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Climate Asia

A new approach to research on public understanding of climate change

BBC MEDIA ACTION
TRANSFORMING LIVES THROUGH MEDIA AROUND THE WORLD

Contents

Executive summary

Climate Asia will be the largest ever research study into public understanding of climate change in Asia with more than 33,000 interviews conducted across seven countries: Bangladesh, China, India, Indonesia, Nepal, Pakistan and Vietnam. This working paper explains the distinctive research approach BBC Media Action has taken in these seven focus countries, which have a combined population of more than three billion people.

Utilising a multi-country, multi-method replicable research design, BBC Media Action aims to provide an evidence base for public understanding of climate change in Asia. BBC Media Action has taken a standard approach to research across all seven countries to enable the exploration and analysis of similarities and differences across and within these countries.

Drawing insights from literature, qualitative research and a series of communications strategy development workshops, BBC Media Action's research examines people's understanding of the effects and impacts of climate change and their responses.

This approach differs markedly from much existing research in that it does not focus primarily on the concept of climate change. Instead, BBC Media Action used insights from formative work to ask people questions using language and concepts that are more likely to relate to their day-to-day lives. Questions in the Climate Asia survey focus on tangible issues including food, water, energy and extreme weather events.

This research is designed to inform the development of communications strategies that support and enable responses to impacts associated with climate change.

Introduction

Climate Asia has been developed by BBC Media Action, in consultation with partners the UK government's Department for International Development and the British Council.

It will establish what people in seven Asian countries understand about climate change and inform the design of communication strategies to enable people to respond to its effects and the impacts they have on people's lives.

Asia is home to nearly four billion people. The Intergovernmental Panel on Climate Change (IPCC) predicts that the region is likely to experience acute impacts as a result of climate change, including rising sea-levels, decreased crop-yields and increased strain on water resources. Meanwhile, recent events, including extreme flooding in Pakistan and drought in north-west China, have had disastrous impacts on livelihoods and demonstrate how people in the region are vulnerable to climatic impacts. People are already encountering change that affects their day-to-day lives and it is likely that this process of change will accelerate in future.

Asia will also play a crucial role in defining the global response to climate change. This includes both helping to prevent a dangerous global rise in emissions and supporting vast numbers of people in adapting to climate change and increasing their resilience. That response is likely to require an unprecedented collective effort. It will also require constant experimentation and innovation.

A key premise of the Climate Asia project is that how people in Asia understand climate change and how they respond to it – economically, politically and socially – will depend heavily on what information they have on the issue, and what understanding they develop on the climate-related issues that are of most concern to them. Communication, particularly through the media will be crucial in enabling effective action in response to climate change.
People in these seven countries face severe risks associated with climate change and will be some of the first to respond. There is a real need for communications that enable people to take action on climate change.

However it is difficult to judge whether communications on climate change have been successful. Media coverage of the issue peaked in 2009 around an unsuccessful attempt to reach an international agreement on climate change at the Copenhagen conference (Boykoff & Mansfield, 2012) and has dropped since. Understanding of the concept still varies considerably from country to country and between developed and developing countries (e.g. Gallup, 2010; Neilsen, 2011; World Bank, 2010).

This working paper demonstrates the development of the approach to research BBC Media Action has taken for the Climate Asia project. In particular it emphasises how insights from our qualitative research have aided the design of the quantitative survey. It also highlights how findings from the research and communications development process could be utilised to generate strategies that enable people to take action on climate change.

Research for the Climate Asia project will generate an evidence base of public understanding of climate change across seven countries in Asia. Communications strategies will be built on data from the research and our communications development process with the aim of enabling people in Asia to make informed decisions and take effective action on climate change.

Climate change and Asia – IPCC Report 2007

Climate change has natural and human causes. Global surface temperature is used as the main indicator of the amount of change. In 2007 the IPCC found that the 100-year linear trend for global surface temperature increase (1906-2005) was 0.74°C. It also concluded that on a global scale it is very likely that human activities that increase atmospheric greenhouse gas concentrations – such as fossil fuel burning and deforestation – have caused the rise in average surface temperature since the mid-20th century (IPCC Synthesis Report, 2007).[1] Considering a range of possible future scenarios, the IPCC projects that continued warming is inevitable for at least a few decades, and is now very unlikely to be less than 1.5°C.

There are variations in the rise in surface temperature between regions. For particular regions, there is less certainty about the amount and cause of the warming. However, it is thought likely that Asia has experienced significant warming as a result of human activities in the last 50 years. Across Asia, the IPCC finds some evidence that climate change has already caused reduced crop yields, caused glacier retreat in some locations, an increase in climate-related diseases and changes to marine and terrestrial ecosystems (IPCC Working Group 1, 2007).

While the IPCC has concluded that Asia is already experiencing changes in climate as a result of human activities, it is very difficult to pinpoint whether any particular change is a result of human-induced climate change or natural climatic variability (IPCC, 2007).

In this study, therefore, a decision was taken to focus research on changes and variations in climate that people perceived, and their understandings of causes, rather than attributing any particular change to human activities.

[1] The IPCC define 'very likely' as a 90-100% probability, 'likely' as a 66-100% probability, 'unlikely' as a 0-33% probability. See http://www.ipcc.ch/pdf/supporting-material/uncertainty-guidance-note.pdf

Inception phase and literature review

In order to inform the design of the research, BBC Media Action first conducted an extensive literature review. Work conducted during a four-month project inception phase revealed gaps in research, particularly in relation to public understanding of climate change in developing nations. Furthermore, there was little to no research designed to inform communications that encourage response to the impacts of climate variability and change.

Most work on public understanding of climate change has been conducted in developed countries. This work has largely focused on awareness and understanding of the causes of climate change – for instance by asking people if they are familiar with the concept and whether they agree that human activities are contributing to it – rather than on its impacts. Where there has been focus on responses to climate change, these have tended to be related to reducing emissions of greenhouse gases rather than adapting to change (Pidgeon 2010).

Insight drawn from previous BBC Media Action work highlights the difficulty of taking this approach in developing countries. The Africa Talks Climate project explored perceptions of climate change in ten African countries: DR Congo, Ethiopia, Ghana, Kenya, Nigeria, Senegal, South Africa, Sudan, Tanzania and Uganda (BBC World Service Trust, 2009). The qualitative study included over 1200 discussions with the public and opinion leaders. It revealed low levels of awareness and understanding of climate change. On the basis of this finding, and from a similar study conducted in Cambodia using quantitative methods, BBC Media Action hypothesised that awareness and understanding of climate change would be somewhat higher, but still relatively low across most of the seven Asian countries in which we planned to conduct research (BBC World Service Trust, 2011). An approach to research which focused around the concept of climate change was therefore considered inappropriate for Climate Asia. If awareness and understanding of climate change is low, subsequent questions about action and response are unlikely to be understood.

For most people in the developing world, taking action on climate change, at least in the short term, will be about adapting to change in their environments. Large-scale research on understandings of adaptation has not been carried out. Research on local knowledge of climate risks and adaptation strategies has been conducted on a small scale (Jabeen, Johnson, & Allen, 2010). However, comparable quantitative data on the extent to which people are responding or are likely to take particular actions has not been collected.

There is also still work to be done in understanding the role communications can play in supporting responses to climatic impacts. Adaptation expert Saleemul Huq suggests that "to truly support the needs of local communities, this information needs to be more site-specific, more user-friendly and more inclusive of traditional knowledge and existing coping practices" (Huq, 2011). Climate Asia research has therefore been designed to highlight existing local understandings and actions so that communications can build on them and support them.

