## CHINA

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







# CLIMATE CHANGE IS ABOUT PEOPLE

How do people in China 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, government, 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. This included 5,062 households, and among these 223 opinion-formers in three large areas of China, and their experiences are at the heart of this report. We also held nine community assessments<sup>1</sup> across the country.

Using both quantitative and qualitative research, we have built a picture of how different groups of people in China live and deal with 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 future, and the environmental changes they have noticed or deal with already.

#### PEOPLE'S PERCEPTIONS MATTER

Understanding perceptions is crucial in order 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. 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.

In 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.



#### 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,

, including 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?

#### CHINA: A UNIQUE CASE IN CLIMATE ASIA

People in the three areas of China surveyed by Climate Asia were taking many actions that would be useful in responding to changes in climate, and were confident in their government to act. Yet, at the same time, they did not feel informed about how they could take action personally. As with the other countries surveyed for Climate Asia (Bangladesh, India, Indonesia, Nepal, Pakistan and Vietnam), people in the surveyed areas of China had noticed increases in temperature and extreme weather events, as well as unpredictable rainfall. While people in China are aware of changes to a similar degree to people in other countries, the way they respond, the information they receive, and their level of confidence in their government differs.

Levels of awareness and understanding of climate change among people in the surveyed areas were the highest in the Climate Asia countries. Yet the majority of people surveyed were not feeling the impacts of changes in climate on their lives, and only 20% felt a high level of impact<sup>2</sup> from these changes, which is the lowest percentage among the seven Climate Asia countries. However, there were particular areas where people reported big changes in their environment; for instance in Nanchong, Sichuan province, people reported a large increase in rainfall and a large decrease in agricultural productivity.

Overall, more people said that they were taking action that would be useful in responding to changes in climate and availability of key resources than in any of the other Climate Asia countries: 40% were taking a high number of actions compared with 23% across the region. For example, 89% of people said that they were using energy more efficiently, which is also a government priority. This compares with a Climate Asia average of 74%.

However, people did not necessarily feel prepared for future extreme weather events. In Guangzhou, 89% of people had experienced an extreme weather event in the last 10 years but only 27% of people feel prepared for future events.

<sup>&</sup>lt;sup>2</sup> 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."



Not having government support was named as a key barrier to action across the region but Chinese people in the surveyed areas were very confident in the government's ability to respond to changes in climate. In addition to government support, Climate Asia research identified two other key factors that supported people to take action across all countries – community cooperation and access to information. However, of the Chinese people surveyed only 43% felt that they were involved in their communities or that their communities took action to solve problems, lower than in any of the other Climate Asia countries (64% across the region). As elsewhere, those who did feel involved in their communities had higher rates of response to the impacts of changes in climate than those who did not.

Despite having a high level of awareness of the term "climate change", only 34% of people in the three regions of China studied said that they felt informed about how to respond to changes in climate – a marked contrast to the Climate Asia regional average of 47%. Only people in Indonesia (31%) felt less informed. Those who did feel informed in China were taking a lot of action to respond to changes in climate and resource availability. Moreover, 62% of people in China felt that a lack of information on how to respond to changes in climate was a barrier to action.

#### WHAT THIS MEANS FOR COMMUNICATION

Communication can play a role in informing people to take action and encouraging community action, particularly in respect to preparing for extreme weather. Television and face-to-face communication to give additional support are the best channels to provide this information. For instance, farmers in Sichuan have been identified as a priority group who need support on how to adapt farming practices. One way to do this is by creating networks between farmers so that they can discuss and share techniques.

There is also a role for communication to help reduce personal emissions of greenhouse gases and encourage more environmentally friendly behaviours. Young people in urban areas, who show a willingness to adopt new behaviours, have been identified as a priority group for this type of communication. Building on their media usage, a combination of short TV clips and online interactive content that is frequently updated is likely to reach this audience. Social media can also be used to enhance the reach of the content and to promote discussion among this audience about the issues raised.



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# LIFE FOR CHINESE PEOPLE

This section provides information on how people in three areas in China live, as well as the values and beliefs that they hold.

## MOST CHINESE PEOPLE BELIEVE THAT LIFE HAS GOT BETTER

The story of China's recent development is reflected in Climate Asia's findings: 80% of people surveyed believed that life has got better over the past five years, a higher proportion than in any other country surveyed by Climate Asia.

#### **HEALTH IS A BIG CONCERN**

When asked from a list what their main concerns in life were, people were most worried about not being healthy (37%), and this was true of people from all financial backgrounds. Another major concern was having suitable homes (18%), especially for people living in rural areas.

Some people linked a concern about health to concerns about pollution:

"The ore yard has been there for more than 30 years, there wasn't cancer before, but now there is a lot, mainly lung cancer, and it's not only found among the elders, also the young people."

(Community assessment, Guangdong province)

#### Biggest worry for participants by resource level and region

	All		Resource level	Re			
		Well-off and comfortable	Poor and very poor	Sichuan	Beijing	Guangdong	
Base:	5062	1499	2742	1447	1775	1840	
Not being healthy	37%	37%	35%	31%	42%	38%	
Not having a suitable shelter/ house	18%	17%	19%	26%	17%	14%	
Not having enough clean water to drink	11%	8%	14%	10%	15%	7%	
Not having enough food to eat	8%	6%	9%	11%	6%	7%	
Not having enough money to spend on items for me and my family	8%	8%	7%	7%	7%	99	
Not sending my children to school/ saving money for my children's future	7%	5%	7%	7%	6%	79	
Not having enough electricity	2%	1%	3%	4%	2%	19	

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



## MAIN VALUES: PEOPLE VALUE EARNING AS MUCH MONEY AS POSSIBLE

For over one-third (35%) of Chinese people in the Climate Asia research areas, earning as much money as possible was the most important value, and this rose to 50% for people living in rural areas. Social acceptance, namely valuing fitting in with people, was also very important, as was continuing to learn new things, particularly among younger people.

#### People's most important values

			Urban/rural	Education			Resource level		
	All	Urban	Rural	High	Medium	Low	Well-off and comfortable	Poor and very poor	
Base:	5062	3551	1511	2224	1895	365	1499	2742	
Earning as much money possible	35%	29%	50%	30%	41%	43%	31%	38%	
Fitting in with people around me	19%	20%	16%	19%	18%	24%	19%	18%	
Continuing to learn new things	11%	13%	8%	15%	6%	6%	13%	10%	

Q: Of the values I have read out, which is most important to you?

#### **GOVERNMENT: CONFIDENCE LEVELS ARE HIGH**

Out of the seven Climate Asia countries, people surveyed in China were the most confident in the ability of the national government to solve problems (83% compared with 48% across the region). This also held true for local government (76% compared with 50% across the region), and 61% of people felt the government made decisions that helped their neighbourhood.

