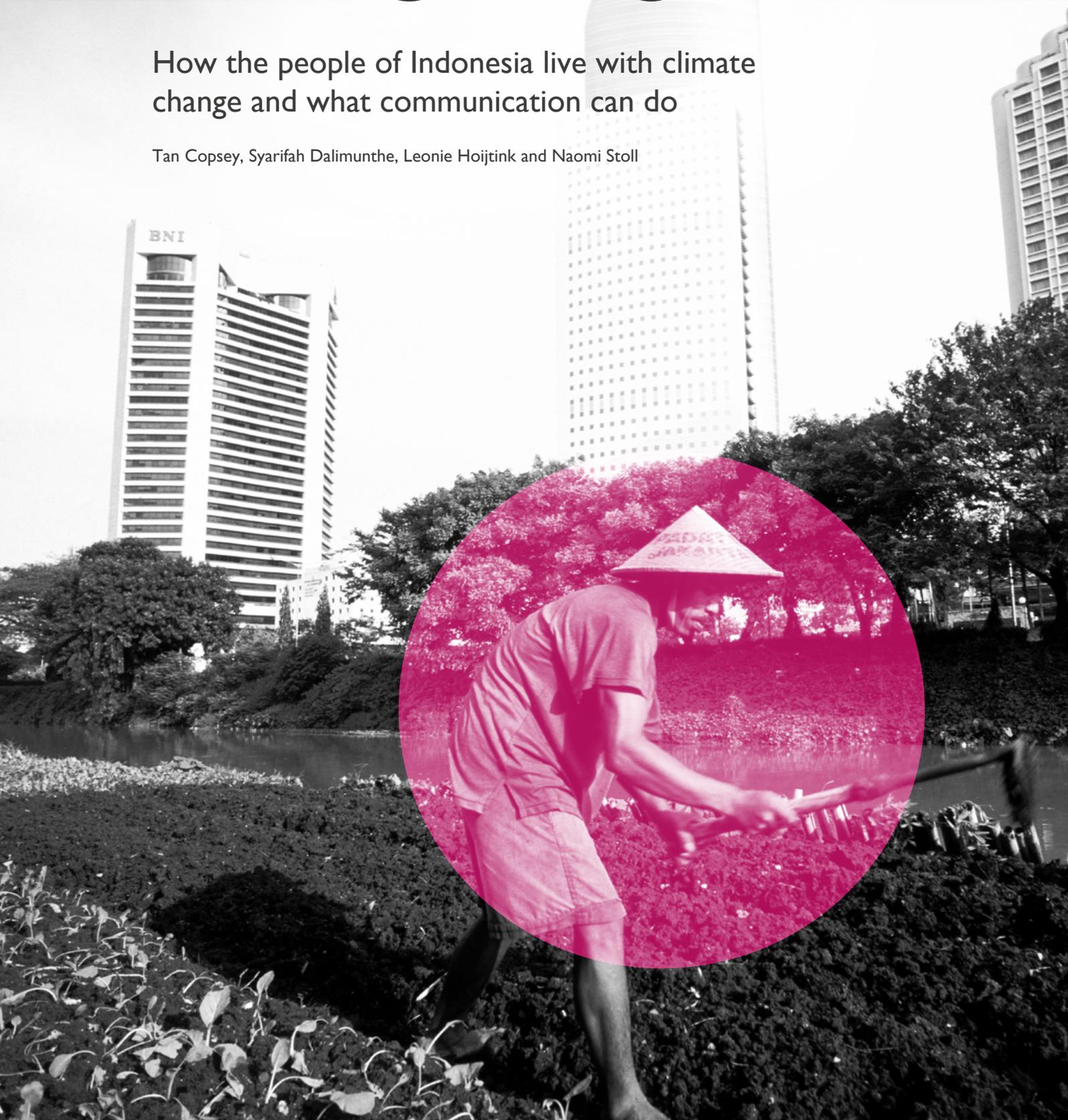


INDONESIA

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

Tan Copey, Syarifah Dalimunthe, Leonie Hoijtink and Naomi Stoll





CLIMATE CHANGE IS ABOUT PEOPLE

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

These are the questions behind Climate Asia, the world's largest study of people's everyday experience of climate change in seven Asian countries – Bangladesh, China, India, Indonesia, Nepal, Pakistan and Vietnam. The project surveyed 33,500 people across the seven countries, including 4985 households in Indonesia. Climate Asia also conducted 16 focus groups with men and women from different social backgrounds across seven locations in Indonesia; 22 in-depth interviews with key experts and opinion-formers from government, civil society, business and academia; and community assessments¹ with seven communities vulnerable to changes in climate. Their experiences are at the heart of this report.

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

The research was conducted from February to October 2012.

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

¹In 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.



PEOPLE'S PERCEPTIONS MATTER

Understanding people's 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.

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 you plan and implement communication and other programmes to support people to adapt to the changes they face. They are available on the fully searchable and public Climate Asia data portal, www.bbc.co.uk/climateasia including a climate communication guide, information on our research methods and the tools we used to conduct research, and our survey questionnaire. Since all of Climate Asia's data and tools are designed for the widest possible use, please feel free to send this report and data portal details to anyone who might be interested.



WHAT'S THE STORY?

Indonesia has undergone recent, rapid development and life has improved for most people. But the country's development has taken a toll on the environment. People feel that the number of trees and animals have decreased. People have also noticed changes in climate, with more than half feeling that it is hotter and the weather is less predictable. Patterns and intensity of rainfall have also changed, with people in some areas perceiving increases in rainfall, while in others decreases have been experienced.

These changes are combining to place stress on some people's lives. In rural areas, Indonesians feel changes in climate are contributing to declining crop productivity and making fishing more difficult and dangerous. People in larger cities of over one million inhabitants are particularly concerned about the impact of extreme weather, which is not only disrupting their lives now but causing them to worry about the future. Despite this concern, Indonesians are doing less to prepare for extreme weather events than people in any other Climate Asia country. For example, only one in ten has a disaster preparedness plan. Across the country people link changes in climate to concerns about health, including increases in pests and water-borne diseases.

Indonesians are taking action to respond to change. A relatively high number of people have made changes to their livelihoods in response to environmental and economic pressures, in some cases this has been difficult as they are moving away from their tradition and having to learn new skills. Those who are most affected by changes in climate are generally taking simple actions such as storing water, keeping food for longer and using fertiliser to improve soil quality. However, some poorer people with less education are struggling to act.

Indonesians are very willing to make further changes to their livelihoods and lifestyle and feel a responsibility to do so but want more information so that they can make choices that they and their families benefit from.

WHAT THIS MEANS FOR COMMUNICATION

Current efforts to communicate about climate issues are having an effect. People who had received communication were much more likely to be aware of and understand climate change and to feel informed about how to respond to the changes they noticed.

Current communication often focuses on the long-term impacts of climate change, but people feel impact now. There is an opportunity to encourage action and make climate change relevant to people's lives by framing communication around the impact they feel and the things they value, for instance by focusing on making money or staying healthy.



Television reaches almost everyone in Indonesia so there is an opportunity to provide information on a national scale. Popular formats such as dramas and reality shows resonate with audiences and provide an opportunity to explore complex issues as well as inspire people with examples of how communities like theirs can take action.

People trust their local neighbourhoods to provide solutions. Local opinion-formers, including religious, traditional and elected local leaders, are an important channel of information for communities.

HOW TO USE THIS REPORT

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

Section 1 details how Indonesians live now – focusing on the values people hold and recent economic development. Development has, however, come hand-in-hand with concerns about the environment, including deforestation and changes in climate, which are highlighted in section 2. In section 3, the report details how people are affected by changes in climate and access to resources and how they respond to the resulting impact they feel. Section 4 includes an analysis of the factors that enable and constrain this response. It emphasises the role played by government, how people are motivated to take action by concerns about their health and the importance of community structures in Indonesia.

Section 5 explores the media and communication landscape of Indonesia, focusing on the information people want as well as the formats and media they would like to receive it through, and also summarises Indonesian media habits. Section 6 provides advice to stakeholders on how to communicate with the Indonesian public to encourage response to changes in climate.

Analysis of Climate Asia data allowed researchers to segment the people surveyed into groups, and section 7 introduces these segments which are then used to identify and understand the needs of different groups of people, as well as to identify communication opportunities to enable effective action.

Finally, section 8 builds on all of this information to identify three important priority audiences – opinion-formers in communities, farmers and fishermen, and people living in larger cities – and highlights each audience's specific communication needs and how media might be used to reach them.

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



CONTENTS

	08
Indonesians are very involved in their communities	
	011
Climate context	
The changes in climate people perceive	
Smaller cities and rural areas feel the benefits of development	
The changes in environment people perceive	
Communication is used to develop awareness of climate change and promote response	
Awareness and understanding of climate change	
	022
People feel the impact of changes in climate	
People were already feeling impacts on their health	
People feel changes are having an impact on their ability to earn money	
Changes in livelihood	
Extreme weather events: feeling under-prepared	
Lifestyle changes a priority for the urban and wealthy	
Indonesians are willing to make further changes	
	035
Health a key motivation for action	
The level of impact	
Indonesians have more confidence in local decision-making bodies	
People who are more involved in their community are doing more to prepare	
Information and discussion is critical in helping people to respond	
A perceived lack of government support was a key barrier to response	



Experts think media can reach more people with entertaining content Television and community are the preferred information sources People's information needs Preferred communication formats	043
Communication to enable effective action	053
Segments by demographics Surviving (6%): Finding it too hard to take action Struggling (24%): Trying to take action but finding it very difficult Adapting (11%): Acting and wanting to do more Willing (32%): Worrying about tomorrow Unaffected (27%): Believe there is no need to do anything	057
Respected members of the community/opinion-formers Farmers and fishermen People living in larger cities	071
Sharing findings and tools Building on data	080
Qualitative research Quantitative research	081
	086

LIFE FOR INDONESIANS

This section briefly outlines how people in Indonesia live, focusing on recent patterns of development as well as the values and beliefs people hold.

The last decade has seen transformational change across Indonesia, a country that is vast and diverse. Many people are experiencing the fruits of steady economic growth. The percentage of the population living in poverty has decreased from a recent high of 18% in 2006 to 12% in 2012.² Life expectancy is currently 69 years and continues to rise, while infant mortality decreases. Climate Asia findings reflected these changes.

People described improved infrastructure, better access to education and media, new technology for farming and more employment. Relatively straightforward changes were improving lives. For instance, in one area having a tarmac road meant more economic opportunities, better access to government services and a more varied diet.

However, pollution from increasing numbers of motorised vehicles and factories concerned people in urban and industrialising areas, who worried about their health. Tap water, contaminated by pollution, was seen as unsafe to drink by some. Rural people worried about loss of trees and changing patterns of land use threatening their access to water, as well as increasing numbers of pests damaging their crops.

“There are two sides of it [development], there’s the good and the bad side.”

(Man, Riau, Urban, age 25–34)

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

The poor (53%) and very poor (65%) were more likely than the comfortable (42%) or well-off (45%) to say that life had not improved.

²UN Data (March 2013) *Poverty headcount ratio at national poverty line* [online] Available from: <http://data.un.org> [Accessed March 2013]

Who are the poor and very poor?

	All	Larger cities	Smaller cities	Rural	Farmers and fishermen
Base: All respondents	4985	281	1872	2832	1302
%	%	%	%	%	%
Poor and very poor	53	27	46	59	70

	All	Eastern Java	Western Java	Northern Sumatra	Southern Sumatra	Sulawesi	Kalimantan	Eastern Islands ³
Base: All respondents	4985	1355	1783	604	567	189	125	362
%	%	%	%	%	%	%	%	%
Poor and very poor	53	53	56	35	63	38	58	52

Q: What category does your household income fall within?

Across the country people were also still very concerned about the basics of life, particularly availability of food (32%), health (24%) and water (19%). Food was even more of a concern for very poor people (43%). In total, 88% of people felt food prices had risen and many spoke of how, alongside positive change such as access to new consumer goods, inflation was making their lives harder:

“We have a steady power source nearby, charging my mobile or listening to the radio in the morning isn’t a problem any more. However, I have to leave home for work early (to work a double shift), so that I will be able to pay the bill. My mother said everything is super expensive these days.”

(Man, Eastern Java, Rural, age 25–34)

³Climate Asia uses the terms Eastern Java, Western Java, Northern Sumatra, Southern Sumatra, Sulawesi, Kalimantan and Eastern Islands to describe areas across provinces. For a full list of which areas these terms cover, go to the research methodology appendix on page 83.

INDONESIANS ARE VERY INVOLVED IN THEIR COMMUNITIES

In focus groups participants emphasised the importance of their communities in both urban and rural areas – communities are valued and are a trusted source of information. People felt very involved in their communities: 84% of people felt their community acted together to solve problems and 57% felt involved in local decision-making.

Religion and tradition play a large role in people's lives

Nearly all Indonesians said following their religious and moral beliefs was important to them (99%), while 52% said it was their most important value. The importance of religion is evident in Indonesians' daily lives, with people gathering for prayers, festivals and giving to charity as part of their faith. There is no state religion, although nearly 90% of the population are Muslims. Imams and other religious leaders play an important role in communities.

Drawing on traditional values and ways of life was valued by nearly everyone (94%):

"I like it when you see the younger generation wearing the traditional costume and performing our rich culture during events or on TV. Because nowadays, there are lots of western influences on us, so we don't want to lose [our culture] to the western culture, we have to defend our own national culture."

(Woman, Jakarta, Urban, 45+)

Some traditions encourage a respect for the environment:

"Practising traditional values down through the generations will save our trees in the forest and fish in our river. Our ancestors taught us how to use just enough resources, without being greedy."

(Community assessment, South East Sulawesi)



THE CHANGES IN RESOURCES, ENVIRONMENT AND CLIMATE THAT PEOPLE PERCEIVE

This section details how people in Indonesia are noticing changes in climate, environment and the availability of food, water and energy. It also highlights how awareness and understanding of climate change has been built, mainly in larger cities, through communication from government, civil society and through media.

Not everyone has heard of climate change, but changes in climate impact 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. In addition, Climate Asia asked questions about changes in the availability of key resources like food, water and energy and changes to their environments. This was followed by a series of more specific questions on "climate change". This section does not include any comparison with existing meteorological or developmental records.

CLIMATE CONTEXT

As a tropical maritime archipelago, Indonesia experiences high humidity and annual wet and dry seasons. Indonesia is also subject to bouts of extreme weather as a result of the effects of El Niño (associated with drought) and La Niña (associated with heavy rainfall and flooding), which occur periodically.