In order to produce data that aids the development of communications strategies, BBC Media Action will also look to build on a number of key studies in this field, in particular the approach taken by the Yale Project on Climate Change Communication which surveyed public climate knowledge, risk perceptions, decision-making and behaviour and segmented the American public into categories depending on their perception of climate change (Maibach, Leiserowtiz, Roser-Renouf, & Mertz, 2011). As one of the study's authors Anthony Leiserowitz notes, "Much work remains to be done to identify and understand the

underlying psychological, cultural, economic, geographical, and political factors that drive global warming risk perception, attitudes and behaviours, as well as to further apply that knowledge in the effort to accelerate collective action on climate change." (Leiserowitz, 2007) Research for the Climate Asia project will attempt to begin to fill these gaps by examining these factors and behaviours on a large scale.

Research methods

Our approach focuses research on emergent themes based on people's lived experience in the project's seven Asian countries. This approach will allow us to make pan-Asian comparisons of people's understanding of the effect, impacts and responses to climate change as well as providing us with information with which to build communications strategies. We have chosen a mixed-methodological approach that also allows for us to examine understandings of the issue among experts, opinion-formers and people adjudged to be particularly vulnerable to the impacts of climate change.

The project recognises that there are significant commonalities in the risks and opportunities faced by people across the region. Therefore BBC Media Action designed research to enable meaningful comparison across the seven countries which are at varying stages of economic and social development. Research data from all seven countries will be analysed on the basis of demographic, geographical, socio-cultural and economic factors (more detail provided below). This will allow us to highlight common, transnational understandings of climate change across the region and to explore which factors influence perceptions and response.

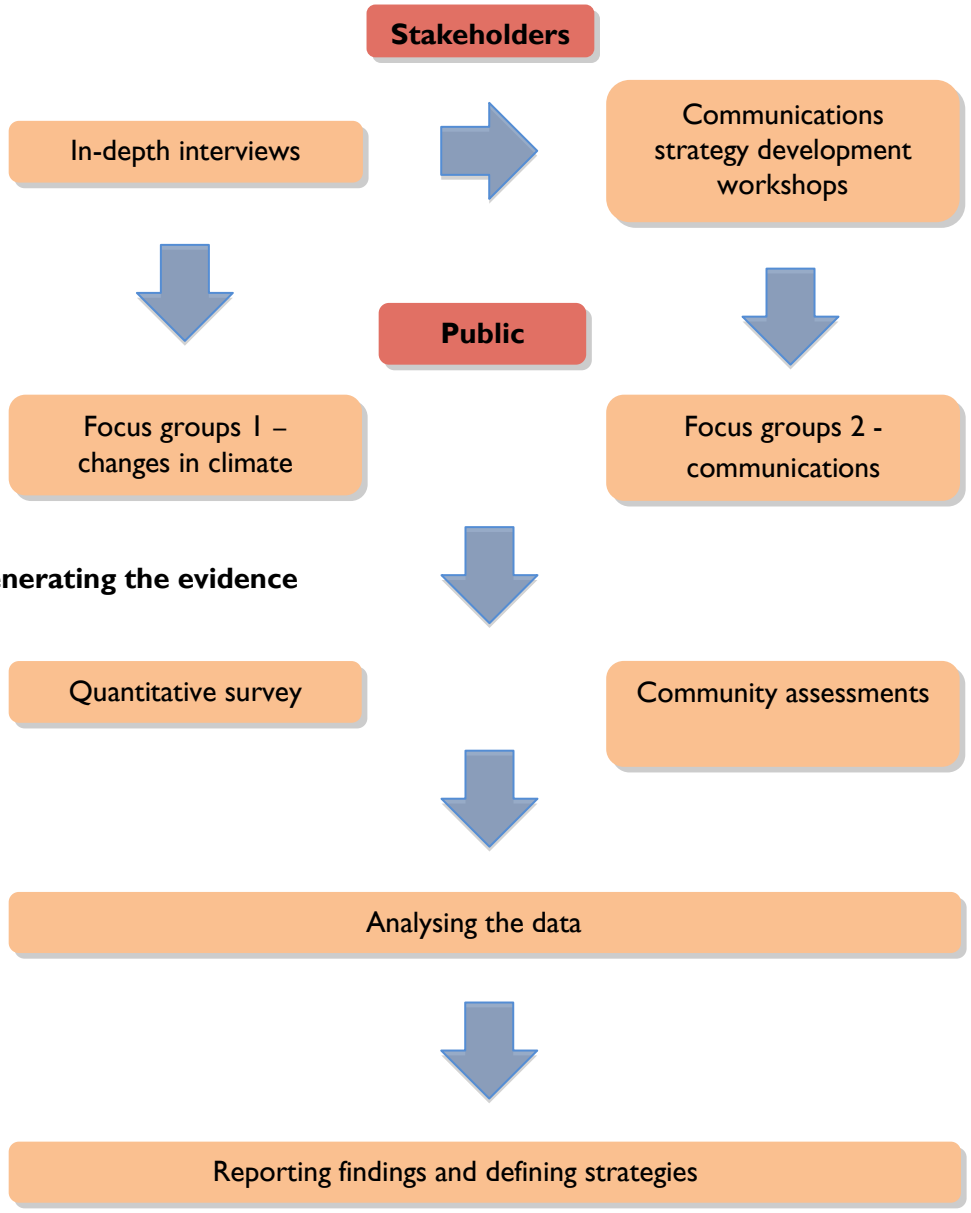
At the outset, it was also decided that research needed to cover geographical zones present in each country. Scientific literature has shown that certain effects associated with changes in climate are present in specific geographical zones (IPCC, 2007). As such the research was designed to allow for comparison not just across countries, but between the geographical zones within them.

The research and communications development process was implemented by researchers and communications project officers in each country.

The research process

The table below charts BBC Media Action's research process. It shows how initial insights from successive waves of research and communications development have shaped our overall approach. Ultimately these insights will inform the analysis of data from quantitative research and development of communications strategies.

Developing the approach



In-depth interviews with stakeholders

150 interviews have been conducted across seven countries with key experts and opinion formers from government, media, business, civil society, science and academia. These interviews explored:

- **Knowledge and framing of climate change** – including awareness of climate change; views on public understanding of the issue; current effects and impacts experienced in their country or region and identification of affected and vulnerable communities.
- **Responses to climate change** – including identification of key actors; discussion of current levels of response; decision-making on this issue and examples of effective responses to climate change.
- **Communications** – including discussion of how experts and opinion-formers communicated; opportunities and barriers to communicating climate change and, with media experts, questions about the media landscape of their country.

Focus groups

96 focus group discussions (FGDs) with members of the public were completed across six countries.[2] The FGDs took place in the main geographical zones present in each country.

Number of focus groups per country

	Bangladesh	India	Nepal	Pakistan	Indonesia	Vietnam
Cities	4	4		4*	4	4*
Coasts	4	7		4	4	4
Deltas	4			4*		4*
Mountains		6	4	4		4
Forests	4		4		4	4
Plains		7	4	4	4	
Total	16	24	12	16	16	16

* In these countries, city locations chosen will be on a delta so will cover both zones

In each location, two to four FGDs took place with participants selected by age, gender, occupation and social class.

The groups were split into two types. The first group explored people's views of their lives, how they talk about their environment and relate to changes in climate. They also explored how people are already responding to changes in their environment and the barriers and motivations to responding.

The second group concentrated on people's media habits, their trust in sources of information and their views of specific actions that they could take to deal with changes in the environment.

