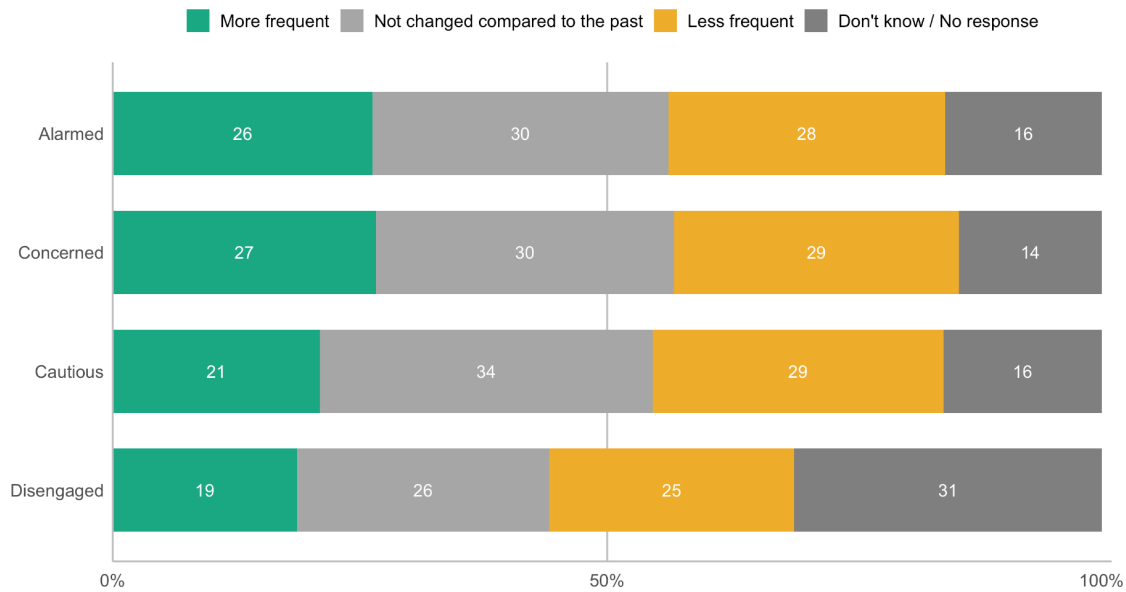


In your local area, have the following become more frequent, less frequent, or have they not changed compared to the past? Severe storms

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

The Alarmed and Concerned are the most likely to say floods in their local area have become more frequent than in the past

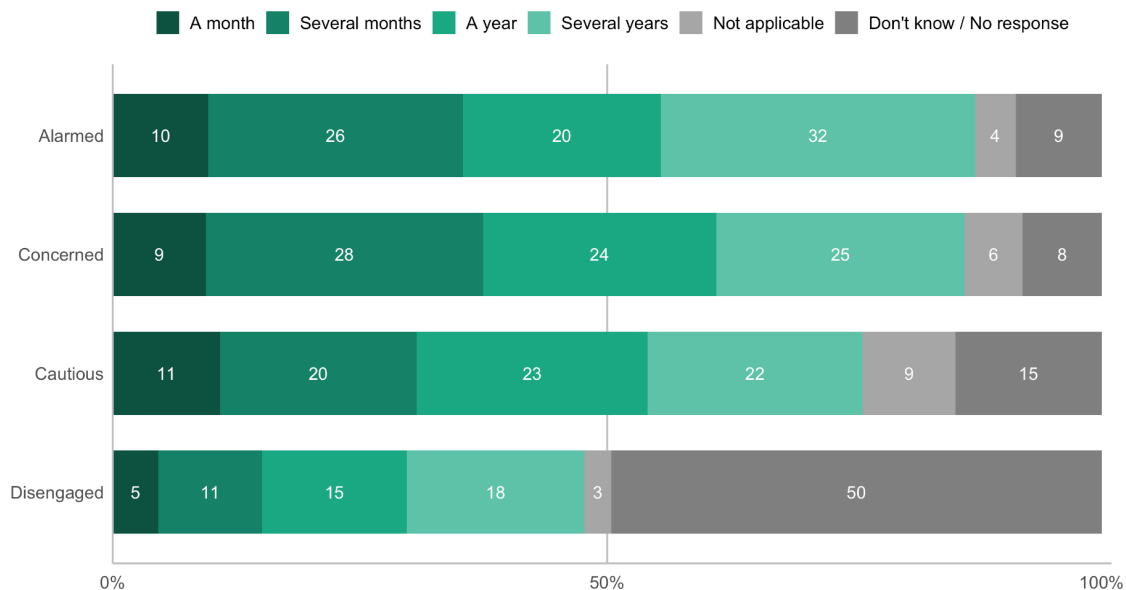


In your local area, have the following become more frequent, less frequent, or have they not changed compared to the past? Floods

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious say it would take them several months or more to recover from a severe drought

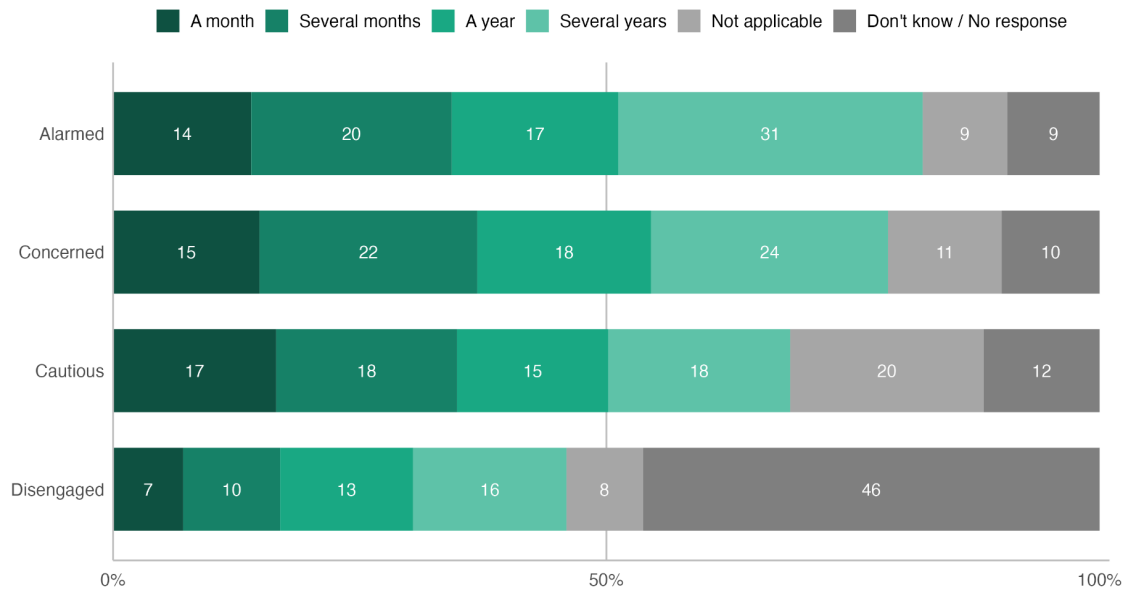


If [X] happened in your local area, how long do you think it would take for your household to recover? Would you say it would take you a month, several months, a year, or several years? A severe drought

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed and Concerned, and about half of the Cautious, say it would take them several months or more to recover from a severe flood