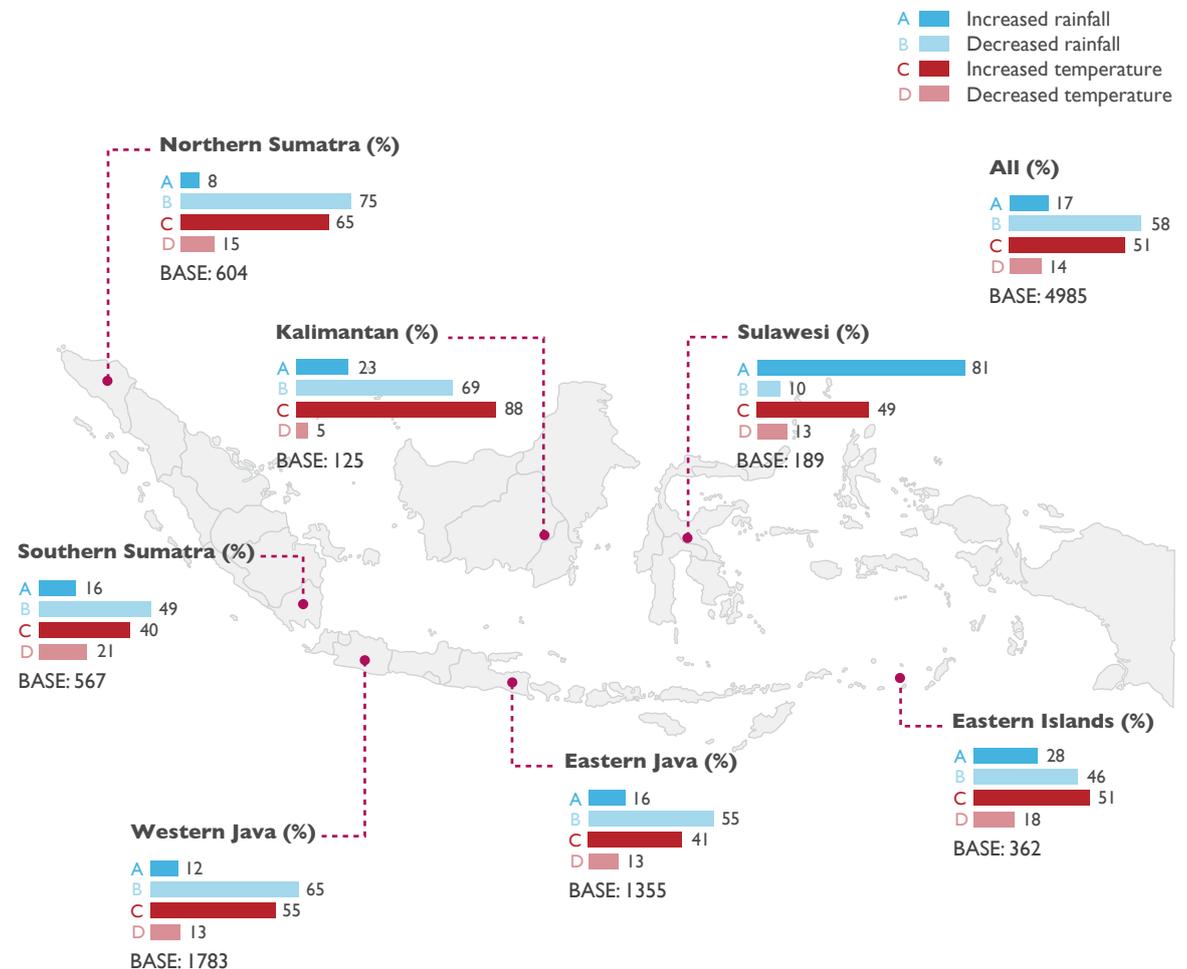
The Intergovernmental Panel on Climate Change suggests that the region has experienced an increase of 0.1–0.3°C per decade between 1951 and 2000 and has projected a temperature rise

of 2.5°C by 2100 for South East Asia.⁴ A recent report by the World Bank noted that Indonesia is projected to see an increase in temperature extremes and that Jakarta is projected to become 5–15% drier by 2080 between June and August.⁵

Precipitation patterns have been observed to change over Indonesia – broadly speaking there has been a decline in annual rainfall in the south and an increase in the north, although there have been local variations within this trend.⁶

THE CHANGES IN CLIMATE PEOPLE PERCEIVE

People’s perception of changes in climate



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

⁴Intergovernmental Panel on Climate Change (2007) Summary for Policymakers. In Solomon, S, Qin, D, Manning, M, Chen, Z, Marquis, M, Averyt, KB, Tignor, M and Miller, HL (Eds.) *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, UK and New York: Cambridge University Press.

⁵World Bank (2013) *Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience: A report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics* (pp. 66–72). Washington, DC: World Bank.

⁶Intergovernmental Panel on Climate Change (2007) Summary for Policymakers. In Solomon, S, Qin, D, Manning, M, Chen, Z, Marquis, M, Averyt, KB, Tignor, M and Miller, HL (Eds.) *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, UK and New York: Cambridge University Press.



Across the country people perceived changes in climate over the last 10 years. Perceptions of change varied by region across this large and geographically diverse country. However, broad trends do emerge: just over half the population felt that temperatures have increased – this perceived increase is highest in Kalimantan (88%) and Northern Sumatra (65%). People in large urban areas are more likely to perceive an increase (70%) than those in smaller cities (54%) and rural areas (47%).

“In the past people slept under a blanket, now they use fans and the people that can afford AC use AC. In the past people would wear hats, now they prefer wearing cloth so there’s a little bit of a breeze.”

(Woman, Riau, Urban, age 35–44)

More people perceived a decrease in rainfall (58%) than an increase (17%) but perceptions varied considerably by region – for instance in Sulawesi 81% of people thought rainfall had increased while in Northern Sumatra 75% felt it had decreased.

The large majority of people felt temperature, rainfall, extreme weather events and the start of seasons had become less predictable in the last 10 years.

“The rainy season is supposed to occur within a month ending with “ber” (September–December), nowadays it has flipped over. Water pours down in January to February. This is unusual.”

(Man, Jakarta, Urban, age 16–24)

This lack of predictability was affecting preparedness:

“[Previously] we were ready for the flood, but now, we don’t know if it will come.”

(Woman, Jakarta, Urban, age 45+)

Residents of Blitar, a small city in Eastern Java, described how they had experienced unusual rainfall throughout 2010, followed by a particularly long dry season in 2011. More recently they said they had been plagued by hard rain that made the regular harvest of crops almost impossible.

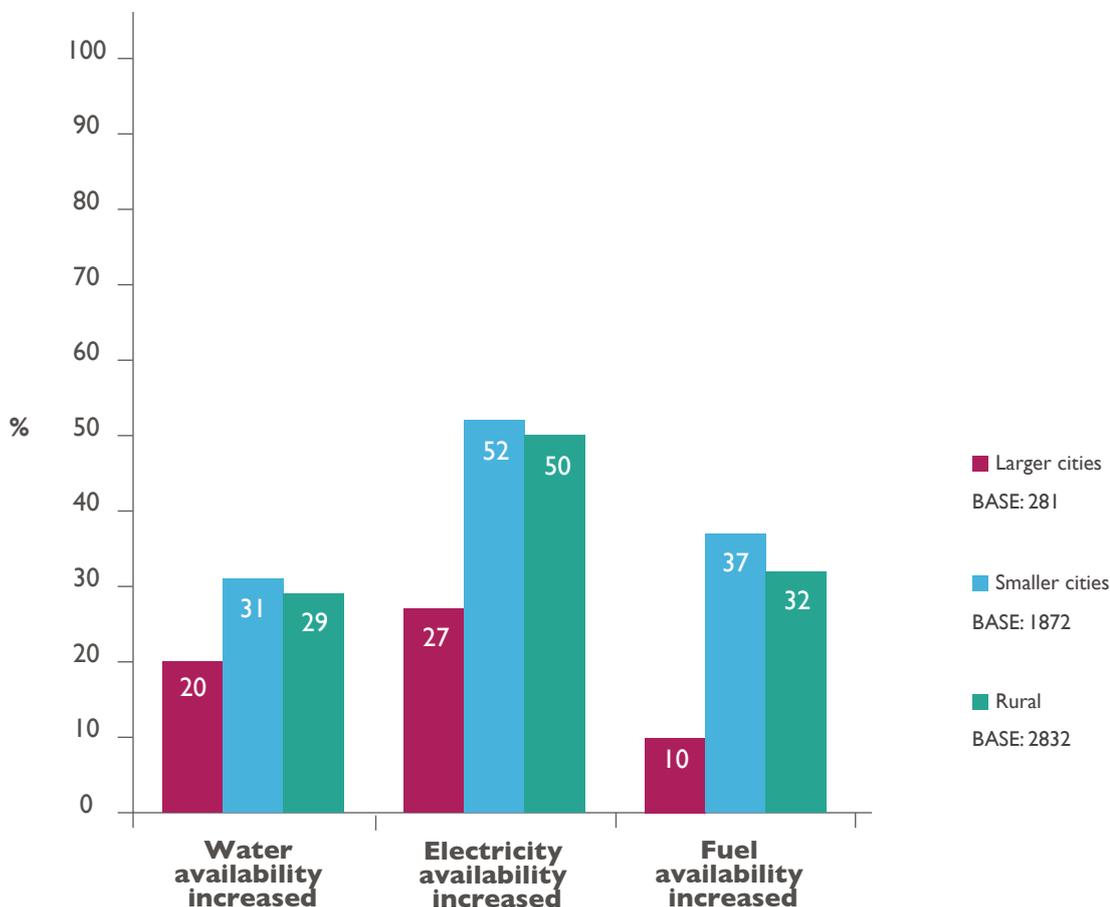
Deforestation, development and general human activity were seen as the reasons for the changes in temperature, rainfall and extreme weather that people had noticed. They were also identified as causes of climate change.

SMALLER CITIES AND RURAL AREAS FEEL THE BENEFITS OF DEVELOPMENT

For the purpose of this report, cities have been split into two types: larger cities with a population of over one million (Jakarta, Surabaya and Bandung) and smaller cities with fewer than one million people (such as Asahan and Bulukumba).

People in smaller cities and rural areas felt that they had experienced an increase in resources such as water, electricity and fuel, far more than those in larger cities. For example, over half of those in smaller cities and rural areas felt that electricity availability had increased, compared with just over a quarter of those in larger cities.

People in smaller cities feel the benefits of development



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

However, people in rural areas were also more likely to be experiencing decreased water availability (32%) compared with larger and smaller cities (24%, 23%).

In focus groups and community assessments people in rural areas described how the benefits of development were increasingly unevenly spread between people and communities:

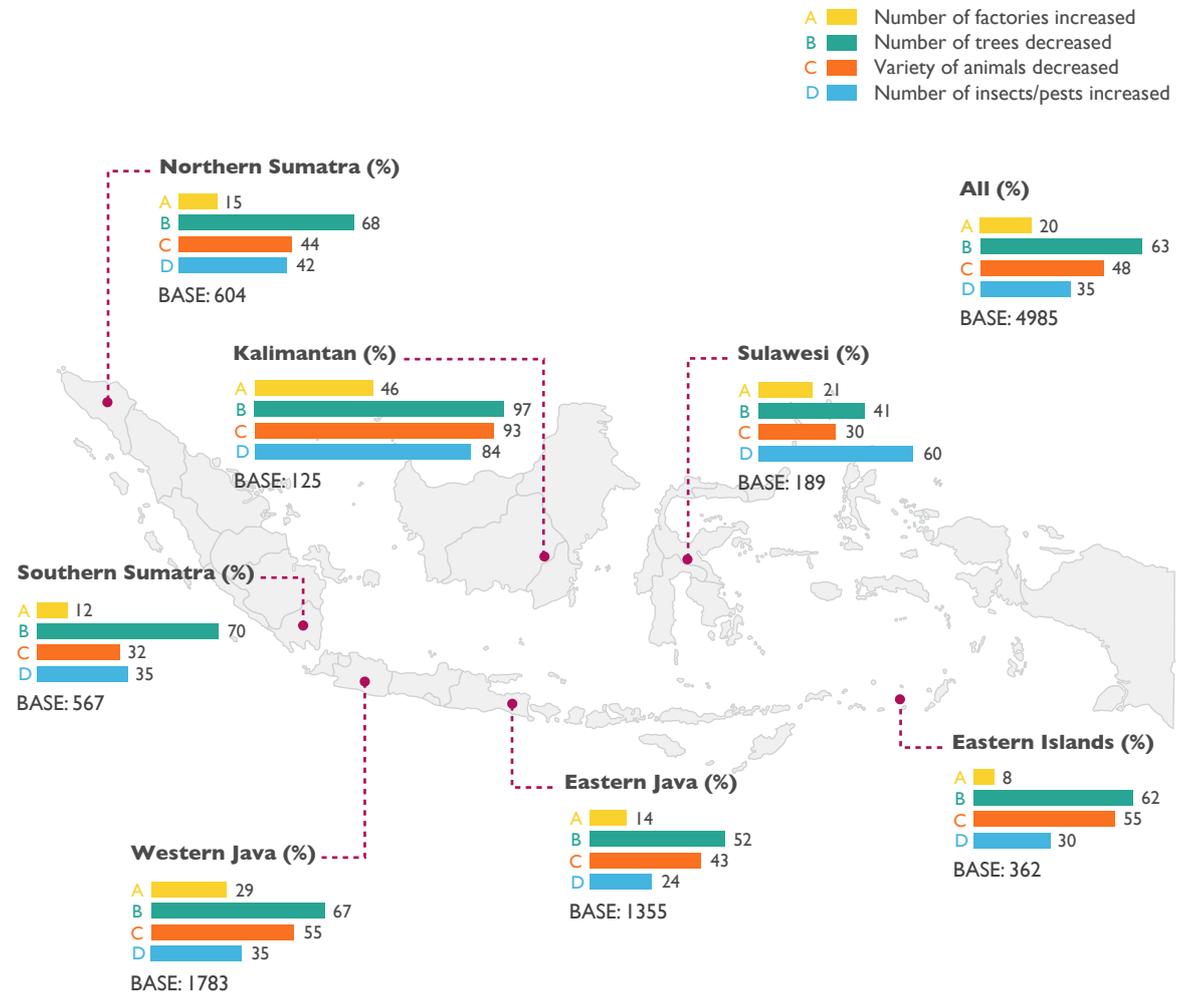
“When I was in charge as a village chief decades ago, it was impossible to distinguish the rich and the poor on rainy days. People walked barefoot in the mud. Now tarmac crosses the island and people will ask you what brand your shoes are.”

(Community assessment, South East Sulawesi)

In addition, despite agriculture’s contribution to recent economic growth many people’s personal experience did not match the growth in larger-scale, commercial agriculture: 31% felt agricultural productivity had decreased.

THE CHANGES IN ENVIRONMENT PEOPLE PERCEIVE

People’s perception of changes in environment by region



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

People had noticed large changes to the environment. Overall, deforestation was a serious concern (63% said the number of trees had decreased), as was species loss (48% said that the variety of animals had decreased). In addition, 35% of people felt that the number of pests, including insects that carried disease, had increased.



Others noted how pressure on them to give up their land for new crops, construction or conservation was making life more difficult. Indigenous people living on the edge of one forest in Sumatra noted how the actions of palm oil companies, new migrants and civil society organisations were reducing their ability to make their own decisions about work. Some had been forced to leave their land. In Riau, Northern Sumatra, people explained that logging and encroachment onto forest land meant that wild pigs and monkeys were being forced to come into the community areas more often.

“It took days to realise the strangers were from the palm oil plantation. Our paddy field and our customary land had been cleared and a ‘no trespassing’ sign placed on it. Three guys in uniform brought a map and told me the land (near the riverbank) belongs to the National Park. All of a sudden our rubber plantation was illegal. We made no fuss to talk about it. I am tired, my people are tired. It just took away our energy and we didn’t find a solution.”

(Community assessment, West Kalimantan)

COMMUNICATION IS USED TO DEVELOP AWARENESS OF CLIMATE CHANGE AND PROMOTE RESPONSE

Indonesia is a focus for significant national and international action on climate change, particularly related to preventing deforestation. Government, international agencies, civil society and media organisations have communicated to people about climate change. An evaluation of climate change communication in Indonesia undertaken by Climate Asia revealed a focus on reducing emissions of greenhouse gases that contribute to climate change with an emphasis on reducing deforestation and promoting energy efficiency.

As well as promoting actions to reduce emissions, the Indonesian government also has a plan for adapting to climate change, particularly to new weather extremes.

Communication is reaching larger cities

	Larger cities	Smaller cities	Rural
Base : All respondents	281	1872	2832
%	%	%	%
Yes	57	35	28
No	35	59	61
Don't know/refused	8	7	11

Q: Do you know of any existing communication activities or programmes providing information about impacts (food, water, fuel, electricity, extreme weather) you might be facing?

Jakarta and other larger cities were a major focus for communication. People there benefited from a communications campaign focusing on “green” activities, such as biking to work, having a car-free day and making buildings energy efficient.

One media expert explained that the focus of communication campaigns on urban areas often excluded people in rural, coastal areas:

“The current visualisations are a child covering his nose or something like that, a jammed vehicle in cities with the smoke from industrial chimneys ... but it is very rare [to see communications] about the sea, which is also important in climate change.”

(In-depth interview, print media expert)

One government expert explained that this initial focus on larger urban areas was part of a plan to gradually increase knowledge of climate change across the country and noted that efforts to build mass understanding of climate change were a relatively new phenomenon. He suggested that people in Indonesia had only really begun to become aware of climate change after Indonesia hosted global negotiations on climate change in Bali in 2007.