[2] Focus groups were not conducted in China due to logistical and cost constraints.

BBC Media Action assembled a selection of adaptation behaviours that people might take in response to climatic variability and change. This list drew from responses suggested by: experts and opinion-formers; participants in communications strategy development workshops; expert advisors; existing literature, policy and practice including National Adaptation Programmes of Action (where available), a World Bank Database of Asia adaptation programmes and a survey of adaptation projects in South Asia assembled by Oxfam (Government of Nepal, 2010; Oxfam, 2011; World Bank, 2012).

These adaptation behaviours were selected on the basis that they were simple, did not require significant additional resources and would be applicable across most of the region. Before adding these to the quantitative questionnaire, these actions were discussed in the focus groups. For example, to tackle water shortage the following actions were tested:

- Storing/saving water (e.g. collecting rainwater)
- Recycling water/re-using waste water
- Making water safe to drink (e.g. boiling, straining through cloth, using water filter)
- Finding a new water supply (e.g. digging wells, installing hand pumps, tube wells)

These possible actions were shown to focus groups as picture cards and participants were asked to devise ways they would like TV or radio to cover them.

Community Assessments

42 community assessments are planned to be conducted across six countries in late 2012.[3] These assessments aim to generate a more detailed understanding of how communities experience the impacts associated with climate change, including how the community is already responding to climate variability.

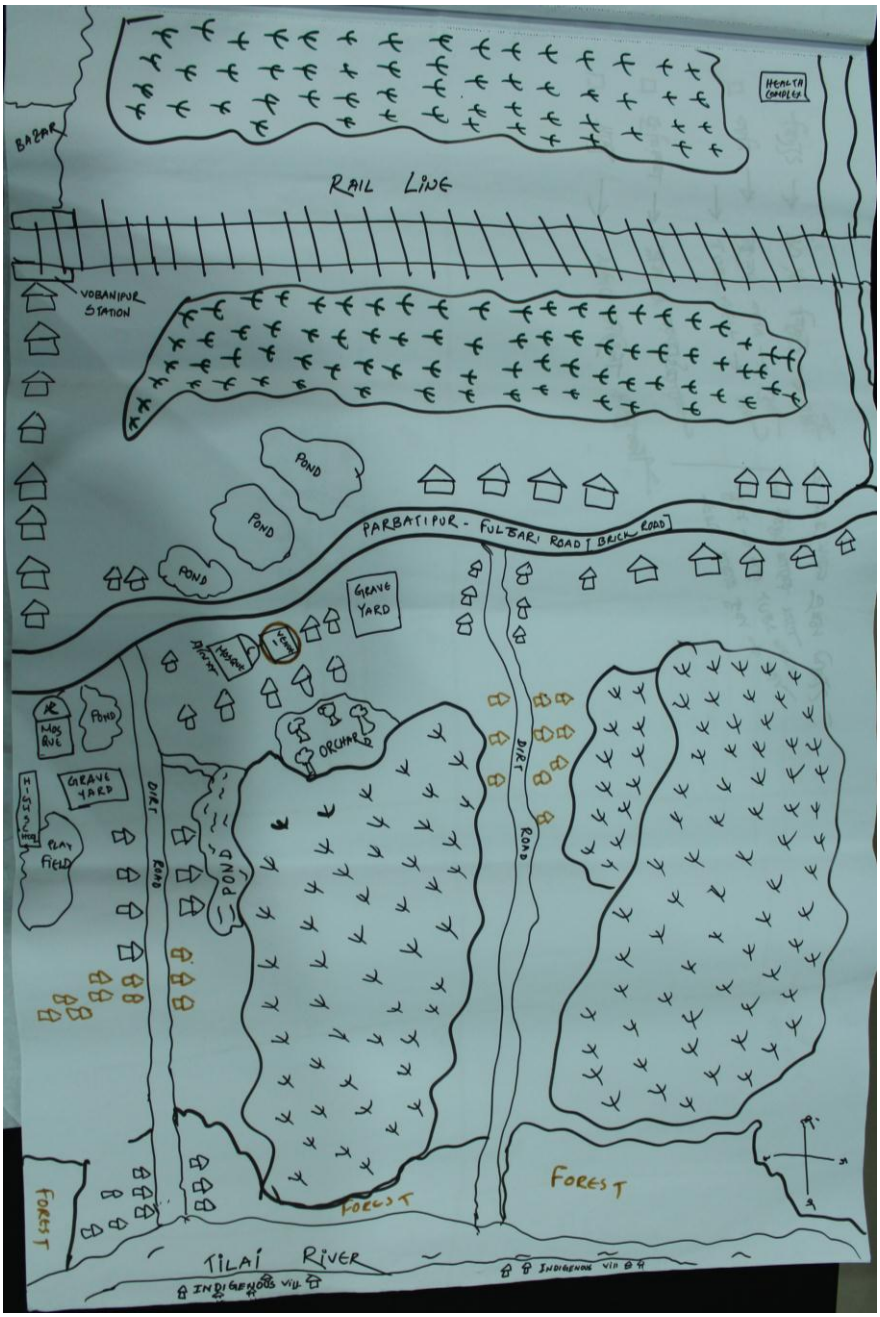
The communities have been selected to both represent parts of the population that experts feel are most vulnerable to the effects of climate change in both urban and rural areas and also cover a range of different geographical zones and the social diversity of the country. These assessments will be undertaken with hard-to-reach people who would not necessarily be reached by a quantitative survey.

Community assessments encompass a range of research techniques including rural participatory appraisals with a group or groups from the community during which researchers draw community maps, seasonal calendars and communications network maps with the group while discussing issues around climate and livelihoods.

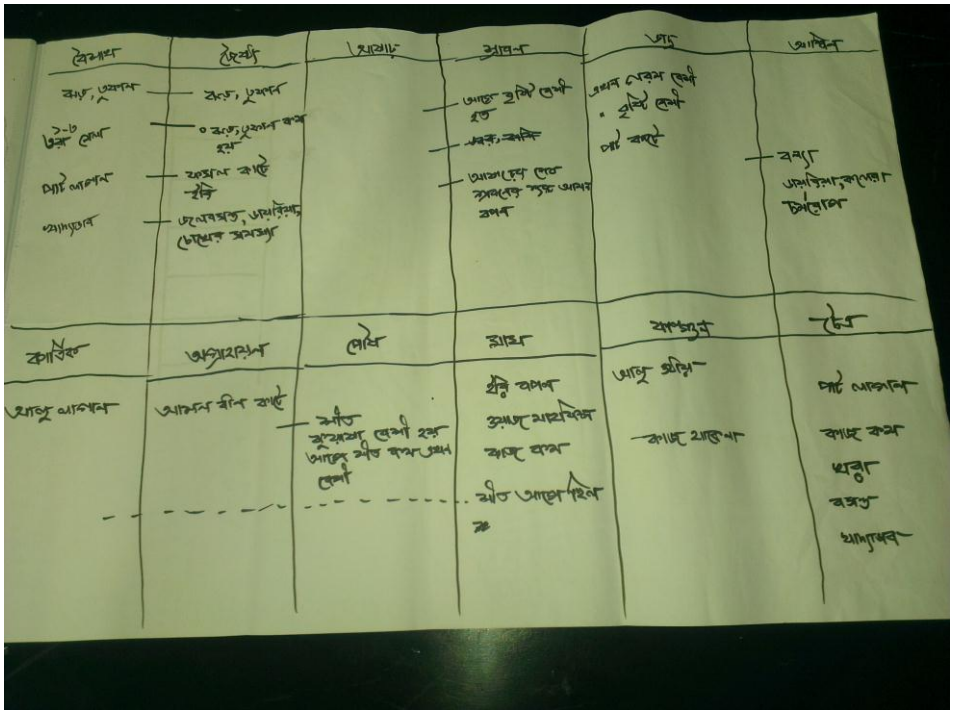
[3] Bangladesh, China, India, Indonesia, Nepal and Pakistan. BBC Media Action was unable to conduct community assessments in Vietnam due to logistical constraints.

