



INDIA

How the people of India live with climate change and what communication can do

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CLIMATE CHANGE IS ABOUT PEOPLE

How do people in India live with climate change now? How will its impacts shape their future, and how will they, in turn, shape their environment? What are the most effective ways to support people to adapt to climate change, and how best can the media, governments, organisations and businesses communicate with them?

These are the questions behind Climate Asia, the world's largest study of people's everyday experience of climate change. The project surveyed 33,500 people across seven Asian countries – Bangladesh, China, India, Indonesia, Nepal, Pakistan and Vietnam.

In India, the research was conducted from May to August 2012 across cities and villages in five states: Gujarat, Madhya Pradesh, Odisha, Tamil Nadu and Uttarakhand, and in the city of Mumbai. These particular states were selected to represent different geographic areas in the country, which include coasts, mountains, a delta, plains with large tracts of rainfed agriculture and a large city. They are also home to people in very diverse socio-economic groups. Climate Asia recorded the opinions, insights and needs of this population, about 70% of whom live on less than \$2 (£1.30) a day.¹

Climate Asia conducted 24 focus group discussions with men and women from different social backgrounds across eight locations in the chosen states and city in India. In addition, our researchers held eight community assessments² with communities vulnerable to climate change, as well as 30 in-depth interviews with key experts and opinion-formers from government, civil society, business and academia.

Using both quantitative and qualitative research, we have built a picture of how people in the states and city surveyed live and deal with climate change. This includes their values, livelihoods, use of food, water and energy, family life, worries, what they watch and listen to, whom they trust the most, what they hope for in the future, and the environmental changes they have noticed or deal with already.

¹World Bank (August 2013) *Poverty headcount ratio at \$2 a day (PPP) (% of population)* [online] Available from: <http://data.worldbank.org/indicator/SI.POV.2DAY> [Accessed 13 August 2013]

²In this report we use the term "community assessment" to describe a qualitative research method. This method involved spending one to two days with a community and using various qualitative tools, including a guided walk with a community member, to gather information.



More details on the research methodology and sampling followed can be found in the Appendix and at www.bbc.co.uk/climateasia.

PEOPLE'S PERCEPTIONS MATTER

Understanding people's perceptions is crucial to craft communication that motivates people to take action to improve their lives. An individual's perception at any given time – for instance of changes in climate or the availability of water in an area – may differ from official records. Nevertheless such perceptions may influence a person's decision-making process. Climate Asia research focused on people's perception of changes in climate, how these changes affect their lives and what they are doing to respond to them. Perceptions are shaped by a range of factors including exposure to media, communication with peers, personal beliefs and values, and education levels.

ABOUT BBC MEDIA ACTION

BBC Media Action, the international development organisation of the British Broadcasting Corporation (BBC), uses the power of media and communication to support people to shape their own lives. Working with broadcasters, governments, other organisations and donors, we provide information and stimulate positive change in the areas of governance, health, resilience and humanitarian response. This broad reach helps us to inform, connect and empower people around the world. We are independent from the BBC, but share the BBC's fundamental values and have partnerships with the BBC World Service and local and national broadcasters that reach millions of people.

HOW CLIMATE ASIA CAN HELP

Climate Asia, a BBC Media Action project, is the largest-ever quantitative and qualitative research study into public understanding of climate change in Asia. Funded by the UK Department for International Development (DFID), Climate Asia interviewed over 33,500 people across seven countries – Bangladesh, China, India, Indonesia, Nepal, Pakistan and Vietnam. The resulting comprehensive data set paints a vivid picture of how people live with climate change now.

This report is one of many tools created from this unique data, all designed to help the planning and implementation of communication and other programmes to support people to adapt to the changes they face. They are available on the fully searchable and public Climate Asia data portal, www.bbc.co.uk/climateasia, and include a climate communication guide, information on Climate Asia's research methods and the tools used to conduct research, including the survey questionnaire. Since all of Climate Asia's data and tools are designed for the widest possible use, this report and data portal details are freely available to anyone who might be interested.



WHAT'S THE STORY?

People across all the states surveyed – Gujarat, Madhya Pradesh, Odisha, Tamil Nadu and Uttarakhand, as well as Mumbai – feel they are experiencing higher temperatures, lower rainfall and less predictable weather than 10 years ago. Water shortage was a big concern for Indians – more than in any other Climate Asia country surveyed – and they link this to changes in climate. The lack of water has an impact on people's lives, most notably by decreasing agricultural productivity, which leads to a loss of income for rural people as well as increasing health risks. People in these Indian states were more worried than people in any of the other Climate Asia countries about the impact of changes in climate and resource availability on their health and their ability to earn money. In addition, a third of people in these states feel at high risk from an extreme weather event but only a quarter feel prepared to deal with it.

This perception of change does not translate into response. More than half of those surveyed were feeling impacts now but struggling to respond. People in these areas of India are less willing to take action to respond to these changes than in any of the other six countries surveyed. This is particularly true of poorer people who don't feel that they have the financial resources to respond. People do not feel that it is their responsibility to take action and think that government, civil society or other institutions are better placed to deal with these issues. However, at the same time, they do not feel confident in the institutions from which they expect support.

Despite broad similarities between the states in terms of the changes their citizens have noticed, there are differences between states in the impacts people are feeling, the extent to which they're responding and their motivations for doing so. In Odisha people are adapting and taking action in small, individual ways, building on their high level of awareness of climate change, their understanding of the issues and their knowledge of how to respond. In Madhya Pradesh, on the other hand, there are very low levels of response: people feel they can't make a difference and don't feel empowered to work together with their communities. As a result they find it difficult to take action to deal with water shortages. Confidence in government institutions is low, people in the state don't feel that the government listens to their needs, and yet feel that they can't act without government support.



WHAT THIS MEANS FOR COMMUNICATION

There is a need for a new way of communicating to engage people with climate change. One way of doing so is by framing the issue around the impacts that people are feeling and will feel, such as reduced income and health concerns. This will help to build awareness of both immediate and future risks that people face in their everyday lives. Experts also highlighted the need to encourage people to respond to the impacts they're feeling.

After building awareness of the issue, communication can encourage action that reduces the impact of present and future changes and variations in climate. There is a role for the government to illustrate to the public which actions they can take as individuals or as part of a community and which actions the government is working on. Communication can help to convince people to take action by fostering a spirit of responsibility. This includes giving people information on how they can take action, inspiring people by showing others like them being successful, and encouraging people to share examples of simple actions that help people lessen the impact of change.

For people who are not currently feeling any impact, communication can build awareness of the impact they may face in the future and what they can do now to help themselves and others.

People trust television more than any other source of information including government. Communication should use television to reach audiences and then seek to enhance this with face-to-face communication where appropriate. There is also a role for partnerships between television, non-governmental organisations (NGOs) and government to increase exposure to existing activities that have a positive effect and create new opportunities to bring the issue of climate change to life.



HOW TO USE THIS REPORT

This report presents findings from India. It seeks to build a picture of how people live their lives and deal with change, in order to understand their communication needs and help them respond to changes and variations in climate.

Section 1 details how Indians in five states and one megacity live now – it focuses on their values as well as recent positive changes, including increasing development. Increased development has, however, come hand-in-hand with new concerns about the environment, including changes in climate and concerns about access to food, water and energy, which are highlighted in section 2.

In section 3, the report details how people are responding to change, while section 4 includes an analysis of the factors that enable and constrain this response, including the impact people perceive, how informed they feel and the extent to which they are engaged in their community.

Section 5 details the differences between states in terms of people's perceptions of changes in climate, the impact on their lives and the actions taken. Section 6 highlights how different stakeholders can use these insights to craft communication that supports people to respond to changes in climate.

Section 7 introduces segments for understanding people's needs in India. Analysis of Climate Asia data allowed researchers to segment the people surveyed into groups. These segments help us to understand people's needs, as well as to identify communication opportunities to enable effective action. Section 8 details the communication channels Indians use now and how to best reach people through the media. Finally, Section 9 builds on all of this information to identify three important priority audiences – farmers, urban poor and housewives – and highlights each audience's specific communication needs.

The report concludes by highlighting how you, the reader, can utilise the information, insight and tools generated by the Climate Asia project to communicate with your own target audience.



CONTENTS

	010
Development means different things to different people	
India: largely rural but moving towards urbanisation	
Values: people value money and have a low level of attachment to the environment	
Worries: not having enough clean water to drink is a key concern for most	
	015
Context: state differences	
Perceptions of changes in climate: it's getting warmer and drier	
	021
People feel the impact of changes in climate on their lives	
Changes in climate are perceived to impact people's livelihoods and health	
People make changes to their livelihoods	
Water: people take simple action	
Agriculture: people take action	
Energy: people in cities are able to take more action	
Extreme weather events: people need long-term support	
	033
People don't believe individual actions will make a difference	
Low confidence in government and institutions	
Community engagement is important in supporting response	
Lack of information is a big barrier	
People are not willing to make changes and do not feel it is their responsibility	
Focus on individual aspirations to help make changes	



	044
Gujarat	
Madhya Pradesh	
Odisha	
Tamil Nadu	
Uttarakhand	
Mumbai	
	050
The potential for communication to enable action	
	053
Segments by demographics	
Surviving (27%): Finding it too hard to take action	
Struggling (25%): Trying to take action but finding it very difficult	
Adapting (20%): Acting and wanting to do more	
Willing (18%): Worrying about tomorrow	
Unaffected (11%): Believe there is no need to do anything	
	066
Sources of information: look to those you trust	
How people use the media	
Who forms opinion in Indian society and how to reach them	
	074
Farmers in Madhya Pradesh	
Urban poor in Mumbai	
Housewives in Uttarakhand	



Sharing findings and tools
Building on data

083

084

Qualitative research
Quantitative research

089

LIFE FOR INDIANS

This section briefly outlines how people in the five states and city surveyed in India live. It focuses on recent patterns of development and migration as well as the values and beliefs that Indians hold.

DEVELOPMENT MEANS DIFFERENT THINGS TO DIFFERENT PEOPLE

Climate Asia developed economic categories based on people's perceptions of their purchasing power.

While annual per capita income in India has almost doubled in the last six years, almost a third of Indians live below the poverty line.³ This contrast is reflected in Climate Asia's findings: while 59% of well-off Indians felt their lives had improved in the last five years, people with less money were less likely to say that their lives had improved.

Differing views on whether life has got better

	Well-off	Comfortable	Poor	Very poor
Base	390	2451	2991	2253
%	%	%	%	%
Life has got better	59	50	43	29

Q: Compared to five years ago, would you say that your life is better, worse or the same now?

³World Development Indicators (WDI) by World Bank (2013) [online] Available from: http://data.worldbank.org/country/india#cp_wdi [Accessed 29 July 2013]

“There has been change from what it was like five years ago, because five years ago a phone was a rarity. But now you can see cell phones even in the hands of a kid... If we talk about change in places then there was a makeshift school before. Now the school has its own building. All this has happened in the last five to seven years... Whatever was there is there, but in a new way.”

(Man, Deowani, Rural, Madhya Pradesh, age 25–34)

Development has brought about a mix of positive changes in terms of technology, infrastructure and incomes, and negative changes in terms of the environment, loss of traditional livelihoods and changing eating habits. One example is a fishing community in Mumbai: with increasing development in the region, the natural environment has changed and the backwaters and creek where the community used to fish have receded and become highly polluted with industrial waste. This left the fishermen with no choice but to look for alternative livelihoods and they abandoned their traditional occupation for employment in industry. This also brought about a change in their eating habits, as less fish was available for consumption.

“Earlier the creek used to be up to here [pointing to the land where we were sitting for discussion]; we used to catch fresh fish when we had guests; now one has to buy fish... Now we eat chicken since fish is expensive.”

(Female, Mumbai, Urban, 45+ years)

Although the community felt unhappy about these changes in livelihood and eating habits, and blamed industries and environmental degradation for them, at the same time they felt that life had got better as their incomes had increased.

In rural areas, people were concerned that development would bring environmental problems with it:

“Technically life today is better, with better communication and other facilities. But from the environmental point of view previous times were definitely better with less pollution.”

(Man, Almora, Rural, Uttarakhand, age 16–24)

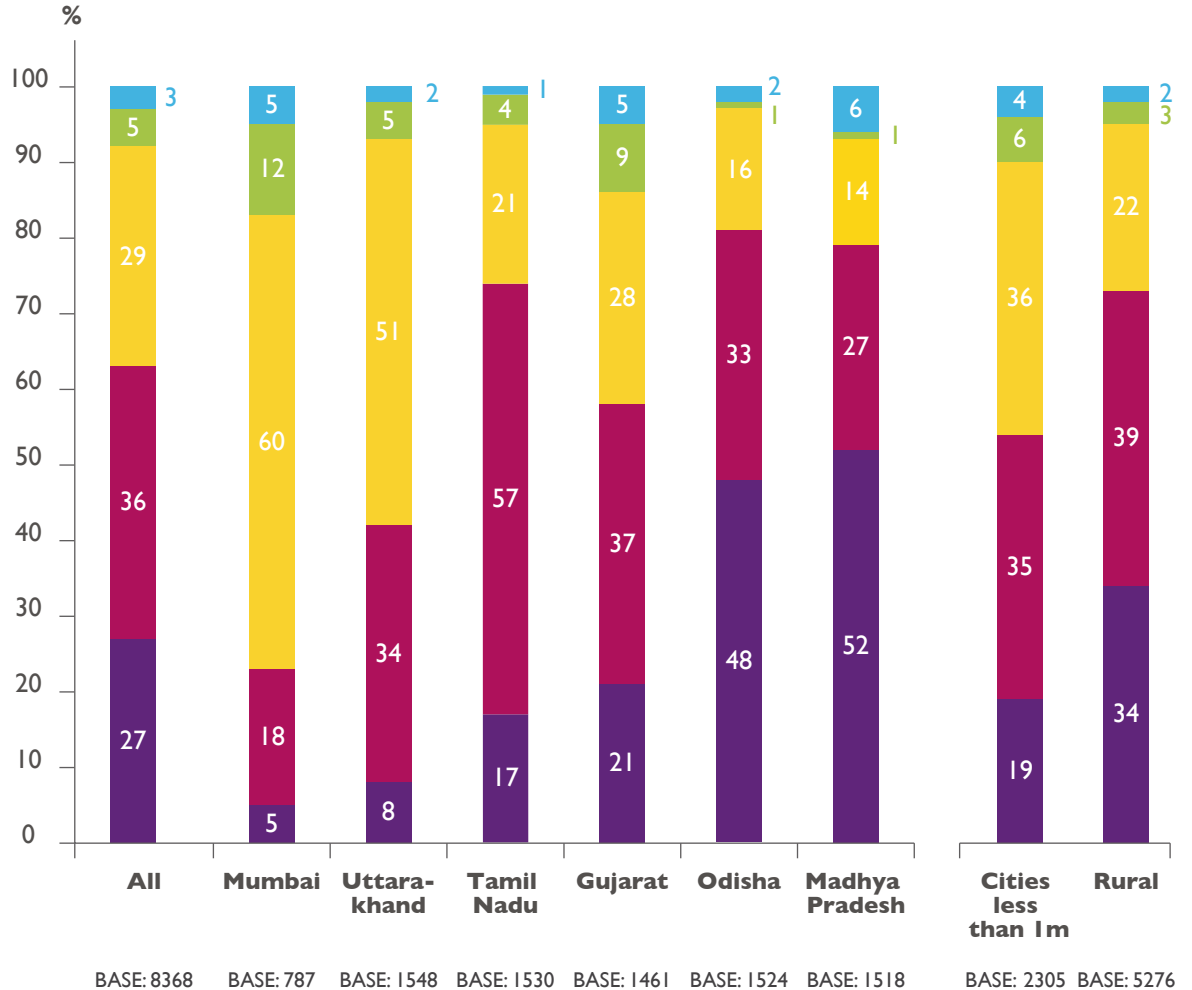
INDIA: LARGELY RURAL BUT MOVING TOWARDS URBANISATION

Of the people Climate Asia sampled, 63% were from rural areas. For the purpose of this report, cities were split into two types: megacities with a population of over one million, such as Mumbai which was analysed separately, and smaller cities with fewer than one million people, such as Salem or Uttarkashi.

Although India is still largely a rural economy, the urban economy is growing very fast. People in rural areas were more likely to be poor than those in smaller or larger cities. There were also large numbers of poor people in Odisha and Madhya Pradesh.

States and location types by resources

Very poor Poor Comfortable Well-off Don't know/didn't answer



VALUES: PEOPLE VALUE MONEY AND HAVE A LOW LEVEL OF ATTACHMENT TO THE ENVIRONMENT

For more than a third of Indians in the states and city surveyed (36%) earning as much money as possible was chosen from a list of values as the most important value shown, distantly followed by being well respected in their neighbourhood (11%). A higher percentage of people who cannot afford the basic necessities (48%) claimed that earning money was their most important value, compared with those in the well-off economic group (20%).