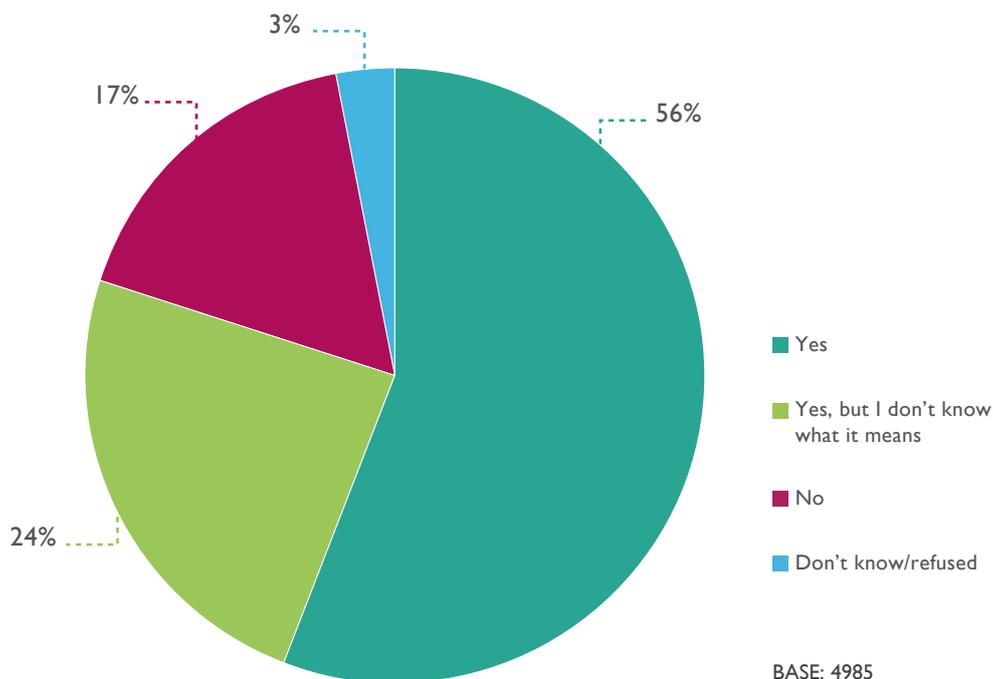
Media experts noted how there was relatively little communicated to a mass audience through television, by far the most popular media in Indonesia:

“Media in Indonesia is dominated by television ... Most TV programmes are based on political and economic issues. Environmental issues (such as forest fires, climate issues, farmers' problems) are still considered non-trendy topics. It is not a sexy issue for the 'ratings'.”

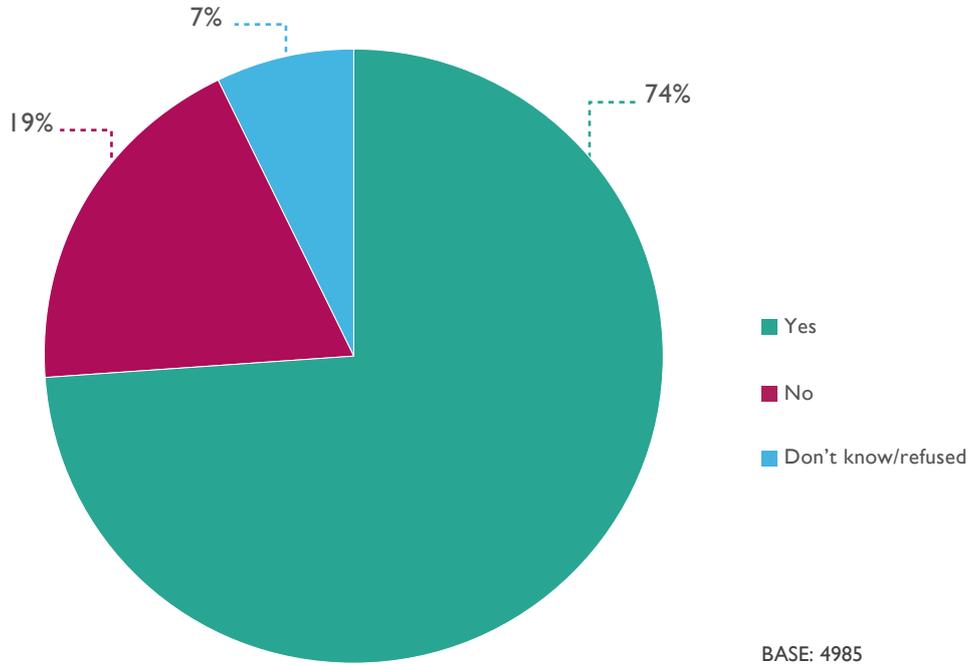
(In-depth interview, broadcast media expert)

AWARENESS AND UNDERSTANDING OF CLIMATE CHANGE

Heard of the term climate change



Believe that climate change is happening



Perceived main causes of climate change

Base: Respondents who believe climate change is happening		3671
	%	%
Loss of trees		72
Population growth		54
Forces of nature		51
Human activity leading to the emission of gases called greenhouse gases		40
A hole in a protective layer of gas that covers the planet called the ozone layer		33
God		30
Migration into cities		16



In Indonesia awareness and understanding of the term “climate change” appeared relatively high, particularly in larger cities (90%) that had received communication on the issue. Awareness was also particularly high in areas where there had been intense government and civil society intervention; for example, in Kalimantan, a focus of international efforts to slow deforestation, 95% of people were aware of the term. Younger people were also more likely to understand climate change than older people, perhaps owing to recent efforts to educate people about climate change in schools. The better educated a person was the more likely they were to be aware of and understand climate change: 99% of highly educated people had heard the term and 90% felt they understood it, compared with 60% of low-educated people, of whom 36% felt they understood it.

Experts suggested there was not deep understanding among the wider population:

“Climate change has different meanings among the community. People in the general public generally are not aware about climate change, because it is still scientists or intellectual people who work on this issue. Communities who work directly with nature, such as farmers and fishermen, are only aware about the changes to weather and seasons – they do not understand the concept of climate change.”

(In-depth interview, broadcast media expert)

In focus groups while people were often aware of the term they did not always show a depth of understanding.

IMPACTS AND RESPONSES

People felt changes in climate, for instance increased temperatures and extreme weather, and the availability of key resources, for instance a decrease in agricultural productivity or availability of water, were having an impact on their lives. This section describes how people felt they were being affected and what they were doing to respond.

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:

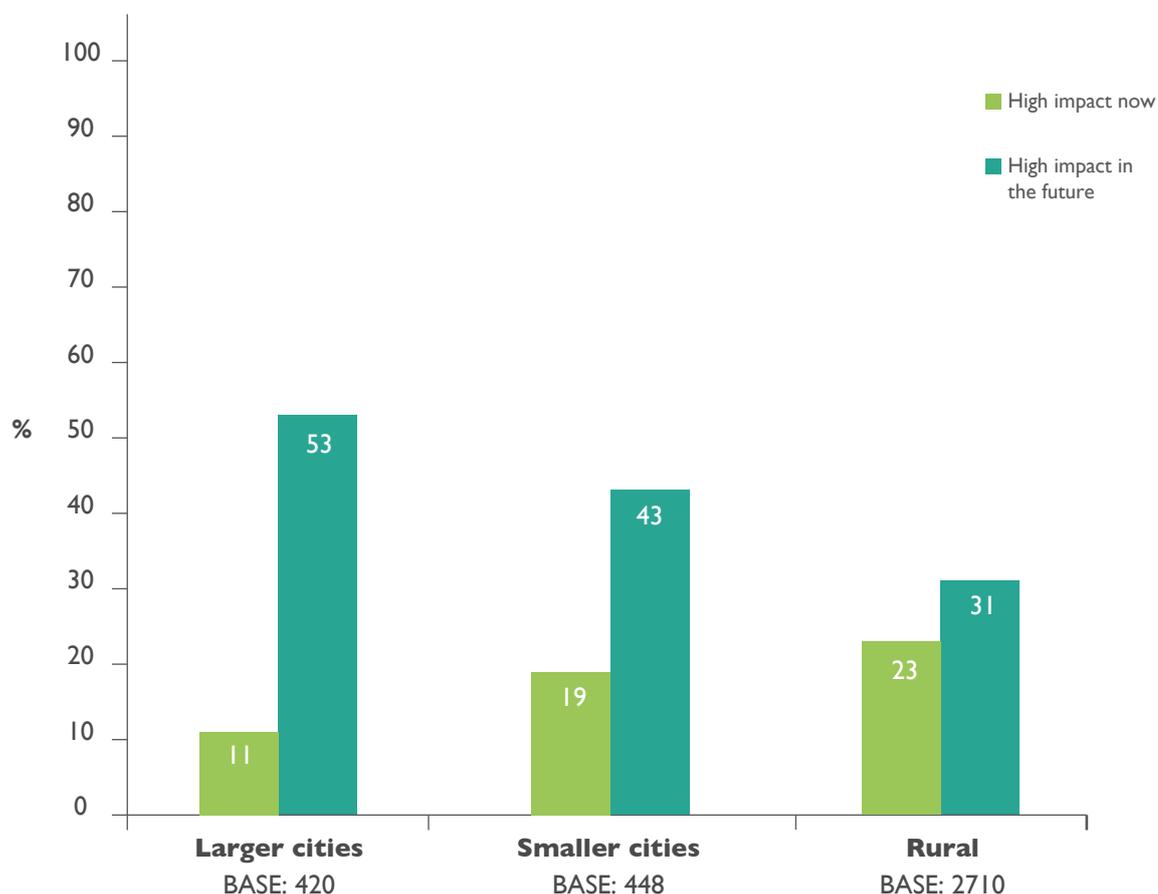
“You have just answered some questions on availability of water, food, electricity and fuel and changes in weather. The next series of questions will be asking you about the impacts that these have had on your life.”

PEOPLE FEEL THE IMPACT OF CHANGES IN CLIMATE

Over a fifth of people in Indonesia (22%) felt that they were experiencing a high level of impact now from changes in climate and availability of key resources. This figure was higher among the very poor (34%) than the well-off (21%). Of all the areas surveyed in Indonesia, people in Kalimantan (40%) were experiencing the highest degree of impact now.

There was an expectation that this impact would increase in future. People in larger cities seemed especially concerned.

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 can have in the future?

People's perception that they would experience higher levels of impact in future may well be linked to exposure to communication about climate change, which emphasises the dangerous changes that may affect people's lives in future:

"I was watching a documentary about flooding in Aceh, half a district was inundated the other day. Also drought in NTT [Nusa Tenggara Timur] is indeed frightening. We learned from the show something terrible could happen to our environment."

(Man, Eastern Java, Rural, age 45+)

PEOPLE WERE ALREADY FEELING IMPACTS ON THEIR HEALTH

When asked what effect the changes in weather were having on them, most people (85%) felt that their health was being negatively affected.

How climate changes were seen to impact health

Change perceived	Manifestation	Health impacts described
Frequent heavy rain	More floods	<ul style="list-style-type: none"> • Increase in the number of mosquitoes carrying Dengue fever and Chikungunya • People exposed to water-borne diseases. • Also forced to buy water in jerry cans from vendors, which was often unclean
Longer dry seasons	Increased dustiness	Respiratory problems
	Disruption to food production	Poor nutrition
Increased temperatures	General illness, fever	Prickly heat
Less predictable seasons	Sudden changes in weather	<ul style="list-style-type: none"> • People felt illness occurred when the weather changed. They associated less predictable weather with an increase in illness

Many people were unsure about how to deal with these problems, but people were taking simple actions. For instance, most people were filtering water to make it safe to drink (57%) and they were trying to reduce their own risk from dust and pollution by wearing masks.



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

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

PEOPLE FEEL CHANGES ARE HAVING AN IMPACT ON THEIR ABILITY TO EARN MONEY

Nearly three-quarters of people (71%) felt that the changes they were experiencing were having an impact on their ability to earn money and almost two-thirds (61%) felt the changes were affecting their choice of job. Those most affected were farmers and fishermen, very poor people and people in larger cities.

Farmers and fishermen were singled out by a senior government official as being particularly affected by changes in climate:

"People who live on the 'edge' of natural life can feel [the changes]. Who are they? They are farmers. They can feel and know when the rain is coming. So do the fishermen. These people's lives depend on nature and they understand the change. They know it has changed but they don't know what causes the change."

(Man, Eastern Java, Rural, age 45+)

Examples of how changes in climate have an impact on the livelihoods of farmers and fishermen

Changes observed	Farmers Increased heat, heavy wind and rain	Fishermen Less predictable weather, including storms
Impact	▼	▼
	<ul style="list-style-type: none"> • Crops destroyed or rotted • Two rather than three crops could be grown in a year 	<ul style="list-style-type: none"> • Not able to go out to sea as frequently • Forced to go further out to sea to catch fish • More frequently stuck out at sea because of storms • Sell fewer fish and use more fuel to return to shore
Economic impact	Decreased income	Decreased income and increased expenditure

“Previously, fishermen knew what months they should go out to sea, but now they don’t.”

(Man, Eastern Java, Rural, age 45+)

Although changes were having an impact on people’s ability to earn money, this didn’t necessarily mean a decrease in overall income. Nearly half (49%) of those surveyed felt that their household income had actually increased, 39% felt it had stayed the same and 12% felt it had decreased.

Changes in household income

	All	Farmers and fishermen
Base	4985	1302
%	%	%
Increased	49	41
Stayed the same	39	45
Decreased	12	14

Q: How much has your household income changed over the last five years?

Farmers and fishermen were more likely, compared with the national figure, to have had their income stay the same or decrease. The impact of changes for farmers and fishermen was, in some cases, being amplified by increasing industrialisation and urbanisation. Over a fifth (22%) practised fishing and farming in smaller cities which brought challenges around producing crops on small areas of land.

CHANGES IN LIVELIHOOD

Although people in rural areas, very poor people, and farmers and fishermen were feeling the highest levels of impact as a result of the changes they perceived, they were also making the highest number of changes to their livelihood. This was primarily by changing job, supplementing their income through other work and going away for periods of the year.

Percentage of people making changes to their livelihoods

	All	Larger cities	Smaller cities	Rural	Farmers and fishermen
Base	4985	281	1872	2832	1302
%	%	%	%	%	%
Made changes to livelihood	15	11	14	16	20

	All	Well-off	Comfortable	Poor	Very poor
Base	4985	84	2199	1518	1062
%	%	%	%	%	%
Made changes to livelihood	15	11	13	14	21

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

EXAMPLES OF CHANGES TO LIVELIHOOD

Changing job: In an area in Northern Sumatra people were no longer farming and were instead working as labourers for the local paper factory.

Supplementing income: People in Eastern Java supplemented their income buying livestock during *musim panen* (the wealthy season) to sell in *paceklik* (the difficult season). Women in Eastern Java also made products such as sugar palm or traditional baskets, and in Jakarta women had opened *warung* (small shops) on their porches.

Seasonal migration: Men in a fishing community on the north coast of Java would leave their village to work as construction labourers or binmen in Jakarta during the long dry season, returning to their villages in time for the planting and fishing season.

Many people described making changes to their livelihood out of necessity. Changes in climate were not the main reason for these changes. Instead they provided an additional stress which, coupled with pressures on the availability of land and competition for resources, made people's lives harder. Some people expressed frustration that these external pressures prevented them from living the life they wanted to and limited their choice of livelihood. Others felt guilt about having left their ancestral lands.

Farmers and fishermen were also undertaking a range of actions that would increase their resilience to changes in climate, for instance using technology to increase soil fertility and rotating their crops.

Farmers' responses to changes in food availability/prices

Current responses to specific changes in food availability/prices	Farmers and fishermen
Base	660
%	%
Using technology to improve soil fertility	24
Growing different types of crops	22
Rotating crops	21
Finding out about crop/livestock prices	2

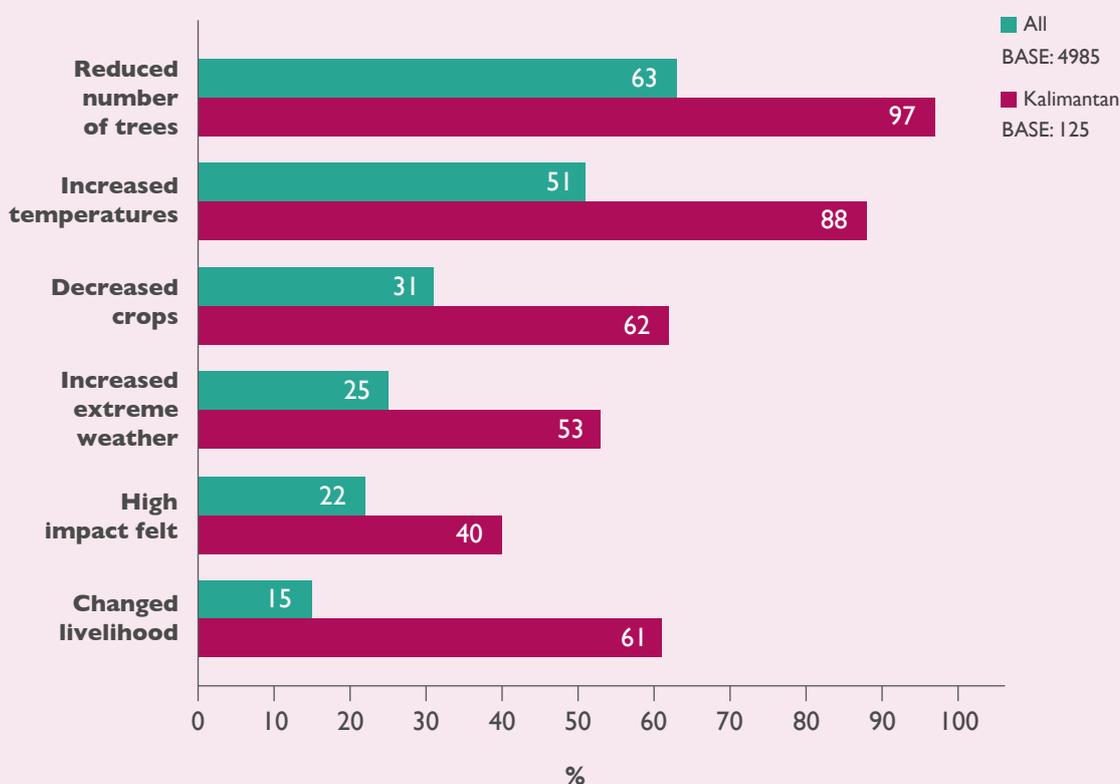
Q: Which of these actions are you currently doing?