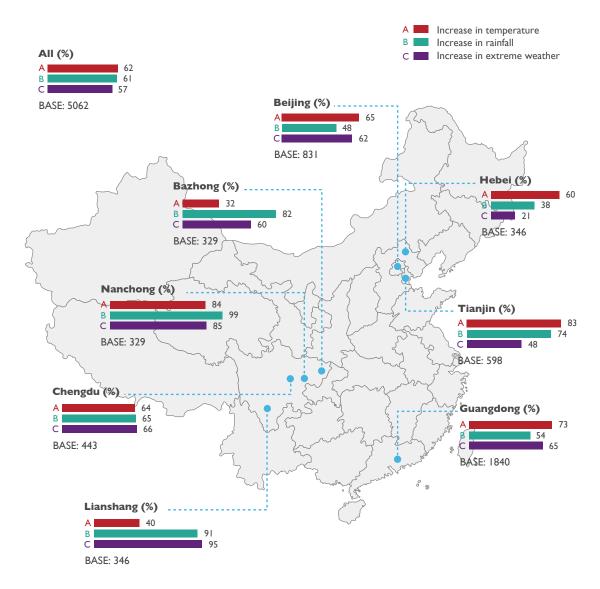
# CHANGES IN CLIMATE AND RESOURCES

This section focuses on people's perceptions of changes in temperature, rainfall, extreme weather events and availability of key resources. It then considers the geographic, demographic and developmental factors that determine how changes are felt in people's lives.

Not everyone has heard of climate change, but changes in climate affect 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 like 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.



#### Perceived changes in climate by region (%)



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

Overall people felt that it had got hotter (62%) and rainfall had increased (61%). However, there were some clear regional differences in perceptions. More people in Beijing (63%) noticed increases in temperature than nationally, while more people in Sichuan noticed increases in rainfall, especially in the area around Nanchong (99%).

Despite noticing changes in climate, most people thought that rainfall (82%) and temperatures (78%) remain predictable. This is very different from what people believed in all the other Climate Asia countries; on average in the region 44% of people thought that rainfall was predictable and 56% thought temperatures were predictable.

On the other hand, over half of the people surveyed in China (56%) believe that the number of extreme weather events – such as typhoons or floods – has increased over the last 10 years, more than any other Climate Asia country except Nepal.

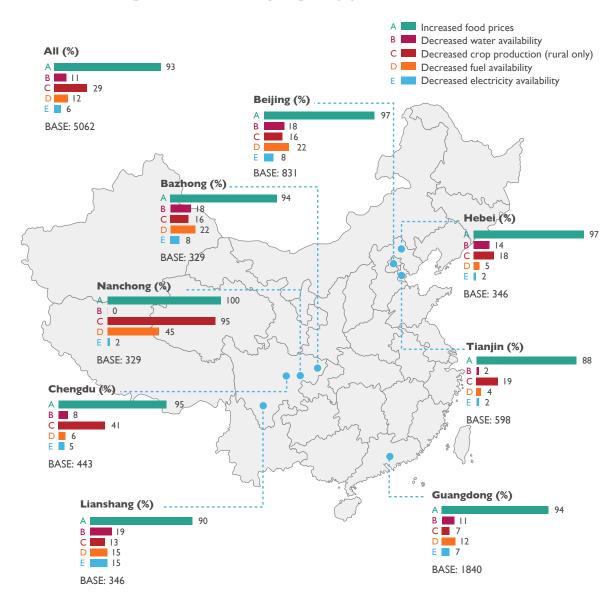
People in Sichuan are even more likely to perceive an increase in these events (69%), and this area has seen a number of floods and subsequent landslides over the past few years.

"Droughts happen quite often, especially this year [2012]; from April to June there were water shortages. Before we only needed to sow once before harvest, but this year even after five times there's still no gain. What is worse is that from July to September it was raining all the time, everywhere is getting waterlogged."

(Community assessment, Liangshan, Sichuan)



#### Perceived changes in resources by region (%)



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

Most people have recently experienced increases in access to key resources – food, water and energy. However, 11% felt that water availability had decreased and 12% felt that fuel availability had decreased; there were also regional variations, for instance more people in Beijing and Hebei had noticed decreases in water availability.

Almost a third of people surveyed (29%) believe that agricultural productivity has decreased and this was particularly noticeable in a few areas – Nanchong and Bazchong. Farmers are especially worried about this issue, as are people over 45 years of age.

## NANCHONG IN SICHUAN: CHANGE, BUT NOT ALWAYS FOR THE BETTER

Almost everyone (99%) in Nanchong<sup>3</sup> feels that life has improved: they are seeing increased access to water (98%), electricity (96%) and fuel (54%).

Less positively, they have noticed an increase in the number of insects/pests (93%), food prices (100%), rainfall (99%) and the number of extreme weather events (84%). People felt agricultural productivity had decreased (93%) and a large number felt it had decreased a lot (51%). The majority perceived low levels of impact now from changes in resources and climate (56%), but large numbers felt their ability to make money (71%) and choice of livelihood (73%) were being affected.

Most people also feel helpless in the face of these changes (82%). At the same time, people in Nanchong are taking simple actions in response to changes. These include changing their diets (80%), using technology to increase soil fertility (59%), saving or storing water (54%), and also looking for new water supplies (44%).

However, it is clear that in order to cope with some of the larger changes and the feelings they inspire, further action is needed. People said that a lack of act (82%), not knowing how to respond (74%) and a need for government support to be able to act (82%) were key barriers to action. Communication that addresses the needs of these people can help them improve their response to change (for more see section 6).

<sup>&</sup>lt;sup>3</sup> Nanchong prefecture is located in Sichuan province, about 150 km to the east of the city of Chengdu. In this area a rural county was surveyed, but will be referred to in this document as Nanchong.



## THE NATURAL ENVIRONMENT CHANGED OVER 10 YEARS

#### Perceived changes in the environment by region

	All			Region
		Sichuan	Beijing, Hebei, Tianjin	Guangdong
Base:	5062	1447	1775	1840
Number of trees increased	40%	50%	45%	28%
Number of trees decreased	26%	21%	26%	28%
Vegetation decreased	22%	17%	21%	27%
Species of animals/ birds decreased	32%	32%	31%	32%
Number of pests/ insects increased	29%	45%	23%	23%

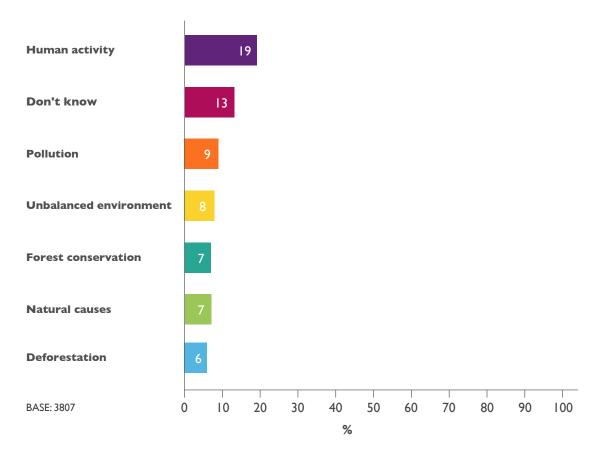
Q: Over the last 10 years, do you think the following have increased, stayed the same, decreased?

People in the three research areas felt that the environment had changed during the last 10 years. Most notably, almost a third felt that the number of insects and pests had increased and 32% thought that the number of animal species had declined.

A quarter saw a decrease in the number of trees over the last 10 years. People in cities with populations of over a million (25%) were more likely to perceive a decrease than the rural population (15%). However, overall 40% of people did notice increases in the number of trees – perhaps because of the government's recent efforts to promote afforestation – and this figure rose to 50% in Sichuan.

When asked about the reasons for these changes in environment, about one-fifth identified human activity as a cause. Six per cent of people mentioned the term "climate change or global warming" as a reason for these changes.

#### Perceived main causes of environmental change



Q: What in your view has caused these changes in environment?