An example of a community map drawn during a community assessement in Bangladesh.

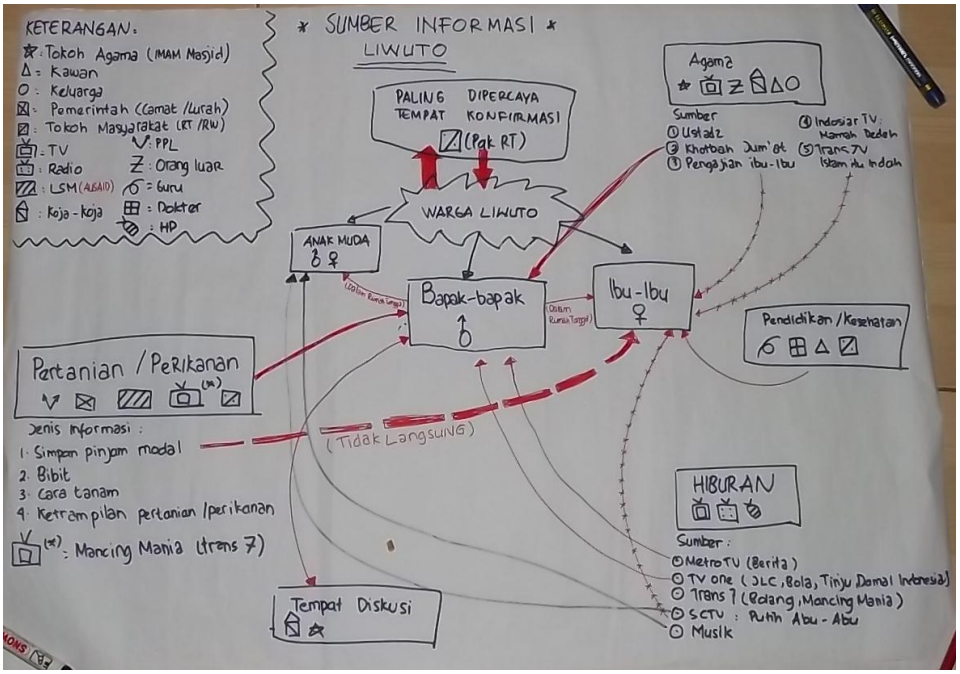
A community map highlights hazards, locations of natural resources, housing, civic services and market places or trading points.



An example of a seasonal calendar, drawn during a community assessment in Bangladesh. With months running across the top and middle of the page, the grid includes information on planting and harvest seasons, periods of food scarcity, times of migration and extreme weather events.



An example of a communications network map, drawn during a community assessment in Indonesia. The map illustrates the flow of information and communication within a community, including information from media and interpersonal communications.



These research techniques are supplemented with in-depth interviews and transect walks around the area with key informants including local and community leaders, officials and, where present, members of civil society groups who conduct activities in the area. Researchers also take detailed field notes while observing the community.

Communications strategy development workshops

Communications strategy development workshops were held in Bangladesh, India, Indonesia, Nepal, Pakistan and Vietnam in early 2012 with climate change experts, officials and practitioners along with media and communications professionals. These workshops discussed definitions of climate change and priority issues related to it; pinpointed affected communities and highlighted how they could adapt to climate change; considered what actions were achievable and the barriers to and motivations for taking them and determined which media channels were appropriate to reach specific audiences and generate ideas for media content. These workshops were also used to test the communications strategy development process.

Communications evaluations

BBC Media Action is evaluating over 100 existing initiatives and media programmes that communicate climate change issues. This process will help to identify the regions, audiences and climatic areas where resources are currently being placed as well as any key issues highlighted through research that are not being widely covered. It will also help to build a picture of the media landscape in the project's target countries and to identify the level of cooperation between media, government non-governmental organisations (NGOs) and other institutions that communicate about climate change.

The evaluation will highlight the types of communications approaches being implemented and where good or promising practice lies. Certain projects and programmes that demonstrate good practice will then be selected as case studies that will inform and reinforce proposed communication strategies.

Quantitative survey

The quantitative survey for Climate Asia has two key aims:

- to provide a replicable baseline of public understanding of effects, impacts and responses to climate variability and change which can be measured over time
- to inform the development of communications that enable action in response to climate variability and change

Insights generated from qualitative research have been used to shape and design the survey. Replicable indicators that the survey will measure and can then be tracked over time include:

- awareness of current changes in the environment
- levels of knowledge about actions to take to respond to changes
- current actions taken to respond to changes
- likelihood to take action to respond to changes in future
- usage of communications to enable response to changes in the environment

A single standard survey has been designed to be replicated in different languages across the seven countries. While there are a few country-specific questions (for instance those which assess the poverty levels of that country) and some country-specific response options (such as specific media channels), the survey has been designed to ensure that comparison and analysis across countries is possible. A standard survey will also allow for regional analysis of data and audience segmentation.

As the survey was designed to inform communications development, most of which is likely to be through mass media, it was important that the survey drew on a sample that represented the mass media audience which comprises a very high proportion of the population in the seven focus countries. This will enable media planners to use data drawn from the survey to implement communication strategies also derived from the research.

BBC Media Action has therefore chosen to conduct nationally representative surveys in each country where possible, rather than with a specific population e.g. farmers. In addition the countries surveyed in this project are vast and the people diverse. Therefore, interviews are being carried out with a national representative sample in all of the geographical regions of each country.

Due to their size, a different approach had to be taken in India and China. In these countries specific regions were chosen which cover a geographical representation of the country. These chosen regions represent a large percentage of the countries' population and cover the main geographical regions present in the country.

The number of interviews conducted in each country has been determined by the size and diversity of the population. To ensure the sample was as representative of each country as possible, quotas were set for urban and rural areas to reflect the urban-rural distribution of the population of the country. For example, in Indonesia where 70% of the population live in rural areas, 70% of interviews were conducted there.[4]

Since the research focused on both the general population and people who are locally influential, separate samples were kept for both these groups. The general population was randomly selected through a survey with a nationally representative sample in each country. When deciding on the sample size for each country, the population of the country was considered and the confidence interval used was not more than plus or minus 2% for any of the countries.

No other quotas were set for the general population as both systematic and probability proportionate to size (PPS) sampling methods to select respondents were used to ensure that the population was accurately represented.[5]

The first step in sampling was to divide the country into main geographical strata to ensure a representation of all geographical regions. For example in Bangladesh, the seven administrative states were chosen; in Nepal the country was split into three ecological regions - mountains, hills and Terai (plains) and in Vietnam the country was split into six geographical zones. In India and China, only selected regions were surveyed so these were

[4] This is different to many national media surveys conducted, where more interviews are conducted in urban areas to reflect the more diverse population found there. Data is then weighted to reflect the actual urban and rural populations. In this study, BBC Media Action was interested in the differences between different rural areas and geographical zones.