Some changes provided new opportunities. For example, in an area in Northern Sumatra, the longer dry season meant more days when rubber could be tapped. In Jakarta, a longer rainy season meant an extended period of work for those who provided an “umbrella service”. And in a community in Kalimantan the longer dry season meant that people could grow more vegetables before their gardens became submerged in the rainy season. The longer dry season had also destroyed rice crops in this community, however.

KALIMANTAN: LIFE ON THE EDGE

An exceptionally high percentage of people were changing their livelihood in Kalimantan (61%). This region is experiencing large changes in land use, including the development of palm oil plantations and coal mines. In addition, people there have noticed the greatest changes in climate and more people feel a high level of impact because of these changes than anywhere else in the country. Of those that had made a change to their livelihoods, 84% had changed their job.

Perceived changes and impacts in Kalimantan





In a community assessment conducted in the region people who were formerly fishermen or farmers were temporarily migrating to Kuching (Malaysia) to work as labourers on palm oil plantations or in construction. They had brought back money to invest in boat engines to help them sail further to fish, which they saw as a necessity because of lower catches closer to shore. When fishermen did not make enough money, women in the village plaited Bemban reeds into baskets and bags to sell to support the family.

Some members of the community described how changing jobs had been challenging, and that in some cases they were not making much money because they didn't possess the necessary skills.

A local farming activist interviewed expressed disappointment with the government for not providing support for people to stay in farming:

“So far the government has been half-hearted [in helping us deal with change]. There are only a few recommendations such as to mix crops and the pattern [of planting].”

(In-depth interview, civil society organisation (CSO) expert)

EXTREME WEATHER EVENTS: FEELING UNDER-PREPARED

In Indonesia, 43% of people surveyed lived in an area that had experienced an extreme weather event – high winds, floods or landslides – in the last 10 years.

When noting the impacts of extreme weather, the financial cost of floods and storms were often mentioned. Damaged houses had to be repaired, and furniture that had been ruined had to be replaced. Sometimes wages were also affected as people were unable to get into work as a result of the flooding.

The psychological strain of living with the risk of extreme weather events was also discussed. One man in a small town in Riau described the stress he experienced:

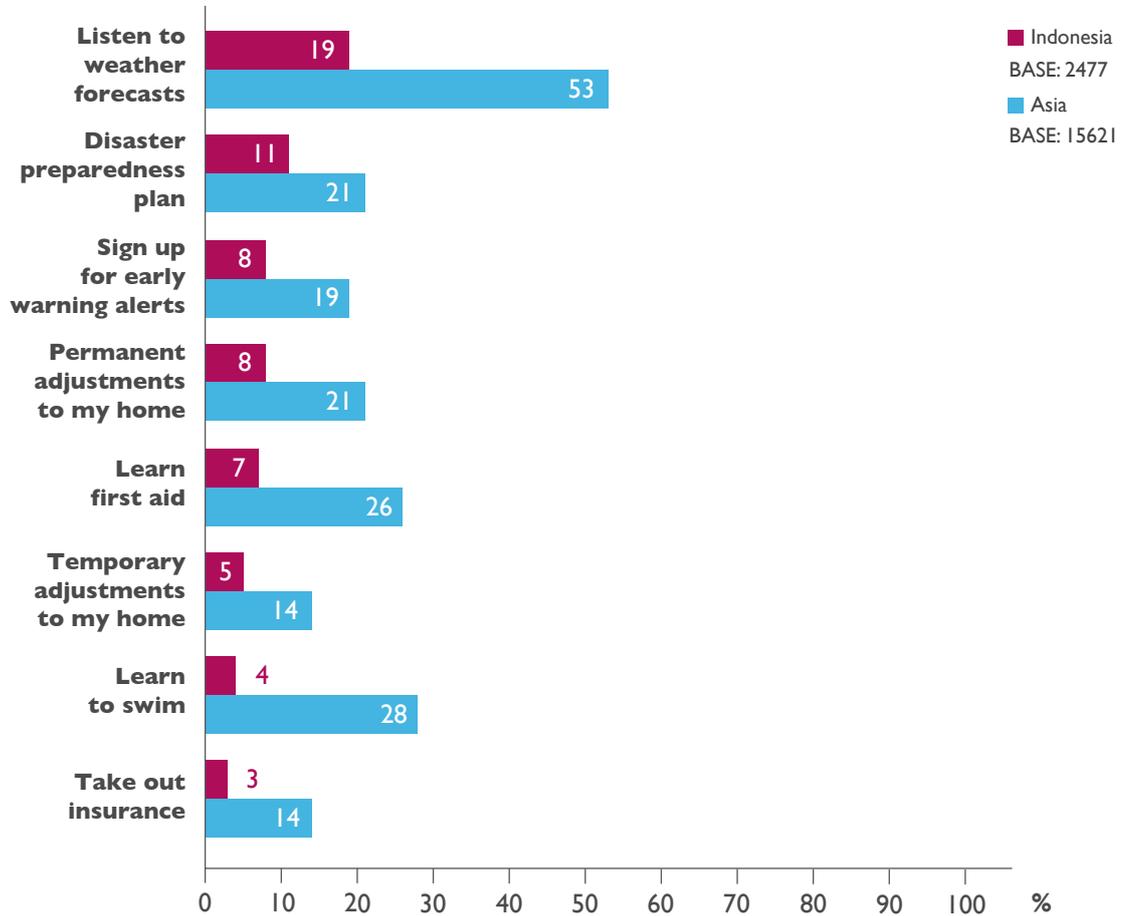
“I live nearby the riverbank, I cannot handle ‘frequent floods’ any more. I can’t sleep during the heavy rain. I have moved out from that house, I don’t live there any more.”

(Man, Riau, Urban, age 35–44)

A large percentage (58%) felt at risk because of extreme weather, but only 18% felt prepared. Knowledge of how to respond to such events was very low and relatively few people were taking the simple steps necessary to prepare for extreme weather.

Climate Asia asked a series of unprompted questions about how people were responding in their day-to-day lives to changes they were noticing in climate and availability of key resources. This was followed by a series of prompted questions about specific actions they could take in response to changes in availability of food, water and energy and to extreme weather events. These questions were chosen by drawing on qualitative research and expert advice with the aim of making the responses simple and comparable across Asia.

Very few people in Indonesia were preparing for extreme weather



Q: Which of these actions are you currently doing?

Richer people were taking slightly more action than poorer people to prepare for extreme weather events, although richer people also felt less at risk.

The impact of extreme weather was both mitigated and exacerbated by development and infrastructural improvement. One Jakarta resident noted how cleaning of canals had decreased their flood risk:

“Nowadays, even if there’s a big rain all night long, we’re not worried, but previously, we weren’t able to sleep, we were thinking all night long, are we going to drown?”

(Woman, Jakarta, Urban, age 45+)

By contrast, people in the Marunda slum in the city were particularly afraid because a large drainage channel had been built next to their homes. This channel, while having a positive impact for many other people in Jakarta, had spilled over during heavy rain and flooded the area.

LIFESTYLE CHANGES A PRIORITY FOR THE URBAN AND WEALTHY

A third of people were making changes to their lifestyles in response to changes in weather and availability of resources. However, unlike livelihood changes, lifestyle changes were being carried out most by those who were richer, and those in cities, particularly larger cities. Popular actions among people in larger cities were using electricity more efficiently and recycling or reusing water.

People in larger cities were making more lifestyle changes

	All	Larger cities	Smaller cities	Rural
Base: All	4985	281	1872	2832
%	%	%	%	%
Made changes	33	49	36	29
See the need to make more changes	49	64	54	44

Base: All those who had made changes	1635	138	673	824
%	%	%	%	%
Using electricity more efficiently	36	44	35	36
Recycling water/re-using waste water	21	36	20	20
Changing diet	20	20	21	19
Storing/saving water	16	11	16	17
Using less/alternative fuel for cooking	10	4	10	11

People in larger cities were also more likely to be exposed to communication encouraging lifestyle change. For example, many urban residents knew of campaigns to encourage energy efficiency and others were familiar with government campaigns to get people to save water. This said, they were also likely to be using greater quantities of these resources in the first place and so had greater opportunities to be efficient.

“When we wash hulled rice there's advice [from the government], so to save the water, after we wash the hulled rice we don't throw away the water, we use it to water the flowers.”

(Woman, Jakarta, Urban, age 45+)

Notably, there were relatively few differences between men and women in the extent to which they were making livelihood or lifestyle changes or responding to changes in availability of resources. In focus groups and community assessments men and women were sometimes responding to changes differently, although this seemed to relate to the range of options they had available to them. For instance, many women were undertaking a range of actions around the house and many men were taking simple actions during their working day.

INDONESIANS ARE WILLING TO MAKE FURTHER CHANGES

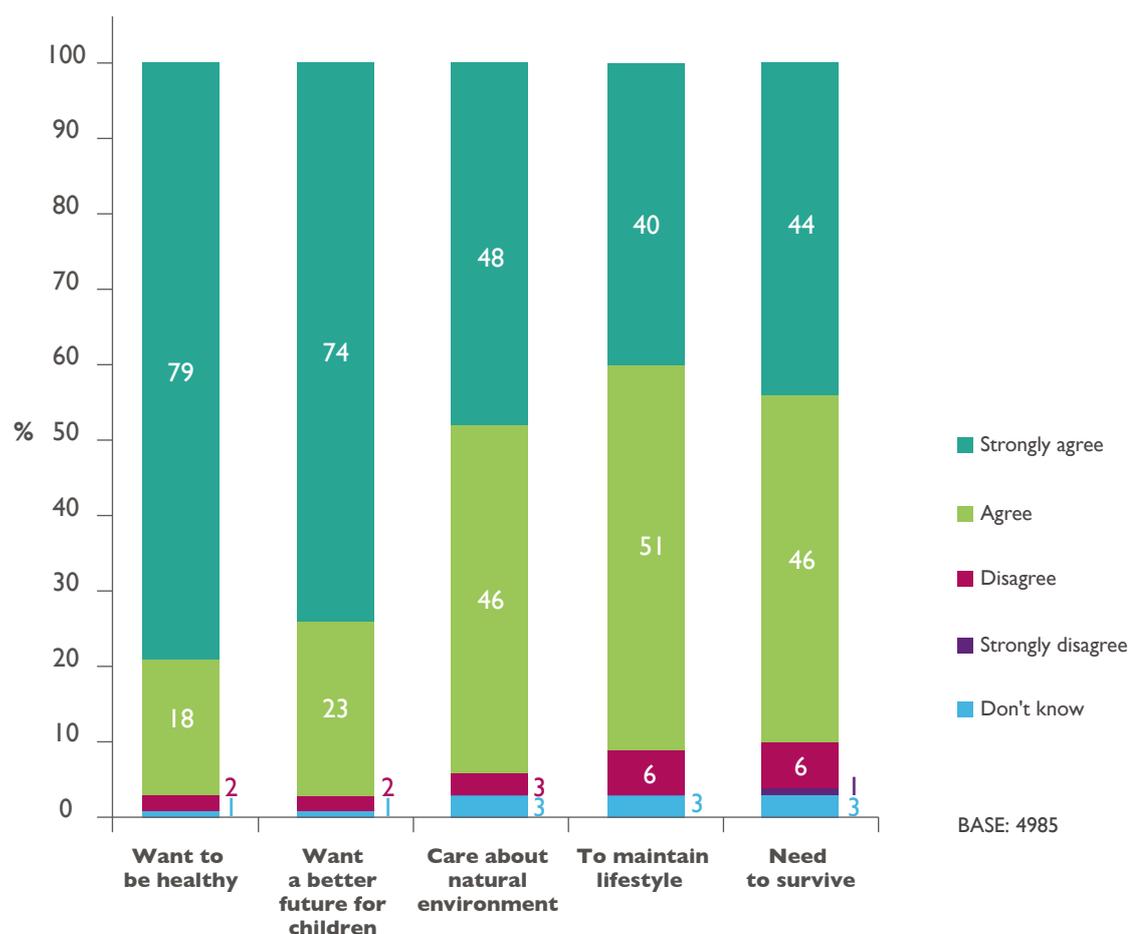
People in Indonesia were willing to make further changes to their lives and lifestyles, to respond to changes in climate and resources in future. Of those surveyed, 51% were willing to make further changes to their livelihood and 65% were willing to make further changes to their lifestyle.

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 higher rates of response.

HEALTH A KEY MOTIVATION FOR ACTION

Motivators for action



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

Across all areas and demographic groups health was not only a major concern it was also a strong motivation for taking action. Actions that had tangible health benefits, for instance reducing the number of mosquitoes in the area by maintaining a cleaner neighbourhood or cleaning the river, were popular.

Indonesians were also moved by a concern for the natural environment. This applied, in particular, to people in larger cities (55% strongly agreed that this would motivate them) and wealthier people (71% strongly agreed that this would motivate them), despite not necessarily having as much connection to their natural environment as poorer people and those in rural areas.

Kalimantan, where more people felt they were experiencing an impact now than in any other area, saw particularly high numbers who were motivated by a need to survive (77% strongly agreed) and a desire to provide a better future for their children (90% strongly agreed).

THE LEVEL OF IMPACT

Unlike in some other countries, the people surveyed who felt a high level of impact now as a result of changes in climate and resource availability were not making any more changes to their livelihoods than those who did not feel high levels of impact. However, those feeling a high level of impact now were more likely to see the need to make changes to their livelihood in future, and were making more changes to their lifestyle now, including by storing, saving and re-using water and using energy more efficiently.

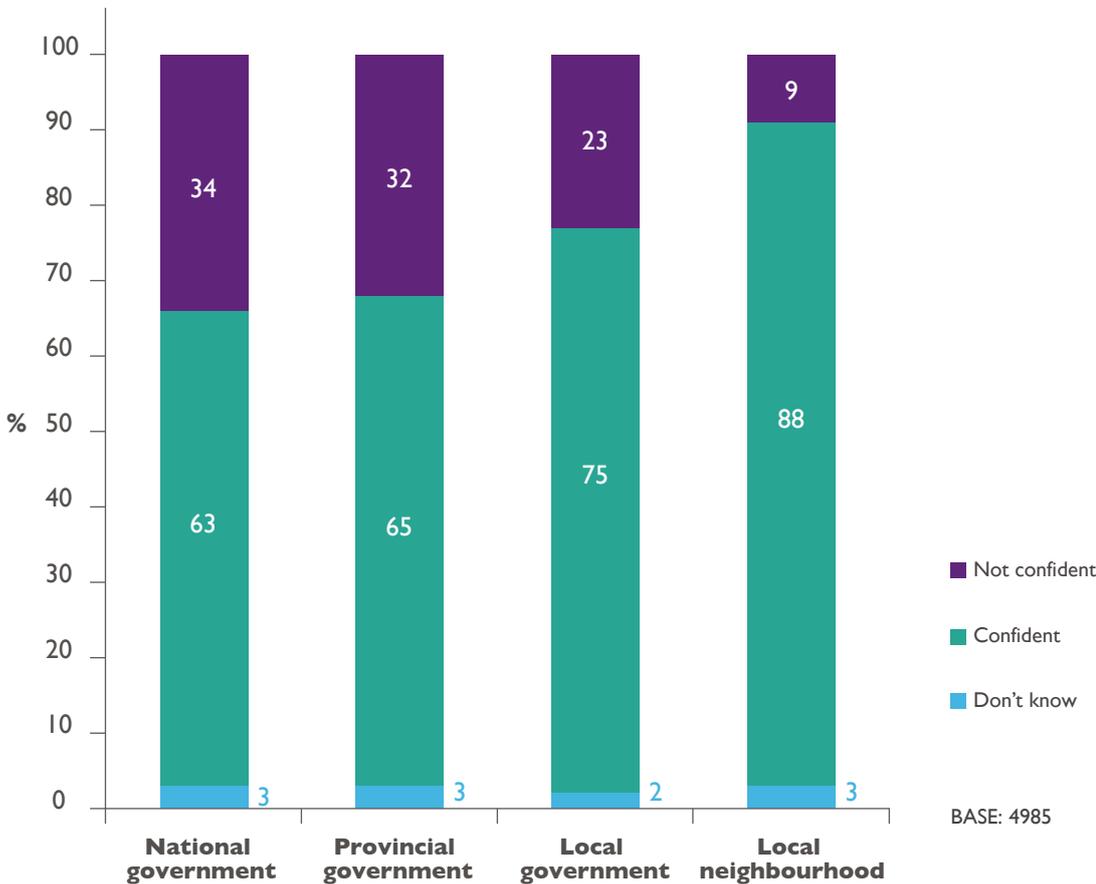
Those who were feeling a high level of impact and not making changes were more likely to be the very poor or fishermen or farmers.