“Money is important for everybody so it is with me too. Without money it is impossible to have a good life and get a proper education.”

(Man, Jabalpur, Rural, Madhya Pradesh, age 16–24)

Other values that emerged as important were fitting in with the community, following religious and moral beliefs, and learning new things.

“Being in the outdoors” was not valued much in India – only 5% of the people surveyed mentioned it as the most important value. People who have a close interaction with the environment were found to value it more than others. This includes people from rural areas who live off the land and people from the state of Uttarakhand, where the van panchayats⁴ monitor the use of forests.

“We had thick forests here 10 years back and it was scary to go out in the morning for a walk, now you have so many buildings around.”

(Man, Almora, Urban, Uttarakhand, age 45+)

⁴Van panchayats are democratic and autonomous local institutions, which have been in existence since the 1920s, and manage legally demarcated village forests.

WORRIES: NOT HAVING ENOUGH CLEAN WATER TO DRINK IS A KEY CONCERN FOR MOST

Almost a third of those surveyed in India said their biggest worry is “not having enough clean water to drink”. This was followed by other worries including saving for their children’s future, not being healthy or not having enough food. Water shortage was an issue for people from diverse backgrounds, including richer people. People in the states of Uttarakhand (46%) and Madhya Pradesh (37%) were more worried about clean drinking water than others.

	All	Well-off	Comfortable	Poor	Very poor
Base	8,368	390	2,451	2,991	2,253
%	%	%	%	%	%
Not having enough clean water to drink	32	29	32	33	30
Not sending my children to school/saving money for my children's future	11	9	13	12	10
Not being healthy	11	18	13	10	9
Not having enough food to eat	10	5	4	9	21
Not having a suitable shelter/ house	9	4	7	10	11
Not having enough money to spend on items for me and my family (clothes, furniture)	9	3	8	11	7
Not having enough electricity	7	4	7	8	6
Not being able to buy the latest model of mobile phone	2	1	3	2	0

Q: Out of the following, which is your biggest worry at the moment?

CHANGES IN CLIMATE AND RESOURCES

People across the states surveyed in India noticed changes in climate and availability of food, water and energy. This section introduces the geographic regions surveyed and then focuses on people's perceptions of changes in temperature, rainfall and extreme weather events as well as the geographic, demographic and developmental factors that determine how changes are felt in their lives.

Not everyone has heard of climate change, but changes in climate have an impact on everyone. In order to find out how, Climate Asia first asked questions about people's perception of changes in temperature, rainfall and extreme weather events over a 10-year period. This was followed by a series of questions about changes in the availability of key resources such as food, water and energy and changes to their environments. Finally Climate Asia asked a series of specific questions on "climate change". This section does not include any comparison with existing meteorological or developmental records.

CONTEXT: STATE DIFFERENCES

For the purpose of our study, we selected six different locations to encompass some of India's diverse geography and socio-economic groups. Here we provide a brief description of each state and, where available, a short summary of recent changes to climate and environment.

Gujarat is a state with semi-arid zones and the longest coastline in the country. These characteristic features increase the state's vulnerability to climate change.⁵

Madhya Pradesh has the largest tribal population in the country, who are dependent on the forest, and the state is faced with frequent drought conditions.⁶

⁵Hiremath, DB and Shiyani, RL (2012) Adapting Gujarat to Climatic Vulnerabilities: The Road Ahead. [Online] *Research Journal of Recent Sciences*, 1:5, 38–45. Available from: <http://www.isca.in/rjrs/archive/v1i5/6.%20ISCA-RJRS-2012-100.pdf> [Accessed 30 August 2013]

⁶UNDP in India (2012) About Madhya Pradesh [Online]. Available from: http://www.undp.org/content/india/en/home/operations/about_undp/undp-in-mp/about-mp/ [Accessed 13 September 2013]

Odisha, situated in the eastern coastal region of the country, is also the site of the Mahanadi Delta. The area has highly variable rainfall, leaving people with periods of drought, dry spells and food shortages, as well as a risk of flash floods during the rainy season.⁷

Tamil Nadu is one of India's largest rice producers but experiences water shortages. Agricultural land in coastal areas is vulnerable to sea level rise as well as salt water intrusion into limited fresh water supplies.⁸

Uttarakhand, located in the western Himalayan region, is largely mountainous. Recent changes in the region include receding glaciers and snow lines, rising temperatures, increasing intensity and frequency of flash floods and the drying up of perennial streams.⁹

Mumbai is one of the world's megacities with a high population density; it is home to major industrial centres and financial institutions. This low-lying coastal city has a high poverty level and is vulnerable to sea level rise.¹⁰

PERCEPTIONS OF CHANGES IN CLIMATE: IT'S GETTING WARMER AND DRIER

"It's been three to four years that we get rains in the winter. It was not like this before. My parents say that when I was small, there were no rains in the winter."

(Woman, Jabalpur, Rural, Madhya Pradesh, 16–24)

Across India people have noticed changes in climate including increased temperatures (87%), decreased rainfall (82%) and increasingly unpredictable extreme weather events (65%). In the five states surveyed, perceptions of changes in climate were remarkably similar, despite their different geographic locations.

"Winter is not proper any more. Before, we had to wear sweaters by October, but these days we don't even need them in January."

(Woman, Cuttack, Urban, Odisha, age 35–44)

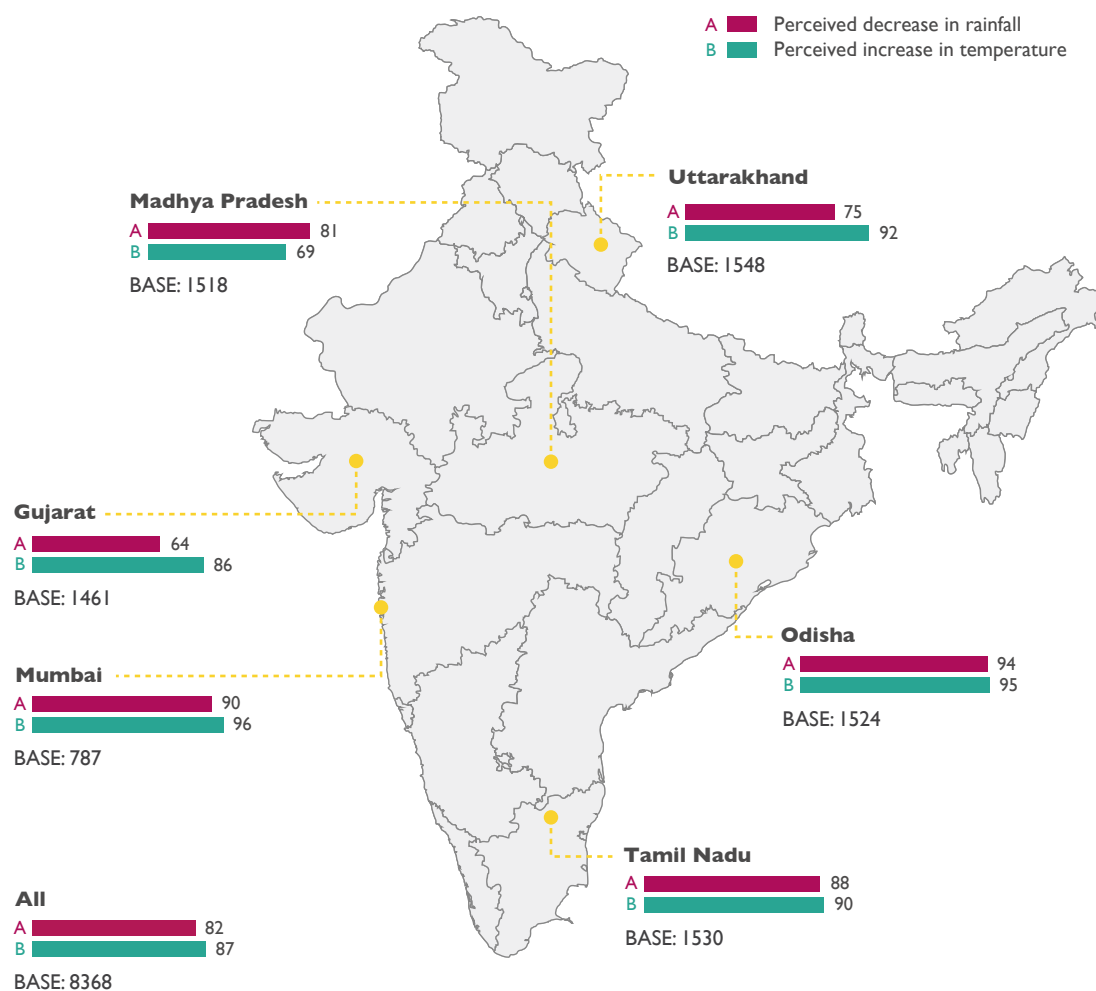
⁷ Odisha Watershed Development Mission (2009) *Climate Change Adaptation in Western Odisha: A Policy Brief* [online] Available from: <http://community.eldis.org/.59d2aaa6> [Accessed 30 August 2013]

⁸ Climate Frontlines (2009) Climate change impacts in Tamil Nadu [Online] Available from: <http://www.climatefrontlines.org/en-GB/node/424> [Accessed 13 September 2013]

⁹ Uttarakhand Government (2012) *State Action Plan on Climate Change* [online] Available from: http://www.uttarakhandforest.org/Data/SC_Revised_UAPCC_27june12.pdf [Accessed 15 August 2013]

¹⁰ Alex de Sherbinin, Andrew Schiller and Alex Pulsipher The vulnerability of global cities to climate hazards [Online] http://www.ciesin.org/documents/vulofglob_contacthtml.pdf [Accessed 13 September 2013]

People's perceptions of changes in weather by states (%)



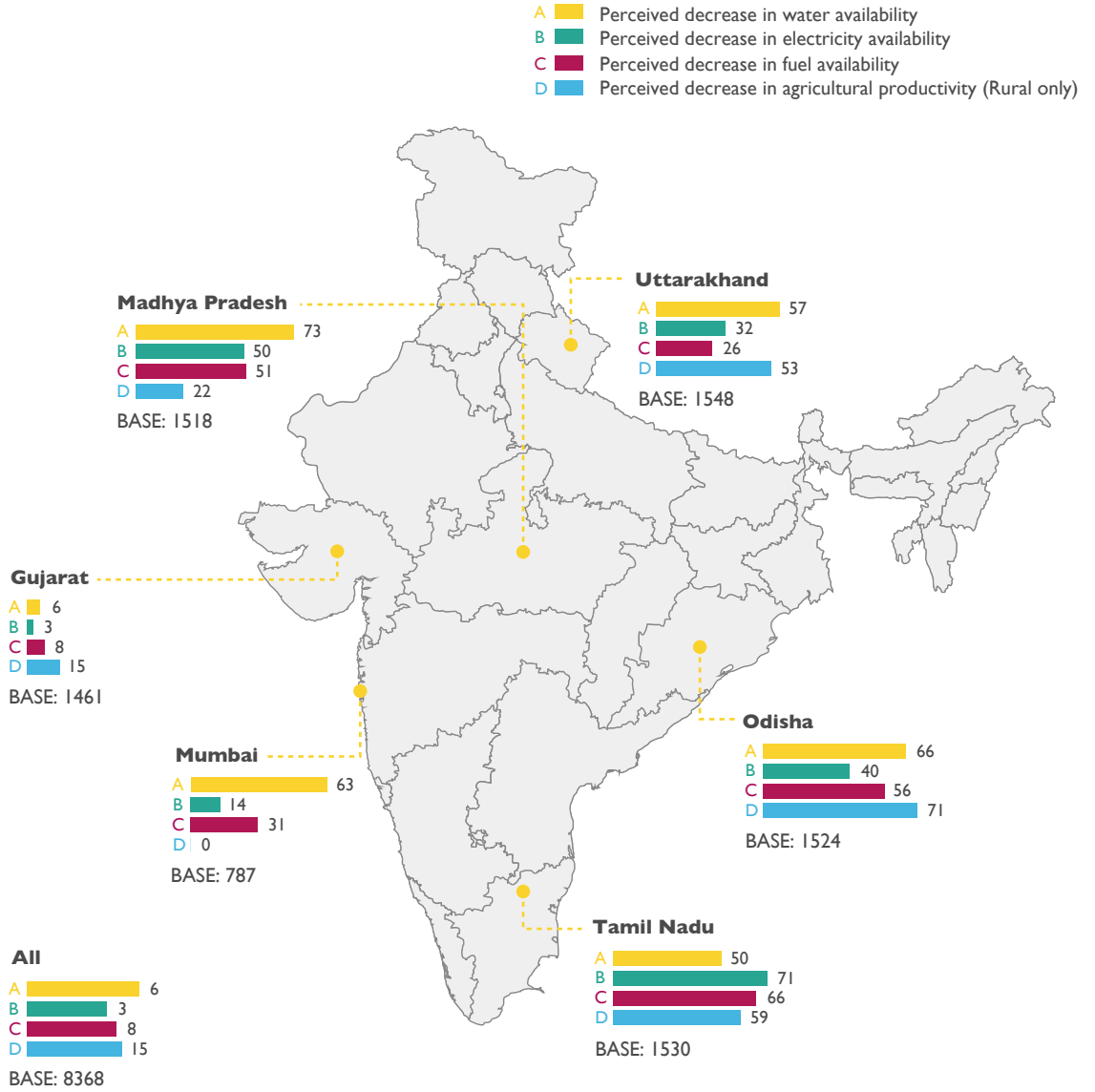
Q: In the area that you live, would you say over the past 10 years the following have increased, stayed the same or decreased?

People linked these perceived changes in climate to changes in resources including water, food and electricity, which concerned them. More than half of those surveyed felt that water availability had decreased over a 10-year period, which explains why a shortage of clean drinking water was people's biggest worry. This decrease in water availability was a big issue in the megacity of Mumbai, where 63% of people perceived a decrease compared with people in smaller towns (46%) or rural areas (53%).

People were also feeling increasing pressure on other resources. More than a third of people felt that electricity and fuel availability had decreased over the last decade.

Nearly half (44%) of people surveyed in rural areas felt that agricultural productivity had decreased. This perception of a decline in resources was perceived across all states except for Gujarat, which has undergone significant recent development.

People's perception of changes in resources by states (%)



Q: Over the last 10 years, do you think the following have increased, stayed the same or decreased?

When asked about the reasons for these changes, about two-thirds of those interviewed identified lack of rain, rising temperatures and a change in the timing of seasons. People also realised that human activity and a growing population put pressure on resources.

Causes of changes in water, food and energy availability

Base: All respondents	8368
%	%
Any mention of weather-related changes	65
Lack of rain	51
Becoming hotter	17
Changes in weather (general)	15
Changes in seasons	9
Growing population	41
Pollution	15
Soil erosion/salination	7
Migration	4
Changes in farming/planting practices	4

Q: What in your view are the causes of these changes?

Although people were aware of changes in climate, they were not uppermost in people's minds. When questioned about changes in their surroundings and in their lifestyles, people primarily talked about changes in infrastructure and general standards of living; environment and climate were only discussed after people were prompted.

Also, although people perceived changes in climate and resources, only just over 40% said they had heard the term "climate change" and knew what it meant – which is the second lowest percentage of all the Asian countries surveyed. The level of awareness was lowest among poor people but there were marked differences by state. Those in Odisha and Uttarakhand had a high level of awareness, and were more likely to believe that climate change was happening.

Awareness of the term “climate change” and belief that it is happening

	All	Gujarat	Madhya Pradesh	Mumbai	Odisha	Tamil Nadu	Uttarakhand
Base: All respondents	8368	1461	1518	787	1524	1530	1548
%	%	%	%	%	%	%	%
Heard of climate change	44	18	29	45	75	31	63
Believe climate change is happening	57	66	43	57	82	26	67

	Well-off	Comfortable	Poor	Very poor
Base: All respondents	390	2451	2991	2253
%	%	%	%	%
Heard of climate change	56	55	38	38
Believe climate change is happening	82	66	48	54

Q: Have you heard of the phrase “climate change”?

Climate change refers to “a change in climate that persists for decades or longer”. Do you think that climate change is happening?

By contrast, the experts and opinion-formers that Climate Asia interviewed had a good knowledge and understanding of climate change. They saw a need to educate the public about climate change, where appropriate using media, in ways that are simple and understandable:

“One good thing that the media can do would be to address these issues without actually mentioning the word ‘climate change’. Talk about conservation, better efficiency in energy use – those are matters which can be discussed without making people scared.”