[5] Probability proportional to size (PPS) is a sampling method for use with surveys in which the probability of selecting a sampling unit is proportional to the size of its population.

used as the main sampling unit. In India these were Mumbai, Gujarat, MP, Odisha, Tamil Nadu and Uttarkhand. In China, Beijing, Sichuan and Guangdong were chosen. In some cases the main geographical strata were divided further. For example, in Pakistan each region was split into rural and urban areas, before districts were chosen randomly.

Then, to ensure a nationally representative sample, BBC Media Action employed the probability proportionate to size (PPS) methodology to select the study districts from within the geographical regions. To do this, census data or other equivalent population data was used.

Urban and rural areas within a district/state were separately listed, on basis of census classification. Municipal wards were used as primary sampling units (PSUs) in urban areas and villages can be used as PSUs in rural areas. Once the sampling units were chosen, 20 interviews were conducted in each. Standard guidelines to be followed in each country were set for how to choose the respondents to ensure comparability.

Comparative country data on surveyed population

	Bangladesh	India	Nepal	Pakistan	China	Indonesia	Vietnam	Total
Total population aged 15+	164 M	1.17 B	29.3 M	184 M	1.35 B	233 B	87.8 B	
Proposed representation	National	Specific regions	National	National	Specific regions	National	National	
General population	3000	8000	2000	4000	5000	4500	3000	29500
Influencers/ opinion formers	500	750	350	500	500	750	500	3850
Total number of interviews	3500	8750	2350	4500	5500	5250	3500	33350

Previous BBC Media Action work in the region and on climate change had revealed the important role key members of communities play in informing people and enabling change, particularly amongst rural people. Alongside the survey of the public, interviews were therefore conducted with potential opinion formers, for instance religious leaders, teachers, business people, local government officials or agricultural extension workers. The composition of opinion formers who are thought to be influential locally has been defined through screener questions which cover occupation and engagement with civil society. For the quantitative survey, a broader definition of an opinion-former was utilised than that used in in-depth interviews. Findings from these interviews will be useful in designing communications strategies, particularly in informing the choice of target audience or audiences for communications.

At the beginning of the interview, screener questions covering occupation, membership of civil society organisations and perceived influence on their community were asked of a given household. Recruitment of opinion formers was based on whether the response to these questions met the criteria set for 'opinion former' which varied by country. If no one in the household met these criteria the interviewer started the interview process as normal, including selecting respondents randomly. As a result, opinion formers were purposively sampled, but the general population was sampled randomly.

The challenges of conducting research

Establishing a project in seven countries simultaneously is a significant logistical challenge. BBC Media Action already operated offices in Nepal, Bangladesh and India, but for the four remaining countries we were required to hire staff, draw up local contracts, locate office space and, in the case of China, establish a formal research partnership before we could begin work. Once researchers were recruited they needed to be brought together from across the region to discuss and contribute to the design of research methodology.

Once established, the team included nationals from all seven focus countries, which has proved a real strength, especially when dealing with the complex task of translating research into seven languages. Conducting research, particularly in more remote areas, also required local government permission and informal partnerships with local civil society organisations, all of which took time and in-country expertise to establish.

Designing a national survey to be used across seven countries must take into account cultural differences that may not be apparent at the planning stage. For example, one of the things we want to understand through the Climate Asia project is whether people are likely to change their behaviour to respond to changes in food availability. One question we asked people in the survey is whether they might "eat less meat" or "not increase meat consumption". During survey piloting, confusion around language was immediately noticeable. Our country researcher from Indonesia explained that 'meat' actually only means red meat but not chicken or fish. In Pakistan we were told that eating meat is considered a sign of upward social mobility. What might seem like a minor question can have complex meanings. To design an effective survey that can be applied across multiple countries requires testing, piloting and plenty of local feedback.

We conducted 33,000 interviews, each of which took approximately one hour, across countries with a combined landmass of more than 16 million km². In each country a research agency or partner organisation implemented the survey. Work often had to be completed to tight deadlines to avoid being disrupted by national holidays and festivals and extreme weather. Ramadan and monsoon season were particularly important considerations. While conducting fieldwork we encountered a power cut that affected hundreds of millions of people in India, soaring temperatures in Pakistan and flooding in China. These events were logged and will be referred to during analysis as they may affect response to questions about climate and energy.

Our approach: Breaking down the concept of 'climate change' to communicate effectively

Insight from initial research – grounding research in people's 'lived experience'

Following a four month inception phase, work on the delivery of the Climate Asia project formally began in November 2011. Qualitative research, including more than 150 in-depth interviews and 100 focus groups, is now complete. In addition we have conducted communications strategy development workshops in six countries in which we discussed and piloted climate change communications with groups of experts and media professionals.

Across all seven countries, experts and opinion-formers interviewed felt that public awareness of climate change was relatively low. Knowledge and awareness of climate change was subsequently tested in focus groups and found to be low in most places, a notable exception was Vietnam where awareness of the term 'climate change' was relatively high in urban areas.

In addition, where there was awareness of climate change many focus group participants could not relate to the concept. For example, in Vietnam some focus group participants talked about climate change in terms of ice melting in the North and South Pole, but could not see how it related to their lives: they either felt it was something too far off to concern them or thought it was too large a problem for them to tackle. This presented a challenge when designing our quantitative research. If many survey respondents were unlikely to understand or relate to the concept of climate change, they would be unable to provide much insight into how to respond to it.

In designing the quantitative research we therefore took a decision not to primarily frame our questions around the concept of climate change. Instead, drawing from literature and insights from qualitative research, we decided to ground questions in concepts that people were more likely to relate to and understand.

A significant number of experts and opinion-formers recommended that communications focus on the effects people notice and the impacts people feel that are associated with climate change as well as climate variability. As one Bangladeshi civil society representative noted, "people don't understand the term 'climate change' or its causes, but they feel the impact of climate change."

The main effects of changes to the climate identified by experts and opinion-formers were changes in weather patterns and seasons, variable rainfall, floods, droughts and extreme events. Experts in particular emphasised the importance of being able to predict weather patterns and suggested that many people, particularly those whose livelihoods depended on the natural environment, would be vulnerable if the weather became less predictable.

> "*We are worried about erratic monsoons. It's not that in India the precipitation is very low… It is fairly reasonable… But it is the erratic monsoon or erratic rainfall which causes trouble to farmers.*"
>
> (Environmental expert, India)

Many focus group participants reported already being affected by similar changes. For example, people observed variability in the onset of seasons:

> *"Winter is not proper. In the past, we had to use sweaters by October, but these days we don't even need them in January."*
>
> (Male, 45+, Cuttack, India)

> "*Now we only feel two seasons. We can feel summer for nine months and the other three months are winter."*
>
> *(*Male, 25-34, Mymensingh, Bangladesh)

People also complained that they were struggling to predict the weather. For a woman in Lombok, this was affecting her ability to grow crops:

> *"The last two years we were late to start palawijo cultivation, [because] the field was flooded. The rain season came too early. We have postponed starting cultivation this year but the rain season came late [instead of early]. We feel tricked. We should have harvested if we had started on time this year."*
>
> (Female, 45+, Lombok, Indonesia)

Informed by such responses, we sought to test through the quantitative survey, whether people had noticed changes associated with climate change – for instance changes in temperature, rainfall, number of trees and variety of animal species – rather than asking and describing the concept of climate change. We also asked about predictability of weather.

The impacts felt by people

The impacts people might feel as a result of these changes in climate are diverse. We therefore looked to group impacts based on the predominant themes that emerged from our qualitative research and communications strategy development workshops.