INDONESIANS HAVE MORE CONFIDENCE IN LOCAL DECISION-MAKING BODIES

Although people were willing to take action themselves and many felt they had a responsibility to do so, most saw government – national, provincial and local – as responsible for taking the lead in responding to changes in climate, as did government representatives themselves.

People surveyed had the highest confidence in their local neighbourhood and local government to respond to changes. This confidence in the institutions closest to them may stem from the fact that community or village leaders actually have an obligation – social and governmental – to act on these issues. Most policies initiated at the national level are fed down to the community through local government and community leaders. Local neighbourhoods, especially in Java, also traditionally participate in a form of community action called *Gotong royong*, carrying out community work like maintaining irrigation systems or providing early response in case of natural disasters.

Confidence in levels of government



Q: How confident do you feel that the [institution/group] is taking the necessary actions to help respond to changes in water, food, energy supplies or weather?

PEOPLE WHO ARE MORE INVOLVED IN THEIR COMMUNITY ARE DOING MORE TO PREPARE

Across Asia higher levels of community involvement were found to be associated with higher levels of action. Most people in Indonesia felt that their communities acted together to solve problems (84%) and felt very involved in community-level decision-making (57%).

In Indonesia people who felt more involved in their communities were more likely to be preparing for extreme weather events by making permanent adjustments to their homes, making disaster plans, learning first aid, signing up for early warning alerts and listening to weather forecasts.

“We shouldn’t rely too much on our government. They are loaded down with other things. As a community we have our responsibilities as well. Let’s learn together to do something about the floods, shall we? [We should] stop being a grouchy community. Let’s clean up the waterway more often, put our belongings in higher places and raise our houses before the rainy season. We shouldn’t forget to learn from information provided by TV or newspapers and let’s find out how people in other regions survive without asking the government for too much help.”

(Woman, Riau, Rural, age 35–44)

People who frequently discuss climate, food, water and energy issues are also more likely to be responding to changes in climate and availability of resources by making changes to livelihood and lifestyle. Those who discussed related issues more frequently were more likely to live in rural areas than urban areas. People in Java were also particularly likely to discuss these issues frequently.

“My neighbours planted it [a new crop], and showed me how to do it on my yard. So I was just following them.”

(Community assessment, South East Sulawesi)

DAMAGE LIMITATION: PREPARING AND RESPONDING TO FLOODS

Living on the banks of a river, people in a community in Central Java know the risks of flooding. But they feel that floods have become more intense and unpredictable in the last few years.

The community has worked together to prepare for the floods and minimise flood damage. They have built high shelves to store belongings safely, have raised the foundations of their houses and started buying plastic furniture so it isn't damaged by flood water. The community then take it in turns to monitor the river level and speak to villages upstream to get warnings if the level rises. If a flood does happen, people evacuate with pre-packed food, and a member of the community stays to patrol the houses to guard against thieves.

After the flood, a community clean-up operation begins, and household members often have to work extra hours to earn money to repair damaged houses and household items.



Ulet Ifansasti, Getty Images

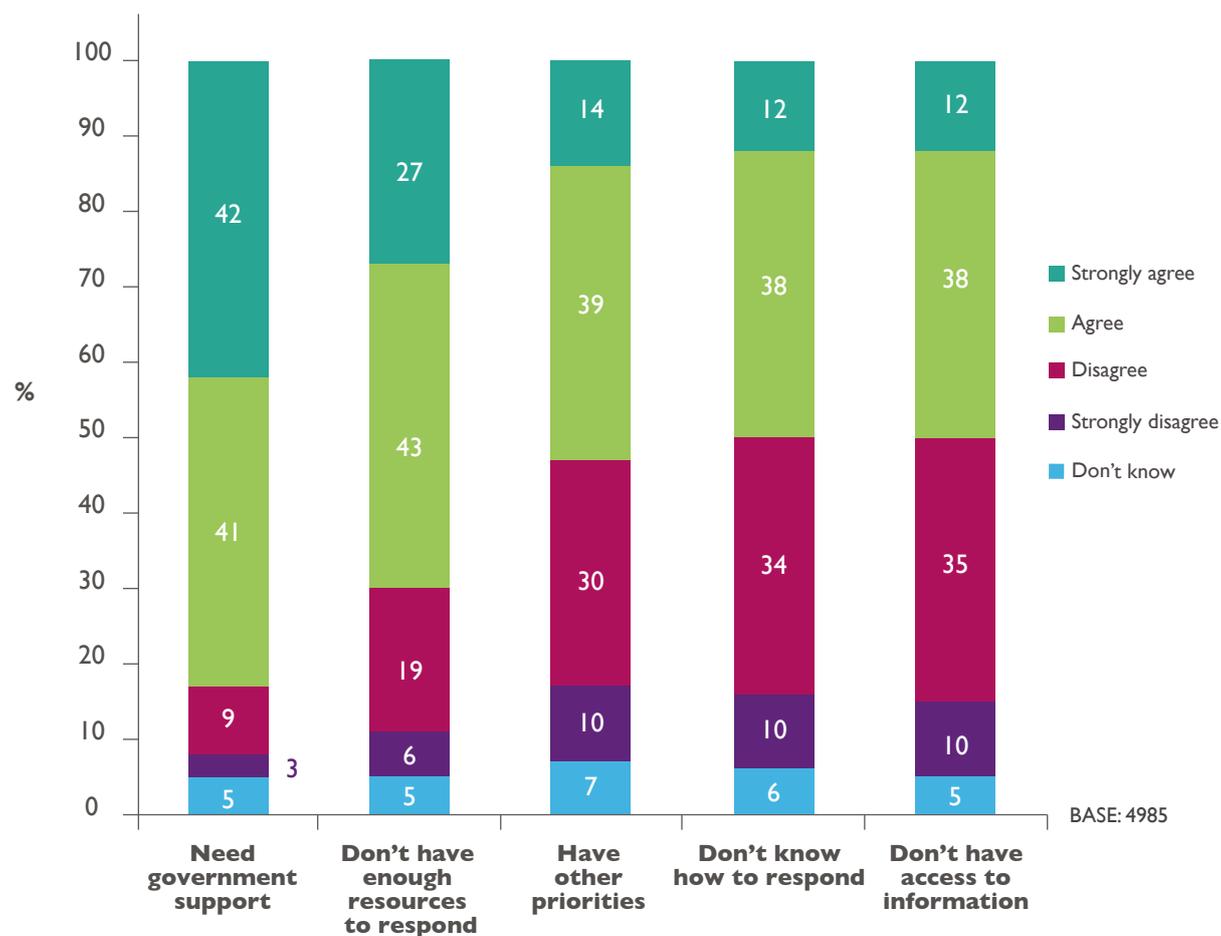
INFORMATION AND DISCUSSION IS CRITICAL IN HELPING PEOPLE TO RESPOND

People who felt well informed about how to respond to changes in climate and resource availability were more likely to be taking some form of action. Well-informed people were more likely to be better educated, have more resources and live in large urban areas in Java. These people were more likely to have made changes to their livelihoods (21% compared with 13% of people who do not feel well informed).

With access to information people became more aware of risks. Well-informed people were more likely to feel affected by changes in climate and availability of resources: 41% of well-informed people felt they were experiencing a high level of impact now compared to 24% of people who were not well informed. They also felt more prepared for these risks: well-informed people felt more prepared for extreme weather events than less informed people.

A PERCEIVED LACK OF GOVERNMENT SUPPORT WAS A KEY BARRIER TO RESPONSE

Barriers to response



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.

A lack of government support was seen to be the largest barrier to responding to changes in climate and availability of resources. There was an expectation that government would provide information, encouragement and resources to respond and some expressed frustration when they were absent. However, a lack of support from government was seen to be a barrier even in areas where government programmes were in operation, suggesting people's expectations of support may be high.

“They should be able to do something ... we’re just stupid people, with no knowledge.”

(Woman, Jakarta, Urban, age 45+)

People in Riau said they lacked knowledge of how to adapt their current farming and fishing practices or pursue alternative livelihoods because they hadn’t been given information by the local government.

Some people felt disempowered by the actions of both government and large corporations:

“It all comes back to the conservation of the environment but sometimes the government doesn’t take responsibility and the people can’t say anything because all the powerful people in authority have signed the rights to companies, that’s why it is hard for the people.”

(Man, Riau, Rural, age 35–44)

Lacking the resources to respond was a barrier cited by a large majority of people. Some people saw taking action as expensive and unachievable:

“If I have the budget, I want to renovate my house, to make it higher and safer.”

(Woman, Jakarta, Urban, 45+)

Not knowing how to respond, not having access to information and not thinking these issues present a problem now were also barriers to action for half the population. People in smaller cities (49%) and rural areas (54%) were much more likely to feel a lack of information was a barrier to acting than people in larger cities (17%) who were more likely to have already received communication on these issues. People in smaller cities and rural areas were also more likely to feel they didn’t know how to respond.



THE MEDIA AND COMMUNICATION LANDSCAPE OF INDONESIA

In order to reach people it is important to understand what they want: what media they use, who they talk to and trust, and how they would like information delivered to them. This section features information about people's media and communication needs, preferences and use.

EXPERTS: MEDIA CAN REACH MORE PEOPLE WITH ENTERTAINING CONTENT

As highlighted in section 2, communication on issues about climate change isn't reaching everyone. Media experts described how content about climate change was difficult for them to produce and for ordinary people to understand:

“Yes, adverts, PSA [public service announcements] and online education are available. However, it's hard to understand their messages. Climate change is still an alien concept to the people. Even to my colleagues in the media. This is not a topic which people talk about during casual conversation. It takes a deep understanding when people try to talk climate change.”

(In-depth interview, online media expert)

Experts emphasised the importance of reaching more people in order to raise awareness and response to changes in climate. A common suggestion was to make the issue more engaging by using entertainment. However, this presents its own challenges:

“This is a serious issue and it is hard to make it interesting. It is an area for academics. We, the communication experts, have to make it beautiful [using television]. It is possible to make it important, but hard to make it interesting. And celebrities are not enough.”

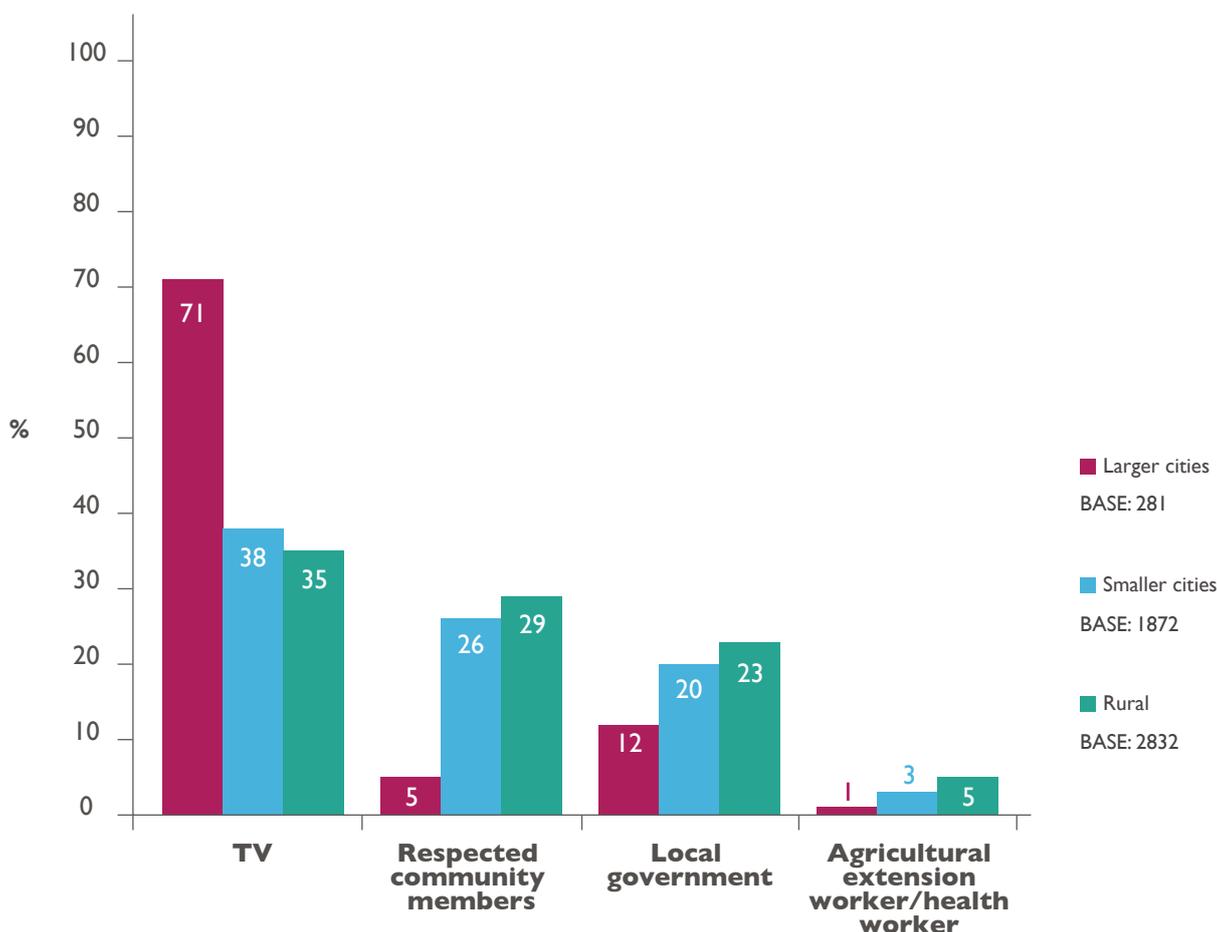
(In-depth interview, broadcast media expert)

In order to make the topic more appealing and engaging for as wide an audience as possible, it's important to understand people's information needs, as well as their preferences for types of media, formats and content.

TELEVISION AND COMMUNITY: THE PREFERRED INFORMATION SOURCES

Most people felt that the media already covered issues to do with food, water, energy and extreme weather well (78%), and people tended to get information on these issues from television (92%) over other media. Television was both the most trusted medium and the preferred way to receive information on these issues, followed by respected community members, local government and family and friends. This preference, however, varied by location type with people in larger cities more likely to prefer television and people in other areas respected community members.

Preferred information sources varied by location type



Q: How would you most like to be provided with information about changes in water, food and energy supplies?

Surprisingly, despite a high level of social media use in Indonesia – 22% of people had used social media in the past week according to a recent survey by the Broadcasting Board of Governors⁷ – less than 2% of people would like to have information delivered to them via the internet.

PEOPLE'S INFORMATION NEEDS

Nearly three-quarters of people (74%) wanted information on the future impacts of climate change. This desire for information on future impacts was highest in larger cities (85%), where people expected the highest level of future impact. Older people in focus groups stressed the importance of showing others the impacts that changes in climate were already having, to demonstrate that they need to take action now.