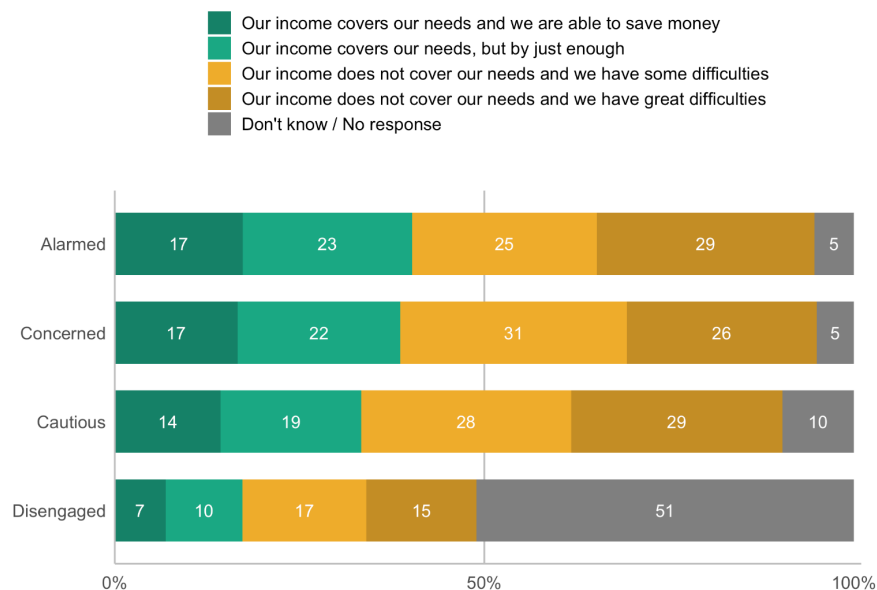


If [X] happened in your local area, how long do you think it would take for your household to recover? Would you say it would take you a month, several months, a year, or several years? A severe flood

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Majorities of the Alarmed, Concerned, and Cautious say their income does not cover their needs and they experience difficulties

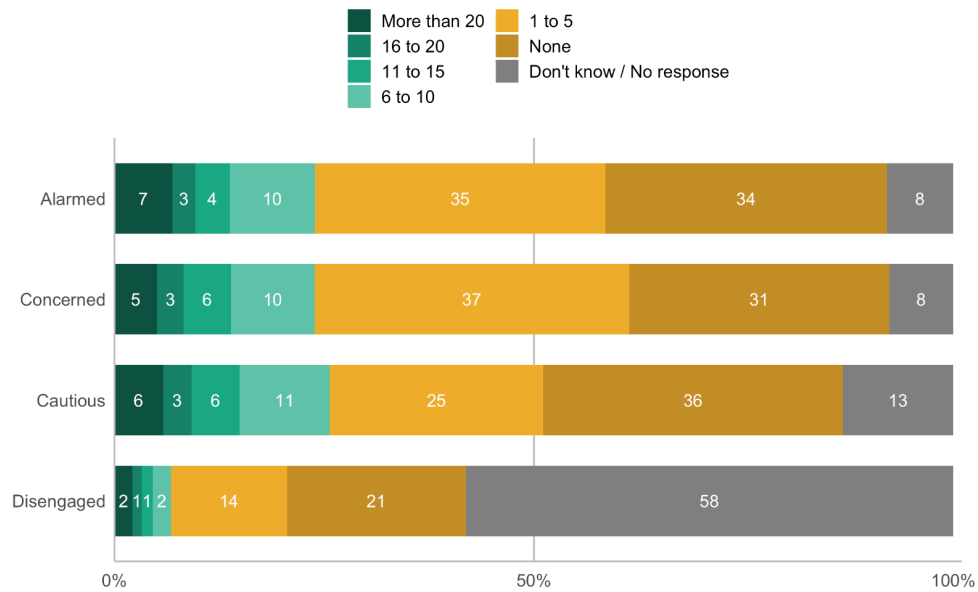


I will now read out a few statements about your household income. Please tell me which one of the following statements is closest to your situation.

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Many people across the segments have few or no relatives and friends they could count on for help if they were in trouble



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?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

7. Demographics and Social Characteristics

Measures of demographics and social characteristics include respondents' educational attainment, monthly family income, age, gender, location, voting behavior, religion, and caste.

The Alarmed

The Alarmed, on average, have the highest levels of education and monthly family income. They are more likely than the other segments to have at least a higher secondary education (41%), while 22% have either primary school education or less. The Alarmed are also the most likely segment to earn a monthly family income of 50,000 Rupees or more (18%), although more than twice as many earn a monthly family income of 10,000 Rupees or less (43%, including 11% who say they earn less than 3,000 Rupees).

The Alarmed are slightly younger than the other segments – 71% are 18-44 years of age (including 33% who are 18-29), while 29% are 45 or older (including 9% who are 60 or older). The gender breakdown of the Alarmed is similar to the Concerned and Cautious (54% of the Alarmed are male and 46% are female). The Alarmed are more likely than the Concerned and Cautious to live in urban areas (32%) and less likely to live in rural areas (52%). The Alarmed (47%), like the Concerned, are more likely than the other two segments to have voted for the Bharatiya Janata Party/National Democratic Alliance. Most of the Alarmed (80%) are Hindu, and 41% are upper/forward caste.

The Concerned

The Concerned, on average, have the second highest levels of education and monthly family income. The Concerned are more likely than the Cautious and Disengaged, but less likely than the Alarmed, to have at least a higher secondary education (29%), while a similar percentage have either a primary education or less (28%). They are also the second most likely segment to earn a monthly family income of 50,000 Rupees or more (12%), although nearly four times as many (45%) earn a monthly family income of 10,000 Rupees or less (including 10% who say they earn less than 3,000 Rupees).

The Concerned are slightly older than the Alarmed – 68% of the Concerned are 18-44 years of age (including 32% who are 18-29), while 32% are 45 or older (including 13% who are 60 or older). The gender breakdown of the Concerned is similar to the Alarmed and Cautious (54% of the Concerned are male and 46% are female). The Concerned are less likely than the Alarmed to live in urban areas (27%) and more likely than the Alarmed and Disengaged to live in rural areas (58%). The Concerned (44%), like the Alarmed, are more likely than the other two segments to have voted for the Bharatiya Janata Party/National Democratic Alliance. Most of the Concerned (81%) are Hindu, and 37% are upper/forward caste.

The Cautious

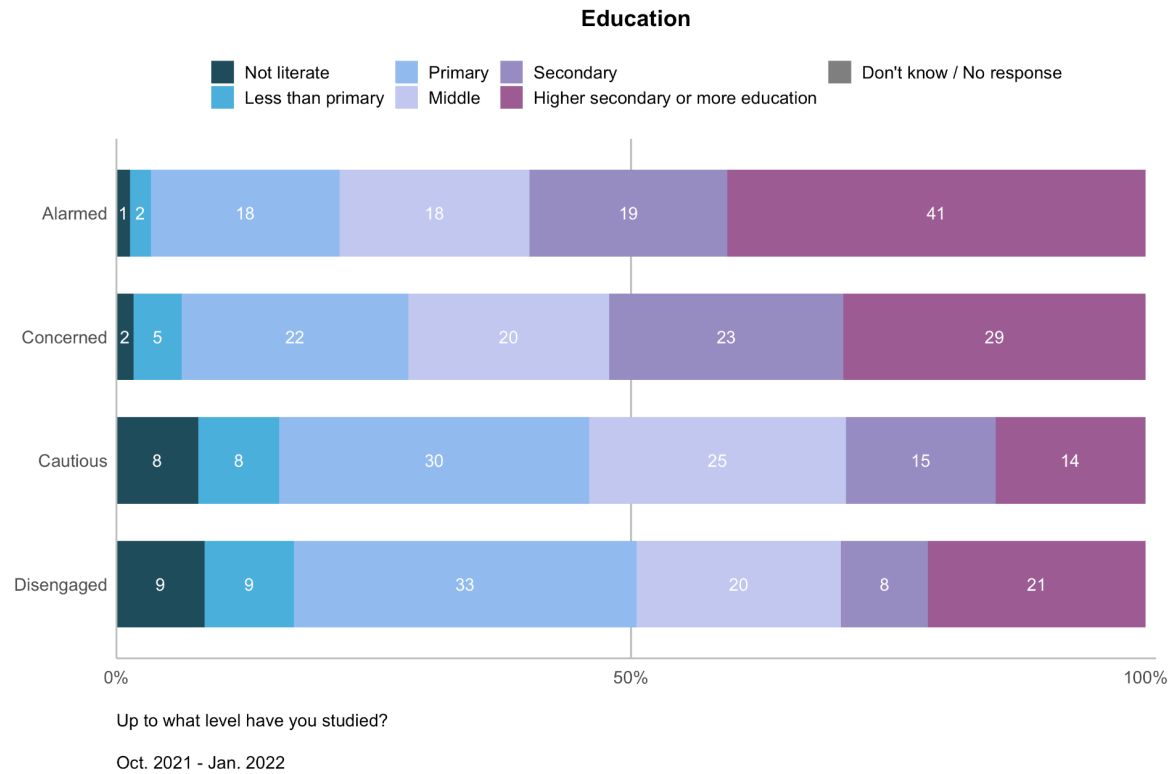
The Cautious, on average, have lower levels of education and monthly family income than do the Alarmed and Concerned. The Cautious are less likely than the Alarmed and Concerned to have at least a higher secondary education (14%) and are more likely to have a primary school education or less (46%), including 8% who are not able to read or write. The Cautious are also less likely than the Alarmed to earn a monthly family income of 50,000 Rupees or more (11%) while they are more likely than the Alarmed and Concerned to earn a monthly family income of 10,000 Rupees or less (51%, including 15% who say they earn less than 3,000 Rupees).