(Member of Planning Commission, central government)



IMPACTS AND RESPONSES

In the last section, people described the impact of changes in climate and the availability of key resources, particularly water shortages. This section describes these impacts and people's responses to them in more detail.

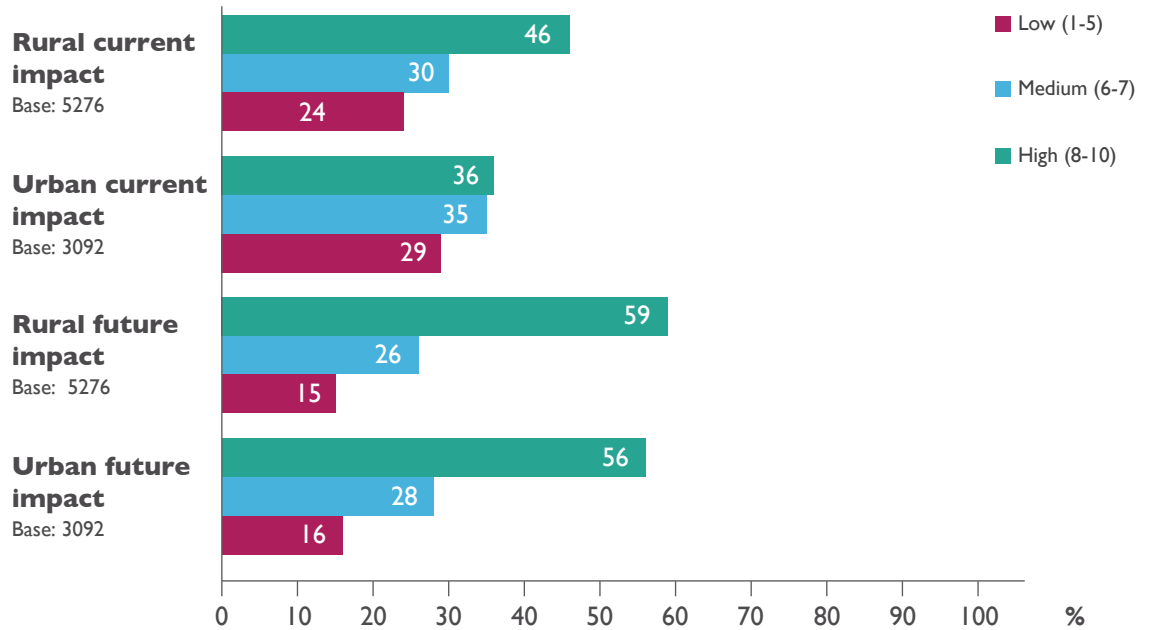
PEOPLE FEEL THE IMPACT OF CHANGES IN CLIMATE ON THEIR LIVES

People find it difficult to distinguish between impacts associated with the availability of key resources – food, water, energy – and those associated with changes in climate. Taking this into account, questions on impact in the survey were worded as follows:

“You have just answered some questions on availability of water, food, electricity and fuel and changes in weather. The next series of questions will be asking you about the impacts that these have had on your life.”

People felt these changes in climate and resources were affecting their lives and the majority of people felt that the impact of these changes would be higher in the future.

Future impact perceived as high



Q: On a scale of 1 to 10 where 1= no impact and 10 is a very high impact:

- How much of an impact do you feel these changes (access to food/water and changes in weather) have on your life at present?
- And how much of an impact do you feel these changes (access to food/water and changes in weather) can have in the future?

“We can see from these constructions [buildings] here that there is a growing population. People are migrating here and have polluted this area.”

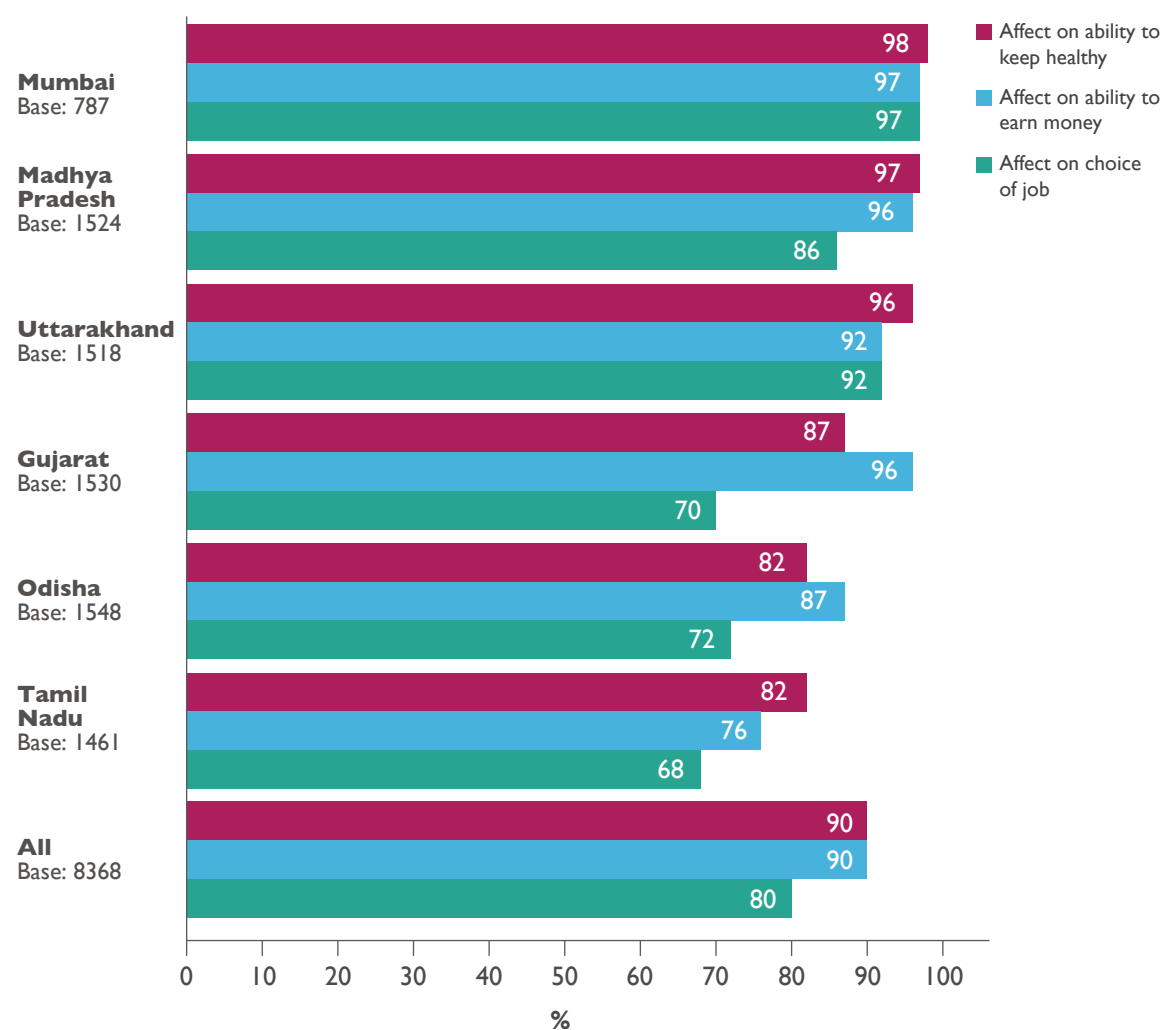
(Woman, Almora, Urban, Uttarakhand, age 35–45)

People in each state differed in the extent to which they felt the impact of these changes. For example, in Mumbai the majority of people perceived a high current impact (80%) and a similarly high future impact (77%); however, very few people in Gujarat perceived either a high current impact (15%) or future impact (23%). A variety of factors contribute to these differences in response by state: resource availability, changes in climate, information from the media and support from government and non-government stakeholders.

CHANGES IN CLIMATE ARE PERCEIVED TO HAVE AN IMPACT ON PEOPLE'S LIVELIHOODS AND HEALTH

When asked specifically about the impact of the changes in climate and resources on livelihoods and lifestyle, people across the different states claimed that these changes had affected their ability to earn money (90%), their ability to stay healthy (90%) and their choice of job (80%). This concern about loss of money and the effect on health is higher in India than in any of the other six Climate Asia countries.

People feel the impact of changes in climate



Q: In your opinion, overall, how have these changes (access to food/water and changes in weather) affected:

- a. Your ability to keep healthy? b. Your ability to earn money? c. Your choice of job?

"... For the last five years our crops have been infested with pests... things are not the same. Now rains come whenever... summers have become very hot, even aquifers dry up... previously we used to have sufficient water but now temperatures are very high... now it doesn't get very cold and we don't get enough snow, but it gets extremely hot, all because we destroyed our jungles."

(Woman, Parwari, Rural, Uttarakhand, age 45+)

When asked how changes in climate and resources were affecting them, 90% of people said they were affecting their ability to stay healthy.

Nearly all – 98% – of people in Mumbai said that changes in climate have an effect on their health, and not being healthy was the biggest worry for 17% of the people.

"Malaria is more prevalent in the rainy season because of the stagnant water all around. Contaminated water is the cause of jaundice. We use filters in the rainy season."

(Man, Mumbai, Urban, age 16–24)

People feel that their livelihoods and health have been affected

People could make the connection between changes in climate and the effect on livelihoods.

"We never saw mosquitoes in winter, only in summer. But these days we see them all the time. There is a large impact on health because of change in climate."

(Woman, Almora, Urban, Uttarakhand, age 35–45)

In rural areas, people were concerned about an increase in disease that, in turn, increases their expenses.

"During sickness we have to pay for the doctor and for medicines. These are expenses coming out of income."

(Man, Deowani, Rural, Madhya Pradesh, age 45+)

PEOPLE MAKE CHANGES TO THEIR LIVELIHOODS

Respondents were asked whether they had made changes to their livelihoods because of issues related to lack of food, water, energy and increased extreme weather events.

Climate Asia's use of the terms "adapting", "making changes", "changing livelihoods" or "changing lifestyle" refers to people's responses to the impacts of changes in climate, key resources, environment and extreme events. Climate Asia's analysis does not include a reflection on the extent to which these changes or responses might be positive or negative in the short or long term, or how effective they might be. It does, however, assume that people need to adapt to changes.

In response to these changes in climate and resources, about a fifth of Indians surveyed had made changes to their livelihoods. There are differences by state – people in Odisha had made more changes (38%) compared with people in other states.

The changes people made to their livelihoods included supplementing their income (42%), growing alternative crops (25%), migration (11%), changing jobs (10%) and seasonal migration (9%). The majority of the people who changed their livelihoods were from small towns or rural areas.

WATER: PEOPLE TAKE SIMPLE ACTION

People across all economic classes were worried about the decreasing availability of clean water.

How changes in rainfall can have an impact on people's lives



Using more fertilisers

“It is better that we use these chemicals and fertilisers if we can increase the production that way.”

Having to buy more livestock

Medicines

“With contaminated water we can fall sick then where is health? And when we spend to get treated where is the wealth?”

Buying clean water

“We will have to buy water.”

Lower income

“We are selling our lands for money – there is poverty here.”

Migration to cities

“People have left this village and become migrant labourers in other states. They move when they face losses in agricultural and farming work. They are working in industries.”

Note: The above quotes are from focus groups in Almora (Uttarakhand), Cuttack (Odisha), and Jabalpur (Madhya Pradesh).

The majority of people surveyed were taking simple action to deal with a lack of water, such as making water safe to drink (56%) or storing and saving water (40%). People with higher purchasing power were making more changes; those who struggled to afford basics such as food and clothing were found to have lower response rates.

Current responses – water

	All	Well-off	Comfortable	Poor	Very poor
Base: Half of the sample	4231	203	1247	1497	1158
%	%	%	%	%	%
Making water safe to drink	56	61	63	60	44
Storing/saving water	40	38	45	44	30
Finding a new water supply	27	34	27	29	23
Recycling water	22	21	24	23	20

Q: Which of these actions are you currently doing?

In one community in Madhya Pradesh, people with more financial resources were using water pumps, while poorer people in the same community were managing with traditional sources such as wells or hand pumps installed by the panchayat (a form of local government in India run by locally elected citizens).

AGRICULTURE: PEOPLE TAKE ACTION

A large percentage (44%) of people living in rural areas felt that agricultural productivity had declined over the last 10 years. This concern was felt by people in all economic classes in rural

areas, and particularly in the states of Odisha, Tamil Nadu and Uttarakhand. Farmers felt that crops were failing because of unpredictable rain.

Around one in five farmers were found to have made changes to their livelihoods and one in three had changed their lifestyles in response to these concerns.

In addition, people felt that food prices were increasing. In communities across the states,

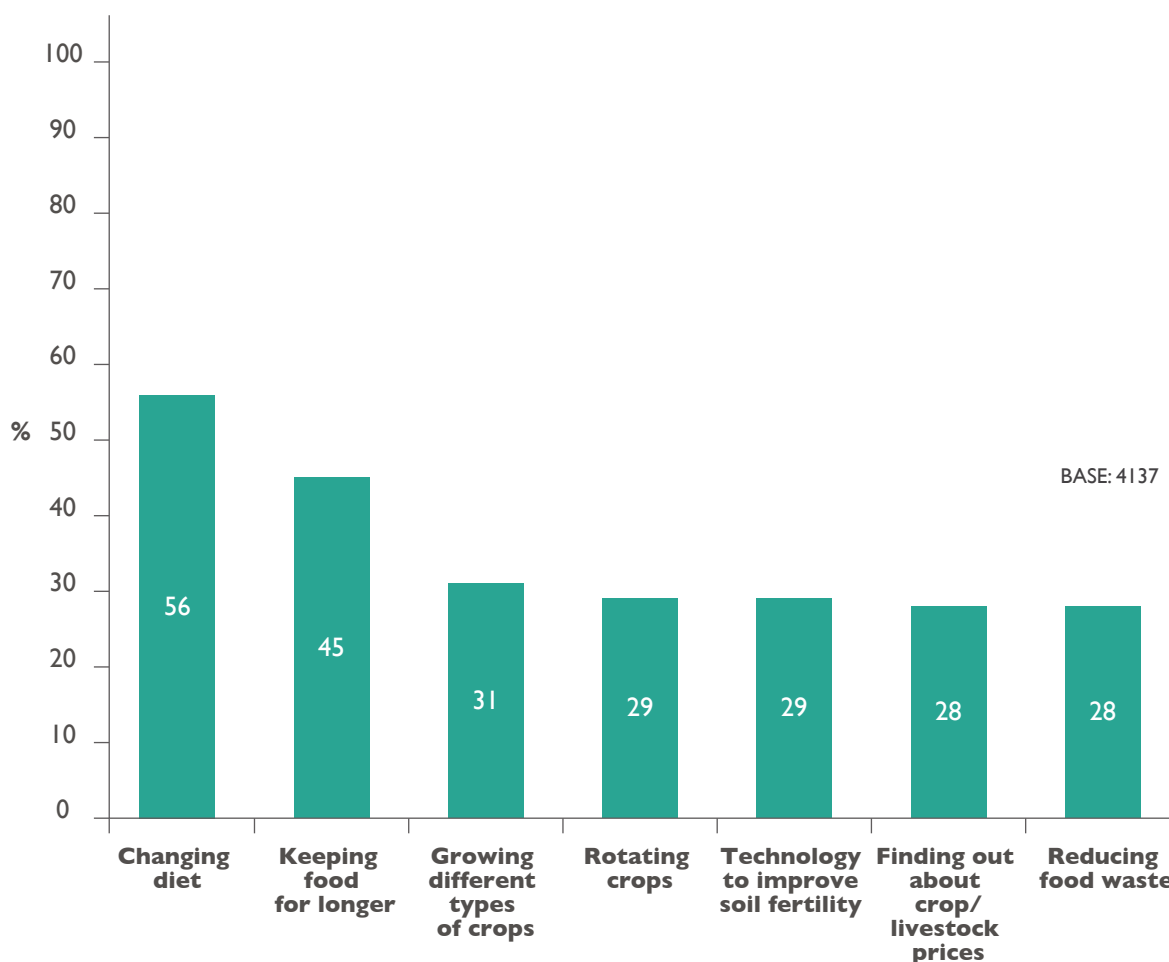
people were eating wheat and rice that they received from the public distribution system and selling what they had grown themselves to earn money.

“Previously there used to be rain for four months. Now we get rain throughout the year. It rains in summer, it also rains in winter. Then, it does not rain enough in monsoon, when we need it. It is not predictable any more... our crops get affected badly.”

(Man, Cuttack, Rural, Odisha, age 35-44)

People were taking steps to deal with a lack of food availability, including changing their diet (56%) and keeping food for longer (45%).