⁷Broadcasting Board of Governors (2013) *Media Use in Indonesia 2012* [online] Available from: <http://www.bbg.gov/wp-content/media/2012/10/gallup-indonesia-brief.pdf> [Accessed 16 April 2013]

Some farmers asked for more reliable climate information and help in finding crops that were more suitable for changing weather patterns. Many also expressed a desire for information that would help them maintain their livelihood or lifestyle, as changes occurred.

The information people want

Base: All	4985
%	%
Information on future impacts	74
Information on causes of changes	70
Education about responses	60
Education for children	34
Teaching skills from others' experiences	24
Information that connects people to each others' experiences	16

Within urban areas, people wanted information on how to stay healthy and avoid disease, especially in densely populated larger cities. In Jakarta, a city with severe flood risks, people wanted information on how to prepare for future floods, which they were scared would become more severe.

PREFERRED COMMUNICATION FORMATS

There was a strong emphasis on the need for any communication to be engaging and entertaining. A television or radio talk show was suggested by some as the best format as it allowed the audience to participate, as well as experts to impart information.

"I have a lot of questions, if there is a phone number provided we can ask questions instead of the presenter asking them for us. You know ... like when we request songs on the radio station."

(Man, Central Java, Rural, age 16–24)



People also suggested using a reality television show format to convey climate information. In Jakarta, a group of men explained that they thought reality television would be a good idea as it demonstrated to others the problems they were experiencing:

“A reporter would invite the viewers to explore the community. Viewers could see first-hand what sort of problems and issues we face every day.”

(Man, Jakarta, Urban, age 16–24)

Along with television formats, there was a strong desire for face-to-face communication. In some cases this was because it allowed people to receive locally specific information, and in others it was because it meant people could be assured the information was correct as it came from a professional or expert.

“Since we don't have any idea of how to start [growing new crops], reading a book probably wouldn't do us much help. It would give us more assurance if we were able to talk with a real professional.”

(Woman, Riau, Rural, age 25–34)

One person suggested providing training videos, featuring experts that provided step-by-step guidance on how to use new farming techniques.

Recent media use (used “yesterday or today”)

	All	Male	Female	Larger cities	Smaller cities	Rural
Base	4985	2469	2516	281	1872	2832
%	%	%	%	%	%	%
TV	93	93	93	97	97	90
Mobile	54	56	53	77	61	47
Newspaper	7	8	5	15	10	4
Radio	13	13	12	13	13	12
Internet	5	6	4	14	7	2

	Well-off	Comfortable	Poor	Very poor
Base	84	2199	1518	1062
%	%	%	%	%
TV	98	96	93	87
Mobile	86	66	49	35
Newspaper	24	10	3	2
Radio	15	14	11	11
Internet	20	8	2	1

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

Television

Television was the most popular type of media with more than 90% of Indonesians having watched it in the last day. Those who watched it mainly did so in their own homes (97%).

Five national television stations, all Jakarta based, shared audiences above 50%, including RCTI (watched by 77% of those who watched television), SCTV (68%), Trans7 (65%), Trans TV (60%) and Indosiar (54%). Satellite dishes were used mostly in rural areas and outside of Java, where a signal for Jakarta-based channels would otherwise be difficult to receive.

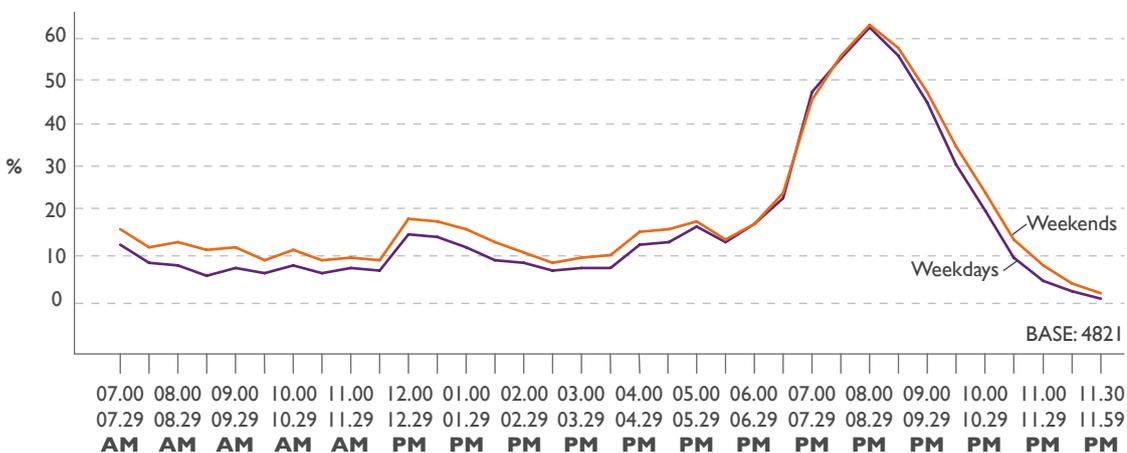
The news was popular viewing, with 87% of people who watched television saying that they watched it, rising to 93% of people in larger cities. Drama and soap operas were particularly popular in rural areas (56% watched them compared with the national figure of 35%). Reality television shows were also popular (36%) as they showed people in different areas, with different lives, working together to solve problems.

“Most of the village prefer to watch TV instead of listening to the radio, because we can see the picture, live. And TV is up to date for its news.”

(Woman, Blitar, Rural, Eastern Java, age 35–44)

Within older groups an emphasis on tradition emerged and they wanted programming that reflected the traditions, culture and ethnic identities of Indonesia.

Preferred television watching times



Q: Thinking about your general viewing habits on typical weekdays/weekends, what time do you watch TV?⁸

⁸Because of time differences across the islands, viewing times for the same programmes may vary. For example, a show in Java at the peak time of 8pm would be showing in Sulawesi at 9pm.

Mobile phones

Mobile phones were used the most by well-off people, although over a third of the very poor had used a mobile in the last day. Mobile phones were predominantly used to make calls (93%) and for sending and receiving texts (85%). Almost half of people under 24 also used their mobiles for listening to music and the radio. The largest network was Telkomsel, which sold prepaid cards such as SimPATI (used by 26% of mobile users) and AS (used by 25% of mobile users).

Radio

In recent years the number of radio listeners has decreased.⁹ Only 13% of the population had listened to the radio in the last day. General listenership varied by region, however, with 33% of people in the Eastern Islands having listened to radio in the last day, compared with 2% of people in Kalimantan. Local radio stations were the most popular, with people tuning in during the peak morning hours between 6.00 and 7.30 am.

Newspapers

Newspapers were popular among urban, rich and professional people. Just under a quarter (24%) of the well-off had read a paper in the last day, compared with only 2% of the very poor, while the percentage was just under a third (30%) for professionals. Among newspaper readers, the most popular papers were the Eastern Java-based *Jawa pos* (14%), the national paper *Kompas* (12%) and the local version of *Kompas: Tribun* (14%). Local newspapers were very popular among a broader demographic in some areas. For example, in a community assessment in Central Java many people, including poorer people, subscribed to the local paper.



Helen Rea/BBC Media Action

⁹Broadcasting Board of Governors (2013) Media Use in Indonesia 2012 [online] Available from: http://www.bbg.gov/wp-content/media/2012/10/Gallup-BBG-Indonesia-Research-Briefing_Final.pdf [Accessed 16 April 2013]



The internet

Like newspapers, the internet was used most by people in larger cities and the well-off and comfortable. The internet was very popular with young people. They were also more likely than other groups to access the internet through their mobile phone. The use of social networking sites in Indonesia is high, with Indonesia having the fourth largest number of Facebook users in the world (estimated at 64 million users per month) and the fifth largest number of Twitter users (19.5 million).¹⁰

The connections enabled by social media have created new networks of people, particularly in urban areas and recently social media has played a role in supporting anti-corruption efforts and amplifying the voices of those dissatisfied with healthcare. Many civil society organisations have begun to utilise social media to support their work and it has significant potential to support efforts to respond to climate change.

The community

There are a number of communal and religious activities and groups within Indonesian society that people identified as important sources of information and sites of discussion:

Warung Kopi (Café)

Men meet to discuss news and events during the day. TV and newspapers are provided, and friends and acquaintances exchange information.

PKK (Family welfare group)

Women come to this group to discuss health and welfare issues.

Pos ronda (patrol station)

Men gather at this building to carry out community night watch duties including patrols and providing early warnings for fires and natural disasters



Religious activities

The community take part in activities like Koran recitation, communal sermons and religious trips.

Karang Taruna

(Youth organisation)
Young people can participate here in sports, arts and cultural activities.

Arisan (Rotating savings

and credit group) At this weekly microfinance group people deposit money and receive payouts on a rotating basis.

¹⁰Social Bakers (2013) *Facebook statistics by country* [online] Available from: <http://www.socialbakers.com/facebook-statistics/> [Accessed August 2013]

Respected members of society: the opinion-formers

Climate Asia collected the views of opinion-formers in the community. 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.

Indonesia has a very extensive grassroots government structure which is often difficult to separate out from the community in general as it is intertwined with community life. Within these structures, respected members of society play a key role in shaping the actions of the community. These opinion-formers include local government leaders, religious or community group heads. They tend to be older, male and more educated than the general population. Of the opinion-formers surveyed, 78% said people came to them for advice.

These opinion-formers felt that they were more informed about changes in climate and availability of resources than the general public. They also had greater awareness of climate change and were more likely to believe it was happening. They discussed changes in resources and climate more frequently than the general population with a greater variety of people and institutions. Over half of the general population (51%) spoke to local influencers and community elders to get advice on changes in weather and resources, while almost a fifth of people (19%) spoke to community leaders, all of whom were seen as trusted sources of information. Information from religious leaders was also considered worthy of high levels of trust, although only 13% of people spoke to them about environmental issues.

The RT/RW system

In Java the RT/RW system is particularly strong. A locality is constituted of approximately 200 households and has an elected representative called a *Rukun Warga* (RW). Reporting to the RW would be a number of *Rukun Tetangga* (RT), each of whom represents approximately 40 households. The RT and RW have responsibilities in the community, for example giving help at weddings, and also to the government, for example helping to run the general election. They liaise with local community organisations and the local government officials, meaning that they are well informed and provide a channel of communication to and from the community.



COMMUNICATION: ENABLING ACTION NOW AND IN THE FUTURE

This section draws on the findings of Climate Asia's research to demonstrate how media and communication can be used to help people respond to change across Indonesia. Climate Asia research has revealed numerous opportunities to help people respond to changes in climate using mass media and face-to-face communication.

Communication can help individuals by building awareness, motivation, self-belief, knowledge and skills, to enable them to take action to secure food, water and shelter, improve economic opportunities and security, reduce the risk of disasters, and cope with crises. It can also support communities to discuss common issues and work together, inform public policies and hold leaders to account, strengthening democracy.

In Indonesia current communication about climate change is having an effect. Awareness and understanding of climate change is higher in the large urban areas that have received the most communication, and so is concern about the future. People in these areas are also more likely to feel informed about how to respond to the changes they notice.

However, there are many people who are not yet being reached with information they understand and can use. These people, more often in rural areas, have lower access to information and are less likely to feel informed about how to respond to changes in climate.

Across the country there is also a pressing and immediate need to improve preparedness for extreme weather events. This presents an opportunity to communicate with people to show them the importance of preparing and to equip them with new skills.

Indonesians are willing to make changes to their work and lifestyles in order to respond to changes in climate, and feel a responsibility to do so. However, the decisions people need to make are complex and it's important that they have enough information to make decisions for themselves and their communities.

COMMUNICATION TO ENABLE EFFECTIVE ACTION

Drawing on the findings of Climate Asia research in Indonesia, it is apparent that media and communication can enable and encourage action in response to changes in climate at different levels of society. There is a need for mass media content that reaches a national audience, most likely through television. In addition, this programming should be supplemented with more locally appropriate content delivered to communities through local leaders and opinion-formers, as well as face-to-face communication from organisations active in this field. There are opportunities to use insights from Climate Asia research to increase the effectiveness of the work undertaken by these organisations, which are already helping Indonesia to respond to changes in climate.

People

At the national level, mass media, particularly television, can enable and support individual people to respond to changes in climate. To do so, it should:

Engage people with the issue by framing communication around people's values and motivations for action: There is an opportunity to increase engagement with climate change and encourage action now by framing communication around the things people value. For instance, strong desires to protect health, the environment and provide for future generations.

Build on people's affinity for fellow Indonesians: People feel an affinity for fellow Indonesians and have strong religious and moral sentiments that encourage good works. Media can highlight how responding to changes in climate might benefit other Indonesians, including the poor and vulnerable.

Empower people to make choices for themselves: Many people in Indonesia feel disempowered by the changes happening around them and are reliant on government to take action. Communication should highlight the options that are available that don't require government support or huge financial investments. This communication should not be prescriptive and present a range of options to allow people to make complex decisions themselves or with their communities.

Encourage consideration of alternative livelihoods: Many Indonesians are facing stark choices over what work they do and where they will live in the face of climate, environmental and economic pressures. While some communication is likely to emphasise the need for people to make changes to their lives and livelihoods, people should be provided with information through appropriate and trusted channels to give them the greatest opportunity to make their own choices that will hopefully have long-term benefits for themselves and their families.



Encourage people by highlighting what they are already doing: People in Indonesia are already carrying out a lot of smaller actions that could help them to adapt to future changes in climate, but they are not necessarily aware that these actions can help them. Communication should highlight the usefulness of what people are already doing to enhance confidence in their ability to try something new, develop new skills or build an alternative livelihood where necessary.

Build knowledge and inspire innovation: People, particularly in urban areas, are hungry for information about what they can do to respond to climate change. Government and civil society are already helping to educate people and build knowledge. Better communication, including through mass media, can amplify the effects of these programmes by providing information to more people and offering the opportunity for people to share their own actions and innovations. Indonesia is a large and diverse country and may be the source of many future breakthroughs that help people throughout the country and beyond its borders to reduce the impact of climate change and craft more sustainable futures.

Community

Indonesians trust their communities and feel they act together to solve problems. Communication should focus on key community members to encourage action.

Reach influential community members: Communicating with key opinion-formers, for example RTs and RWs, community and traditional leaders, is likely to ensure that information is accepted and disseminated. In addition, they are themselves an important source of information about what's actually occurring at the community level. (See section 8 for more detailed ideas on how to communicate with this audience.)

Encourage discussion about these issues: Increasing engagement in these issues by facilitating discussion among communities is crucial in enabling response – helping people to make sense of information and to reach decisions. This is particularly true for issues such as preparing for extreme weather events, where it is important to work together, and improving agricultural productivity, where solutions often need to be tailored to the local area. Across Indonesia people who discussed food, water, energy and climate issues were more likely to feel informed about how to respond to the changes they noticed.

Share ideas and actions between communities: Indonesia is a huge country, with diverse landscapes and people. Sharing information about how different people are tackling different challenges can help people to learn from each other and encourage replication and reinvention.

Institutions

A key barrier to action for many is the lack of support from outside institutions. Media can be used to create a dialogue between these institutions and people.

Help civil society to meet people's needs: Indonesia has a large and active civil society that is already helping people take action to prepare for climate change. However, trust in NGOs and the extent to which they were perceived to be effective varied considerably across the country. There are opportunities to increase the effectiveness of NGO initiatives through communication based on a better understanding of community needs and motivations to act.

Hold government to account: There is scope for better dialogue between the general public and government on this issue. Some people felt disempowered by the actions of government, which they saw as unaccountable and serving the needs of business rather than the people. To create understanding and trust and encourage action, more transparency about government efforts is needed. Media can provide an opportunity for people to question government, business and civil society leaders at national, provincial and local levels, for instance through debate shows that feature members of the public.



BRINGING IMPACTS AND ACTION TOGETHER TO UNDERSTAND PEOPLE IN INDONESIA

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

People in Indonesia 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.