The Cautious, like the Disengaged, are slightly older overall than the Alarmed – 62% are 18-44 years of age (including 29% who are 18-29), while 38% are 45 or older (including 15% who are 60 or older). The gender breakdown of the Cautious is similar to the Alarmed and Concerned (57% of the Cautious are male and 43% are female). Like the Concerned, the Cautious are less likely than the Alarmed to live in urban areas (26%) and are more likely than the Alarmed and Disengaged to live in rural areas (61%). The Cautious (38%) are less likely than the Alarmed and Concerned to have voted for the Bharatiya Janata Party/National Democratic Alliance. The Cautious are less likely to be Hindu (74%) than the other segments, and 36% of the Concerned are upper/forward caste.

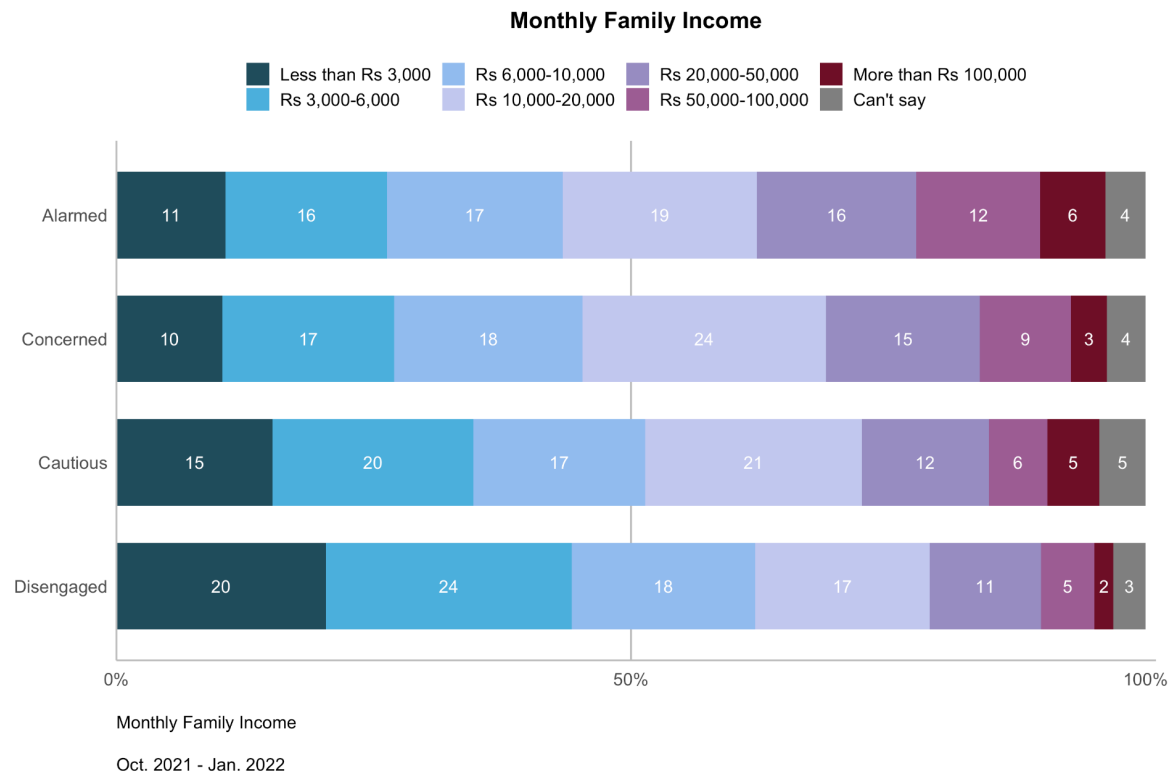
The Disengaged

The Disengaged, like the Cautious, on average, have lower levels of education and monthly family income than do the Alarmed and Concerned. The Disengaged are less likely than the Alarmed and Concerned to have at least a higher secondary education (21%) and are more likely to have a primary school education or less (51%), including 9% who are not able to read or write. The Disengaged are less likely than the Alarmed and Concerned to earn a monthly family income of 50,000 Rupees or more (7%). Additionally, the Disengaged are the most likely segment to earn a monthly family income of 10,000 Rupees or less (62%, including 20% who say they earn less than 3,000 Rupees).

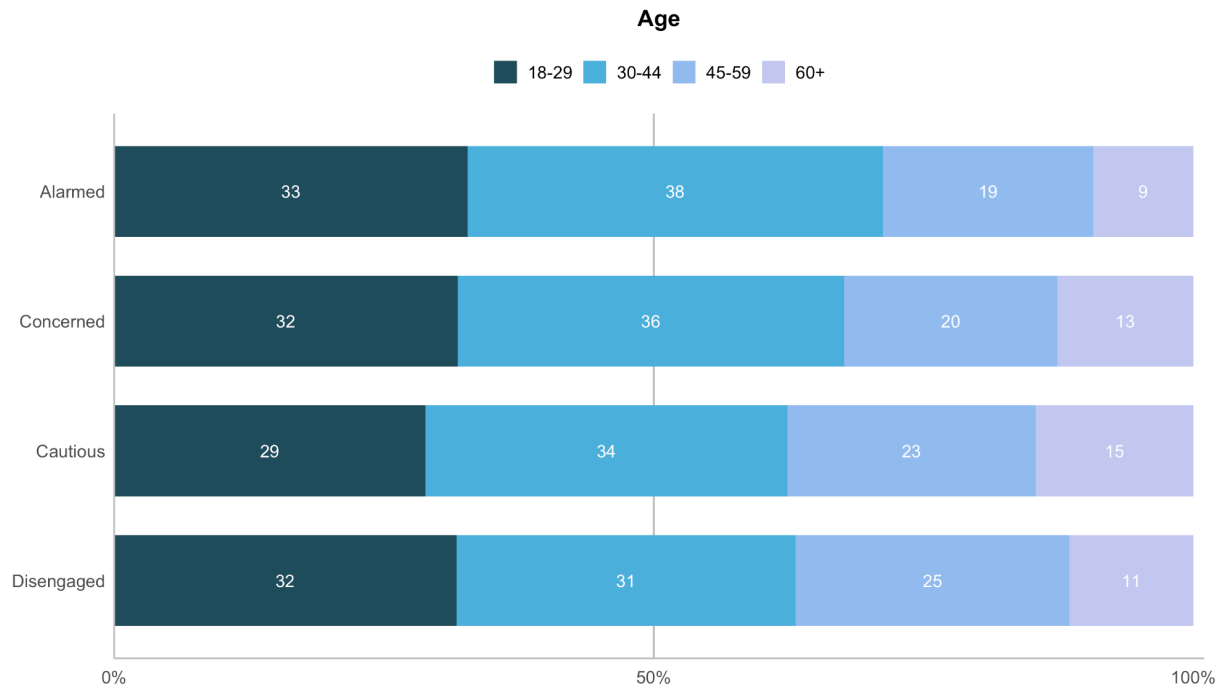
Like the Cautious, the Disengaged are slightly older overall than are the Alarmed – 63% are 18-44 years of age (including 32% who are 18-29), while 37% are 45 or older (including 11% who are 60 or older). The Disengaged have a much greater proportion of females (76%) than all other segments. They are the most likely of all the segments to live in semi-urban areas (26%) and the least likely to live in rural areas (45%). Similar to the Cautious, the Disengaged (36%) are less likely than the Alarmed and Concerned to have voted for the Bharatiya Janata Party/National Democratic Alliance. Most of the Disengaged (83%) are Hindu, and 41% are upper/forward caste.