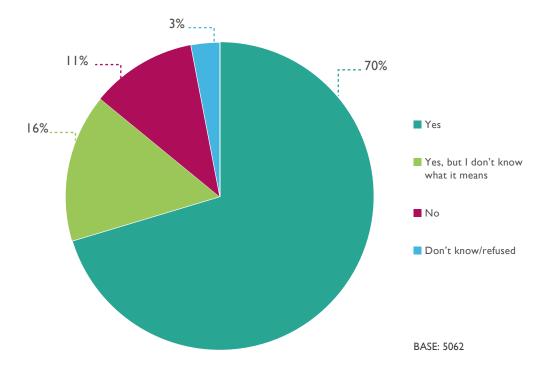
#### COMMUNICATION ON CLIMATE CHANGE

Communication about climate change is comparatively common in China compared with some of the other countries surveyed, and dealing with climate change is a core part of government policy. National policies have tended to focus on decreasing the rate at which China's emissions of greenhouse gases rise, with a long-standing emphasis on increasing energy efficiency, and the government is now in the process of developing a full national climate change adaptation strategy. Thirty-one per cent of participants know of existing communication initiatives that focus on climate change and related issues; these include television programmes (66%), television advertising (48%) and non-governmental organisation (NGO) activities (21%). However, less than half (46%) of those surveyed believe that the media covers these issues well.



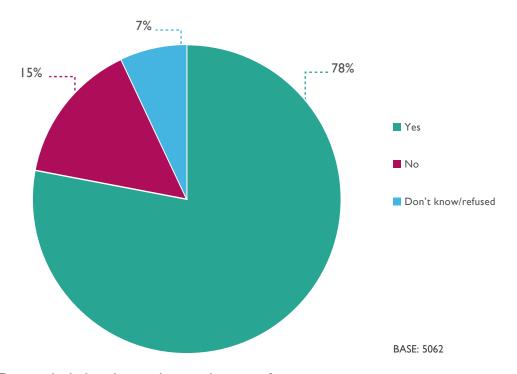
#### Awareness and understanding of climate change

Heard of term climate change



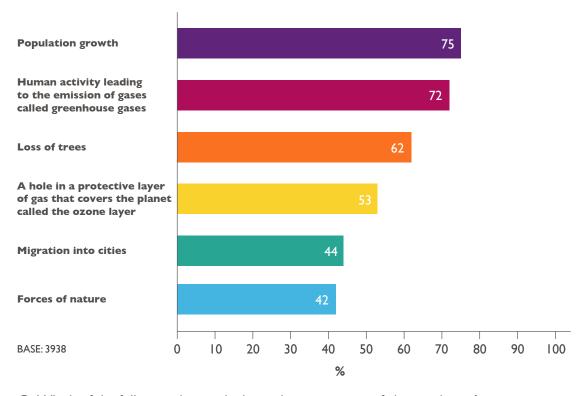
Q: Have you heard of the phrase "climate change"?

#### Believe that climate change is happening



Q: Do you think that climate change is happening?

#### Perceived main causes of climate change



Q: Which of the following do you think are the main causes of climate change?

It is notable that Chinese people in the surveyed areas were found to be more aware of the term "climate change" (86%) than citizens of all the other six countries surveyed in Climate Asia. Our research found that poorer people are more aware of the term "climate change" than richer people, but a higher number of richer people believe that it's happening. Understanding of climate change was also comparatively high, with people across almost all demographic groups identifying population growth (75%), the emission of greenhouse gases (72%) and loss of trees (62%) as its main causes.



# IMPACTS AND RESPONSES: CHANGE NOW, THEN MORE CHANGE LATER

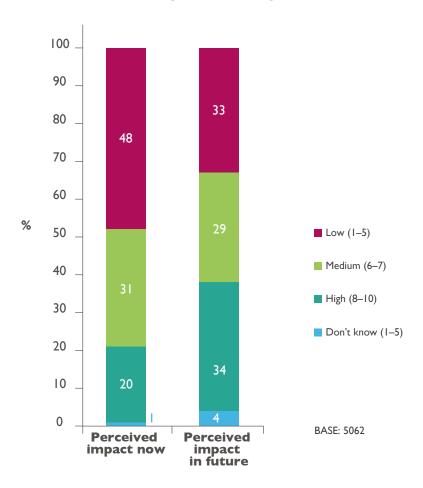
People described the impact of changes in climate and the availability of key resources in their lives. This section describes these impacts and people's responses to them in more detail.

People find it difficult to distinguish between impacts associated with the availability of key resources – food, water, energy – from 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 FEEL THE IMPACT OF CHANGES IN CLIMATE, BUT LESS THAN IN OTHER COUNTRIES

Some people felt these changes in climate and resources were affecting their lives: 20% felt high levels of impact now and a third felt they would experience high levels of impact in future.

#### Present and future perceived impact



Q: 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 could have in the future?

Those who felt higher levels of impact now often had low levels of education, were young and relatively poor. People who had experienced an extreme weather event recently were also more likely to say that they had experienced high levels of impact. Well-educated people, on the other hand, were more likely than other groups to believe that they will experience high levels of impact as a result of changes in climate and the availability of resources in future.

Overall, however, people felt that they were experiencing less impact than people living in any other country surveyed by Climate Asia. In addition, fewer people in the areas we surveyed in China than in any of the other Climate Asia countries felt these changes had an impact on their ability to earn money.



#### **HEALTH: A SERIOUS WORRY**

#### The effect of changes on people's lives

	All	Urban	Rural
Base: All respondents	5062	3551	1511
Effect on ability to earn money	53%	47%	67%
Effect on choice of job	45%	10%	55%
Effect on ability to keep healthy	81%	83%	76%
Effect on ability to maintain current lifestyle	60%	62%	54%

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

Despite the lower overall impact from climate change that people felt in the surveyed areas in China than in other countries, over three-quarters (81%) said that changes in climate and availability of resources were affecting their ability to stay healthy.

#### KNOWLEDGE OF HOW TO RESPOND WAS LOW

When asked, relatively few people in the Climate Asia survey areas (34%) said that they felt informed about how to respond to changes in climate and resource availability. Only people in Indonesia (33%) felt less informed than the people surveyed in China.

#### How informed people feel

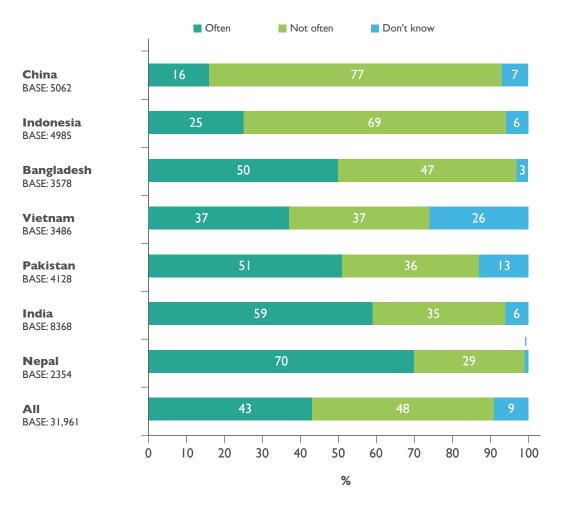
	All		Type of area	Education		Resource level		
	All	Urban	Rural	High level of education	Medium level of education	Low level of education	High level of resources	Low level of resources
Base: All respondents	5062	3551	1511	2224	1895	365	1499	2742
Feel informed	37	40	28	40	35	19	43	36
Do not feel informed	56	55	57	57	56	67	52	57

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

Students and teachers (42%) were better informed than other professions, while farmers and fishermen were the least informed (26%). People in Sichuan (29%) were less informed than people in other areas. Forty-eight per cent of people who had received communication on these issues felt informed compared with 39% of those who had not received communication.