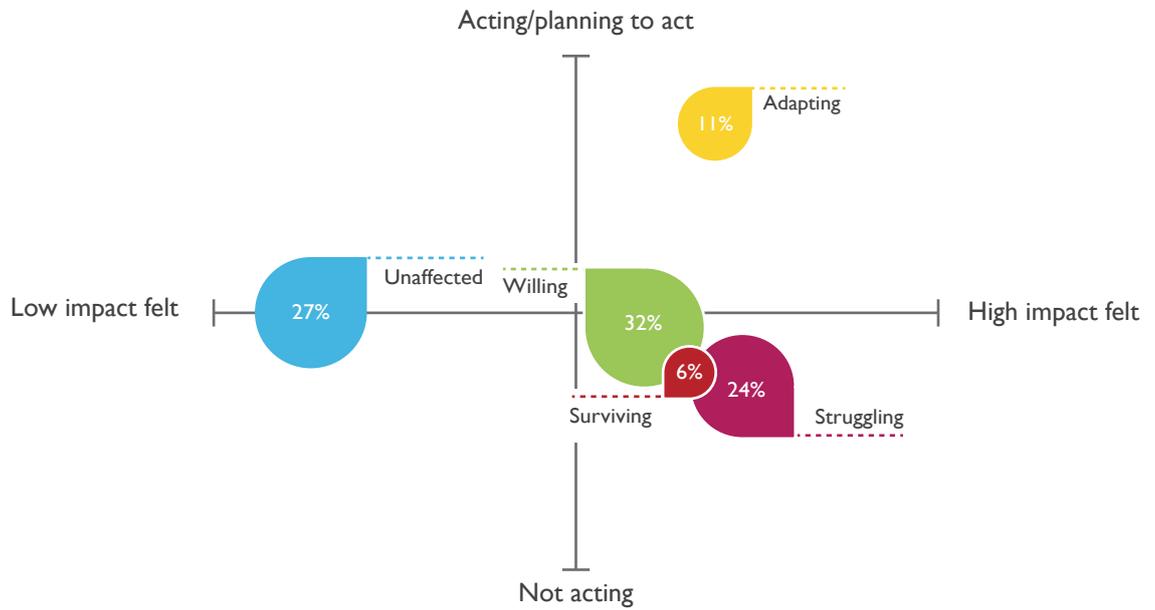
Section 4 highlighted how people in Indonesia respond differently to the changes they face for a variety of reasons including:

- The impact they feel
- Their access to information
- The degree to which they feel connected with their community

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

The size of each segment represents the extent to which people perceive impacts and are taking action to respond to them. In Indonesia, the largest groups are the willing, who want to make changes but haven't yet, and the unaffected, who are yet to see much change or feel much impact. There are also considerable populations of surviving and struggling in the country, who are feeling impact but for different reasons are not responding very much, as well as the adapting, who both feel impact and are taking action to respond to it.

Indonesia – many people are willing to take action



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

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



SEGMENTS BY DEMOGRAPHICS

Those feeling the most impact and taking the least action – the surviving – are more likely to be very poor. Large numbers of this group are farmers who experience the impact of changes in climate now.

The struggling, another group that is experiencing the impact of changes in climate and facing barriers to action, are relatively evenly distributed across urban and rural areas and demographic groups. Slightly higher concentrations of this group were found in Eastern Java and the Eastern Islands.

High concentrations of the adapting – a group that is feeling impact, but taking action to respond to it – are found in Western Java. A high number of people in this area have been exposed to more communication about climate and related issues – 38% compared with 32% nationally. People in this region gain information from a wide variety of sources, including health workers and NGOs.

The willing and the unaffected are two groups that are not experiencing as much impact now. These people tend to be richer and the willing are most likely to be located in larger cities, while there are high numbers of the unaffected in rural areas.

The willing and the unaffected are two groups that are not experiencing as much impact now. These people tend to be richer and the willing are most likely to be located in larger cities, while there are high numbers of the unaffected in rural areas.

The breakdown of Climate Asia segments

	Total	Surviving	Struggling	Adapting	Willing	Unaffected
Base	4985	228	894	429	1211	1044
%	%	%	%	%	%	%
Gender						
Male	50	47	50	51	55	47
Female	50	53	50	49	45	53
Economic category						
Very poor	21	34	23	24	22	20
Poor	31	27	32	33	28	31
Comfortable	44	38	44	42	46	48
Well-off	2	1	1	1	4	1
Occupation						
Farmers	26	32	27	32	26	24
Housewives	30	30	29	24	25	33
Petty traders/ business men	13	11	15	13	15	11
Students/teachers	9	6	7	11	11	11
Region						
Eastern Java	28	28	34	18	25	29
Western Java	32	33	29	47	40	20
Northern Sumatra	12	9	12	11	12	15
Southern Sumatra	14	15	9	8	5	28
Sulawesi	4	5	4	7	4	3
Kalimantan	3	2	1	2	6	1
Eastern Islands	7	8	11	7	8	4
Location						
Larger cities	5	1	3	4	11	2
Smaller cities	39	36	40	40	41	36
Rural areas	56	63	57	56	48	62

In Indonesia, 3,806 of the 4,985 people interviewed were included in the segment groups. For these respondents Climate Asia had complete data for the variables used in segmentation for these respondents.

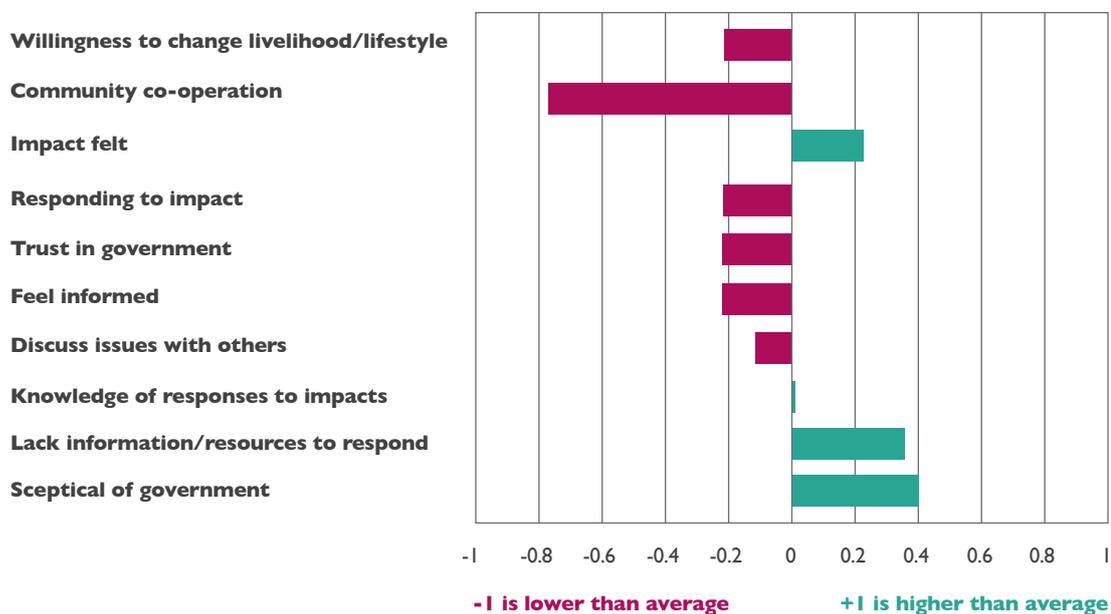
SURVIVING (6%)

“Finding it too hard to take action”

- 46% feel that it is not their responsibility to take action
- 76% cite having other priorities as a barrier to response
- Only 49% are aware of the term climate change
- 7% have made changes to their livelihoods

More than others, people in the surviving group feel high levels of impact as a result of changes in climate and resource availability. Although they are feeling the impacts, they are not willing to take action. They lack knowledge, money, information and interest in the issues. Those in the surviving segment have low levels of trust in government. For them, this issue is not a priority and is not talked about. They have very low levels of community co-operation and tend not to know others who are responding.

Surviving vs the rest of the population



Aims for communication

Encourage community participation: Although the surviving do not feel involved in their communities, encouraging participation in community activities could break their relative isolation and open up access to information and resources.

Show relevance: The surviving are not responding, because they do not understand the issue and feel they have other priorities right now. Connecting issues of climate change to their daily lives by providing practical information on how to take action will show the relevance of the issue and motivate them.

Use trusted intermediaries: One way to influence the surviving and encourage them to take action is by communicating with people in their communities who are influential, particularly people from the same tribe or place of origin.

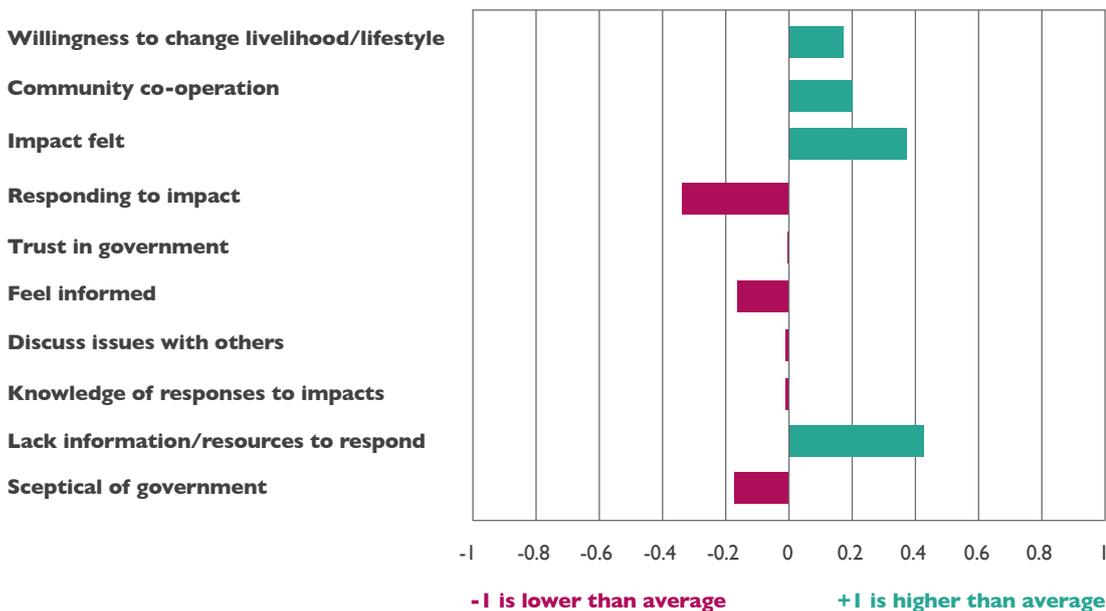
STRUGGLING (24%)

“Trying to take action but finding it very difficult”

- 96% say their communities work together to solve issues
- 99% say they value fitting in with others around them
- 89% feel they lack access to information
- 89% would take action if it made or saved them money

The struggling are feeling the most impact of any segment but are not taking much action. However, unlike the surviving, the struggling are willing to make changes. Lack of information and support prevents them from taking action. Despite strong community ties they do not discuss issues to do with food, water, energy and climate with their peers very much.

Struggling vs the rest of the population



Aims for communication

Promote discussion to help people make complex decisions: The struggling value fitting in with people around them and their communities. Encouraging discussion of potential options for response is likely to lead to communities making decisions about how to make the most of limited resources.

Take collective action: Communication could build upon the high level of community co-operation by encouraging collective action.

Highlight the financial benefits of adapting to changes: The struggling are more likely to act if there is a chance that action will make or save them money.

Build networks: People feel connected to the community. This ethos can be harnessed by facilitating dialogue between communities so that ideas can be shared and issues discussed.

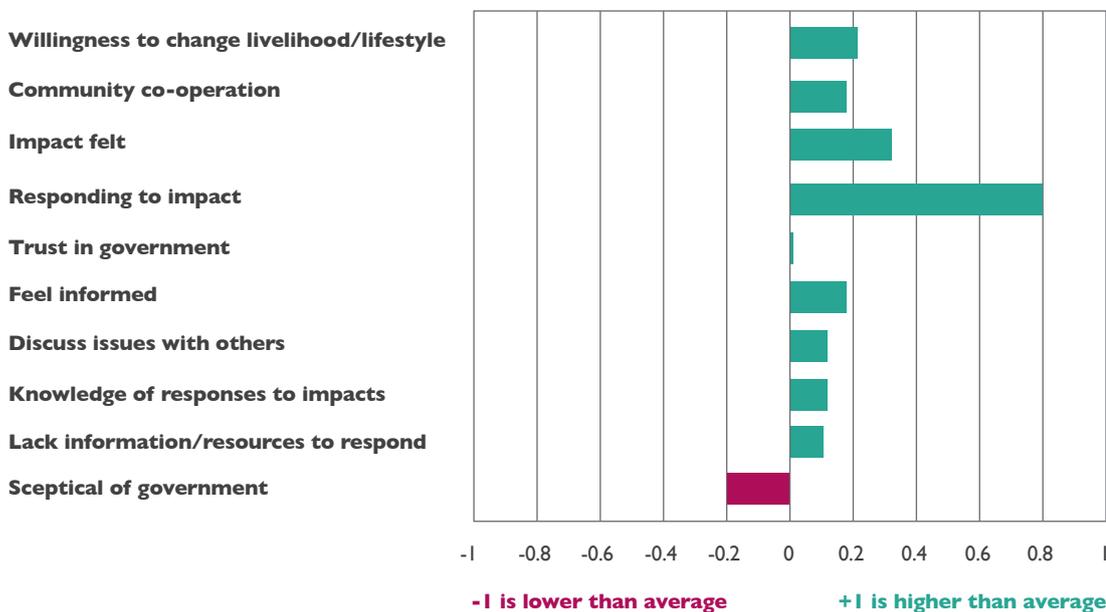
ADAPTING (11%)

“Acting and wanting to do more”

- 78% listen to weather forecasts and 61% have prepared a disaster plan
- 45% expect to be highly affected by climate change in the future
- 69% feel prepared for an extreme weather event
- 94% value being respected in their community

The adapting are taking action now to cope with the changes they notice and the impacts they perceive. They feel relatively well informed about how to respond to changes in climate and availability of resources, but they want to know more as the actions they're taking are not necessarily reducing the impact they feel. They are more likely than other groups to value and use technology. More than any other group they value making money but still want to be respected by and fit in with their peers.

Adapting vs the rest of the population



Aims for communication

Help to facilitate discussion: The adapting are more likely to be opinion-formers in their community, and people in Indonesia tend to trust information from sources close to them. Encourage them to lead community discussions and work together with people to solve problems.

Share their experiences to inspire others: The adapting are undertaking a wide range of actions to cope with change. It's likely that many innovations will be invented, trialled and tested by this group. Encouraging and enabling the adapting to share their experiences with others will give others the chance to learn from them and inspire them to act.

Provide more technical information: This group still feels ill equipped to deal with the challenges it faces. People want information on how to respond, particularly more sophisticated responses such as utilising new technology or techniques.

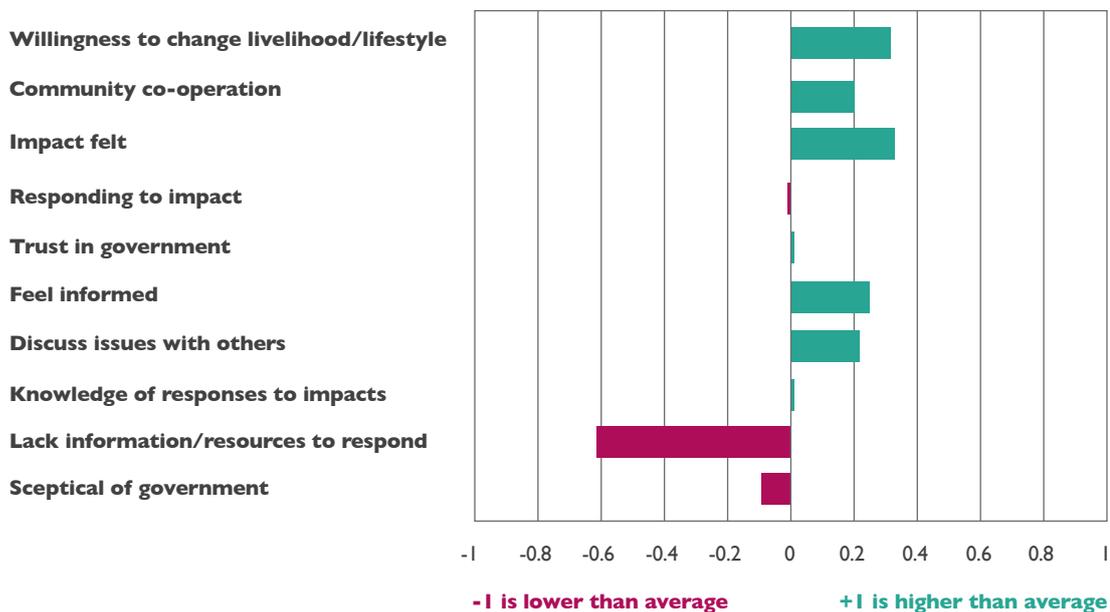
WILLING (32%)

“Worrying about tomorrow”

- 19% listen to weather forecasts and 10% have prepared a disaster plan
- 50% expect to experience high levels of impact in future
- 50% have made lifestyle changes
- 98% would respond to create a better future for their children
- 98% would take action to protect the natural environment

The willing are more affluent and educated than other segments. They are aware and feel that they understand climate change. More than any other segment, they expect to experience high levels of impact in future. Despite having relatively few barriers to action, they are not taking nearly as much action as the adapting.