Experts and opinion-formers highlighted floods, droughts and extreme weather events as likely to impact large numbers of people as a result of climate change. In Bangladesh experts were particularly concerned with increased salinity in soil as a result of salt-water intrusion. In Nepal, meanwhile, experts identified risks associated with glacial lakes. Some opinion-formers, in particular those involved in business, suggested that people would experience considerable knock-on effects as a result of climate change including disruptions to food markets and the availability of water.

Participants in **communications strategy development workshops** were encouraged to highlight key issues that would be exacerbated by climate change in the long term but which people were also currently experiencing. They identified water scarcity and drought; access to energy; food insecurity and declining agricultural and fishing production; new pest profiles; changing disease patterns and issues around migration.

Key concerns to emerge from the **focus groups** included risks to agricultural productivity and the impact on income and availability of food; access to water; a decline in water quality and access and cost of energy.

Based on insights from **qualitative research** we identified four key themes of food, water, energy and extreme weather events. As well as being identified as key areas of concern by

participants, these were chosen because they were tangible, related to the day-to-day lives of participants and there are a range of actions they could take to deal with impacts in these areas.

Food

Changes to weather patterns such as unpredictable rainfall or an increase in extremes such as longer and hotter summer seasons were of particular concern to rural focus group participants. These changes, along with a continuing decline in soil quality, were seen to have had a negative impact on the productivity of crops, affecting the stability of their income and, in some cases, increasing costs due to the growing reliance on chemical fertilisers.

"Crops grow a little bit earlier or later and there is rainfall even in winters. The winters have become more cold and the summers hotter."
(Male, 45+, Kharang, Sankhuwasabha, Nepal)

"We need to use more chemical fertiliser for cultivation than before, because the richness of our land becomes less and less as time goes by."
(Male, 35-44, Dak Lak, Vietnam)

Water

Both rural and urban participants were concerned about the decline in the quality of water due to pollution and over development. Many were having to travel longer distances to get clean water.

"It is very difficult to get water, especially during the summer. There are days when the taps and the canals dry up."
(Female, 16-24, Jabalpur, India)

For rural groups, water shortage also affected their crops and productivity. For example, people complained that they needed to irrigate their crops more and did not have access to enough water to do so.

"The land is also affected. Because of a shortage of water and fewer herds, everything which used to grow at home is now bought from the market. Even water is bought."
(Male, 45+, Mansehra, Pakistan)

Energy

Experts and opinion-formers suggested that availability, access and cost of energy are priority issues in most of our countries.

> *"Electricity is a problem. Every six to seven hours, there is a power cut in our village. Power cuts even happen during the night."*
>
> (Male 16-24, Cuttack, India)

Focus groups revealed an anxiety around energy access, availability and costs, particularly in India and Pakistan. Unreliable access to electricity was a concern and power cuts were a common occurrence in some regions. The cost of energy resources and lack of access has led some people using alternatives such as wood or liquid petroleum gas. Some experts identified this as a potential area for 'green' development through the provision of alternative energy on a variety of scales.

> *"Alternative energy sources should be used to tackle the problem of electricity."*
>
> (Male, 45+, Muzaffargarh, Pakistan)

Extreme weather events

Many experts felt that extreme weather events – for instance cyclones in Bangladesh, intense rainfall causing floods in Pakistan or landslides in Nepal – would become more powerful in future. Experts and opinion formers were divided on whether specific types of extreme event would become more frequent. But there was agreement that the overall impacts felt by normal people as a result of extreme weather would be greater.

> *"Climate change means more natural calamities, floods and droughts."*
>
> (Central Government official, India)

Many focus group participants cited examples of recent extreme weather events as part of a wider trend of 'natural disruption'. Focus group participants in some rural locations in Indonesia noted how industrial activities had increased their vulnerability to the impacts of intense rainfall.

> *"Flood season comes earlier and has a stronger impact because a lot of trees have been cut."*
>
> (Female, 35-44, Trieu Phong, Vietnam)

Understanding of responses to adapt to impacts of climate variability and change

Our approach differs from existing surveys on public understanding of climate change by moving beyond asking about knowledge and awareness to explore people's response to these changes.

In many countries overall response to climate change was seen by a variety of experts as fractured and uneven. A first step towards a more effective response identified by many was to overcome barriers to implementing existing plans and policy. A considerable number of respondents highlighted the importance of government.

Government was considered by many to be a key actor in enabling and creating action on climate change, but also seen by some to be a barrier to action.

> *"The government is not doing anything. What can we do? At election time, they come around to ask for votes but then we don't see them."*
>
> (Male, 25-34, Deowani, India).

Not all action was necessarily seen as dependent on government. Some experts and opinion-formers made suggestions for community-level responses. They emphasised solutions that related to people's day-to-day lives, for instance responding to water scarcity through improved water harvesting and storage practices.

People in many locations were already taking action to respond to the impacts of climate variability. In Nepal, for example, participants in a female group in the rural district of Pyuthan collected rain water to use in the household:

> "*During the rainy season the water is collected in drums and utensils. Since we cannot use it for irrigation we use it for toilets and household chores*."
>
> (Female, 25-34, Rural, Pyuthan, Nepal)

But lack of resources, skills and infrastructure meant that many felt responses were not as effective as they could have been. The lack of support for response seems to reinforce lack of efficacy and fatalistic views amongst participants across various focus groups in India:

> "*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."*
>
> (Male, 25-34 years old, Deowani, India)

Designing the quantitative survey

The questionnaire for the quantitative survey embodies our approach: embedding research in people's lived experiences**,** exploring impacts felt and current and possible responses.

As stated previously, a conscious decision was made to minimise questions focusing specifically on awareness and understanding of the concept of climate change itself. A short series of questions on awareness and understanding appear later in the survey, but the main focus remains the effects associated with climate change on people's day-to-day lives.

In the quantitative survey, for example, awareness of the effects of climate change is assessed through awareness of changes to the environment including changes in temperature, rainfall and extreme weather events.

To explore people's responses to impacts felt, four main impacts were chosen: water shortage and availability; food security and availability; energy and fuel availability and preparing for extreme weather events. In order to manage the length of time it takes to complete the survey, each respondent is asked about two impacts (either water and energy or food and extreme weather events).

The list of actions tested in the 96 focus groups have been modified and included under each of the four main impacts. The questionnaire asks if they are currently taking any of the suggested actions and, if not, if they are likely to respond. To explore factors which may affect their ability to respond, the quantitative survey also includes questions on governance, self-efficacy, trust and confidence in institutions to support them in responding to changes in climate.

By grounding this research in people's lived experiences of the effects of climate change and variability, BBC Media Action hopes to be able to both gauge people's understanding of climate change, but also of its effects, impacts and potential responses to it. The survey is designed in such a way that even if a respondent has not heard of climate change data can be generated that can be used to design communications that appeal to them and enable them to take action. These communications should then relate to the day-to-day concerns of people.

How research will inform communications

Utilising data drawn from research and ideas drawn from the communications development process, BBC Media Action will establish a series of strategic recommendations or 'strategies' on how communications can enable people to take action on climate change.

Given the diversity of the people of Asia, these strategies are likely to utilise multiple methods of communication and be context specific. It is likely that they will both build on people's existing knowledge and practices as well as draw on support from multiple actors and institutions at different levels of society.

In this section, we propose a model for the development of communications strategies and note how these will build on the ideas, understandings and practices of the people of Asia as well as good practice in communications. We identify the topic areas and specific questions from our qualitative and quantitative research we will draw on as well as examples of the hypotheses we will test based on findings generated from the qualitative research.