#### Chinese people discuss the issues less



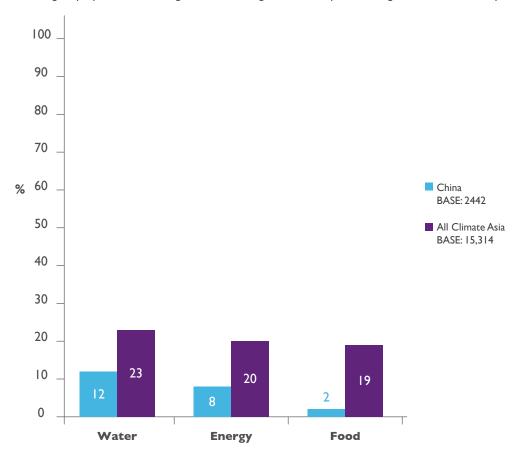
Q: How often do you talk to others in your neighbourhood about taking action to cope/deal with changes in water, food and energy supplies you might be facing?

## DESPITE LACK OF KNOWLEDGE PEOPLE WERE TAKING ACTION

When asked to explain how they would respond to changes in the availability of key resources including food, water and energy, many fewer people in the surveyed areas in China than the rest of Asia were able to provide more than one response. However, when provided with prompted examples of possible responses, rates of action in China were the highest in the region. This suggests that people may not think of the actions suggested as responses to changes in climate or resource availability.

### Chinese people have less knowledge of how to respond to changes in resource availability

Percentage of people with medium/high level of knowledge of how to respond to changes in resource availability



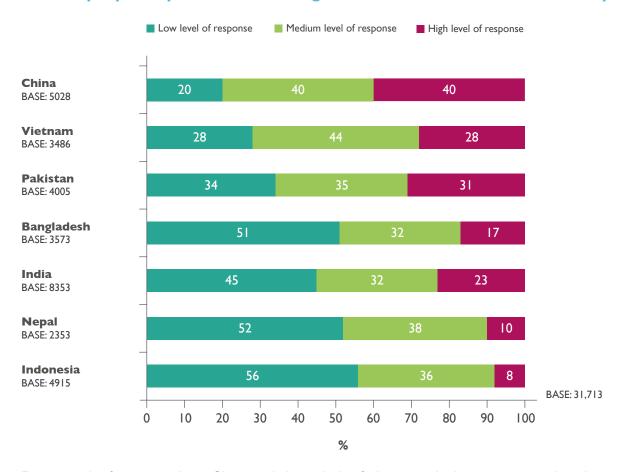
Q: What can people do to respond to difficulties with: the availability of water, electricity and fuel; changes in food availability/food prices?

Fewer Chinese people in the surveyed areas than those in other Climate Asia countries suggested, unprompted, simple actions to respond to changes such as using less fuel or gathering rainwater. However, many more of them gave complex answers such as investing in assets and saving money (16%), or market regulation (10%).

When answering questions prompted by Climate Asia researchers, more people in the three areas of China described taking a range of actions to respond to changes in food, water and energy availability as well as extreme weather events than in any other country in Asia.

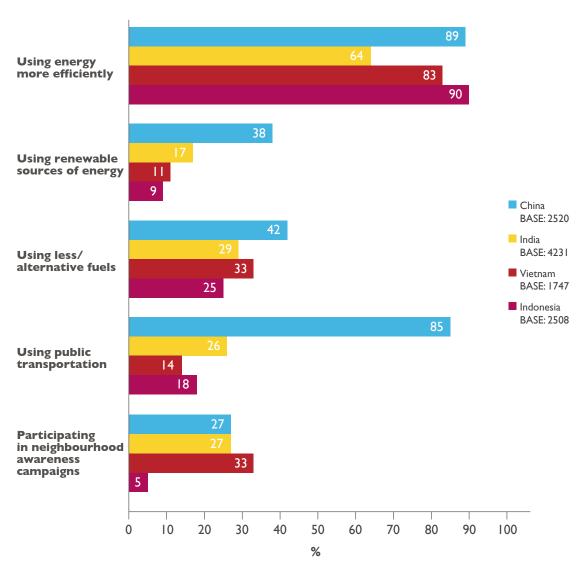


#### Chinese people respond more to changes in climate and resource availability



For example, fewer people in China said that a lack of electricity had an impact on their lives compared with those in other Asian countries. However, Chinese people in the regions surveyed were taking action to change their energy use in any case.

#### Chinese people are taking more action on energy issues



Q: Below is a list of actions people can take to help them deal with problems with availability of electricity and fuel? Which of these actions are you currently doing?

People with higher levels of education were more likely to be taking steps to change their energy use, including using renewable sources of energy and public transport, and participating in neighbourhood awareness campaigns to save energy.

Government and civil society experts interviewed by Climate Asia highlighted how China was making significant efforts to slow the rise of greenhouse gas emissions through policies to promote low carbon growth, especially through increasing energy efficiency. This is likely to contribute to the high numbers of people saying that they are using energy more efficiently and using renewable energy.

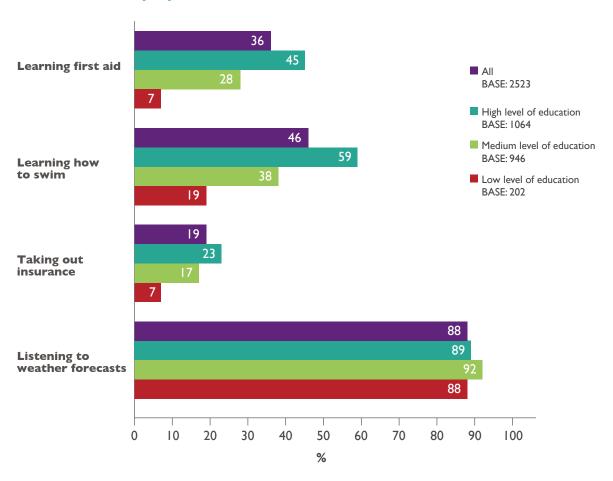


## EXTREME WEATHER: PEOPLE DO NOT FEEL PREPARED

One area in which there is obvious scope to improve action is in preparation for extreme weather events: only 12% of respondents felt prepared for extreme weather events. People living in Sichuan and those with less education felt even less prepared. One possible explanation is that despite a perceived increase in the number of these events, very few (14%) of people thought they were at high risk from future extreme weather events.

Many people were taking simple actions to prepare, although, once again, their unprompted knowledge of how to respond was very low. Somewhat alarmingly, participants who have experienced extreme weather in the past are not necessarily preparing for future events more than others. More educated people were more likely to be preparing for the long term, for instance by taking out insurance, learning first aid and learning how to swim.

#### Actions taken to prepare for extreme weather



Q: Below is a list of actions people can take to help them deal with extreme weather events. Which of these actions are you currently doing? Or have already done?

## GUANGZHOU, GUANGDONG: OPPORTUNITIES TO INCREASE PREPAREDNESS

A delta area on the coast prone to typhoons and floods, Guangzhou is vulnerable to changes in climate. The Organisation for Economic Co-operation and Development (OECD) also suggests that it is one of 10 cities around the world with the largest number of people exposed to risk of coastal flooding and storm surges.<sup>4</sup> There is also the risk of negative economic consequences should the flow of goods to and from the region be disrupted by extreme weather.

In this area people had noticed an increase in rainfall (63%) and the number of extreme weather events (59%). However, very few people in Guangzhou were feeling a high level of impact as a result of changes in climate now.