Current responses – food



Q: Which of these actions are you currently doing?

In a community in rural Gujarat, people were happy with the arrival of electricity as it had enabled them to buy refrigerators that helped them to store food for longer. In other communities, people cooked as much as they could finish within the day as they did not have the means to store food.

In rural areas people were also responding by using new and traditional farming practices – rotating crops, using technology to improve soil fertility, growing different crops or finding out about crop prices.

ENERGY: PEOPLE IN CITIES ARE ABLE TO TAKE MORE ACTION

More than a third of people felt that the availability of electricity and fuel had decreased over the last decade – more in rural areas. To respond to this decrease in electricity availability, the majority were found to be using electricity more efficiently (64%). Some were also using alternative fuels (29%). People in cities seemed to be taking more action compared with those in rural communities, with 39% in urban areas using alternative fuels as opposed to 23% in rural areas.

Just under one-fifth of people use renewable sources of energy, which were slightly more popular in urban areas. In rural communities, people preferred to stick to traditional alternative sources, such as firewood and cow dung cakes for household purposes and diesel for machinery.

Energy – people in cities respond more although rural people feel more impact

	All	Urban	Rural
Base: Half of the sample	4231	1504	2727
%	%	%	%
Using electricity more efficiently	64	68	61
Using less/alternative fuel	29	39	23
Neighbourhood awareness campaign	27	30	26
Using renewable sources of energy	17	23	14
Using public transport (only urban)	74	74	-

Q: Which of these actions are you currently doing?

EXTREME WEATHER EVENTS: PEOPLE NEED LONG-TERM SUPPORT

Almost a third of the people surveyed felt at high risk of extreme weather events, for instance cyclones or floods. People felt particularly at risk in Odisha and Mumbai. **However, only about a quarter felt prepared for such an eventuality.**

High perceived risk in Odisha and Mumbai but a low level of preparedness

	All	Gujarat	Madhya Pradesh	Mumbai	Odisha	Tamil Nadu	Uttara-khand
Base: All	8368	1461	1518	787	1524	1530	1548
%	%	%	%	%	%	%	%
High risk of extreme weather event	29	26	12	49	58	10	31
Feel prepared	23	33	7	23	29	23	21

Q: How at risk do you feel your neighbourhood is for experiencing an extreme weather event eg floods, drought, cyclonic storm etc? On a scale of 1 to 10, 1 means your neighbourhood is at no risk and 10 means it is at high risk. If a flood/drought/cyclonic storm were to happen in your local area, how prepared do you think you would be?

“The road that you came on is fully flooded. Even in the rainy season we keep going to other villages and come back as if nothing is changing. Why live in fear of something? We are like the fishermen. They go into the waters regardless. They don't fear. We are the same. That is the preparation... We don't do anything special for the floods. What can we do?”

(Man, Deowani, Rural, Madhya Pradesh, age 45+)

More people in cities than in villages claim to be taking action, such as having a disaster preparedness plan (31%) and making permanent adjustments to their houses (29%). In rural areas lack of resources can be a barrier to action; however, around half of people in cities (58%) and rural areas (47%) do listen to weather forecasts.

Overall, responses varied more by people's purchasing power and location than by their gender or age.

Extreme weather events – people need support for the longer term

	All	Urban	Rural	Well-off	Com- fortable	Poor	Very poor
Base: Half of the sample	4137	1588	2549	1834	1204	1494	1095
%	%	%	%	%	%	%	%
Listen to weather forecasts	52	58	47	53	58	57	37
Learn first aid	32	33	32	33	38	34	22
Learn to swim	31	29	32	36	31	31	33
Sign up for early warning alerts	28	31	25	30	31	27	22
Disaster preparedness plan	24	31	20	24	26	24	21
Permanent adjustments to my home	22	29	18	23	26	19	21
Take out insurance	20	28	14	21	29	15	13
Temporary adjustments to my home	17	23	14	17	21	17	12

Q: Which of these actions are you currently doing?

FACTORS THAT ENABLE OR PREVENT ACTION

This section identifies key factors that enable or prevent action in response to changes in climate and availability of key resources. It includes analysis of people's stated barriers and motivations and of factors that are associated with higher rates of response.

PEOPLE DON'T BELIEVE INDIVIDUAL ACTIONS WILL MAKE A DIFFERENCE

The highest barriers affecting response were related to a lack of motivation as well as people's lack of faith in their own ability to deal with these issues.

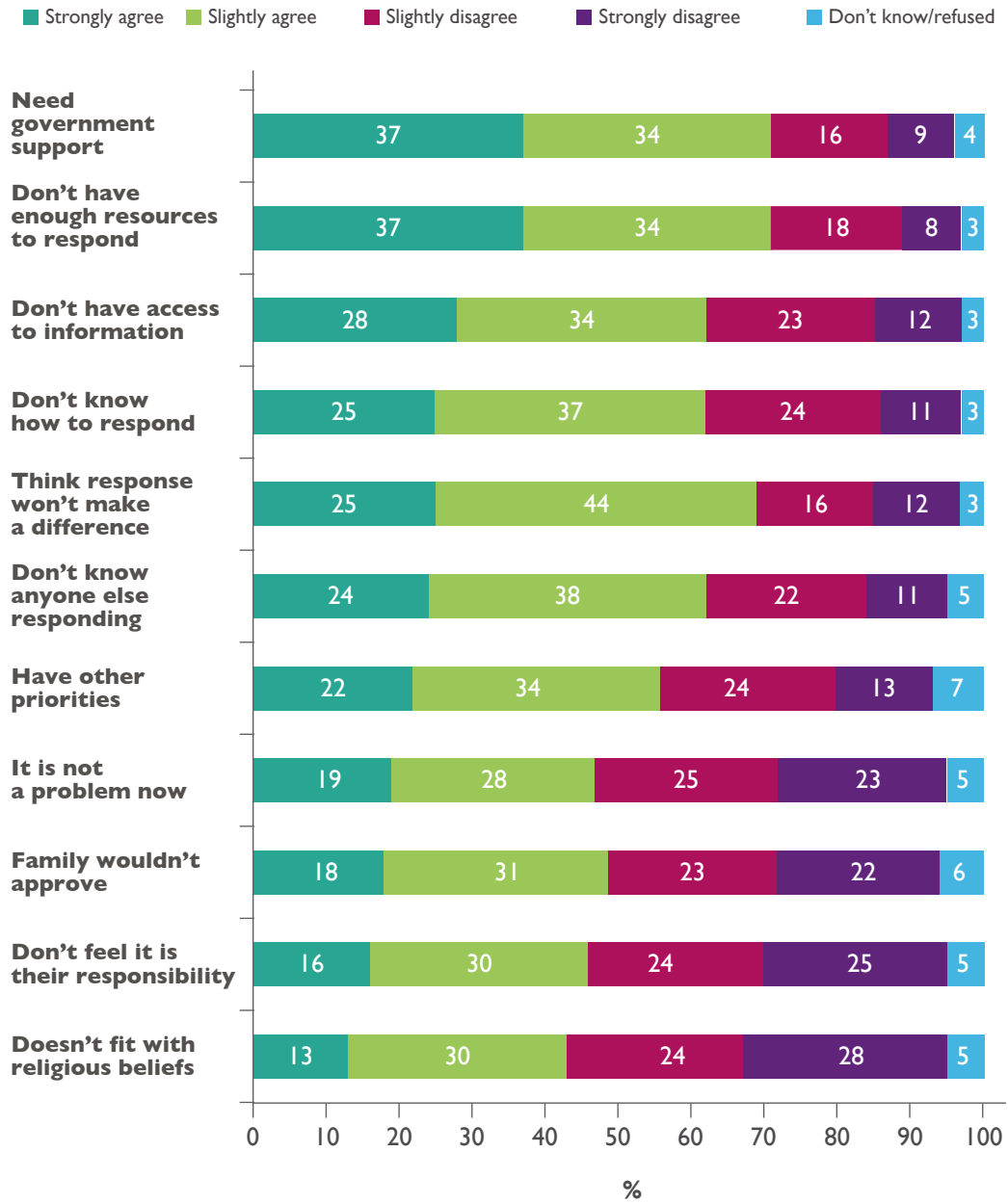
People identified a lack of government support, a lack of resources and no access to information as their main barriers to responding to the changes in climate they'd noticed and the impacts they had felt.

Fatalism was a barrier for some people who believed in divine will as the cause of these changes. More than a quarter said they would pray to God in the case of an extreme weather event.

"God is angry with us. So he is changing the weather so that we feel hotter and colder and get more rain."

(Woman, Deowani, Rural, Madhya Pradesh, age 16-24)

People don't believe individual actions will make a difference



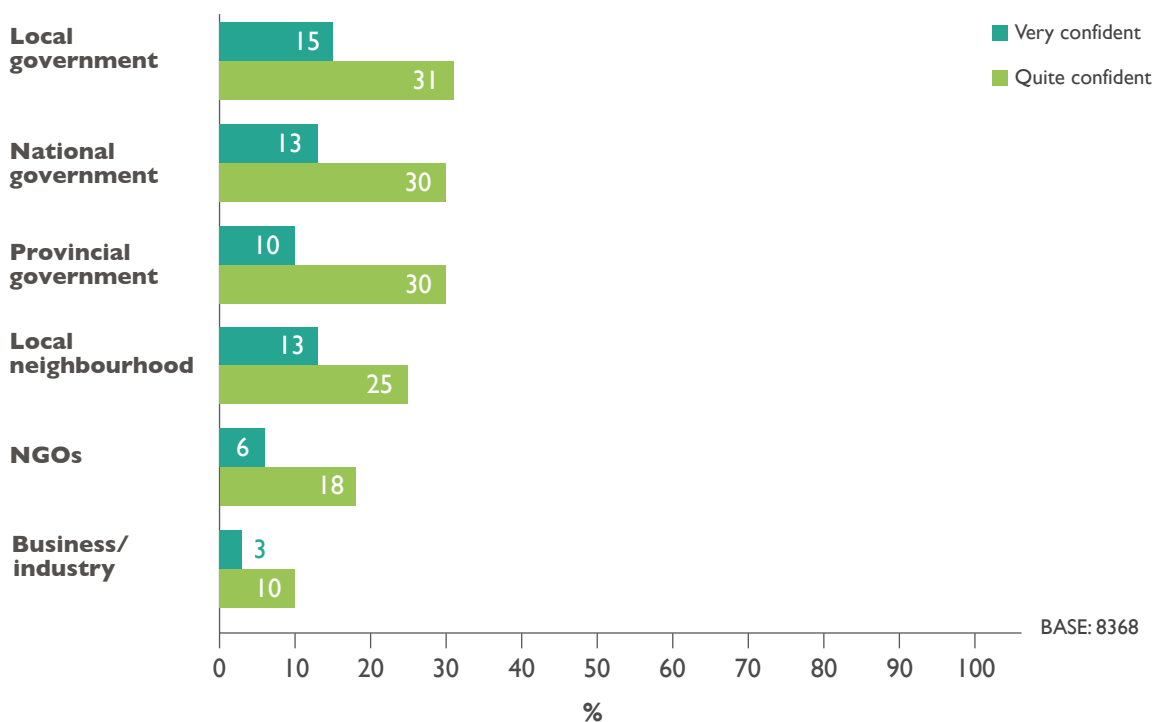
Q: I am now going to read out some statements that people have given as reasons for why they have not taken actions to respond to changes/impacts.

LOW CONFIDENCE IN GOVERNMENT AND INSTITUTIONS

“Needing more support” was the key barrier to response among Indians surveyed. Linked to this, more than half the people surveyed did not have confidence in government at any level – national, state or local. People had slightly more confidence in their local government.

People also trust local institutions more than non-governmental organisations or business, as can be seen in the chart below.

Low confidence in government and institutions



Q: How confident do you feel that each of the following institutions is taking the necessary actions to help respond to changes in water, food, energy supplies or weather?

Many communities expressed their disappointment with their regional government. Frustrations included the government not being there to support them with floods, not solving electricity problems and not acting on their concerns.

“We do take part in strikes and write petitions to government and organise a ‘chakka jam’ [stopping the traffic in a city so that the government gets the message] and other protests. Then a politician comes and talks to all of us and gives us assurances. Then nothing happens. It’s the same situation again.”

(Man, Jabalpur, Rural, Madhya Pradesh, age 25–34)

“[There is] compartmentalisation of different sectors or subsectors. We say, ‘OK, we work in the water sector, I work in the forest sector, you work in climate change.’ The scientific community, this is how it’s divided, this is how government departments are divided... But when it comes to finding solutions for climate change, which is not a watertight problem, this becomes multidisciplinary or multi-departmental or multi-sectorial... We are working in climate change but in order to find solutions to one problem, we may be generating another problem.”

(Dr Neeraj Khara, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), thematic expert)

Experts and opinion-formers also noted that the government departments were not coherent in their approach to implementing policies to help respond to changes in climate and consequently people lacked resources and information.

The Indian government is working at multiple levels to deal with climate issues. In June 2008, the government of India launched a National Action Plan on Climate Change (NAPCC), which will run until 2017. Its remit is to lay out a national strategy for responding to the challenges of dealing with climate change while maintaining an emphasis on high economic growth rates that would raise overall living standards.¹¹

State governments are also preparing adaptation plans that deal with their specific challenges and circumstances. However, neither the national plan nor the state plans include a significant focus on communication about climate change to the public. Experts interviewed lamented a lack of co-ordination in communication on climate and highlighted how some government-backed scientific innovations were not reaching and benefiting the people.

State difference in government intervention also came out clearly when visiting communities. The government was helping people respond to recent natural disasters in a community in Tamil Nadu. As a result the community was better equipped to cope with current changes and future events – in particular they appreciated new, more secure housing and water systems.

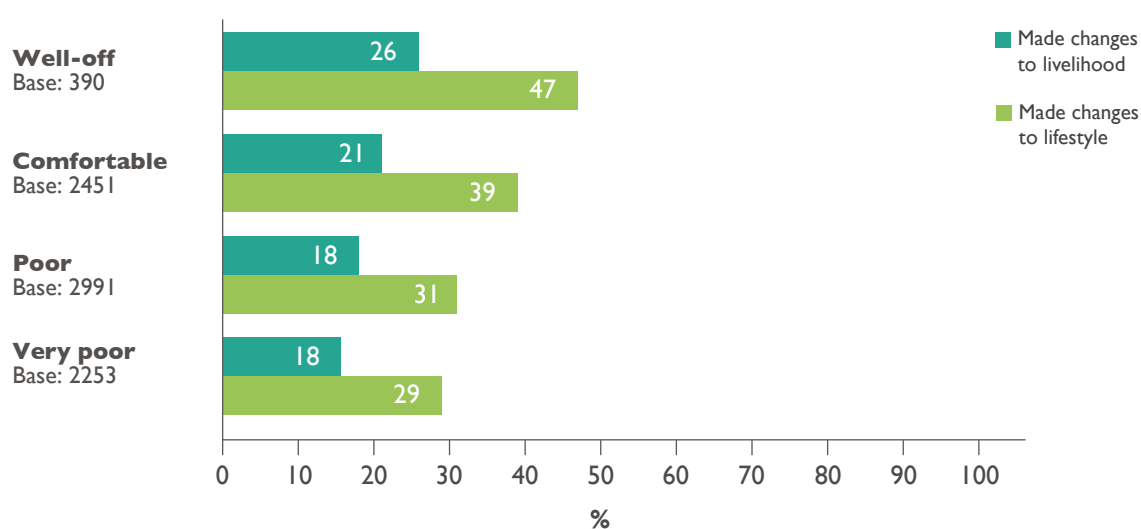
¹¹Summary: India’s National Action Plan on Climate Change [online] Available from: http://www.climateactionprogramme.org/news/summary_indias_national_action_plan_on_climate_change/ [Accessed 23 August 2013]

This was in contrast to another community in Madhya Pradesh where people felt impacts of changes in climate but did not receive much government support and therefore had a low level of response. People in focus groups were mainly critical of the government's role in supporting them; however, they did mention ways that support had been provided, including alternative sources of fuel, information on new crops, and vaccine programmes to prevent diseases.

Experts and opinion-formers also noted the important role government had to play at a national, state and local level in helping people respond to changes in climate.

People also showed little faith in both the business communities and non-governmental organisations (NGOs). In a tribal village in Odisha located in a region where there are aluminium mines, people blamed the mining companies for depleting resources, cutting down forests and creating water shortages. In Uttarakhand and Mumbai men felt that NGOs did not provide meaningful support to the community, while women reported that NGOs were working in the community but were not particularly effective.