This proposed approach is heavily influenced by the BBC's focus on public audiences and creativity in communications. It will continue to evolve in response to findings from our research and evaluation of existing communications on climate change.

Step 1: Prioritising the issues - key issues for response

This stage will define the impacts and issues that people have suggested are most significant and, based on survey data and suggestions from communications strategy development workshops, identify the areas where there is a role for communications to support response to changes in climate.

To do this, we will analyse data from the quantitative survey to identify the main climatic impacts being felt by people and the responses that are currently happening and likely to happen in each country. Alongside this data, intelligence will be gathered on possible responses from the in-depth interviews, communications strategy development workshops, communications evaluations and continued consultation with expert advisers and practitioners.

To start our analysis we will test hypotheses generated during our qualitative research. Example hypotheses include:

- People whose livelihoods depend on the natural environment, including farm workers and fishermen, perceive greater changes in climate and their surrounding environment.
- People in certain geographical zones – for example, mountains, perceive greater changes in climate and their surrounding environment.
- Poorer people experience greater impacts as a result of the effects of climate variability and change.

Step 1: Prioritising the issues - key issues for response

STRATEGY PROCESS	Qualitative	Quantitative
Identify levels of awareness of climatic variability and change ↓ **Assess perceived impact these changes have on their life** ↓ **Determine current level of response to changes in environment** ↓ **Determine knowledge and prevalence of responding to these changes and how this differs by audience**	**Focus groups** - explore people's awareness of changes to the environment, the seasons and the associations people make with them e.g. festivals, agricultural activities and songs. **In-depth interviews** – views from experts and opinion-formers on awareness and responses to climate change and its impacts. **Focus groups** - discussion of issues people are facing as a result of changes in climate and the impacts these are having on their lives.E.g. migration, change in farming or fishing practices. **In-depth interviews –** explore the wider impacts of climate change from business, government and NGO perspectives**.** **Communications evaluation -** will demonstrate which impacts practitioners are currently focusing on. **Focus groups –** people's responses to effects and impacts, why they are responding and likelihood to respond in future. **In-depth interviews –** how the country and organisations within it are responding to climate change **Communications evaluation -** examples of the types of response emphasised in current communications.	**Perceptions of change** *Q: Over the last 10 years, do you think the following have increased, stayed the same or decreased?* *Availability of water, prices of food, variety of vegetables/crops available, availability of electricity, availability of fuel, agricultural productivity, factories/industries in areas number of trees, number of insects/pests* *R: increased a lot, increased, decreased a lot, decreased, stayed the same* **Perceived impact on life** *Q: How have changes affected your ability to earn money, your choice of job, keep healthy, maintain your current lifestyle, live the life you would like to* *R: very much, quite a lot, not very much, not at all, neither/nor* **Responses to changes in the environment** Prompted awareness of responses, frequency of responding and likelihood to do these actions in the future

Step 2: Segmenting audiences – needs, responses and interests

Once the key issues and responses have been identified, the next step is to begin defining and understanding multiple groups of people to form target audiences. To do this, data will be analysed to determine commonalities and distinguishing characteristics – for example, livelihoods, psychographics or gender – together with attitudes towards response. This will allow us to begin segmenting audiences in order to design communications that will resonate with people's diverse needs and aspirations.

After initial analysis of trends, we will seek to establish which characteristics are key determinants or drivers of behaviour, for example: values, knowledge, perceived impact felt or likelihood to respond. These characteristics will then be used to split the audiences into segments which can be targeted through communications strategies. For example, the data may show that across the region people respond differently to changes in climate due to their personal values. In this instance, segments would be drawn up on a regional level based on this key determinant and then country data would be analysed to determine the prevalence of these segments nationally.

Alongside this, the relationship between potential audiences and those institutions or individuals best placed to support them will be mapped to understand external barriers and opportunities that enable or prevent response.

At this point we will test additional hypotheses based on our qualitative research that relate to the composition of audiences and their motivations and barriers to response. For instance:

- A key barrier to response for some people will be psychological – fatalism, for example, about how effective solutions can be.
- People are more likely to respond if they perceive there is an economic benefit in doing so
- Opinion formers have low awareness of the need to respond to the effects and impacts associated with climate change

Step 2: Segmenting audiences – needs, responses and interests

STRATEGY PROCESS	Qualitative QUESTION AREAS	Quantitative QUESTION AREAS
Define target audiences Establish people affected by impacts or in a position to support them to take action ↓ **Identify response to be taken** Establish practical actions relevant to target audiences ↓ **Audience drivers** Explore common values, beliefs and prejudices towards specific responses ↓ **Determine communication needs** For example. building awareness, developing skills, community support ↓ **Map enabling environment for each audience**	**Focus groups** – how different people feel and react to the impacts of changes in climate **In-depth interviews** - who government, NGOs and academics see as vulnerable groups **Focus groups –** ranking of photos illustrating values (e.g. family, wealth, education) in order of importance. **Focus groups** – exploration of barriers and motivations to responding to changes **In-depth interviews –** identification of obstacles to people responding **Focus groups** – information needs of people and communities **In-depth interviews** – views on what the public need to know about climate change and how best to deliver the information **Communications evaluation –** outcomes and actions prioritised or encouraged by practitioners **Focus groups –** perceived benefits and barriers to responding for individuals and the community. **Communications evaluation –** which organisations are responding to which issues and what kinds of partnership are being established to deliver outputs **In-depth interviews** – Policies and priorities of concerned organisations and actors, in particular various levels of government.	**Demographics of audience** Age, education, social class, gender, ethnicity, material resources, occupation **Values/life priorities** Understanding people's personal values and relative importance of key issues for their lives **How people feel about changes** *Q: How do you feel about these changes? Worried, Angry, Happy, Guilty and Helpless* *R: Very, quite, not very, not at all, neither/nor* **Barriers and benefits to responding** Statements identifying barriers for response: e.g.: *I need support from the Government* *I don't have enough resources* *My family wouldn't approve if I responded* *I don't know how to* Statements identifying possible benefits for response: e.g.: *I would feel guilty If I didn't take action* *I want a better future for my children* *To make/save more money* *I want to be healthy* **Enabling environment** Perceived confidence in a range of institutions e.g. government, business, NGOs, local neighbourhood taking necessary action to respond

↓ **Define personal benefits and journey towards adoption and action**	**Community assessments** – interviews with key informants who help create enabling environments for vulnerable audiences **Focus groups –** people's values and priorities	

Step 3: Defining the strategy – objectives, partners and channels

The next step is to establish clear objectives for what communications can achieve on a given issue, for a target audience and in a country context. For example, this might be to increase confidence in people's abilities to learn new skills or livelihoods, raise awareness of the benefits of alternative energies or enhance community cohesion in areas where new migrants have arrived.

A range of communications channels for public audiences – from media to community tools – will be selected, based on their preferences and evaluation of existing media programming. Alongside this, a consortium of organisations operating at multiple levels within society will be identified as potential partners. These organisations will consist of those most trusted by target audiences together with the project's own evaluation of best practice emerging from existing climate change initiatives.

In all cases we will specify objectives, timescales for implementation and indicators for measuring the impact of these strategies.