Despite 89% of people stating that they have experienced an extreme weather event in the last 10 years, only 27% feel prepared for one. Many people are taking simple, practical action to prepare including listening to weather forecasts (86%), learning how to swim (55%) and learning first aid (56%). However, very few are taking more sophisticated preparatory measures such as taking out insurance (17%) and making disaster plans (12%). Those who are not yet taking measures, though, say that they are likely to do so in future. In Guangzhou there is a role for communication to increase awareness of future risk and to encourage people to plan in order to minimise the economic and human impact of future events.

## EXPERTS FELT THERE WERE OPPORTUNITIES TO INCREASE ACTION

Despite people's high levels of awareness and action, experts from government, civil society and the media also identified further opportunities to increase awareness of climate change, as well as knowledge of how to respond to it. This group tended to focus on the importance of low carbon development, which was seen as a government priority.

<sup>&</sup>lt;sup>4</sup> OECD (2008) Ranking Port Cities with High Exposure and Vulnerability to Climate Extremes: OECD Environment Working Papers No. 1. Southhampton, UK: OECD Publishing. [online] Available from: [Accessed 29 October 2013]



Further awareness-raising about climate change was seen as necessary in order to generate individual action.

"Most people haven't realised the importance of climate change, so they don't have motivation to act."

(Government expert)

With further assistance from government and the media this awareness could subsequently be turned into action.

"Put into action – turn ideas and consciousness into operational behaviour." (Civil society expert)

A number of government officials expressed concern that current communication was not necessarily successful in relating to people's day-to-day lives. One solution suggested was to implement new education initiatives.

"An era of education on climate change is coming."

(Government expert)

Media experts also noted how their sector would be crucial in shaping response. Suggestions for improving media coverage included working closely with civil society organisations and expanding the range of sources of information consulted to produce better journalism.

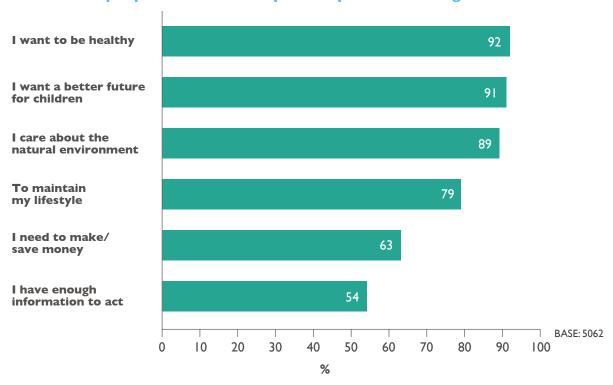
Relatively few experts talked about adaptation to climate change as something China needed to prioritise.

## ENABLERS AND BARRIERS TO 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 rates of response.

#### **MOTIVATORS FOR ACTION**

#### Reasons for people in China to respond to perceived changes



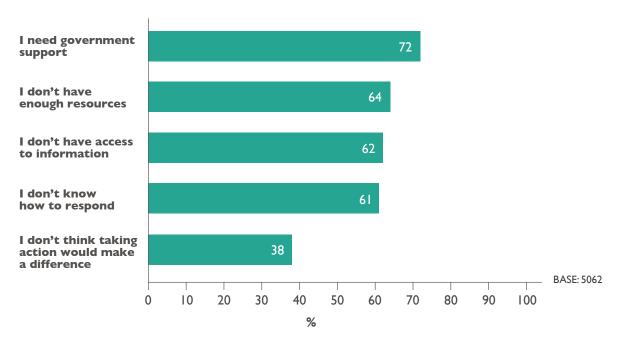
Q: For each statement I read out, please say whether you agree or disagree with it as a reason for why you would respond?

When asked whether they agreed or disagreed with a list of reasons why they might take action, by far the highest number of people agreed that they were motivated to act by a concern for their health. This was especially true for people living in Guangdong, older people and those with higher levels of education. Wanting a better future for their children was also an important reason for people to act, again especially for older people. A concern for the natural environment was another motivator, especially for those with a high level of education and young people aged 15 to 24.



#### **BARRIERS TO RESPONSE**

#### **Barriers to response in China**



Q: For each statement I read out, please say whether you agree or disagree with it as a reason for why you would not respond?

When asked whether they agreed or disagreed with a list of reasons why they might not take action to respond to the changes they noticed or the impacts they felt, the highest number of people agreed that they would need government support to act. This holds particularly true for those with low levels of education and people living in small cities.

Notably, despite high levels of exposure to media and communication, people also perceived problems accessing information that helped them to respond, particularly those in rural areas and with less education. High numbers of young people (between the ages of 15 and 24) saw access to information to help them respond as a problem (68%), despite their very high levels of media use. A similar number of people also agreed that they didn't know how to respond to changes. These somewhat surprising barriers suggest an opportunity to provide people with information about what they themselves can do, with and without external support.

## INCREASING THE NUMBER OF PEOPLE WHO FEEL INFORMED

People who felt informed about how to respond to changes in climate and availability of key resources were, unsurprisingly, taking more action. Fifty-nine per cent of those who felt informed were taking a high level of action compared with 36% of those who did not feel informed.

Chinese people had a relatively high level of exposure to communication on these issues (31%); however, those who had been exposed to communication were not necessarily taking more action. According to media experts interviewed, communication around climate change did not usually focus on how people could respond to its impacts. As such there is a role for communication to increase the number of people who feel informed about how to respond to changes in climate in order to promote action, for instance by providing people with more information about what they can do to prepare for extreme weather.

In addition, a relatively low percentage of Chinese people surveyed regularly discussed issues related to food, water, energy and climate with people in their neighbourhood (16% compared with 44% across all countries surveyed). People who discussed these issues frequently were taking more action. So, in addition, communication could encourage discussion and sharing of experience.

## THOSE WHO FELT INVOLVED IN THEIR COMMUNITIES WERE TAKING MOST ACTION

People who felt that they were involved in local decision-making and that their neighbourhood worked together to solve problems were taking a higher number of actions than those who did not. However, relatively few Chinese people felt involved in local decision-making (32% compared with 44% across the region) or felt that their neighbourhood worked together to solve problems (43% compared with 64% across the region). Those who had been living in an area for longer more often felt that their community worked together. Therefore communication could encourage further collective action in response to change by promoting greater involvement in communities.



# BRINGING IMPACTS AND ACTION TOGETHER TO UNDERSTAND PEOPLE IN CHINA

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

People in China 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. The previous section highlighted how people in China respond differently to the changes they face for a variety of reasons, including their access to information, their level of education and where they live.

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.

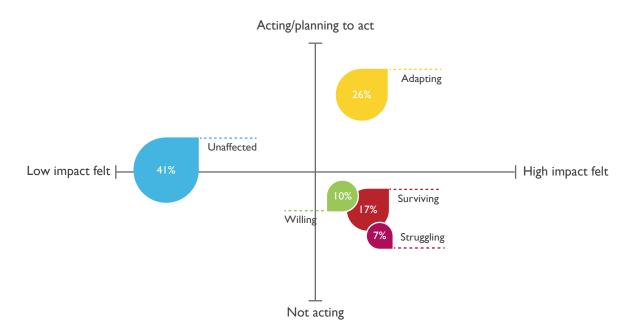
Each segment varies in the factors that enable and prevent response, and the extent to which people in that segment perceive impacts and take action to respond. As such, each segment has different communication needs and can be supported in different ways. We have called these segments surviving, struggling, 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.