Resources important for response



Q: Have you made changes to your current livelihood/job to help cope/deal with changes in water, food, energy supplies or weather you might be facing?

Have you made changes to your current lifestyle/way of living to help cope/deal with changes in water, food, energy supplies or weather you might be facing?

Richer people, who were more likely to be better educated, were also more likely to take action to prepare for extreme weather events by signing up to early warning alerts and listening to weather forecasts.

COMMUNITY ENGAGEMENT IS IMPORTANT IN SUPPORTING RESPONSE

People discuss issues related to food, water, fuel and extreme weather events mainly with others in their household or local neighbourhood (over 85%). Discussions at the larger community level (panchayat level in rural areas) are relatively low (42%) compared with other Asian countries, especially in Uttarakhand and Odisha, where less than 10% of people talk about such issues at the community level.

COMMUNITY CO-OPERATION CAN MAKE A BIG DIFFERENCE

In Madhya Pradesh people in two communities reeling from severe drought for the past eight years had not seen much development and felt that the future impact of environmental changes would be quite high. Yet they were very different in their responses.

One community was heterogeneous with people of multiple castes living in separate hamlets, and access to resources including water was based on the caste membership. The lower caste people in the community did not have access to water pumps. The community did not work together to deal with water shortages and the community and its panchayat leaders did not seem particularly willing to work together to find solutions.

The other community, just 15km away, was smaller and more homogeneous, but people were responding to water shortages. This community had only one radio, which a resident nicknamed “Khabrilal” (person who provides information) listened to and then mobilised his friends to participate in a rural radio competition, developed by Development Alternatives, India. He began to use organic manure on crops and this successful experiment won him the competition. Subsequently more people in the village began to adopt this technique.

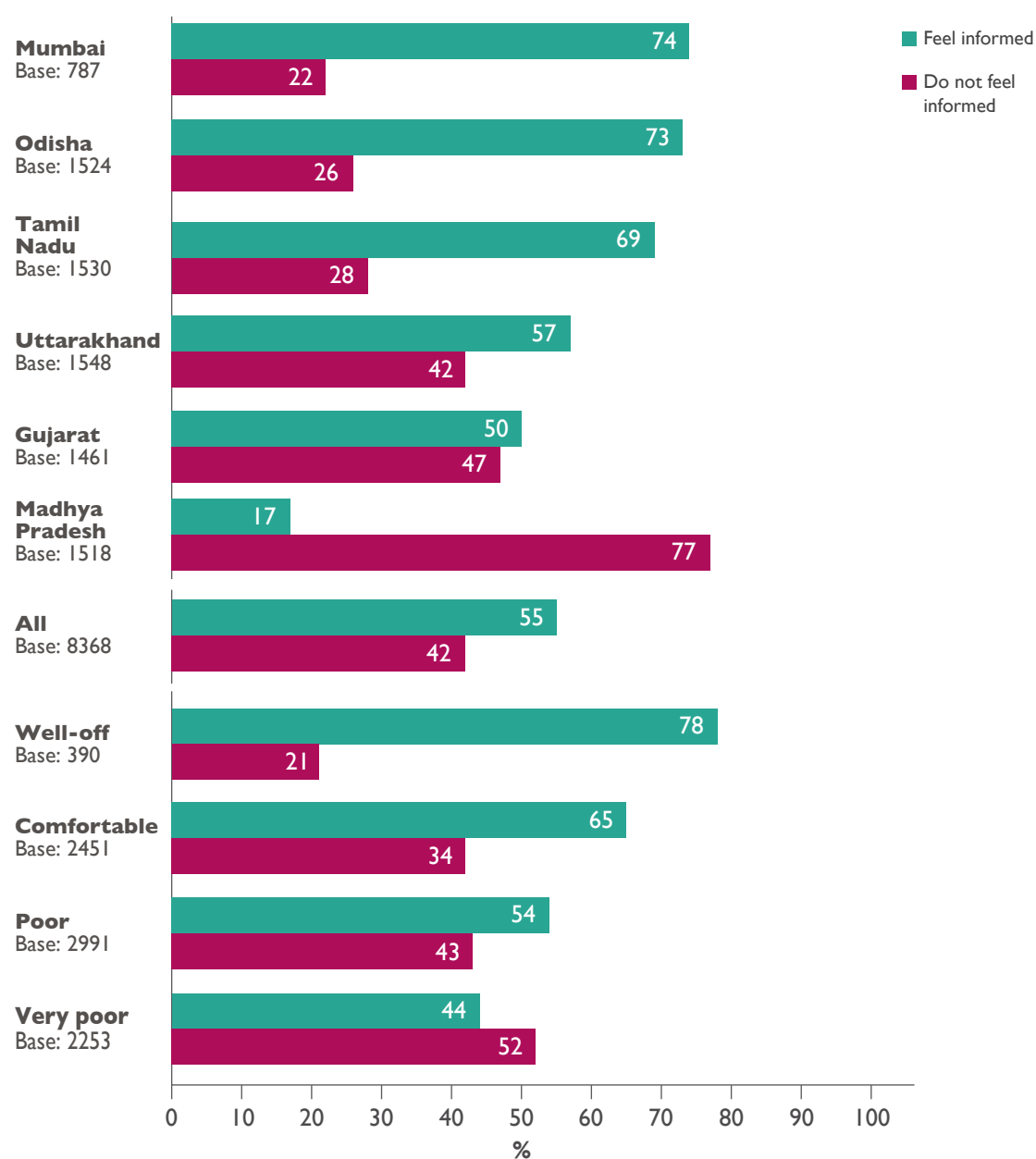
A community led by a young girl who demonstrated the use of waste water from household chores to grow and nurture a kitchen garden in a water-scarce community was the runner-up.

The stark difference between the two communities highlights the role of community co-operation, the use of media and the importance of a trusted intermediary to reinforce the information explored in the radio programme.

LACK OF INFORMATION IS A BIG BARRIER

Lack of information is a big barrier to responding and 42% of people did not feel well informed about how to cope with the impacts of changes in climate. This is particularly true in the state of Madhya Pradesh, where more than three-quarters of the population do not feel well informed. Very poor people (52%) and rural communities (46%) feel less informed.

Lack of information is a big barrier



Q: How well informed do you feel about the things you could do to cope/deal with the changes in water, food, energy supplies you might be facing?

PEOPLE ARE NOT WILLING TO MAKE CHANGES AND DO NOT FEEL IT IS THEIR RESPONSIBILITY

Over half of the Indians surveyed in the selected states were not willing to make changes to their livelihoods in comparison with about a third in the other six Climate Asia countries. Similarly, over 40% were not willing to make changes to their lifestyles, compared with about a quarter who were not willing in the other countries.

This lack of willingness to change is due, in part, to people doubting that they can take action that will improve their overall situation. Large numbers of people (69%) felt that taking action would not make a difference. Many also said that they have other priorities (57%) and that it was not their responsibility to act (46%).



The following quotes illustrate the general perceptions of people across states – very few people accepted responsibility for change.

Do people take action to respond to the changes they notice?

“The thing is if the problem has any solution it makes sense to pursue it. But this problem doesn’t have any solution. That’s why we are not doing anything.”

“Just four or five people can’t do anything. So it is only government that can do something about it.”

What about the government?

“The government is not doing anything. What can we do? They come around election time to ask for votes. Then we don’t see them.”

What about the NGOs?

“We can do a lot of things but we need someone to lead in a dedicated way then we shall support the cause. No NGO is working here.”

India was one of the countries where people felt less responsibility for doing things without outside support. People in countries such as Indonesia and Bangladesh felt that they needed to take action themselves. One woman in Indonesia typified this feeling of personal and community responsibility:

“We shouldn’t rely too much on our government. They are loaded down with other things. As a community we have our responsibilities as well. Let’s learn together to do something about the floods, shall we?”

(Woman, Pelalawan, Peri-urban, Indonesia, age 35–44)

FOCUS ON INDIVIDUAL ASPIRATIONS TO HELP MAKE CHANGES

To overcome these barriers requires an understanding of people’s motivations for action. Over 90% of people cite the following as their motivations for taking action to respond to changes in climate and resources:

- A desire to be healthy
- A concern for the natural environment
- The wish for a better future for their children
- The need to survive

Thus communication aimed at encouraging action could highlight the resulting health benefits or the importance of making changes now to benefit the next generation.

MANDLA: SUCCESS INSPIRES CHANGE

An intervention by an NGO in Mandla – a tribal district situated in the east-central part of Madhya Pradesh – demonstrates how tapping into people’s motivations can encourage action.

Mandla has rich forests and its agriculture is mainly rainfed, with kodu and kutki (millets) as staples in this region. The community reported that they had faced food shortages until a few years ago, as they had only been able to produce one crop a year and the quality and cover of the forest had also been degraded because of environmental changes. Further, people were not legally allowed to access the forest resources and produce, on which they had traditionally depended for their survival. For all these reasons, most people had to migrate for work.

The Foundation for Ecological Security has been promoting non-traditional agricultural practices such as using bunds (water catchment dikes or dams to reduce soil erosion) and agroforestry. Several farmers shared their success stories of bunding, which has helped them retain soil and water in low-lying areas, in turn helping them to grow wheat and other crops that require deep soil layers and more water. Their financial success has subsequently led to more widespread acceptance and helped other farmers overcome barriers to change.

UNDERSTANDING STATE DIFFERENCES

Our research shows that there is a lot of variation in findings at a state level in India. This section summarises these differences.

GUJARAT

(Base: 1461)

Context: More than half the people in Gujarat felt that life had got better in the last decade thanks in part to the state's rapid growth.

Awareness of changes: People in Gujarat had noticed changes in climate, in particular an increase in temperature.

Impact: People do not feel a high level of risk now and are hopeful that they will not face impact in the future. However, when asked specifically about these changes having an impact on their ability to earn money, 96% said that their ability to earn money had already been affected.

Action: The current level of response is not high but people are willing to make changes in the future.

Barriers and motivators: A major barrier to action was that people felt that they cannot make a difference. People were motivated by concerns about the natural environment and wanting a better future for their children.

Influencers and media: People had confidence in governments and the local neighbourhood but did not trust NGOs much. Over 40% of people were aware of any existing initiatives on climate change – mostly from television advertising or a television programme. People relied on multiple sources for information on changes in climate and availability of resources – friends, family, teachers, scientific experts and religious leaders. Television and mobiles had almost 70% reach and local newspapers were popular.

MADHYA PRADESH

(Base: I518)

Context: Madhya Pradesh is a state where people struggle to access basic resources – more than half of its population found it difficult to afford food or clothes. More people in Madhya Pradesh than in any other state claimed that “earning as much money as possible” was their most important value. Their biggest worry was not having enough clean water to drink.

Awareness of changes: People in the state perceived decreases in all resources, especially water, with nearly three-quarters reporting a decrease in water availability over the last 10 years. People perceived a decrease in rainfall and an increase in temperature. However, less than one-third of people had heard of the term “climate change”.

Impact: Over half the people of Madhya Pradesh currently feel high levels of impact and believe that future impact will be even higher. Again, over 90% felt that these changes have had an effect on their ability to earn money and on their health.

Action: The proportion of people in the state responding now is very low. Their willingness to respond in future is also low. About a third are making water safe to drink, which links to their biggest worry about the lack of clean drinking water.

Barriers and motivators: People felt that they were not well informed to respond. There was a high level of apathy as well as a need for government support even though confidence in government institutions was low. It was the only state where more than three-quarters of the population reported that they were not well informed about actions to take to cope with changes in access to water, food, energy supplies and the impacts of extreme weather events.

Influencers and media: Over a quarter of people in Madhya Pradesh were aware of any existing initiatives on climate change and environment – mostly through television advertisements. The people relied on multiple sources for information on change – ranging from family and friends to local opinion-formers, health workers and teachers. Only about half of the population had access to television and a similar number had access to mobile phones. There was low penetration of all other forms of media.

ODISHA

(Base: 1524)

Context: Odisha is the only state where food scarcity is as big a worry as a shortage of clean water – almost a third of people from Odisha said that their biggest worry was not having enough food to eat.

Awareness of changes: People in Odisha had noticed changes in both climate and resources, especially a decrease in agricultural productivity in the last 10 years and an increase in extreme weather events. Of the states surveyed, people in Odisha had the highest awareness and understanding of climate change (75%).

Impact: People feel that the future impact of changes in climate and availability in resources will be higher than the current impact. A high number of people felt that these changes were already having an impact on their livelihoods, health and ability to earn money.

Action: As well as being very aware of climate change, many people in Odisha were also well informed about how to respond; some are already adapting and are willing to make changes. About 40% have made changes in their livelihoods by either supplementing their income or growing alternative crops.

Barriers and motivators: People were motivated by a need to survive and to be healthy.

Influencers and media: People had faith in the national and local government and the highest exposure to existing communication on climate and the environment (70%) of all the states surveyed. This was from television and radio programmes and from television advertising. About 60% of people had access to television and 50% to mobile phones. Access to radio was limited to 15% of the population. Local language media was very popular.

TAMIL NADU

(Base: 1530)

Context: Over a quarter of the Tamil Nadu's people were worried about not having enough clean water to drink. Almost one-fifth of the population was worried about not being able to save for their children's future.

Awareness of changes: People in Tamil Nadu have experienced large changes in resources – especially decreases in electricity access and fuel availability – and have noticed large decreases in rainfall and increased temperatures.

Impact: People do not see an increase in extreme weather events and the current perception of risk is low. Tamil Nadu's citizens do not feel that the changes in climate are affecting them now or will do so in the near future.

Action: Although people took relatively little action overall, a high number of people (53%) knew that collecting rainwater was an appropriate response to water shortage. This could be a result of the Tamil Nadu state government's emphasis on rainwater harvesting.

Barriers and motivators: Even while people felt the need for government support, they also felt that change was their responsibility. Thus more people in Tamil Nadu than in other states are adapting and willing to adapt.

Influencers and media: People had faith in the government and their local neighbourhood but little confidence in NGOs. There was a low level of awareness of any existing initiatives on climate change (9%). People received information on the impacts of changes in climate and resources from friends, family and people in the neighbourhood. There was high penetration of television and mobile phones, and over 50% of people read newspapers. Radio was not very popular.

UTTARAKHAND

(Base: 1548)

Context: The biggest worry for almost half of the people in this state was not having enough clean water to drink – which was higher than in other states surveyed.

Awareness of changes: The people of Uttarakhand had a high level of recognition of changes in climate and changes in resources – more than half were concerned about decreases in water

“If we are healthy or wealthy, without a good environment that is of no use because we may not live to enjoy all that.”

(Man, Almora, Rural, Uttarakhand, age 16–24)

availability and agricultural productivity in the last decade. A high percentage of people (63%) had heard the term “climate change” and an equally high number (67%) believed it is happening. In the qualitative research, people in Uttarakhand also showed a strong affinity with their environment.

Impact: Half of the population felt a high current level of impact as a result of changes in climate and availability of resources, and the majority felt that this impact would be higher in the future. Over 90% of people said these changes had an impact on each of the following: their livelihoods, ability to earn money and ability to stay healthy.

Action: Almost one-quarter of people in the state had made changes to their livelihoods and over 40% were willing to change their livelihoods if required. Over 60% were making water safe to drink and close to 85% were using electricity more efficiently.

Barriers and motivators: People wanted the government to take the initiative and support them to take action to respond to changes in climate and availability of resources. People felt least involved in decision-making in comparison with other states. Those who were responding said that their biggest motivations were care for the environment, a need for survival and their children’s future.

Influencers and media: Although the people of Uttarakhand wanted more government support, they did not trust the government or NGOs. People relied mostly on information from family, friends and the local neighbourhood. Knowledge of existing initiatives to communicate climate change was low (13%). Although the terrain was difficult, access to television was over 80% and people watched Hindi and local channels. While radio was not very popular in Uttarakhand, over 80% had access to mobile phones.

MUMBAI

(Base: 787)

Context: People in Mumbai were worried about not having enough clean water and not being healthy.

Awareness of changes: People in Mumbai had a high level of awareness of changes in resources and climate.

Impact: People in Mumbai perceived the highest impact of changes in climate and resource availability of all the areas surveyed, and expected an even higher level of impact in future. People reported that changes in climate and resource availability were affecting their ability to earn money (97%) and stay healthy (98%).

Action: The proportion of people responding now is low and their willingness to respond in the future is also low (37% as compared to 46% in Gujarat and 42% in Uttarakhand). People were undertaking small actions that might help them respond to changes in climate and availability of resources, including making water safe to drink or using electricity more efficiently.

Barriers and motivators: The biggest barriers were having other priorities and not knowing how to respond. People who were making changes are driven by the need to make or save money and to be healthy.