Source: Yale Program on Climate Change Communication



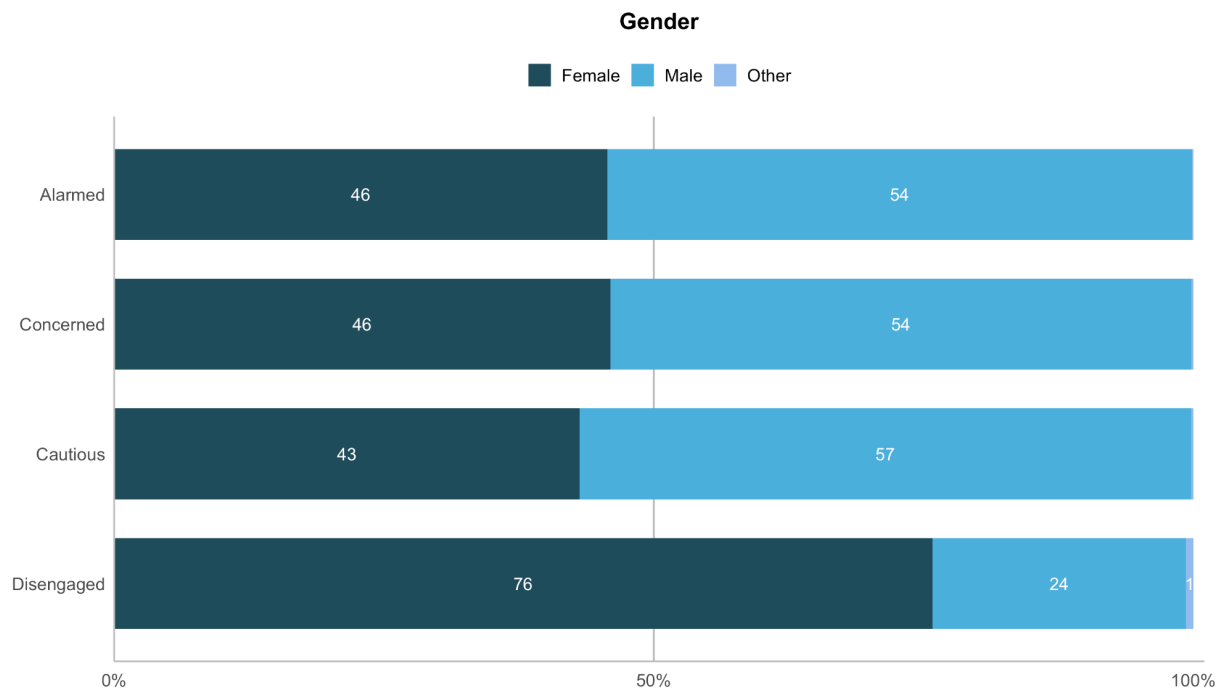
Source: Yale Program on Climate Change Communication



What is your age? (In completed years)

Oct. 2021 - Jan. 2022

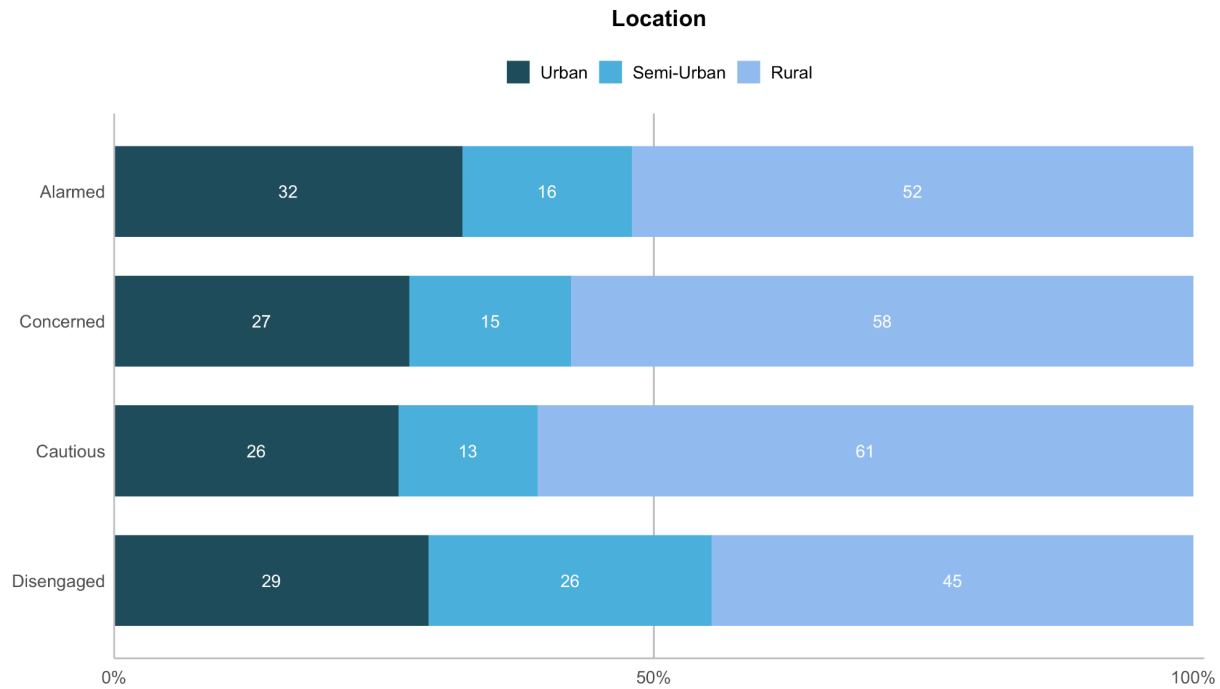
Source: Yale Program on Climate Change Communication



Gender

Oct. 2021 - Jan. 2022

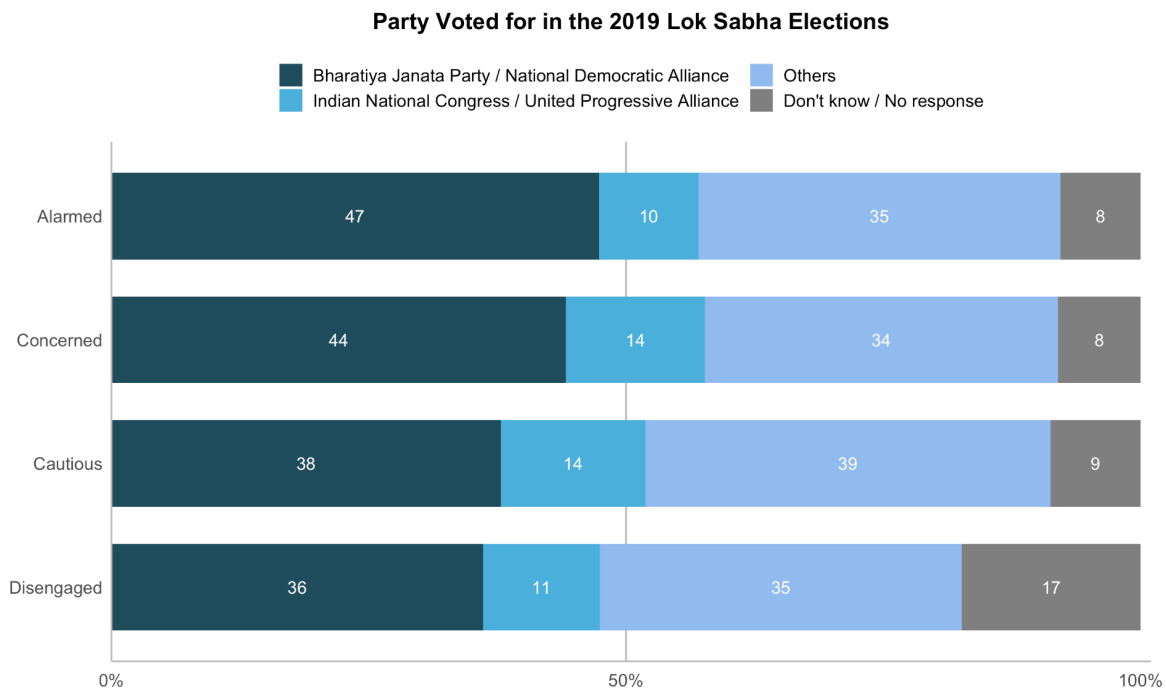
Source: Yale Program on Climate Change Communication