Over 40% of the people surveyed in China fell into the unaffected segment. This signifies that they do not feel the impacts of these changes in climate on their lives, are not making changes to help protect their future, and do not feel there is any need for them to do anything.

In contrast, about a quarter of the people fall into the surviving and struggling segments — they are feeling the impacts of changes in climate on their lives and resources but are not able to take very much action. These people need support to respond. About a quarter of people fall into the adapting segment, meaning that they are acting and wanting to do more. By understanding this group, stakeholders can identify motivators that enable response.

#### The majority in China feel unaffected by 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"

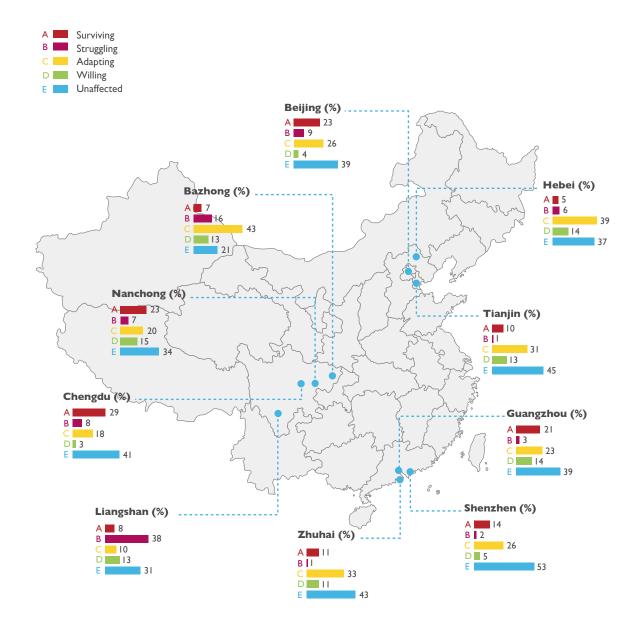
More detail on how these audience segments were formed can be found at www.bbc.co.uk/climateasia.



#### THE BREAKDOWN OF CLIMATE ASIA SEGMENTS

There are clear differences in segment distribution by region. For instance in Guangdong there is a high proportion of unaffected people, in Beijing many fall into the adapting segment, and in Sichuan, where there is a large population of farmers with low resources, many fall into the struggling group. People who say that they have more economic resources are more likely to fall into the willing segment.

#### **Map of segment locations**



# SURVIVING (17%): FINDING IT TOO HARD TO TAKE ACTION

- 83% feel their ability to earn money has been affected
- 52% say they have other priorities now
- 66% do not feel well informed about how to respond

People in the surviving segment feel the impact of changes in climate but are unable or unwilling to take action. They do not have many resources; more than people in other groups their biggest worry is not being able to buy basic items for themselves and their families. Therefore, they do not believe they have the resources or knowledge to respond to issues related to changes in climate. People in this group have lower levels of trust in government, feel uninformed and are not working with their community.

# Surviving vs the rest of the population

Willingness to change livelihood/lifestyle
Community co-operation

Impact felt

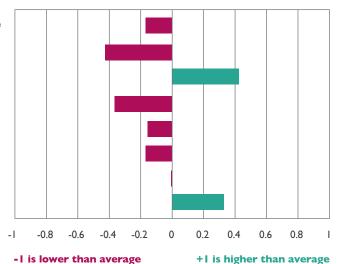
Responding to impact

Feel informed

**Discuss issues with others** 

Knowledge of responses to impacts

Lack information/resources to respond



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



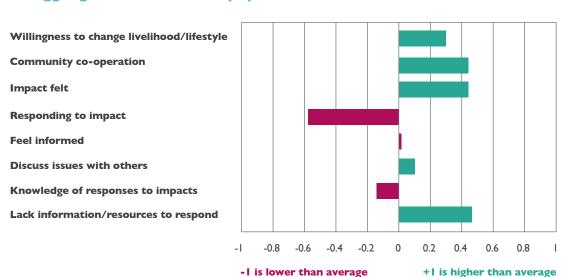
- **Provide basic information about climate change.** People in the surviving segment feel uninformed and are not engaged in the issue. Communication could highlight how people might feel impacts in the future and show simple actions to encourage them to start taking action.
- **Promote discussion with family and friends.** The surviving mostly turn to and trust family, friends and people in their local neighbourhoods as sources of information. They indicate that they do not feel involved in communities. Promoting discussion among family and friends might be a first step to increasing their engagement.
- **Increase accountability and trust.** Facilitating dialogue between government bodies, other organisations and people can increase levels of trust. A third of people in the surviving segment do not trust information provided by government officials.

# STRUGGLING (7%): WANTING TO TAKE ACTION, BUT FINDING IT DIFFICULT

- 56% live in rural areas
- 21% feel a high level of impact from changes
- 73% have noticed an increase in the number of extreme weather events
- 93% do not know how to respond to changes

People in the struggling segment are willing to respond to changes and trying to take action in response to the relatively high level of impact they are feeling. But response is hampered by a lack of resources, and access to information is a particularly important issue. Although they see a relatively high level of risk for an extreme weather event, they do not feel well prepared.

# Struggling vs the rest of the population





- **Increase knowledge of simple actions.** This will create confidence and reduce people's sense of helplessness. In particular, communication could focus on simple things these people could do to prepare for extreme weather.
- Encourage collective action and discussion. Communication could build on the high level of community involvement that people in the struggling segment feel.
   Undertaking action collectively will show them how others are acting and open up opportunities for exchanging knowledge and skills.

# ADAPTING (26%): ACTING AND WANTING TO DO MORE

- 48% are highly educated
- 80% are worried about changes in climate and environment
- 94% are motivated to take action to create a better future for children

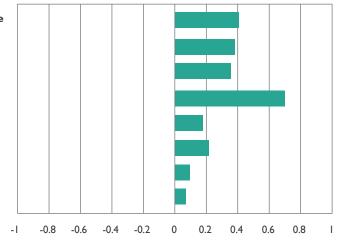
People who fall into the adapting segment are responding in many different ways, from reducing food waste and using electricity more efficiently to seeking new water sources and using technology to increase soil fertility. They feel well informed about the issues at hand and discuss them with family, friends and people in their local neighbourhoods. One reason that they have not taken more action is that they feel they lack the necessary money and equipment to do so.

# Adapting vs the rest of the population

Willingness to change livelihood/lifestyle
Community co-operation
Impact felt
Responding to impact
Feel informed
Discuss issues with others

Knowledge of responses to impacts

Lack information/resources to respond



+I is higher than average



- **Spark and share innovation.** The people in this segment have relatively high levels of knowledge of and response to climate change. Communication can encourage people in the adapting segment to be front-runners in motivating others to take (more) action. Working together with others can lead to a pooling of resources, allowing people to do more.
- Use as role models. People in the adapting segment are more likely to hold
  prominent positions in their community and are good role models for people in the
  surviving and struggling segments.
- **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 advanced, technical information on how to respond, and ways to cope with the challenges they face, will help to support them and is more likely to be understood given their level of education.

# **WILLING (10%): WORRYING ABOUT TOMORROW**

- 32% indicate that fitting in with others is their most important value
- 79% would feel guilty if they did not take action
- Only 17% feel prepared for an extreme weather event

People in the willing segment feel well informed and seem to discuss the issues with a wider variety of people, including government officials and non-governmental organisations (NGOs). They have access to information and relatively high levels of resources. But despite their ability and willingness to take both actions that are easy to do and those that require more commitment, they are often not responding to the same extent as other segments.