Influencers and media: People had confidence in the government as well as NGOs. About 40% were aware of existing initiatives on climate change in the state (Maharashtra) primarily due to television advertising. Mumbai has the highest level of access to all media of all areas surveyed but there is also a high level of apathy and a lack of information on how to respond.

COMMUNICATION: ENABLING ACTION NOW AND IN THE FUTURE

This section draws on the findings of our research to demonstrate how media and communication can be used to help people respond to changes in climate and availability of key resources across India.

Media and communication have the potential to support people to reduce the impact of changes in climate on people's lives by contributing to people's ability to secure food, water and shelter, improve economic opportunities and security, reduce risk of disaster and cope with crises. It can help people build awareness, motivation, self-belief, knowledge and skills to enable them to take action. Similarly, media and communication can support communities to discuss common issues, work together as a community and hold leaders to account. This, in turn, can contribute to stronger systems to support the public in the long run.

THE POTENTIAL FOR COMMUNICATION TO ENABLE ACTION

Climate Asia's research shows that some key factors influence how well people respond to the impact of climate change in India. Media and communication can directly influence some of these factors in the following ways:

People

Introduce a new way of talking about climate change: Not many people in the states surveyed in India are engaged with climate change. But many are experiencing the impact of changes in climate and availability of resources, and are struggling to cope. Communication can make the subject more understandable and tangible by framing the issue in ways that have relevance to people's lives – for instance by talking about the impacts people feel and the actions they can take to respond to them. Increasing awareness levels will support public discourse and help to increase the perceived need to adapt to climate change.

Foster a spirit of responsibility: Many Indians (46%) felt that it was not their responsibility to take action, while 71% thought that the government should support them to act. Equally, there were significant divides in experiences between urban and rural populations and the poor and middle classes. Therefore, increasing urban people's consciousness of the sheer number of people who are experiencing impacts could help to ignite a greater sense of responsibility, both for the welfare of fellow Indians and the environment. Equally important will be building awareness and encouraging collective action at multiple levels – individual, community, state or national – with or without government support.

Inform people: Forty-two per cent of Indians surveyed did not feel that they were informed about how to respond to changes. People who did feel well informed, however, were willing to make more changes. Informing people about how they can make changes, such as modifying agricultural practices or using energy more efficiently, could help them to act.

Identify individual actions: Many people are unsure about what they can do to combat changes in climate and resources. Some actions can be undertaken by an individual, for example boiling water to make it safe to drink. There is scope to communicate to people about the actions that individuals and communities can take without support.

Encourage self-belief: “Not knowing how to” (62%) and “not thinking it will make a difference” (69%) were identified as barriers to response. Increasing people's confidence in their own abilities may help them to respond. Media can inspire people by showing how individuals with limited resources can take action and change their lives for the better.

Use financial incentives: In an environment where many people who feel the impact of changes in climate are not taking action, people need incentives to act. Among those surveyed in India, more than a third of people stated that “earning as much as possible” was their most important value. Also, 88% of people would like to respond to changes in climate and resources in order to either make or save money. The individual actions that people take, such as saving water (40%) and using electricity more efficiently (64%), save them money. Communication should highlight the financial benefits of taking actions by clearly showing how acting will help people to save more money.

Support people financially: People with higher purchasing power and more assets were taking more action. This was particularly true of activities requiring investment, such as building water supplies or using renewable energy. Communication initiatives should partner on-the-ground interventions to ensure that the individual is supported in these investment-heavy activities.

Community

Increase discussion with others: People who discuss food, water, energy and climate issues are more likely to take action. Therefore increasing engagement in these issues by facilitating discussion within communities is crucial.

Increase civic engagement and participation: Those who felt that their community can make decisions together were taking more action. Communication can encourage people to try and solve problems as a community.

Create networks and inspire: When people had good ideas on how to respond, such as mixed cropping, agroforestry and new techniques, they were adopted by others around them – as people could see that these innovations were working. People seemed more likely to adopt an action if the innovator was someone who was respected and trusted in the community. Communication can showcase individuals who are successful in adapting and can provide a platform for people to share stories to inspire others.

Institutions

Amplify the work of institutions: Media can build on examples from NGOs and government interventions to support the public. In Mandla in Madhya Pradesh, successful interventions had elicited community participation in taking on new farming techniques. Communication can showcase examples like these for a larger audience and amplify their effect by encouraging others to take action.

Hold government to account: People mentioned that they needed more support from the government. However, they felt that the government was not accountable and the support they received was neither timely nor adequate. At the community level, people were not very aware of government schemes. They complained that government workers were not sharing information related to irrigation, sources of new water supplies and farming techniques. Climate change experts interviewed suggested that, although the government had designed good national policies, it had failed to implement them. Communication can support dialogue between people and governments and provide a space for institutions to be held accountable.



BRINGING IMPACTS AND ACTION TOGETHER TO UNDERSTAND PEOPLE IN INDIA

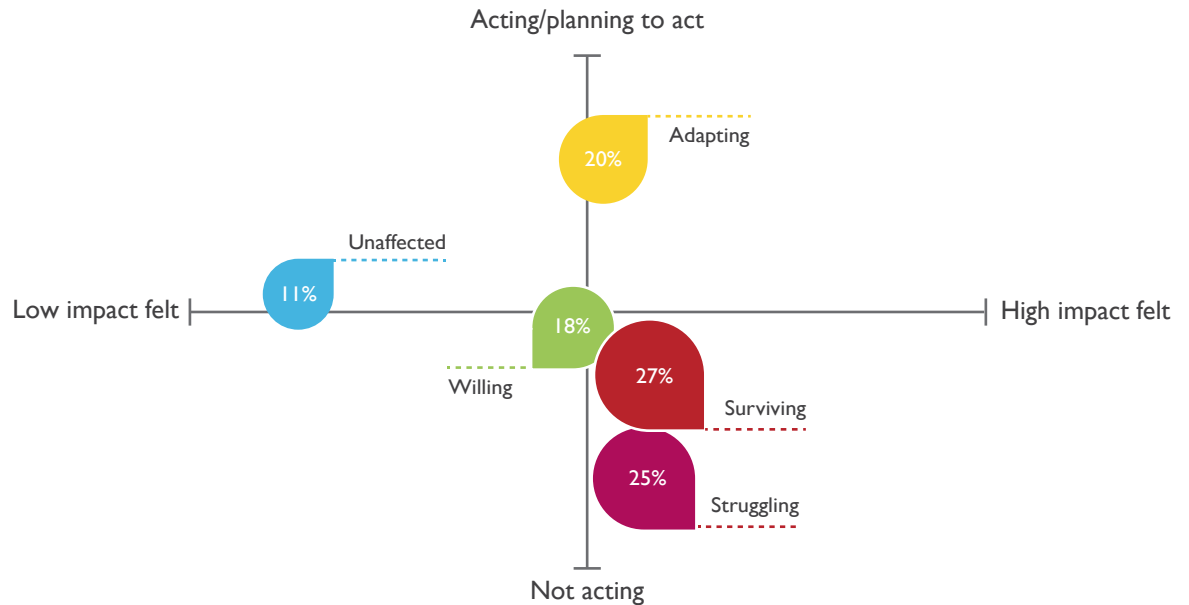
This section introduces the results of a segmentation analysis conducted by Climate Asia across the region. This analysis builds on research findings to produce insights that allow for better understanding of people's needs in India. These insights can then be used to identify opportunities for communication that encourages effective action in response to changes in climate.

People in India vary in the changes in climate they perceive, the impact they feel as a result and the extent to which they're taking action to respond to these changes.

In order to understand people's needs and identify opportunities to communicate with them effectively, Climate Asia has analysed survey data from across the region and placed people into five discrete segments, using a process called cluster analysis. Each segment varies in the factors that enable and prevent response. As such, each has different communication needs and can be supported in different ways. We have called these segments surviving, struggling, adapting, willing and unaffected.

The proportions of these segments within a country represent the extent to which people in the country perceive impacts and are taking action to respond to them.

Indians are struggling to respond to changes in climate



- Surviving: “Finding it too hard to take action”
- Struggling: “Trying to take action but finding it very difficult”
- Adapting: “Acting and wanting to do more”
- Willing: “Worrying about tomorrow”
- Unaffected: “Believe there is no need to do anything”

More detail on how these audience segments were formed can be found at www.bbc.co.uk/climateasia.

SEGMENTS BY DEMOGRAPHICS

More than 50% of the Indian people surveyed fall into one of two segments – struggling or surviving. They are feeling the impact of changes in climate and depleted resources but are not taking much action.

These two groups have low levels of resources and education and mainly live in two states – Uttarakhand and Madhya Pradesh. Farmers are also more likely to belong to these two segments. By contrast, over half of the adapting segment live in urban areas and 42% are comfortable or well off.

Differences in distribution of the segments across the states highlight the ways in which people in different parts of the country are feeling impacts and responding to them. In Gujarat people feel that the state provides them with resources and infrastructure which enables them to act. In contrast, people in Madhya Pradesh are struggling as they do not feel their government is listening to their needs, the impact of water shortages is high and they do not have access to enough information.

Breakdown of Climate Asia segments in India

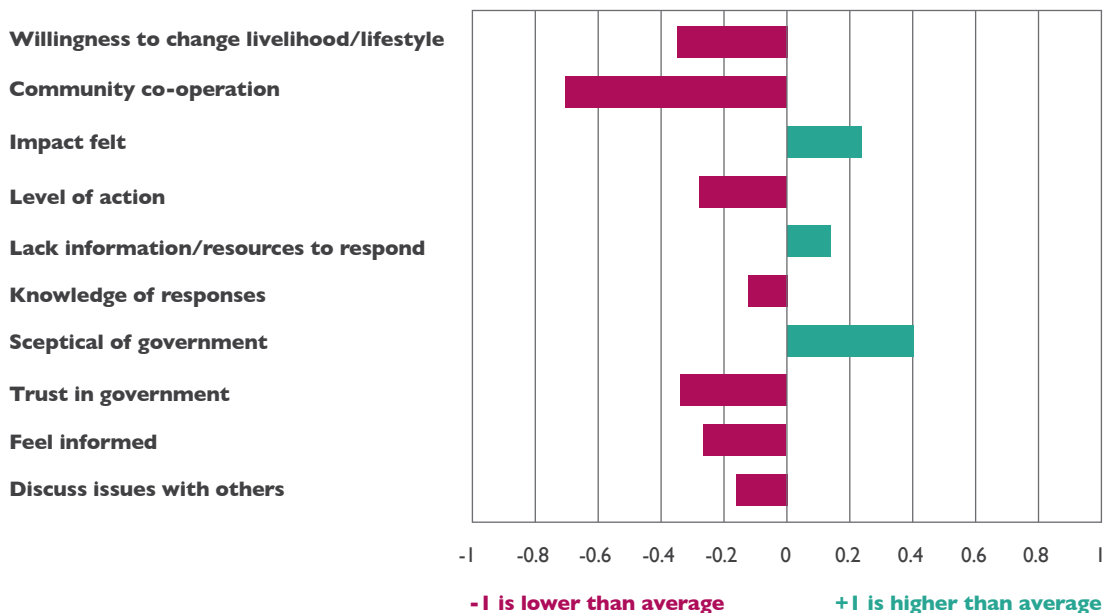
	All	Surviving	Struggling	Adapting	Willing	Unaffected
Base	8368	1983	1828	1462	1298	823
	%	%	%	%	%	%
Location						
Cities – 1m+	9	9	10	18	7	1
Cities – less than 1m	28	27	21	33	28	30
Rural	63	64	69	49	65	69
Occupation						
Farmers/fishermen	27	28	31	22	26	22
Traders/businessmen	7	7	7	9	8	7
Students/teachers	9	9	8	11	9	9
Housewives	33	34	31	32	30	36
Professionals	5	3	6	6	6	4
States and Mumbai						
Gujarat	17	8	19	20	21	12
Uttarakhand	18	25	22	12	14	11
Tamil Nadu	18	13	11	17	19	53
Madhya Pradesh	18	39	21	8	7	7
Odisha	18	5	16	25	32	16
Mumbai	9	9	10	18	7	1
Resources						
Well-off	5	3	4	5	7	1
Comfortable	29	29	27	37	29	27
Poor	36	35	36	33	35	47
Very poor	27	28	30	22	26	22

SURVIVING (27%): FINDING IT TOO HARD TO TAKE ACTION

- 22% feel that their life has got worse and 22% feel that their income has decreased in the last five years
- Only 25% feel that they need to make more changes to their livelihoods
- 68% do not feel that their action can make a difference
- 58% do not feel informed about what action they can take

People in this group feel the impact of changes in climate but are unwilling to take action. They feel isolated: they are not discussing the issues as much as others and they feel excluded from local decision-making and largely ignored by the government. Knowledge of how to take action is low; they do not feel informed and distrust the media and NGOs as sources of information. They do trust local sources of information – family, friends and local people. They lack the motivation to respond as they don't feel they can make a difference. For those who have made changes, their biggest motivation to act is “a need to survive”.

Surviving vs the rest of the population



The figures show how different people in each segment feel about key factors determining response, in comparison with the average of the other segments. +1 is higher than average, and -1 is lower than average.



Aims for communication

Generate trust: For this group, media will be more effective if information is reinforced through face-to-face communication delivered by trusted people in the community over time. As levels of trust are quite low, seeing other people act and succeed will help to persuade this group that taking action will benefit them.

Increase engagement in the issue: Communication should encourage people to discuss the problems they face more, to work together as a community and to share knowledge.

Increase knowledge of simple actions: Showing how people can take small steps such as making water safe to drink will equip them to act and enable them to feel that they can make a difference.

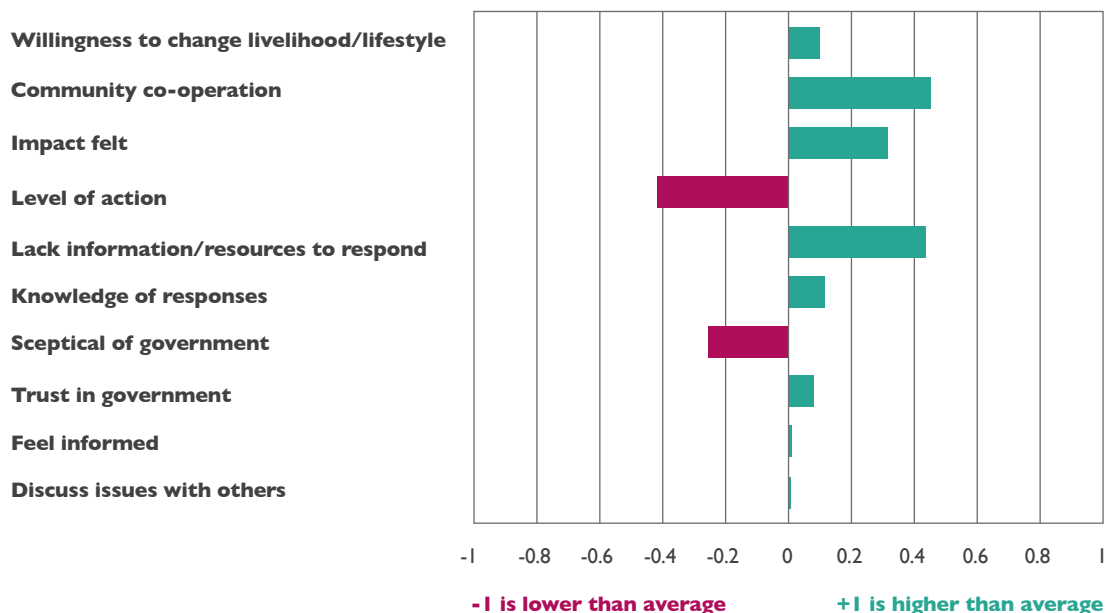
Increase awareness of problems: People need to be encouraged to act. To do this, people may need to be shown the long-term impact that changes in climate will have on their lives and ways that they can adapt their lifestyles to combat them. For example, showing that water availability will continue to decrease and that if they can take action such as saving rainwater, it will help them to combat water shortage.

STRUGGLING (25%): TRYING TO TAKE ACTION BUT FINDING IT VERY DIFFICULT

- 86% feel that they need support from the government to act
- 83% feel that taking action will not make a difference
- 75% agree that they would feel guilty if they did not take action

People in this segment feel the impact of changes in climate and resources quite strongly; however, they are sceptical of their ability to make a difference. They do not believe that they have the resources or knowledge to respond to the issues at hand. Unlike the people in the surviving segment, they feel that they can make decisions as a community and value fitting in with others. They do not discuss changes in climate and resources very much. Their trust in government is slightly higher than most segments but they feel that the government should support them. Their biggest motivation to act is making/saving money. Although they feel the impact of lack of water, they are not taking much action to adapt to this, for example storing or recycling water.