Location

Oct. 2021 - Jan. 2022

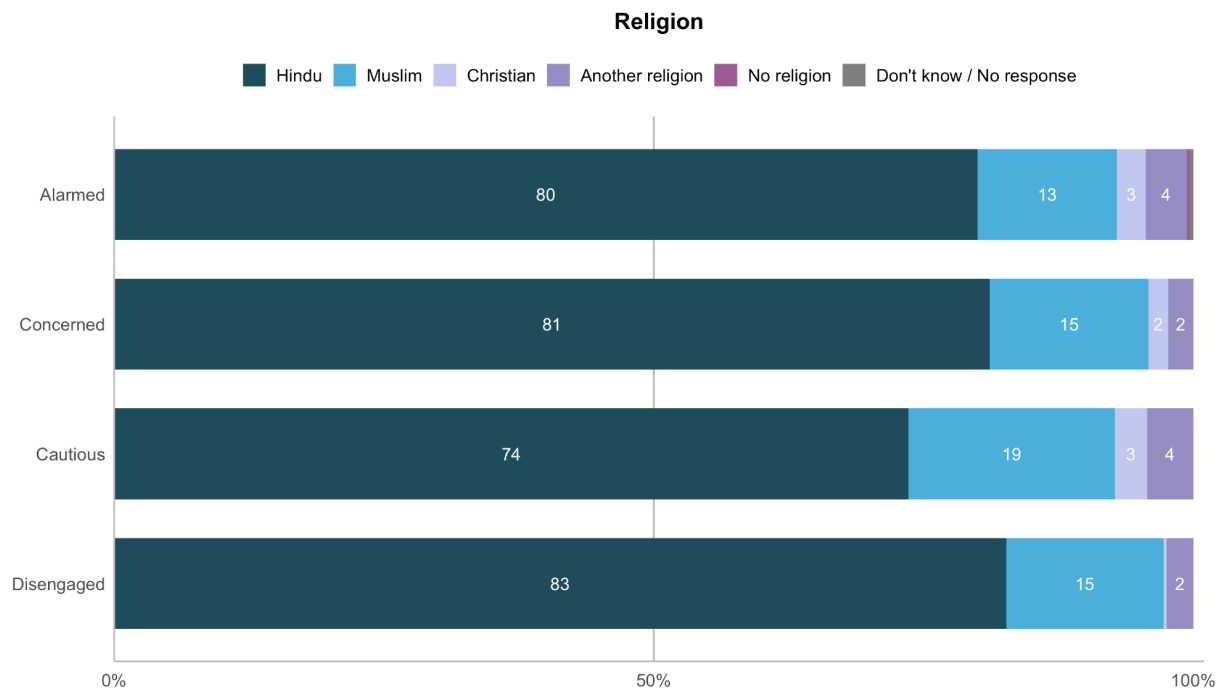
Source: Yale Program on Climate Change Communication



Which party did you vote for in 2019 Lok Sabha Elections?

Oct. 2021 - Jan. 2022

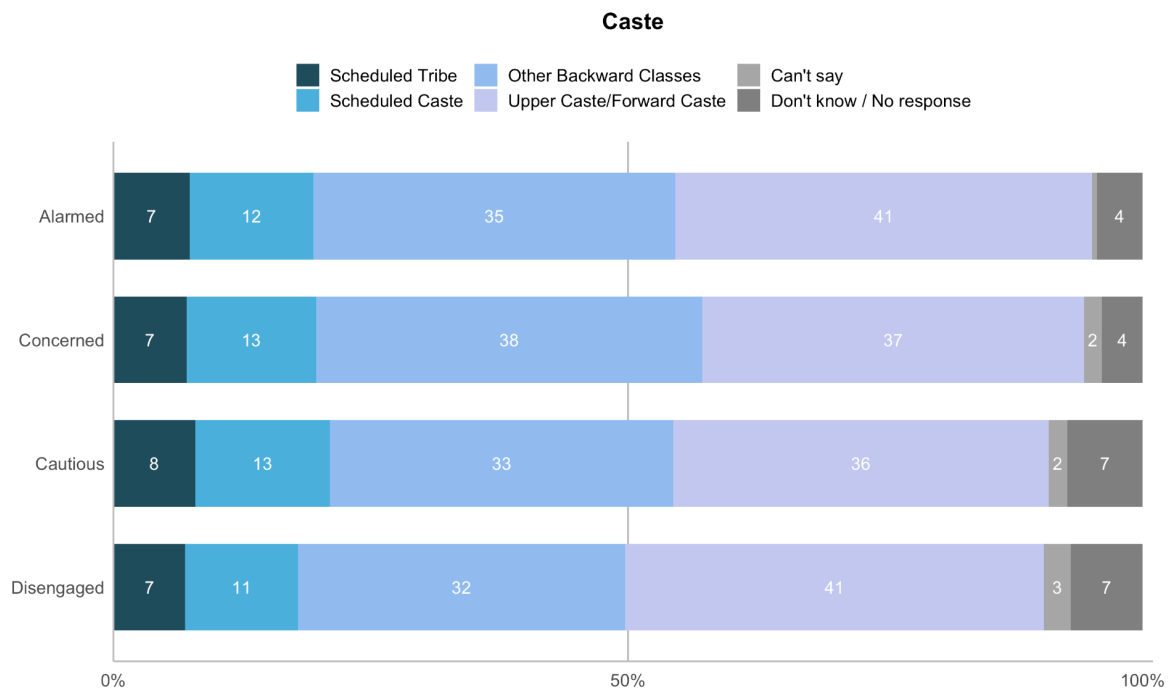
Source: Yale Program on Climate Change Communication



What is your religion?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication



And what is your caste group?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

8. Household Characteristics

Measures of household characteristics include questions about housing type, homeownership status, electricity access, air conditioning, Internet access, drinking water source (e.g., tap, well water)⁴, and cooking fuel type (e.g., propane or natural gas, wood). For a complete list of household cooking fuel types and drinking water sources, see Appendix II: Demographic Tables (pp. 34–35) of the [Climate Change in the Indian Mind, 2022](#) report.

The Alarmed

The Alarmed are the most likely segment to live in a pucca independent house (a house made with modern materials like brick and cement; 43%), and a large majority (81%) say they own their home. Nearly all of the Alarmed (93%) say they have access to electricity. The Alarmed are the most likely segment to say they have air conditioning (16%) and/or Internet access (71%). Additionally, the Alarmed are the most likely segment to have access to an improved drinking water source (e.g., tap water, protected wells; 86%). A majority of the Alarmed (60%) say they use propane or natural gas for cooking, while fewer say they use wood (27%) or other fuel types such as straw/grass or dung (9%).