# Willing vs the rest of the population

Willingness to change livelihood/lifestyle

Community co-operation

Impact felt

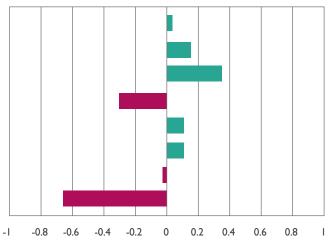
Responding to impact

Feel informed

**Discuss issues with others** 

Knowledge of responses to impacts

Lack information/resources to respond



-I is lower than average

+I is higher than average



- **Encourage action.** Despite relatively low barriers and a high level of willingness to act, the willing need encouragement to turn words into actions. Communication that stresses how acting may improve health and/or help to provide a better future should motivate these people to act.
- **Show others acting.** Fitting in with others is important for people in the willing segment. Communication could provide examples of others acting, which could motivate the willing to do the same.
- **Create awareness.** A quarter of the willing do not feel that they are responsible and 71% need government support to respond. This group is a target for constructive (not alarming) communication about the impacts and how to respond to them in order to encourage people to start taking action independently.

# UNAFFECTED (41%): BELIEVE THERE IS NO NEED TO DO ANYTHING

- 21% value fitting in most
- 57% feel low impact from climate change
- 74% need government support

People in the unaffected segment feel far less impact from and are less worried about the effects of climate change. They do not see a need to adapt their livelihoods or lifestyles. However, they are responding more than most other segments, including the willing, when it comes to actions such as changing diets, using less or alternative fuels and making water safe to drink. The unaffected group does not seem to be aware that their responses to changes in the availability of water, food and fuel may help them deal with the impacts of climate change.

# Unaffected vs the rest of the population

Willingness to change livelihood/lifestyle

Community co-operation

Impact felt

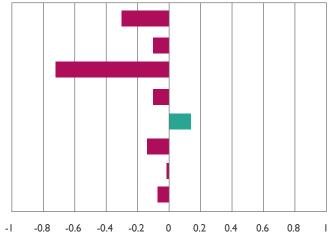
Responding to impact

Feel informed

**Discuss issues with others** 

Knowledge of responses to impacts

Lack information/resources to respond



- I is lower than average

+I is higher than average



- **Show relevance.** People in the unaffected segment feel that they have other priorities, probably because they do not feel impact from climate change. Communication should provide information that is not alarming about likely impacts in the future and relate this to people's daily lives to encourage them to take more action.
- Recognition of current actions. The unaffected are already taking some very simple actions, but do not recognise these steps as measures to counter climate change.
   Creating more awareness about the subject could show them they are already on the right track and motivate them to do more.

# THE MEDIA AND COMMUNICATION LANDSCAPE

# **TELEVISION**

Access to television is almost universal in China, with 98% of people surveyed stating they have access to this medium. It is a source of information for most (93%), and is trusted (93%) and regularly used: 76% of participants accessed a TV today or yesterday and in rural areas this figure rose to 87%. People living in rural areas seem to have a specific preference for receiving information about changes in resource availability and changes in climate through the TV (62% compared with 42% for urban areas).

TV is mostly watched at home (98%) with peak times from 6 to 7:00am and 6 to 10:00pm during weekdays and 6 to 10:00pm during weekends.

#### TV use

	All	Urban	Rural
Base: All respondents	5062	3551	1511
Access to TV	98%	97%	99%
Base: All with access to TV	4957	3456	1501
Accessed TV yesterday or today	76%	70%	87%



# **MOBILE PHONES**

Mobile phones are owned and used on a daily basis by over three-quarters of respondents (80%), especially by those in urban areas (86% compared with 66% in rural areas). People with higher levels of education are particularly active, using their mobile phones once or more per day (93%) compared with 82% of people with lower education levels. Although 79% of people surveyed, and especially people with low levels of education (84%), seem to trust mobile phones as a source of information, only 14% would prefer to receive information through this medium.

# **Access to mobile phones**

		Urban	Rural
	All		
Base: all respondents	5062	3551	1511
Access to mobile phones	88%	93%	78%
Base: all with access to mobile phones	4470	3287	1183
Accessed mobile phone yesterday or today	80%	86%	66%

# **RADIO**

Over half of people surveyed had access to a radio (52%) but only 17% had listened to the radio in the past day. Use is especially low in rural areas (11%). Despite high levels of trust in information coming through the radio in both urban and rural areas, only a third of people currently get information via this medium (33%). Only 2% would prefer to receive information on environment and climate issues through the radio.

#### Access to radio

	All	Urban	Rural
Base: All respondents	5062	3551	1511
Access to radio	52%	66%	20%
Base: All with access to radio	2650	2342	308
Accessed radio yesterday or today	17%	20%	11%

# **NEWSPAPERS**

Over half of Chinese survey participants (59%) had access to newspapers and 53% read them at least once a day. This is comparatively high within the Climate Asia study. Use is highest among people in cities and those with high levels of education. People's trust in newspapers is high (92%); nonetheless, only 6% of people would prefer to receive information on environment and climate issues through this medium.

## **Access to newspapers**

	All	Urban	Rural
Base: All respondents	5062	3551	1511
Access to newspapers	59%	74%	21%
Base: All with access to newspapers	2962	2636	326
Accessed newspaper yesterday or today	46%	47%	34%

# THE INTERNET

Over two-thirds of Chinese participants have access to the internet (69%) and half (52%) have used it today or yesterday, particularly in urban areas (65%). People use it for general browsing (53%) and for reading the news (52%); however, trust in the internet as a source of information is lower than for most other media (76%), especially among highly educated people. Nonetheless, the internet is a preferred source of information about changes in resource availability and climate after TV and mobile phones (13%), especially for people with higher levels of education (21%).

#### Access to the internet

	All	Urban	Rural
Base: All respondents	5062	3551	1511
Access to internet	69%	85%	30%
Base: All with access to Internet	3474	3026	448
Accessed internet yesterday or today	52%	65%	21%



# **PRIORITY AUDIENCES**

The segments discussed in section 6 – 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. Climate Asia's ideas for reaching these audiences are based on an understanding of the segments.

The priority audiences chosen for China are farmers in Sichuan province and urban youth.

# **FARMERS IN SICHUAN PROVINCE**



# Who are they?

Farmers in Sichuan surveyed for this research tend to be older than the general population: 46% are over 45 years of age and almost all of those in our sample were poor. Fifty-six per cent are men and 44% are women.

## Distribution of farmers across the five segments

	Surviving	Struggling	Adapting	Willing	Unaffected
AII	17%	7%	26%	10%	41%
Sichuan farmers	14%	24%	12%	19%	32%

# Why choose them?

Farmers in Sichuan are feeling the impact of changes in weather and the environment -30% feel high levels of impact compared with 20% of people overall. They've noticed increases in extreme weather events, and decreases in agricultural productivity and fuel availability (many use firewood for fuel). They feel these changes are having an effect on their ability to earn money. Compared with urban residents they are less worried about the impact on their health.

Sichuan farmers are taking some action to respond, particularly those who have external support, for instance in using alternative energy or growing new crops, but relatively few are taking many simple agricultural actions that might help them adapt to changes in climate.

People in this group need support. They do not feel they know how to respond (71%), they do not feel informed about the issues at hand (62%) and are not discussing issues with each other (84%). They have little knowledge of how to take simple actions, such as keeping emergency supplies or having a disaster plan in case of a flood or landslide.