Step 3: Defining the strategy – objectives, partners and channels

STRATEGY PROCESS		RESEARCH QUESTION AREAS AND RESPONSES
Finalising objectives Determining what communications can achieve based on people's needs, possible responses, people's personal drivers and the enabling environment ↓ **Levels of engagement** Building on the objectives, audiences and approach to assess all levels of engagement and partners – from government to media to NGOs and local leaders ↓ **Channels** Mapping the most effective channels for communicating to public audiences and influencers	**Focus groups and community assessments –** after analysing quantitative data to determine target audiences, qualitative research findings will be analysed to understand people's drivers and the role of the external environment in enabling response. **Communications evaluation -** Evaluation of existing initiatives will list the types of communication currently being used to deliver messages (channel and format) the style of content and voices used, accessibility of language – and where available, the reach of programmes _____ **Focus groups and community assessments –** qualitative data on media usage and preferences and maps of information flows will be analysed to understand how, why and when people use particular communication channels	**Information preferences** *Q: If you were to get information about changes in water, food, and energy supplies, how would you like to be provided with this information?* **Trust in sources of information** Perceived trust in a range of sources of information to provide information on these issues e.g. NGOs, government official, religious institutions, teachers, television, radio and newspapers **Preferred channel** *Q: How would you MOST like to be provided with information about changes in water, food and energy supplies?* *R: Television, radio, mobile phone, posters and leaflets, neighbourhood meetings, street theatre, schools, members of my community, religious institutions, public events*

Step 4: Developing the communications – 'formats, content, proposition'

In the final stage, we will match the formats and content identified as most useful and appealing by an audience with the information related to potential actions on a given issue and current examples of best practise derived from the communications evaluation.

For example a drama or advertising campaign could be used to raise awareness of, and confidence in diversifying agricultural practices. Such a drama might feature characters that a target audience could identify with and storylines that address their concerns, while building confidence to respond to change. In addition, a community radio phone-in programme could provide an opportunity to discuss more technical farming techniques. These might feature localised examples of best practice undertaken by people similar to those in the target audience which we have identified during the research.

Where possible, we will establish a core creative idea to bind together communications outputs. This 'creative framework' will be rooted in local cultures and experiences and seek to reinforce the stated aspirations and needs of target audiences while challenging perceived barriers to action. We hope to develop these frameworks through workshops with media experts and target public audiences.

Step 4: Developing the communications – 'formats, content, proposition'

STRATEGY PROCESS		RESEARCH QUESTION AREAS AND RESPONSES
The creative framework The brand or creative proposition which brings to life the opportunities and identities of a given audience ↓ **Formats** Drawing on audience data to establish which formats are best at delivery information that meets audience needs ↓ **Content** Working with examples of public best practice and inspiration alongside scientific information from climate experts and NGOs to provide information that can build knowledge and stimulate response. For example this might include: - *Discussion of climate impacts* - *Practical advice* - *Benefits to action* - *Stories of inspiration*	**Focus Groups -** exercises where participants designed their own creative output to inform them on issues related to climate change _____ **Focus groups and community assessments –** people's views on preferred formats for different types of information. Analysis of existing communication preferences and how these could be adapted. **Communications evaluation** - favoured formats for practitioners and media _____ **Focus groups and community assessments** – questions on what information participants want to help them to respond effectively to impacts	**Pinpointing the proposition** *Further analysis of the exchange between motivations and barriers in a given cultural context* **Formats** *Q: Which of the following formats of programmes do you like to watch/listen to?* *R: Panel/discussion/talk shows; drama/soap opera; news; competition/game show; reality show; lifestyle programming; religious programming; films* **Content** *Q: If there was some media to give you information on food, water and energy supplies what would you be interested to watch/read/listen to?* *Tells you about likely future impacts; explain what is causing the changes being experienced; provides you with education on what to do; teaches your children; allows you to learn skills and successes from other people* *R: Yes or No for each*

Dissemination of findings

BBC Media Action will seek to disseminate the findings of Climate Asia research as widely as possible. Specifically we will provide:

- Information on key target audiences for communications segmented by distinguishing characteristics for instance by demographic information, values or knowledge levels
- A series of regional and national strategies that can be used by practitioners working across Asia. This will include formats and channels by which to communicate to each target audience.
- Access to data to also enable organisations to develop their own communications strategies for their target audiences.

To ensure that findings from Climate Asia research are accessible by, and understandable to as many people as possible, we have conducted research on the formats professionals in related fields find useful and usable. As a result our plans for dissemination now include interactive research reports and communications strategy development tools.

The format is still to be confirmed but it will include a website, data portal, pdf reports. Printed versions of the reports and toolkit will be available for those organisations with low connectivity. Long and short-form reports will also be available as well as a handbook detailing our methods for conducting research and developing communications.

Conclusions

This paper outlined the approach BBC Media Action is taking to research for the Climate Asia project, the reasons for this approach and how research will inform the development of communications strategies that enable action in response to climate change.

The approach to research taken by BBC Media Action for Climate Asia differs significantly from much existing research on public understanding of climate change. This research focuses on the tangible effects and impacts people notice in their lives and the responses they take, rather than the concept of climate change.

With Climate Asia, BBC Media Action hopes to make an important contribution to both research and communications on climate change. In particular the project will contribute to an emerging field of knowledge and practice on resilience and adaptation to climate change at a moment when these issues are just emerging on the agenda of the seven focus countries. In future it may be possible to evaluate the success of communications strategies we recommend by replicating this research. With this in mind, BBC Media Action plans to make publically available the research instruments and methods used in this research. The quantitative baselines have been designed to be replicable and it is intended that organisations will use these to measure shifts in public understanding of climate change in Asia over time.

Research will also highlight good practice in responding to climate change. By taking a specifically cross-country approach to research, BBC Media Action aims to facilitate the sharing of learning and experience by people with their counterparts who face similar challenges in other countries. Insight drawn from qualitative research suggests that there may be similarities in impacts felt and responses taken by people in similar geographical

areas. For instance, participants in mountain locations in a number of countries have been very aware of changes in the timings of seasons. It may be possible to replicate successful communications across mountainous areas in the region.

It is hoped that Climate Asia research and communications can be built on and implemented by other actors. Research and communications strategies have been designed to be of use by a wide variety of practitioners in related fields. For instance, climate scientists may find useful a regional evidence base that includes people's perceptions of temperature and rainfall change, particularly when compared to meteorological records in the region.

However it is important to acknowledge that the approach taken has its limits. In attempting to make the research and subject accessible to as many people as possible across seven Asian countries, we have been unable to undertake research on understandings of some of the more specific, often quite technical actions that individuals or institutions need to take in response to climate change. It is our hope that the research can be built on by those who already possess such information.

Research participants also highlighted the importance of government policy in creating an enabling environment that facilitates response to climate change. The breadth and focus of Climate Asia research precluded exploring public understanding of policies related to climate change in great depth. That said, we see policy makers in the region as an audience for Climate Asia research and hope that providing them with the views of their public on these issues will prove useful.

At this stage, it is too early to evaluate the effectiveness of our approach to research. After completing the Climate Asia project, BBC Media Action will review the approach taken and methods used and highlight lessons learned so that other researchers can build on our undertaking.

Finally, it is important to recognise that this research is being conducted at a time when people are only just beginning to respond to climate change. In future we hope the research BBC Media Action has designed for the Climate Asia project might be used to track the effectiveness of many future communications initiatives that empower the people of Asia to take action in response to climate change.

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BBC Media Action is the BBC's development charity. We believe in the power of media and communication to help reduce poverty and support people in understanding their rights. Our aim is to inform, connect and empower people around the world. We work in partnership to provide access to useful, timely, reliable information. We help people make sense of events, engage in dialogue, and take action to improve their lives.

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BBC MEDIA ACTION

TRANSFORMING LIVES THROUGH MEDIA AROUND THE WORLD

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