The Concerned

The Concerned are less likely than the Alarmed, but more likely than the Cautious, to live in a pucca independent house (39%). Like the Alarmed, a majority of the Concerned (81%) say they own their home. Also, like the Alarmed, nearly all of the Concerned (92%) say they have access to electricity. The Concerned are less likely than the Alarmed to have air conditioning (11%), Internet access (64%), and/or access to an improved drinking water source (83%). Most of the Concerned (61%), like the Alarmed, say they use propane or natural gas for cooking, while fewer say they use wood (24%) or other fuel types (9%).

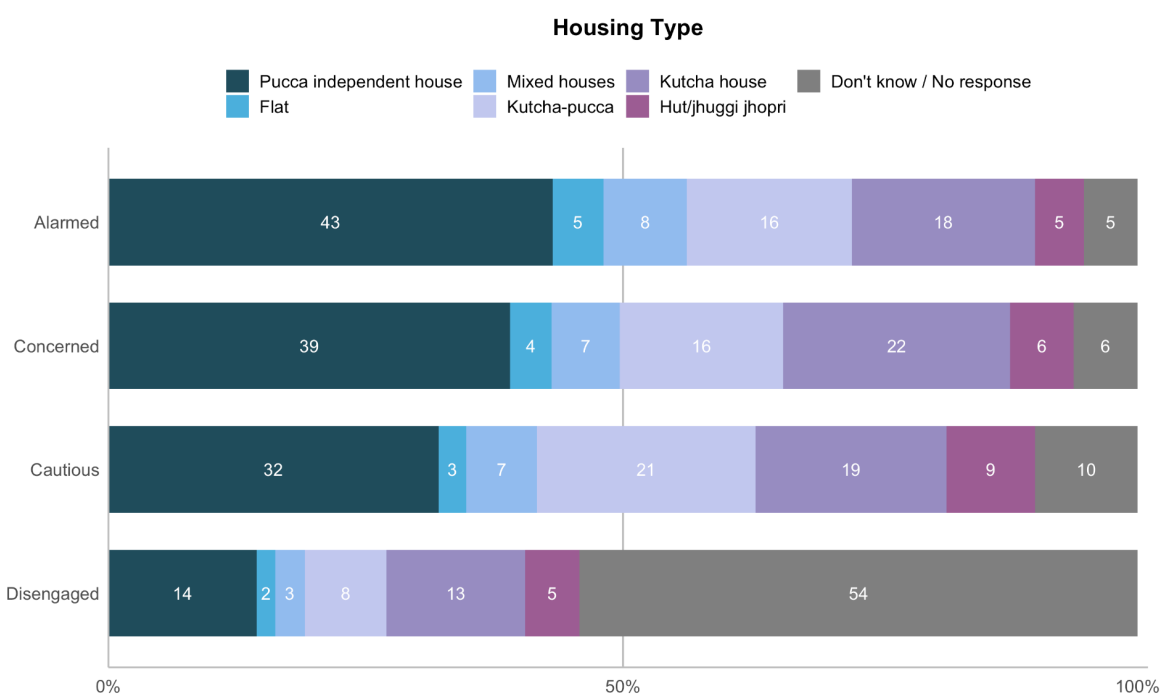
The Cautious

The Cautious are less likely than both the Alarmed and Concerned to live in a pucca independent house (32%), and are more likely to live in a kutch-pucca house (21%) made with a mix of permanent materials such as bricks and cement and traditional construction materials such as mud. A majority of the Cautious (76%) say they own their home, but they are less likely than the Alarmed to say so. A large majority of the Cautious (87%) say they have access to electricity, but to a lesser extent than the Alarmed and Concerned. The Cautious are less likely than the Alarmed to have air conditioning (9%), and they are less likely than both the Alarmed and Concerned to have access to the Internet (53%) and/or access to an improved drinking water source (78%). Compared with the Alarmed and Concerned, fewer of the Cautious (47%) say they use propane or natural gas for cooking, and a larger percentage (42%) say they use either wood (29%) or other fuel types (13%).

⁴Based on the [Census of India, 2011](#), the following household drinking water sources were categorized as improved water sources: tap (piped into the house or yard/plot), public tap or standpipe/hand pump, tube well/borehole, protected well, and protected spring

The Disengaged

The Disengaged are the segment most likely to say they don't know or to not provide a response when asked about their households (ranging from 54% to 57% across questions). Few of the Disengaged (14%) say they live in a pucca independent house, and 38% say they own their home. Forty-two percent of the Disengaged say they have access to electricity, and few say they have air conditioning (1%) and/or Internet access (24%). Forty-four percent of the Disengaged say they have access to an improved drinking water source, and 22% say they use propane or natural gas for cooking.

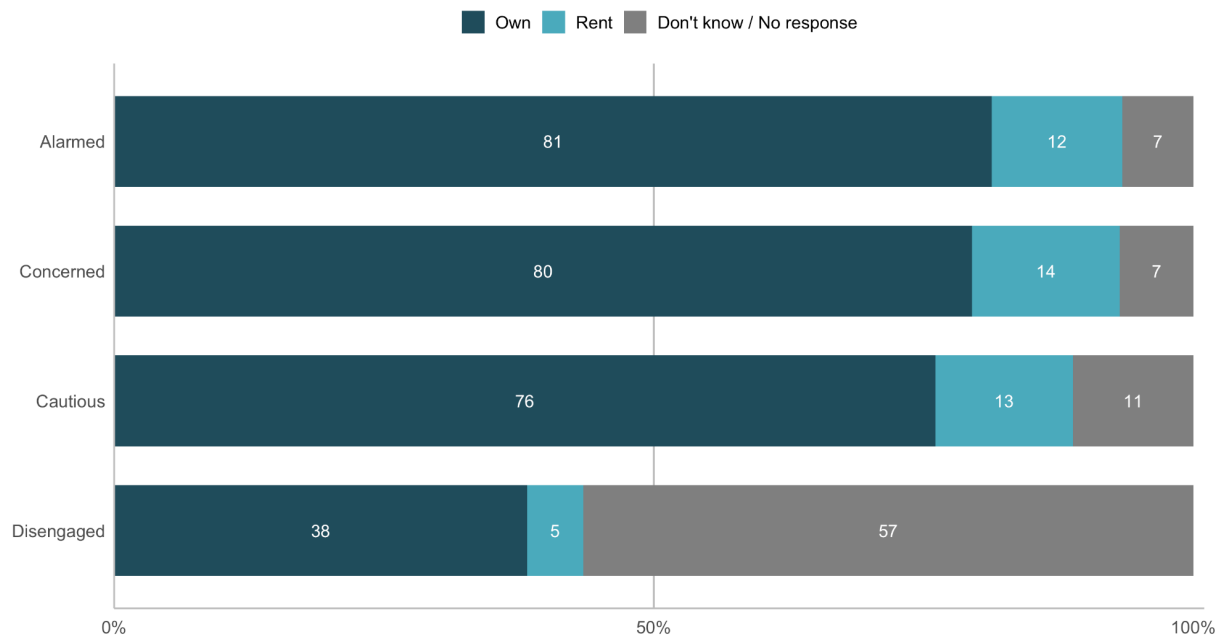


What type of a house do you live in?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Homeownership