Struggling vs the rest of the population





Aims for communication

Involve the community: Collective problem solving is quite common among this group, but they are not sharing knowledge or discussing problems related to changes in climate enough. Communication can focus on bringing people together, show what they can do to overcome the problems with limited resources, and increase their sense of being able to make a difference.

Emphasise the financial motivators: This group needs to be shown the benefits of taking action to persuade them to do so. Showing people how simple steps can make or save them money both in the short and long term could help to persuade them to act. Seeing others like them responding and reaping the financial benefits would reassure people that other communities already use these approaches and that they work.

Inform: Communication can provide practical, relevant information that this group can relate to and understand. Base communication on the impacts that people feel, for example exploring simple steps to help them to cope with increases in water-borne diseases.

Increase accountability: Communication should facilitate dialogue between government bodies, other organisations and people, to put forward and respond to demands for infrastructure and resources.

ADAPTING (20%): ACTING AND WANT TO DO MORE

- 68% have found a new water supply
- 95% feel that these changes are impacting their health
- 30% are making changes to their livelihoods such as supplementing income or migrating

People in this group are responding in great numbers and taking more action than those in other segments. They are not only using electricity more efficiently and reducing food waste but also undertaking more sophisticated activities such as participating in neighbourhood awareness campaigns, finding new water sources and creating disaster preparedness plans. They are driven to act through worry over the impact on their health and their ability to earn money, as well as from discussing these issues with peers and feeling more informed about how to respond to change. In addition, people in this segment have higher trust in the government to act and feel more connected to their community. This support system, knowledge and motivation to act has helped them respond. However, they still want to make more changes and are worried about the future.

Adapting vs the rest of the population





Aims for communication

Provide more technical information: While people in this group have better knowledge of responses than most, they still feel that they are not well equipped to deal with changes. More guidance on how to respond, practical tools and examples of how to cope with challenges will help to support them.

Share skills: These people are making a lot of changes already. Their skills can be shared and developed with the community. For example, they can be encouraged to work with the community to improve irrigation and the installation of renewable energy.

Make them role models: People in this group have a strong position in their community and can be good role models for people in the surviving and struggling segments.

Help to spark and share innovation: Encouraging communication between communities that have high numbers of people in the adapting segment could harness their experience and knowledge to inspire, as well as to share tips and best practice with others, particularly regarding responses to water issues. This includes raising awareness about the importance of supporting people with fewer resources or people who do not feel involved in decision-making processes.

WILLING (18%): WORRYING ABOUT TOMORROW

- 95% feel that these changes have an impact on their health
- 93% want to act to maintain their health
- 43% are aware of existing communication initiatives about climate change or related issues

People in the willing segment are aware of changes in climate and resource depletion. They don't feel barriers to response - they feel informed, know how to respond and feel they have the resources to take action. Their social environment does not seem to be a constraint either: they know who are responding, they do not feel their families would disapprove of taking action and they feel that it's their responsibility to take action. People in this segment are willing to make changes and do not seem to face any of the barriers that people in other segments are experiencing. Nevertheless, they are not responding to the same degree as people in the adapting or even the unaffected groups, who are not as well resourced or informed.

Willing vs the rest of the population





Aims for communication

Motivate: There is a need to motivate the willing. Opportunities include emphasising the links between climate change and health and the impact these changes may have on their children's future.

Inform on future impact: This group is a target for constructive but not alarming communication about future impact.

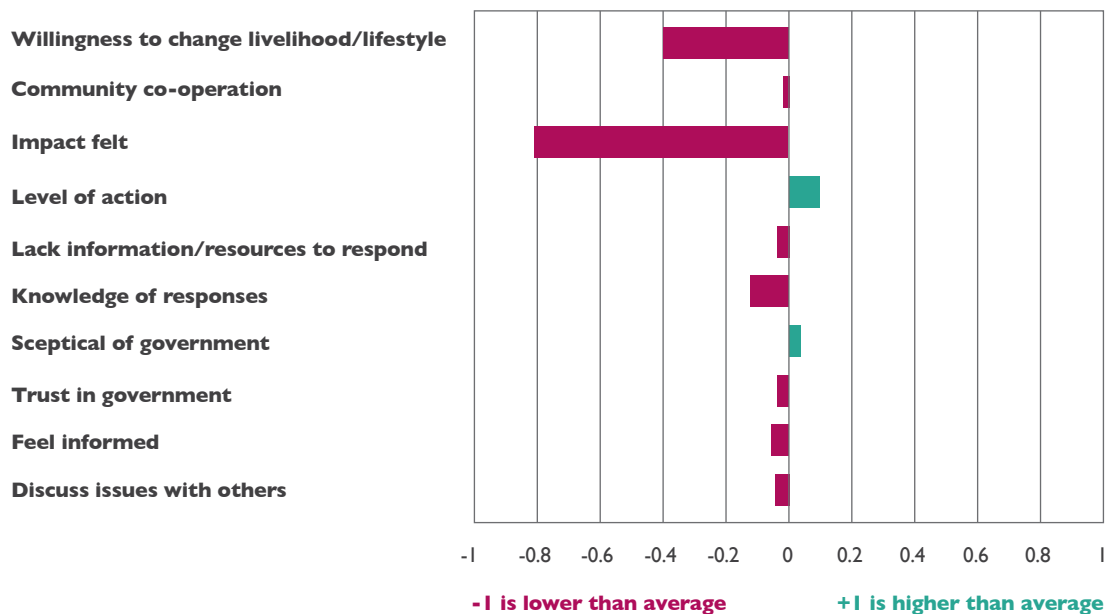
Support future planning: Communication should build on this segment's willingness to learn and act by enabling them to work with the community to plan and make changes that will help them to be more resilient in the future.

UNAFFECTED (11%): BELIEVE THERE IS NO NEED TO DO ANYTHING

- 75% feel that taking action won't make a difference
- Only 27% feel that they need to make changes to their lifestyle
- Only 18% are aware of existing communication initiatives on this issue

The large majority of people in this group feel little impact from changes in climate and, in particular, are not feeling the impact on their health and ability to earn money as much as other groups. They are less willing to support policies that governments could put in place, such as charging for water, and do not feel that they should make changes to their lifestyles. There is a low level of awareness of communication initiatives and they do not feel informed. Social and financial barriers are at play – they do not know that others are responding and feel that they have a lack of resources.

Unaffected vs the rest of the population





Aims for communication

Increase awareness of actions people are already taking: People in the unaffected group are not experiencing much impact in their daily lives, so making changes to livelihoods or lifestyles may seem unnecessary. However, unknowingly, they are already responding. Creating awareness about simple actions and the positive effect they can have could encourage them to do more.

Increase engagement: The unaffected do not feel very well informed, and knowledge of how to respond is low. Their actions have a bearing on others in the long term, and therefore it is important to engage this group. Communication can play a role by showing how changes in climate may affect their financial security in the future.

Increase awareness of future risk: This group needs information on the likely future impact of climate change and how they can respond to it. Since they do not seem to be very involved with their communities, targeting individuals and households may be the best route.

THE MEDIA AND COMMUNICATION LANDSCAPE: NOW AND IN THE FUTURE

In order to reach people it is important to understand what they want – what media they use, who they talk to and trust and how they would like information delivered to them. This section outlines media and communication usage in the five states and one major city surveyed in India.

SOURCES OF INFORMATION: LOOK TO THOSE YOU TRUST

Television is the main source for information on changes in climate and availability of resources, followed by print media. People in Gujarat, Madhya Pradesh and the megacity of Mumbai rely on a number of sources for information on the impact of these changes in climate.

Television is also the most trusted source of information (89%) followed by print (76%), among the media channels.

Television – the biggest and most trusted source for information

Sources of information: media and institutions	All	Gujarat	Madhya Pradesh	Mumbai	Odisha	Tamil Nadu	Uttarakhand
Base: All respondents	8368	1461	1518	787	1524	1530	1548
%	%	%	%	%	%	%	%
Television	83	96	62	100	68	97	85
Newspaper/magazine	57	89	50	92	31	49	51
Mobile phone	40	86	51	58	16	24	18
Radio	37	71	53	62	22	21	6
Government official	30	86	43	41	5	6	6
Community centre/institution	29	76	46	41	8	6	7
Religious institution	29	82	46	39	9	3	4
Cinema/theatre	28	74	46	45	3	7	2
Internet	26	62	46	49	4	4	6

Q: Where do you currently get information on issues discussed today (water, food, energy, extreme weather)?

The trust diminishes as the distance between relationships increases. People tend to trust family, friends and community more than representatives from the government, organisations and experts. This emphasises the importance of communicating at the local level through opinion-formers in the community.

People are talking about these issues with family, friends and local people

	All	Gujarat	Madhya Pradesh	Mumbai	Odisha	Tamil Nadu	Uttara-khand
Base: All respondents	8368	1461	1518	787	1524	1530	1548
%	%	%	%	%	%	%	%
Family/friends	95	100	85	98	92	98	97
People in your local neighbourhood	86	99	83	85	84	91	73
Local influencers/ neighbourhood elders	67	99	71	68	46	55	62
Community leaders	42	99	54	60	8	36	9
Employed only: People you work with	45	99	60	58	3	43	17
Government officials	42	99	60	49	4	38	11
Religious leaders	40	99	58	46	6	33	4
Agricultural extension workers	35	85	60	40	2	24	4
Health workers	36	86	63	52	11	6	11
NGOs	33	86	59	46	5	8	5
Local organisations/ co-operative	33	88	58	41	4	12	3
Teachers	39	96	67	45	6	10	15
Academic/ scientific experts	30	86	56	39	1	4	2

Q: Who do you currently talk to, or who talks to you, for advice or information on issues discussed today (water, food, energy, extreme weather)?

Across all the areas of India surveyed, a third of people were aware of existing communication initiatives on food, water, energy and climate, which were mainly television programmes or advertisements. This is the highest among the Climate Asia countries, although it varied significantly by state: 70% of people in Odisha were aware of such communication, compared with 9% in Tamil Nadu. In Odisha 73% of people who knew of communication had seen a television programme on these issues.

There are a few regular programmes on the environment and climate on Indian television. A noteworthy media initiative aimed at raising awareness of environmental issues was commercial broadcaster NDTV's Greenathon, which has been running since 2008. It is a day-long television event that combines live music, celebrity interviews, "green" pledges and environmental reportage in order to fundraise for specific activities.

However, there are a variety of programmes that reach large audiences and feature information that would help people adapt to changes in climate. The national broadcaster, Doordarshan, airs a show called *Krishi Darshan* (Agricultural Vision) from Monday to Friday, which disseminates agricultural information to rural farming audiences. It is the longest-running programme on the network. There is also a radio programme called *Kisan Vani* designed to keep local farmers informed about daily market rates, weather reports and day-to-day information in their respective areas at a local level.

HOW PEOPLE USE THE MEDIA

Television: the preferred medium

Media usage (used "yesterday or today")

	All	Gujarat	Madhya Pradesh	Mumbai	Odisha	Tamil Nadu	Uttarakhand
Base: All respondents	8368	1461	1518	787	1524	1530	1548
%	%	%	%	%	%	%	%
TV	68	59	41	96	48	95	80

Almost three-quarters of the population had access to television and about two-thirds had watched it yesterday or today. Television is the preferred medium for both rural and urban people. Access was highest in cities and lowest in rural areas.

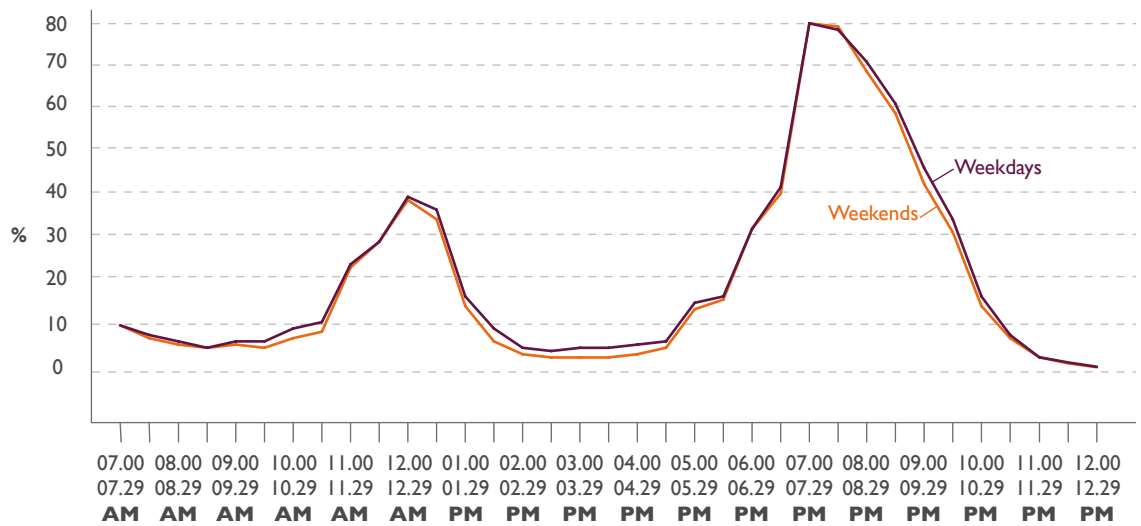
There were large differences between states in levels of access to television and recency of viewing. Tamil Nadu had almost universal access to TV and almost everyone surveyed watched it regularly. However, less than 50% of people in Madhya Pradesh had access to television and therefore only slightly more than 40% had watched it yesterday or today. Viewing figures in Odisha were low as well.

The popular channels are regional-language channels within each state. Many people also watch Hindi satellite channels such as Star Plus (41%), Colors (31%), Zee (30%) and Sony (21%), along with state-run terrestrial channel Doordarshan (27%).

Most people watch during prime time from 7pm to 10.30pm, along with two other time bands: 7am to 9.30am and 1pm to 3.30pm.

TV viewing times

BASE: 3304



Q: When is the last time you accessed/used the following media?

Radio – recency of listenership

Media usage (used “yesterday or today”)

	All	Gujarat	Madhya Pradesh	Mumbai	Odisha	Tamil Nadu	Uttara-khand
Base: All respondents	8368	1461	1518	787	1524	1530	1548
%	%	%	%	%	%	%	%
Radio	9	4	10	17	8	13	4

Q: When is the last time you accessed/used the following media?

Access to radio was relatively low – 18% across the country – and therefore recent use (yesterday or today) was also low, just 9%. By contrast, Mumbai’s radio access was high (61%) because radio is accessible through mobile phones, but only 17% of people had listened to it recently (yesterday or today). In all other states access to radio ranged from 10% to 19% with Tamil Nadu having the highest level of access. In Mumbai the popular channels are the FM channels Big FM, Red FM, Radio City and Radio Mirchi. In other cities and rural areas the state-run medium-wave channels Vividh Bharati and Akash Vani are popular.

Mobile phones: new media

Just 15 years from the introduction of mobile phones in India, nearly 70% of people now have access to them, including 61% of people in rural areas. The states that lag behind are Madhya Pradesh and Odisha, with less than 50% of people having access to mobile phones. Phones are primarily used for phone calls (93%), text messages (15%) and listening to the radio/music (20%). Popular service providers include Airtel (29%), Vodafone (29%), BSNL (16%) and Idea (13%).

Newspapers – recency of readership

Media usage (used “yesterday or today”)

	All	Gujarat	Madhya Pradesh	Mumbai	Odisha	Tamil Nadu	Uttara-khand
Base: All respondents	8368	1461	1518	787	1524	1530	1548
%	%	%	%	%	%	%	%
Newspapers	30	31	9	69	15	39	37

Q: When is the last time you accessed/used the following media?

At least a third of people, even in rural areas, had access to newspapers and nearly 30% had read one recently (yesterday or today). The readership was lowest in Madhya Pradesh and Odisha.

Generally, people prefer newspapers in the regional language.

Internet

Access to the internet is still limited to cities and it is used mainly for social networking and email, with Facebook, Gmail and Yahoo the most accessed sites.

Madhya Pradesh stands out as the state where people have the lowest access to almost all media, including the internet.

Formats: from news to drama

Overall, most people mentioned that news (63%) was the preferred media format. Although both men and women prefer watching news, women watch soap operas and dramas more than men.

Most people mentioned that programmes on issues related to food, water, energy or extreme weather should give them information on impact (78%), responses (71%) and educating their children (79%).

In several instances, people suggested programme formats in which urban people can be helped to understand the problems of rural people and to empathise with them.

“It should be a local channel. It should be a family serial like Diya Aur Baati – you can have two families, one in a village and one in the town – one family educated and the other illiterate. The illiterate person in the village can talk to the educated people in the cities and tell them how they live their lives with water scarcity and hardship while the so-called educated and elite people of the cities enjoy all the benefits and are misusing them.”