One barrier is that they don't know others who are taking action and they tend not to feel involved in their communities or that their communities act together. Therefore there is scope for communities to work together more.

This audience values tradition and earning as much money as possible. Their motivations to make changes are to survive and maintain their lifestyle. They feel worried, helpless and angry about the problems they face.

# Information sources

Sichuan farmers have good access to media -99% have access to TV and many use it to watch agricultural programming, including that provided by CCTV Agriculture. Seventy-four per cent have access to mobile phones. Television is their preferred source of information (95%), followed by information from government officials (58%). Neighbourhood meetings (51%) are also an important source of information, as are influential members of the community.



Awareness of communication initiatives is high: 37% of Sichuan farmers have heard of existing communication initiatives on environmental and climate changes compared with 31% across the three regions of China surveyed – these included TV programmes (66%), TV ads (48%) and NGO activities (21%).

# Reaching this audience

Sichuan farmers are interested in receiving information on changes in climate and environment, specifically about future impacts (87%) and possible responses (88%). Over half would prefer to get this information through TV (58%), followed by mobile phones (10%). Their preferred formats are dramas/soap operas (87%), news (82%) and films (55%).

There are three key opportunities for communication to support people:

- I. Giving information on how people can take simple, individual actions
- 2. Supplying information on preparing for extreme weather events
- Creating networks between farmers so they can discuss and share techniques, for example growing different crops or increasing soil fertility

Simple information on how people can take actions such as saving or recycling water could be provided through posters, disseminated in neighbourhood meetings or be shown as bite-size public service announcements on television.

TV programming could also concentrate on increasing people's knowledge of how to respond to extreme weather and increasing engagement in the issue. For instance, a television drama could show local families struggling with floods, but then finding innovative ways to respond and minimise how much money they lose. Farmers themselves could be encouraged to upload videos of best practice which could be shared among people.

This group would also benefit from being more connected with each other. A mobile phone service could complement TV programming. The service would enable farmers across the region to share best practices, new technologies and seed varieties. This would enhance their knowledge, while simultaneously showing others who are responding and provide opportunities to learn from their experiences.

# **URBAN YOUTH AGED 15-24**

# Who are they?

The vast majority of urban young people (81%) feel that life has improved over the last five years. They have noticed changes in the availability of resources and climate. Currently, a quarter of them are feeling high levels of impact (25%), and many also expect to experience high levels in future (45%).

# Distribution of urban youth across the five segments

	Surviving	Struggling	Adapting	Willing	Unaffected
All	17%	7%	26%	10%	41%
Urban youth	26%	5%	26%	9%	34%





# Why choose them?

People in this group are taking some action; others are feeling the impacts and are finding it hard to act. Health is a big concern, as are food prices. However, over half of urban youth fall into two segments – surviving and unaffected – and people in these segments are less likely to feel that they, as individuals, can take action.

Urban young people value learning new things and have a stronger attachment to their environment than older generations. They are more aware of health risks and live in areas where the number of factories has increased recently. A key area where they lack information is response to extreme weather.

## Information sources

Urban youth are heavy consumers of media and feel that it is not covering climate-related issues well; 56% also do not feel informed on how to respond to changes in climate. They have more confidence in the government and NGOs than other demographic groups.

They have two preferred channels for climate change and response information – television (88%) and the internet (80%). Internet penetration is very high among this group and a lot of time is spent on social networks. Young people in urban areas would like to have information on the future risks and causes of climate change as well as knowing how they can take action.

# Reaching this audience

Significant opportunities exist to educate this audience to improve their knowledge of climate and environment, and to encourage them to play an active role in the community to respond to changes in climate in the longer term. Specifically:

- Preparing for extreme weather giving information on emergency plans and first aid and emphasising how they can help others in their community when an extreme weather event strikes
- 2. Increasing knowledge of climate change, its causes and its future effects
- 3. Encouraging them to take individual actions such as not wasting food, conserving water and using public transport

Building on their media usage, a combination of short TV clips and online interactive content that is frequently updated is likely to reach this audience. In addition, social media could be used to enhance the reach of the content and to promote discussion among this audience about issues raised.

This type of content can encourage this group to share ways of taking action. Content should be entertaining, engaging and informative, feeding this audience's thirst for new information.

# 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 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 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

The research methodology for China is outlined in section I. This section gives more detail on the quantitative survey, community assessments and in-depth interviews.

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.

The number of interviews conducted in each region was decided in proportion to its population.

	Population in millions	Sample size
North China (Beijing, Tianjin and Hebei provinces)	104	1775
South China (Guangdong province)	110	1840
South-west China (Sichuan province)	88	1447
Total	302	5062

# SAMPLE SELECTED ACCORDING TO POPULATION

Within each region, specific districts were chosen for the surveys. Taking Sichuan province as an example, each area is classified into four tiers according to size – Tier I being the large cities and Tier 4 being rural areas. One district was selected from each tier.

Once the regions were selected, districts within the region were randomly chosen according to their population. At each chosen sampling point, researchers conducted 20 interviews.

## Criteria for choosing sampling districts in Beijing

	BEIJING	Population in millions	Number of sampling points	Total interviews	Total opinion- formers
Tier I	Dongcheng	0.911	2	40	6
	Xicheng	1.243	3	60	9
	Chaoyang	3.545	7	140	21
	Haidian	3.281	7	140	21
Tier 2	Fengtai	2.112	5	100	15
Tier 3	Tongzhou	1.184	4	80	12
	Changping	1.661	5	100	15
	Daxing	1.365	4	80	12
	Miyun	0.468	2	40	6
Tier 4	Pinggu	0.416	2	40	6
Total		16.186	41	820	123

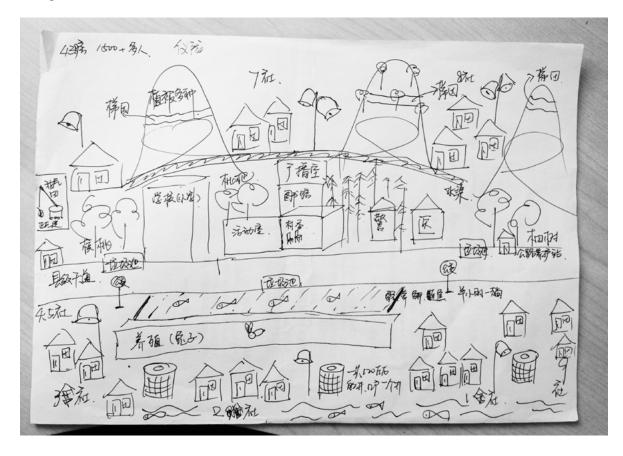
Opinion-formers were identified as having two of the three following characteristics: a professional occupation, belonging to an organisation, group or association, and having influence over more than 10 people.

In addition 30 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.

In China, Climate Asia also conducted nine community assessments – a qualitative research method involving spending one to two days holding group and one-on-one discussions with community members. The assessments were held with people thought to be more vulnerable to the impact of changes in climate and in hard to reach groups. This includes people who live in isolated areas, do not have fixed abodes (including those living in slums, nomadic populations and migrants) and ethnic minority groups. People of different ages, genders and income levels, from a range of households and who play various roles in their neighbourhoods also participated. Three community assessments were held in each of the three areas. The aim of these assessments was to understand these communities' access to and need for information and the challenges they encounter.



The map below was drawn in a community assessment in Nanchong and was used to identify important individual and community resources to identify areas that had experienced change over the last 10 years. It was also used to help identify areas and resources at particular risk from changes in climate and extreme weather.





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