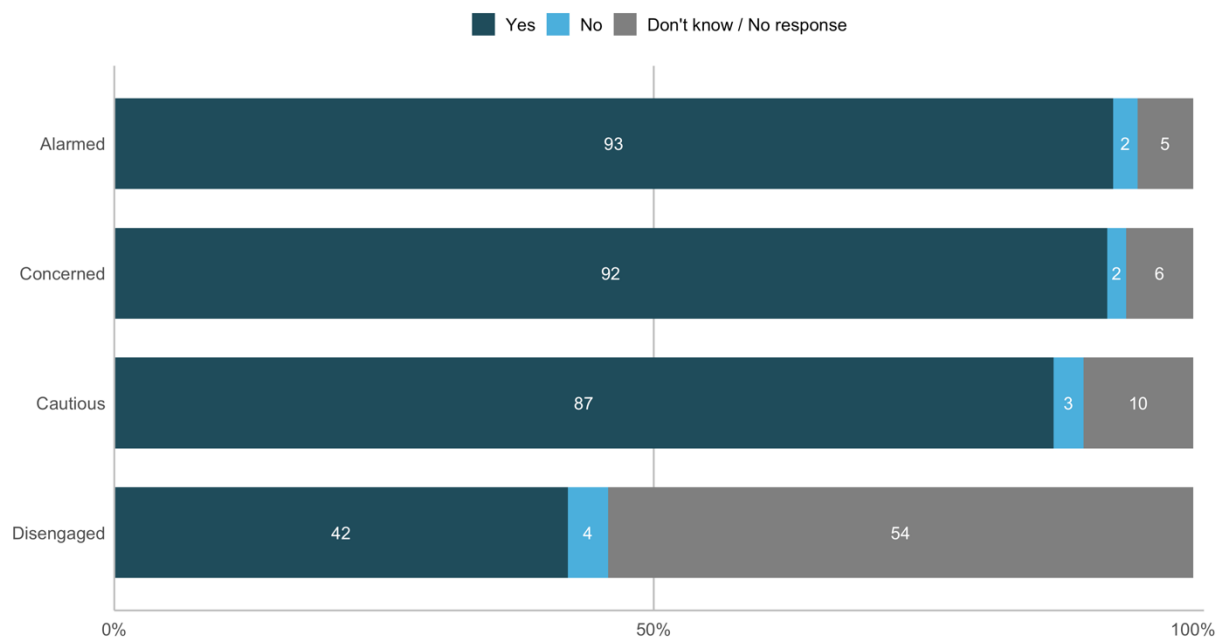


Do you own or rent your home?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Household Electricity