(Man, Almora, Urban, Uttarakhand, age 34–45)

WHO FORMS OPINION IN INDIAN SOCIETY AND HOW TO REACH THEM

Opinion-formers were identified as having two of the three following characteristics: a professional occupation; belonging to an organisation, group or association; and having influence over more than 10 people.

Opinion-formers were seen as an important source of public information. Almost two-thirds of the general public sought out local influencers or community elders for information. Opinion-formers tended to be men over 45 years of age, were more likely to be highly educated and were economically more comfortable than other people. In addition, opinion-formers feel well informed about climate change and are more aware of the term than others. They discuss issues related to climate change more often than other people and especially talk to their family, friends and people in their local neighbourhood about it.

The general public got their information predominantly from television and newspapers. Although this was true for opinion-formers as well, they used a wider range of potential sources of information. In particular, they were more likely to use relatively new information sources, such as mobile phones (51% compared with 40% of the general public) and the internet (33% compared with 26%). Moreover, opinion-formers turned to government officials more and put more trust in the information they received from them (68% compared with 41%).

The majority of opinion-formers were willing to help their communities, especially by creating more awareness (93%) and sharing knowledge and skills (87%).

EXAMPLES OF PRIORITY AUDIENCES

The population segments discussed in section 7 – surviving, struggling, adapting, willing and unaffected – have been used to help prioritise groups of people that can be targeted through media and face-to-face communication. BBC Media Action concentrates on communication with people who perceive the highest impact now. As such, Climate Asia has identified a few examples of the priority audiences for this report that include significant populations among the surviving and struggling segments.

Our ideas for reaching these audiences are based on an understanding of the segments. In India, audiences' communication needs and the range of channels are diverse. Therefore, we have used examples of audiences from across the states surveyed to show how this research can be used to shape communication. The three different audiences chosen to showcase differing needs in India are farmers in Madhya Pradesh, the urban poor in Mumbai and housewives in Uttarakhand. We then highlight the communication needs and the channels and formats by which to meet these audiences' needs.

The Climate Asia data and tools are available on a fully searchable Climate Asia data portal at www.bbc.co.uk/climateasia, which you can use to find information on different target audiences. These could include, for example, farmers in other states or urban poor people in Madhya Pradesh.

FARMERS IN MADHYA PRADESH

Rationale

Approximately a quarter of the people in the Climate Asia survey in India were farmers. Approximately 60% of farmers fell into the struggling and surviving segments. Madhya Pradesh had the highest proportion of farmers who were experiencing high impacts from changes in climate but felt they did not have the resources or information to respond. Other states, including Uttarakhand, also had high proportions of farmers in these segments.



BBC Media Action

Farmers in Madhya Pradesh

	Surviving	Struggling	Adapting	Willing	Unaffected
Base: All	1983	1828	1462	1298	823
%	%	%	%	%	%
India	27	25	20	18	11
Rural India	27	27	15	18	12
Farmers in India	29	30	16	17	9
Farmers in Madhya Pradesh	48	34	9	7	3
Farmers in Uttarakhand	33	39	16	7	5

Context: impact, response, motivators and barriers

Farmers did not feel very informed about how to respond. Approximately 70% had low or no knowledge of responses related to extreme weather events, food, water and energy. The proportion of farmers currently taking action was very low in Madhya Pradesh.

These people feel that they cannot make a difference and that the government should support them. They want to increase crop yields to ensure that their income is maintained.

Communication preferences

Farmers in Madhya Pradesh want information on educating their children and more on what they can do about the changes they've noticed.

Although access to media was particularly low in Madhya Pradesh (29%), television was the preferred medium for receiving information on issues related to food, water, energy and extreme weather events. Community institutions were another popular source of information (38%). Access to mobile phones (20%), radio (4%) and newspapers (1%) was low among this group.

Communication needs

Communication can support these farmers to respond to change, in particular by enabling greater participation in their communities and empowering them to make changes to their agricultural practices.

Local television programmes can help by providing simple information, and can encourage participation by using inspiring stories of farmers in Madhya Pradesh who have used innovative ways of coping with change.

Knowledge of the impact of future changes in climate on agriculture can be built up among this group through educational programming aimed at the younger generation. This can be supplemented with information, delivered through existing channels and media, on alternative livelihoods and ways of diversifying existing practices to reduce risk.

URBAN POOR IN MUMBAI

Rationale

The urban poor (people who live in cities and are poor or very poor) made up almost 19% of the surveyed population, distributed across states. A large proportion of this group (47%) fell into the surviving and struggling segments.

The two regions with the highest proportion of urban poor falling within the surviving and struggling segments were Madhya Pradesh and Mumbai. Urban poor people in Mumbai felt a high level of impact from changes in climate because of inflation and lack of resource availability, including water, food and energy.



Urban poor in Mumbai

	Surviving	Struggling	Adapting	Willing	Unaffected
Base: All	1983	1828	1462	1298	823
%	%	%	%	%	%
India	27	25	20	18	11
Urban India	28	22	24	15	11
Urban poor	26	21	27	17	9
Urban poor in Madhya Pradesh	56	24	10	5	5
Urban poor in Mumbai	29	39	17	13	2

Context: impact, response, motivators and barriers

The urban poor in Mumbai perceived that the availability of resources was decreasing, and over 80% reported that these changes had a high impact on their life currently. However, more than 60% of people felt that they did not need to make changes to their livelihoods and lifestyles.

About a third of the urban poor from Mumbai had low levels of knowledge about responses to extreme weather events. Knowledge of how to respond to a lack of availability of water, energy and food was also extremely low: more than half of the population had no knowledge of this at all.

Exposure to media was quite high, and at the same time people felt that the biggest barrier to response was lack of information. There seems to be a need for relevant and specific information on what to do, which increases knowledge and response. This group also felt that it was not their responsibility to act, that the government should support them and that individual action would not make a difference.

Communication preferences

In Mumbai, urban poor people were hungry for information on what to do and wanted to know about likely future impact and causes so that they could educate their children. People felt connected to other people and were more keen to learn from other people's experiences.

Television was the universally preferred source for information on this topic, followed by mobile phones. Radio and newspapers can also play a role in Mumbai as these are widely used as sources of information. People preferred short formats, such as advertisements or news clips, while some women like soap operas.



People in this group will act on information if they trust the source – in practice this is often only when they have face-to-face interaction with people who can show them the benefits of these responses. This creates space for using mass media with human mediation to increase impact.

Communication needs

When communicating to this group, the key aims are to increase engagement in the issue and to encourage the belief that they can do something by understanding what action is possible. However, many of the issues that people in this group face are a result of poor infrastructure and provision of services in cities.

Therefore it is important for communication to feature people like them, who feel the impact of changes in climate in urban areas and can show how they are taking simple, doable actions to deal with day-to-day issues of food, water, energy and extreme weather events. There is also an opportunity for communication to share and emphasise the benefits of community actions – entertaining formats such as competitions where communities work together could be popular.

HOUSEWIVES IN UTTARAKHAND

Rationale

A high proportion of housewives from Madhya Pradesh (60%) and Uttarakhand (44%) fall into the surviving segment. They are feeling impacts but are not willing to change.



BBC Media Action

Housewives in Uttarakhand

	Surviving	Struggling	Adapting	Willing	Unaffected
Base: All	1983	1828	1462	1298	823
%	%	%	%	%	%
India	27	25	20	18	11
Housewives in India	28	26	18	20	9
Housewives in Uttarakhand	44	29	12	9	7
Housewives in Madhya Pradesh	60	26	8	4	6

Context: impact, response, motivators and barriers

Housewives in these states recognise that changes in climate and availability of resources have had an impact on their lives. However, they do not think that they have enough resources, information or government support to take action and they are not very willing to act in future. In addition they do not feel very involved in local decision-making.

Communication preferences

In the state of Uttarakhand more than 80% of housewives were keen to receive information about the causes and future impact of changes in climate. Television was their biggest source of information and they prefer watching Hindi channels, such as Star Plus, Colors, Zee TV and Doordarshan.

Access to mobile phones was limited with 44% of housewives in Uttarakhand owning a mobile phone.

There were already positive examples of how communication could be used by and for this audience. Some women interviewed in Uttarakhand mentioned going from village to village, singing songs about the environment and action to encourage people to protect it.

“We have also done shows on spreading awareness on ‘Protect Environment’. We sing songs and spread the message to save trees and take care of Mother Nature.”

(Woman, Almora, Rural, Uttarakhand, age 45+)

Communication needs

When communicating to this group, the key aims are to empower people through taking action and to help them feel involved in decision-making, building on a desire to change and to protect the environment. Traditional formats, such as songs or street theatre, could be used alongside media, for example there could be a television drama that encourages taking action and participating in communities. Communicators should also encourage the use or formation of women’s groups where people can discuss the impacts they face and come up with ideas for how they can work together to solve problems. Media content – such as television dramas – should be framed to appeal to an attachment to the environment and feature examples of housewives taking action and making their voices heard.



WHAT NEXT?

This report and all Climate Asia data and tools are available on a fully searchable Climate Asia data portal, www.bbc.co.uk/climateasia. We believe that these resources can improve communication and decision-making by allowing stakeholders to better understand their audiences' needs

The findings of this report can be explored in more detail using the data portal. For instance responses to any question can be analysed by audience segments, key demographics, geographic location or media use.

SHARING OUR FINDINGS AND TOOLS

We invite people to share this report, the links to the data portal (www.bbc.co.uk/climateasia), the climate change toolkit and our research tools as widely as possible. We will also work with stakeholders and partners to help them use our evidence and analysis. The more people who use our findings and tools, we hope and believe, the greater the chance of effectively supporting people who live with climate change today.

BUILDING ON OUR DATA

This Climate Asia report is just the beginning. Our research can be built on. For instance people can use Climate Asia research tools to conduct their own surveys. This will enable key indicators to be tracked over time, which would further add to an understanding of the role of communication in climate change adaptation.

By working with existing communication initiatives and new projects, stakeholders can bring this data to life for the people who need it.



APPENDIX: CLIMATE ASIA'S METHODOLOGY

Climate Asia's research has used qualitative and quantitative methods to understand people's perceptions of changes in climate and the environment as well as the impacts of these changes on their lives. The findings will inform adequate communication to support people's needs in responding to these changes.

QUALITATIVE RESEARCH

In India, qualitative research included 30 in-depth interviews with experts and opinion-formers, 24 audience focus groups and eight community assessments across the country.

The in-depth interviews were conducted with key experts and opinion-formers from central and local government, the media, the private sector, civil society, science and academia. Focus group participants were members of the public from Madhya Pradesh, Mumbai, Odisha and Uttarakhand. In each location, focus group participants were selected according to age, gender, occupation and social class to capture a diversity of views within the population. The locations for the eight community assessments were chosen in the states of Gujarat, Madhya Pradesh, Odisha, Tamil Nadu, Uttarakhand and the megacity of Mumbai. Vulnerable regions and populations within these states were chosen with help from local experts and NGOs. These were Jogad village in Little Rann of Kutch in Gujarat; Papawani and Goilikhirak villages in the Tikamgarh district, and Kusmi and Mohpani villages in the Mandla district of Madhya Pradesh; Kapsiput village in the Koraput district of Odisha; MGR Thittu village in the Cuddalore district of Tamil Nadu; Parwari and Mailana villages in the Chamoli district of Uttarakhand; and Bhandup and Mishra Nagar areas of Mumbai.

Initial insights from some of this research and the communication development process, which included workshops and an evaluation of existing initiatives, shaped the approach to quantitative research.



QUANTITATIVE RESEARCH

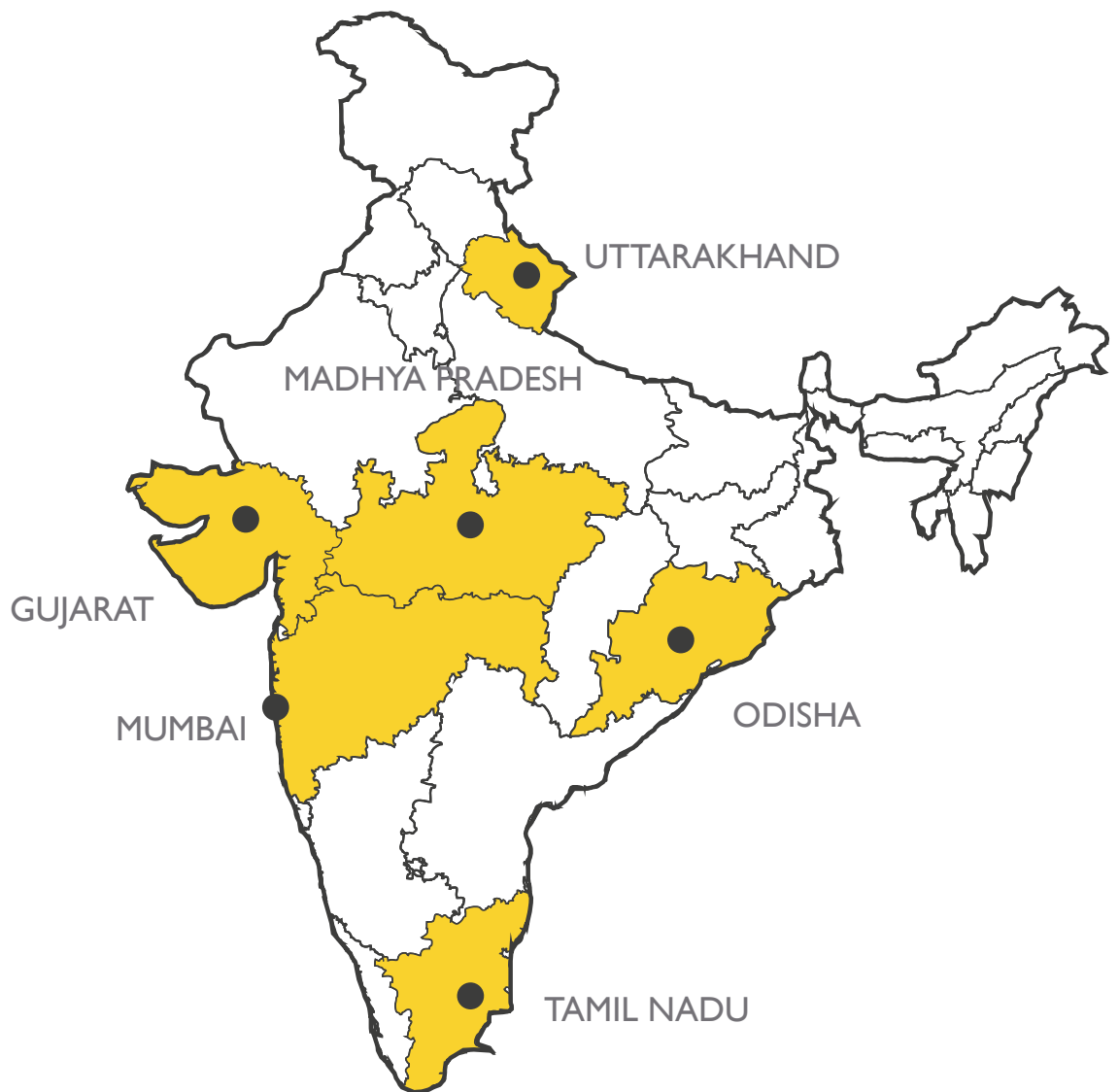
Each of the given areas – the states of Gujarat, Madhya Pradesh, Odisha, Tamil Nadu and Uttarakhand, and the city of Mumbai – were selected to represent different geographic areas in the country, which include coasts, mountains, a delta, plains and a large city. Three districts were selected in each of the states using systematic random sampling. Similarly in Mumbai, three zones were randomly selected. After the random selection, we ensured that all the key geographical features of each state were represented in the sample.

A further 18 villages and two towns were selected in each district using the probability proportionate to size method (PPS). Eight wards were then selected per town. The 18 villages and 16 wards thus selected formed the primary sampling units (PSUs) per district. Within each rural PSU, 20 interviews with the general population were conducted. In urban areas, each PSU was divided into groups of 50 households. Two groups were then selected to conduct the interviews by generating a random number. The starting point of each group was from the north-west direction. A right-hand rule of movement was followed for conducting the interviews, skipping five households after every completed interview. A maximum of 10 interviews were conducted in each group.

Within each selected household, only one interview was done (with a male or female). In the case of more than one eligible respondent present in the sampled household, the person to be interviewed was selected using the KISH Grid method. A maximum of three attempts at interview were made in cases of absence of the sampled respondent from the household after which the interviewer moved to another household.



The states and city sampled in India





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