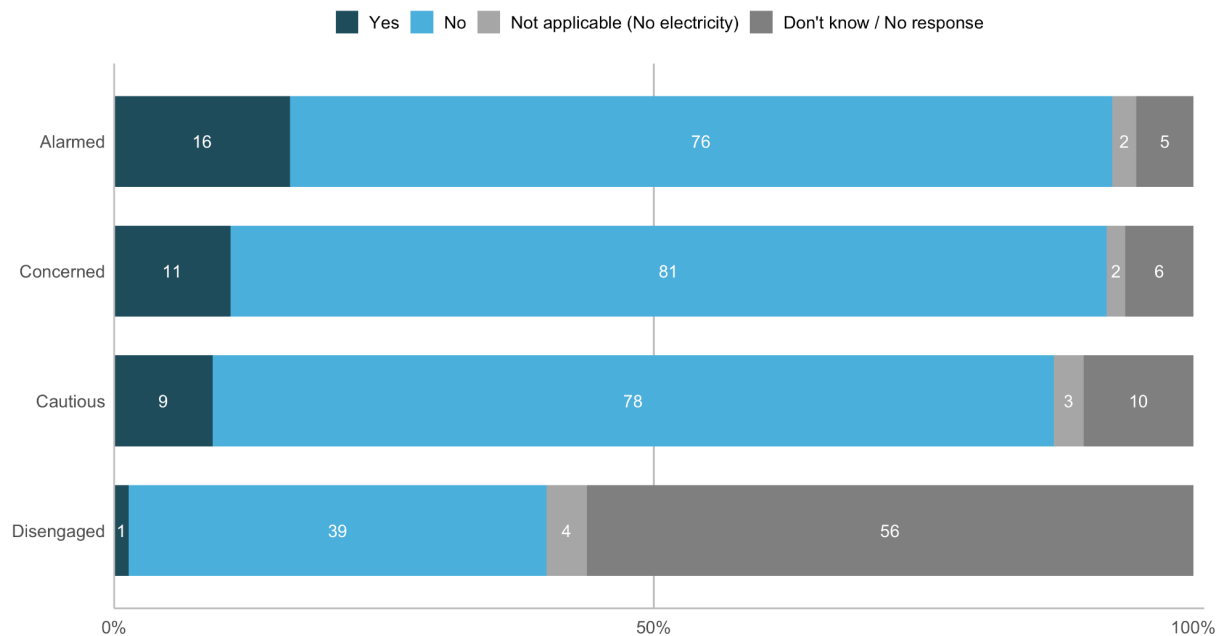


Does your household have the following? Please answer yes or no. Electricity

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Household Air Conditioning

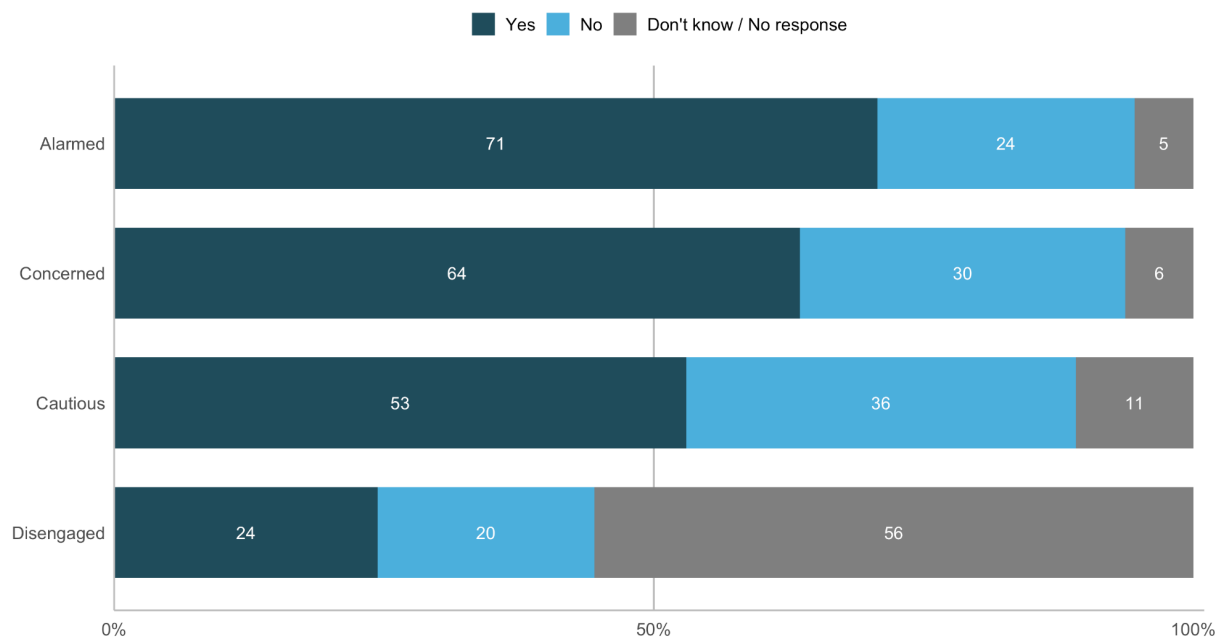


Does your household have the following? Please answer yes or no. Air conditioner

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Household Internet Access

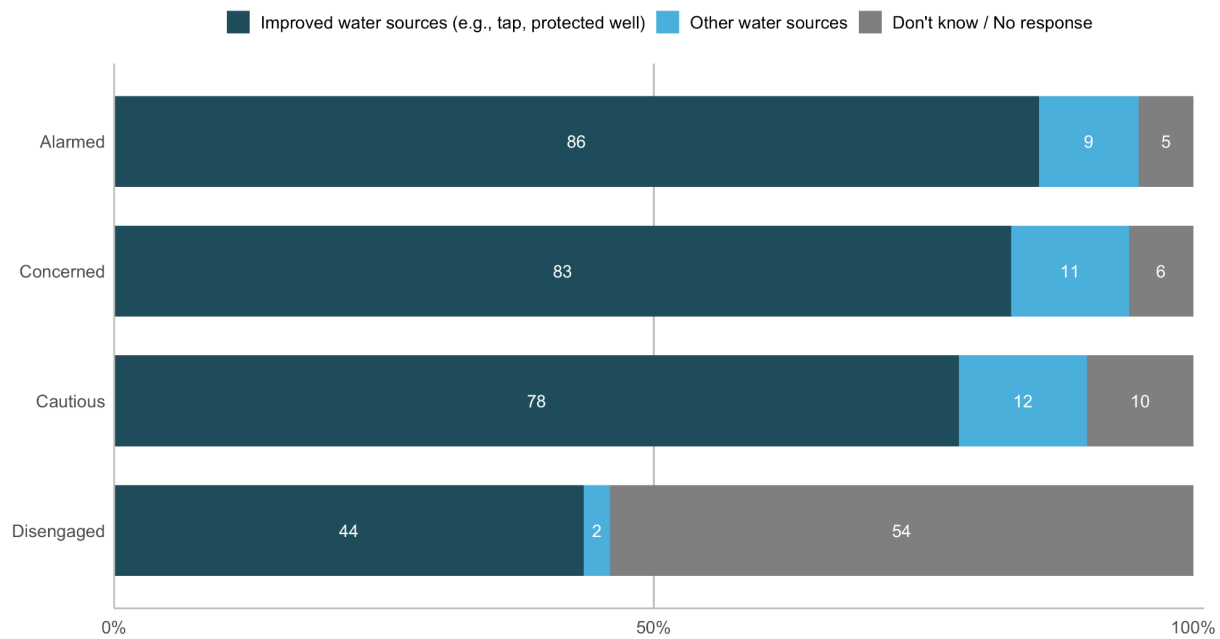


Does your household have the following? Please answer yes or no. Internet access (broadband/cable or mobile phone)

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Household Drinking Water Source

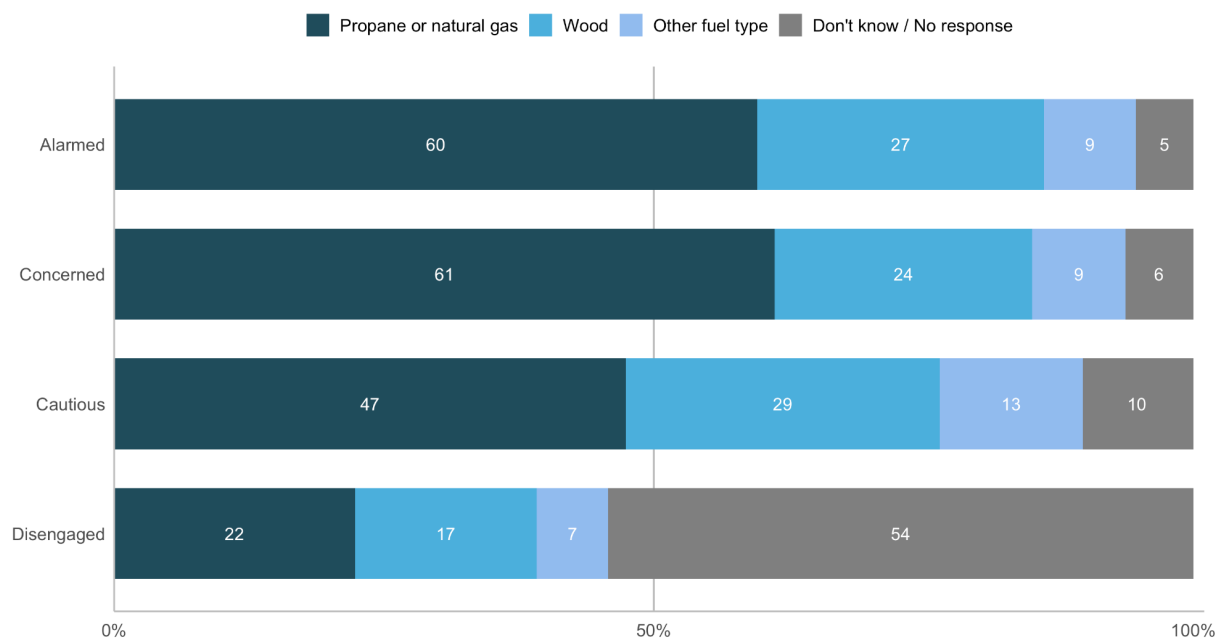


What is the main source of drinking water for members of your household?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Household Cooking Fuel



What type of fuel does your household mainly use for cooking?

Oct. 2021 - Jan. 2022

Source: Yale Program on Climate Change Communication

Appendix: 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 weighted after the data collection was completed to adjust the final sample to match national demographic parameters on gender, age, education, income, religion, and urbanicity. Interview dates: October 21, 2021 – January 9, 2022. Interviews: 4,619 adults (18+). Average margin of error at the 95% confidence level is +/- 1.4 percentage points for the full sample. Margins of error for the four audience segments are: Alarmed +/- 1.9 percentage points ($n = 2,545$); Concerned +/- 2.7 percentage points ($n = 1,271$); Cautious +/- 4.6 percentage points ($n = 454$); and Disengaged +/- 5.2 percentage points ($n = 349$).

In the charts/figures, 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, and Arunima Sircar of Yale University, Jagadish Thaker of the University of Queensland, and Yashwant Deshmukh and Guara Shukla of CVoter. This report was written by Matthew Ballew, Seth Rosenthal, and Anthony Leiserowitz of Yale University, and Jagadish Thaker of the University of Queensland. The segmentation was developed by Matthew Goldberg and other data analyses were conducted by Matthew Ballew. Charts/figures in the report were created by Matthew Ballew and Sanguk Lee of Yale University, as well as Russell Shaddox and Liz Neyens.

Audience Segmentation Analysis

The approach to this work is based on the established methodology of the [Global Warming's Six Americas](#) project conducted by the [Yale Program on Climate Change Communication](#) and the [George Mason University Center for Climate Change Communication](#). Latent class analysis (LCA) was conducted on a subset of [Climate Change in the Indian Mind, 2022](#) survey questions to identify distinct audiences in the population based on similar patterns of responses to questions about climate change. LCA works by analyzing how different types of people can be clustered into smaller audiences or “classes” based on their pattern of responses. The analysis then balances the accuracy of segmentation with the practicality of the audience sizes for reporting and strategic purposes. This process led to the development of the four distinct audience segments in the Indian population.

The segmentation analyses incorporated information from 4 variables⁵ (listed in the table below) and was conducted using the *poLCA* package in *R*. The package uses LCA to identify clusters of respondents who are similar to one another on the measured variables, and was chosen because it works with categorical data. The model aims to identify unobserved “latent classes” (i.e., segments) that help explain the relationships between the measured variables. The analysis used the expectation-maximization (EM) and Newton-Raphson algorithms to maximize the log-likelihood function of belonging to each group. Thus, each person is assigned a probability of belonging to each potential cluster. The model begins with random values and proceeds iteratively, replacing old values with new values in each iteration until the maximum likelihood is reached. Put simply, respondents with similar responses on the observed variables will cluster into the same segments, with each response evaluated as to whether it causes a given respondent to have a lower or higher likelihood of being assigned to a given segment.

The segmentation analyses generated several potential solutions ranging from 3-segments to 10-segments. Model fit statistics (Akaike Information Criterion and Bayesian Information Criterion) were used to guide the assessment of each potential solution and evaluate the trade-off between parsimony (fewer segments) and the informational value of each additional segment. Additionally, the interpretability of each solution was assessed by examining cross-tabulations of each segment with other variables in the dataset. The 4-segment solution was selected as the most interpretable and useful. It is the solution presented in this report.

Question Text	Response Levels
How worried are you about global warming?	Very worried Somewhat worried Not very worried Not at all worried Don't know/No response
How much do you think global warming will harm you and your family?	A great deal A moderate amount Only a little Not at all Don't know/No response
How much do you think global warming will harm future generations of people?	A great deal A moderate amount Only a little Not at all Don't know/No response
How important is the issue of global warming to you personally?	Extremely important Very important Somewhat important Not very important Not at all important Don't know/No response

⁵Initially, 23 variables were used for the audience segmentation analysis, however, the 4 variables used in this report provided a more parsimonious solution. Segmentation analyses that use additional variables will likely yield different results.

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