Willing vs the rest of the population



Aims for communication

Turn willingness into action: Communication should focus on motivating the willing to plan and make changes for the future. Preparing for extreme weather events is a particular area to focus on. One way to do so is to appeal to this group's interest in fitting in – showing them what others are doing could motivate them to act.

Create awareness on current action to deal with future impacts: The willing are worried about the future and know they should be taking more action. But to get them to act they need both specific information about what they can do and an incentive to do so. One way would be to appeal to their desire to make more money or create a better future for their children.

Encourage them to be leaders within their peer group: This group is highly informed and aware of climate change but is not responding. Communication could encourage them to take the lead in preparing their community for extreme weather events.

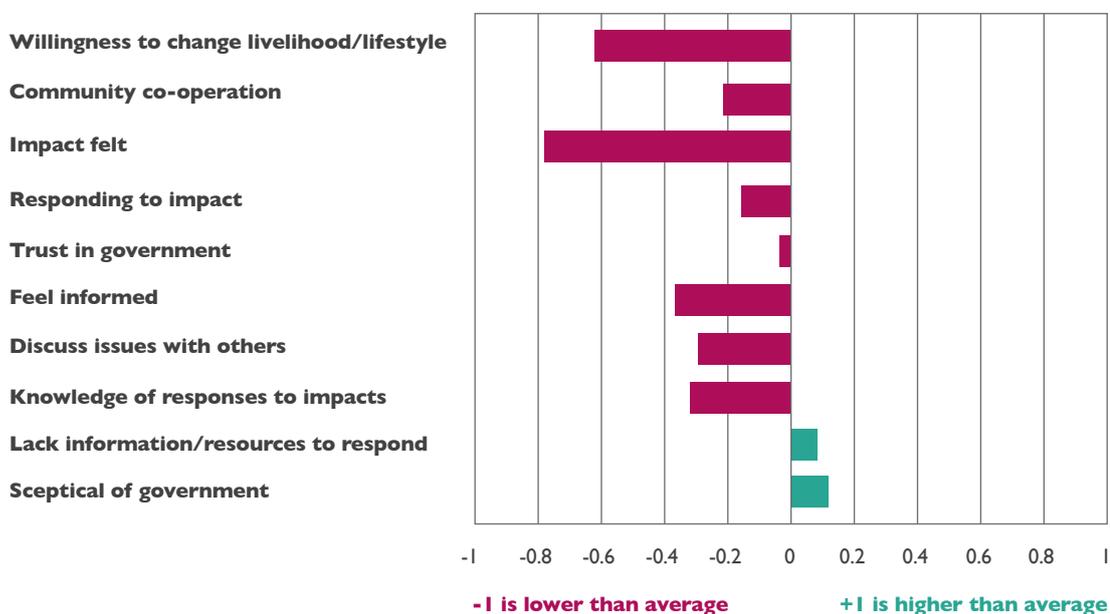
UNAFFECTED (27%)

“Believe there is no need to do anything”

- 38% feel a low level of impact at present
- 76% do not feel informed about how to respond to change
- 60% say following their religious and moral beliefs is their most important value
- 91% value continuing to learn new things

The unaffected do not feel as much impact as a result of changes in climate and availability of resources as other segments. Consequently, they do not see the need to make any changes to their lives. They are unlikely to discuss related issues with others and feel uninformed about how to respond to change. Nonetheless, they are carrying out very simple actions that will help them deal with changes in climate, such as storing water, using electricity more efficiently and making permanent adjustments to their houses to withstand extreme weather events. They are interested in receiving information on likely future impacts and causes of climate change.

Unaffected vs the rest of the population



Aims for communication

Build social responsibility and awareness of the problems others face: The unaffected value their communities, religion and tradition. It is important to show them how their actions or good works can benefit others, particularly vulnerable people who are experiencing the impact of changes in climate now. This will appeal to a sense of moral obligation or religious duty.

Creating awareness of existing actions: The unaffected are already carrying out actions that can help them to adapt to changes, but they do not recognise these as effective against changes in climate. Providing them with information on the causes of climate change, and how the actions they are taking are already beneficial, will show them they are on the right track and inspire them to do more.

Encourage a green lifestyle: Although they do not yet feel much impact, there is a risk that they may do in future. The unaffected are likely to be more receptive to taking action if it helps them to preserve their existing lifestyle and standard of living.

PRIORITY AUDIENCES

The segments discussed in section 7 have been used to help prioritise groups of people that can be targeted through media and face-to-face communication.

RESPECTED MEMBERS OF THE COMMUNITY/ OPINION-FORMERS



Syarifah Dalimunthe/BBC Media Action

“Do contact the RT chief [an official representative for about 40 households] and use the existing system. People approached the RT chief when they were about to introduce the LPG conversion programme. He [the RT chief] will hold a community gathering or if it's not possible he will go door to door and tell us the information.”

(Man, Pelalawan, Urban, Riau, age 25–34)

Distribution of respected members of the community across the five segments

	Surviving	Struggling	Adapting	Willing	Unaffected
All	6%	23%	11%	32%	27%
Respected member of the community	2%	14%	10%	49%	25%

Who are they?

Opinion-formers tend to be older (over 40), male and have higher levels of education than the general population. They are found in both urban and rural areas and across a range of professions, from business managers to agricultural labourers and teachers.

Why choose them?

Providing information to opinion-formers allows them to pass it on and interpret it for the community in ways that are culturally appropriate. A community is more likely to trust information from opinion-formers and would also feel comfortable asking them questions. Opinion-formers also play a key role in organising community discussions, and could encourage the community to share information and work together with neighbouring communities.

When it comes to adapting to changes in climate, opinion-formers want to help their communities. Over 80% would like to increase awareness in their community, 60% would like to share their skills and knowledge, and 97% would be willing to play a role in helping their community to deal with the impacts of the changing environment.

Information sources

As with the rest of the population, TV is the most used media by opinion-formers: 96% have watched it in the last day and it is used by 97% of opinion-formers to get information on these issues. Three-quarters of opinion-formers had used mobile phones in the last day, compared with just over half of the national population. Opinion-formers are twice as likely as the general population to use newspapers to get information on these issues (43% compared with 22%).

They already talk a lot more than others: over 80% speak to family, friends and people in the neighbourhood. They are also more likely to discuss these issues with religious leaders, local organisations and government.



Reaching this audience

Communication should aim to provide this audience with accurate and reliable information that can be interpreted and discussed in relation to specific local contexts. In addition, it should encourage this group to take action and lead their communities to prepare for extreme weather and adapt to climate change.

At the national level: Opinion-formers should be encouraged to utilise their influence and help to build knowledge and confidence within their communities. Newspapers are an effective way to showcase profiles of community leaders who are championing action within their community, and could be used to inspire those in similar positions to do the same, perhaps through a “community leadership” section. This is also a good medium to share ideas between communities and could be enhanced by a toolkit which is available both online and in physical form to support community leaders to hold discussions on available actions within their communities. Such action could also be supported by creating role models featuring community or religious leaders within dramas or reality television shows.

At the local level: It will be important to provide training to leaders so that they can support their communities to respond to changes in climate and availability of resources. Government, civil society and key academic and scientific institutions can provide tailored guidance and technical support. Training schemes should work through a range of different mechanisms, such as mosques, cultural organisations and government structures. Trainers should look to communicate back to the national level and use media partnerships to share examples of good practice across the country. A mentoring scheme that supports newly trained leaders by providing them with access (usually over a mobile phone) to trainers and other programme graduates is also recommended.

FARMERS AND FISHERMEN



Syarifah Dalimunthe/BBC Media Action

“Because of unpredictable weather, farmers harvest randomly. They now normally harvest rice once a year, but there was a time when farmers could harvest rice twice a year. The situation means farmers should be aware of the weather all the time and always prepare themselves with different crops. However, this requires spending a lot of money and not all of us are able to do it.”

(Man, Eastern Java, Rural, age 45+)



Distribution of farmers and fishermen across the five segments

	Surviving	Struggling	Adapting	Willing	Unaffected
All	6%	23%	11%	32%	27%
Farmers and fishermen	7%	24%	14%	31%	25%

Who are they?

The majority of farmers and fishermen are male (71%), although women also play a critical part in farming, from pre-harvest to post-harvest processing. Farmers are also older than the general population and a third are poor or very poor.

Why choose them?

As discussed in previous sections, farmers and fishermen are particularly vulnerable to changes in climate and many are already experiencing impact from such changes.

Although some farmers and fishermen are making changes to their livelihoods (19%), over a third think that they need to make further changes. The majority feel that a lack of information is a barrier to responding. Approximately a third of this group are in the struggling or surviving segments – they want to make changes but are finding it difficult to do so.

Information sources

Television (93%) and mobile phones (49%) are very popular among farmers and fishermen. They often talk to community leaders and local farming and fishing groups about different methods as well as the changes they are experiencing.

Reaching this audience

Farmers and fishermen want information to help them make more money. Many would also like to use techniques that don't damage the environment. Any communication should focus on the financial and social benefits of adapting their lives to climate change.

At the national level: A reality television show that captures the experiences of farming or fishing communities as they attempt different new ways to farm, as well as diversify their incomes, would resonate strongly. The programme could be themed around a challenge to increase community income while enhancing environmental sustainability, and be hosted by expert farmers, fishermen or entrepreneurs who have achieved their own success. The programme would provide technical information as well as inspire fishermen to learn from people like themselves. Given the nature of the reality format alongside the compelling and emotional subject of the farmer or fisherman's fate, it is likely to be of mass appeal to others across the country. The programme would feature inspiring individuals and families and show some of the difficult decisions these people have to make on a daily basis. This format could then be replicated using a farming community as a focus.

At the local level: Extension workers who operate in farming or fishing communities and other civil society groups could build on the reality television programme, hosting discussions within communities as well as providing training on alternative techniques and livelihoods, especially those featured in the show. A helpline for people in similar situations could be trialled as part of the show to link them with extension workers who can provide the necessary training. Local media could host similar discussions and encourage phone-ins for farmers or fishermen in similar situations following each episode.

In addition, there are opportunities to use media to increase accountability and to address other concerns that rural people have, for example about rapid land-use changes and deforestation. A debate show that gave regular people the opportunity to put questions to government officials, businesses and civil society organisations about issues that concern them in their area would be one way to do this. While offering a space to ask questions, the show could also replicate aspects of other popular television shows, such as Jakarta Lawyers Club, which feature fierce debate and are also highly entertaining.



PEOPLE LIVING IN LARGER CITIES



Syarifah Dalimunthe/BBC Media Action

“People here like to have more trees, they know trees will make this city healthier. They are longing for safe clean rivers and water channels. Putting it in the spotlight is the problem, how can you create engaging activities and inspire people?”

(Community assessment, North Jakarta)

Distribution of people in larger cities across the five segments

	Surviving	Struggling	Adapting	Willing	Unaffected
All	6%	23%	11%	32%	27%
Larger cities	2%	13%	9%	67%	10%

Who are they?

Over half of people living in larger cities are economically comfortable (57%). Although the majority of people have lived in the area for over 15 years (69%), there are still relatively high levels of migration, with 16% of people surveyed in larger cities having moved there within the last five years.

Why choose them?

People in larger cities expect to experience very high future impacts from changes in climate. A very high percentage of people in these cities are in the willing segment, who are very worried about the future, but as yet have taken relatively little action to prepare for the changes they expect. Larger cities have already benefited from considerable communication on climate change, and people are relatively aware of the issue if not yet sure about what they can do to prepare and respond. There is scope to encourage further action to change lifestyles and prepare for extreme weather events.

Targeting large cities may have additional positive effects as people in rural areas tend to mimic and aspire to the behaviours and lifestyles of those in larger urban areas.

Information sources

Most residents of larger cities use television (95%) to get information on climate change, although more of them also use newspapers (35%) and mobile phones (18%) than in other areas. They also speak to family and friends more to get information and tend to discuss the issues more often than in other areas.

Reaching this audience

Communication with this audience should seek to encourage more environmentally-friendly lifestyles, help people to prepare for extreme weather events and build on their affinity for fellow Indonesians.



At the national level: A “green urban hero” television show where a group of contestants young and old travel the country taking on a different challenge each week, such as making homes more environmentally friendly or preparing for floods, would appeal to people’s desire for entertainment and build awareness of how people can respond to the challenges they and their country face. The sense of competition would be strong too, with contestants from all of Indonesia’s key cities taking part and a single winner decided by a panel of judges. Local governments, community leaders, businesses and the media could all become involved as partners of the show.

At the local level: Social media can be used to extend the influence of the television show and create local action, for example by providing a forum for people to identify further green challenges, share examples of the actions they’ve taken, encourage people to make commitments and track people’s progress in meeting those commitments by sharing results online with peers. The most innovative or compelling community-generated responses would be featured on the television show.

WHAT NEXT?

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

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

SHARING OUR FINDINGS AND TOOLS

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

BUILDING ON OUR DATA

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

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



APPENDIX: CLIMATE ASIA'S METHODOLOGY

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

QUALITATIVE RESEARCH

In Indonesia, qualitative research included 22 in-depth interviews with experts and opinion-formers, 16 audience focus groups and seven community assessments across Indonesia.

The in-depth interviews were conducted with key experts and opinion-formers from national and local government, the media, the private sector, civil society, science and academia. Focus group participants were members of the public from three provinces – Jakarta, Riau and Eastern Java – and included people from rural areas, smaller cities with under one million people and larger cities. In each location, focus group participants were selected according to age, gender, occupation and social class to capture a diversity of views within the population.

The locations for the seven community assessments were chosen from seven different provinces. They were Jakarta, Central Java, West Java, Jambi, South East Sulawesi, West Nusa Tenggara and West Kalimantan. Vulnerable regions and populations within these provinces were chosen with help from local experts and NGOs.

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

QUANTITATIVE RESEARCH

In Indonesia, the project surveyed 4,985 people following a stratified random sampling approach. First, the country's population was separated by province. In each province, regencies were randomly chosen. Within each regency a number of sub-districts were chosen from urban and rural areas following the probability proportionate to size (PPS) method. A total of 107 sub-districts were chosen across Indonesia. Within each sub-district, up to 50 households were

randomly selected following the right-hand rule of field movement and five households were skipped after every successful interview.

The data was then analysed using many different variables to examine patterns in the data. One variable used was the type of area. This variable involved splitting up areas into three groups: rural, smaller cities of under one million and larger cities. Based on data from Statistics Indonesia,¹¹ cities of over one million were Jakarta, Surabaya and Bandung.

Provinces included in the Climate Asia survey



Climate Asia used the terms Eastern Java, Western Java, Northern Sumatra, Southern Sumatra, Sulawesi, Kalimantan and Eastern Islands to describe areas across provinces. The list below shows which areas these terms cover.

¹¹BPS: Statistics Indonesia (January 2012) Population of Indonesia by Province [online] Available from:http://www.bps.go.id/eng/menutab.php?kat=1&tabel=1&id_subyek=12 [Accessed 21 July 2012]



Composition of Climate Asia research areas

Climate Asia research areas	Provinces
Northern Sumatra	Provinces
	North Sumatra
	West Sumatra
	Aceh
Southern Sumatra	Riau
	South Sumatra
	Lampung
Western Java	Jakarta
	Central Java*
	West Java
	Banten
Eastern Java	Central Java*
	East Java
Eastern Islands	Bali
	East Nusa Tenggara
	West Nusa Tenggara
Kalimantan	West Kalimantan
Sulawesi	South Sulawesi

*Primary sampling units in the province of Central Java were split between the Climate Asia research areas of Western Java and Eastern Java

The quantitative research was carried out during the dry season. If it had been carried out at a different time of the year it is possible that this may have produced slightly different results, for instance in perceptions of change in rainfall.



LEGAL NOTICE

Purpose and usage

The purpose of this Climate Asia report is to enhance public access to and use of research and data compiled by BBC Media Action to interested parties on a not-for-profit basis. Readers are encouraged to use and share the report with third parties and permission to use, reproduce and republish it or use it for teaching purposes is granted, provided that the report is not distributed for profit or commercial advantage, and BBC Media Action is attributed as the source, as set out below.

While users may translate the report in whole or in part, any translations of the report must include the following text: “BBC Media Action is not liable or responsible for any errors, omissions or ambiguities in the translated version of the Climate Asia report.”

Any commercial use will require the prior written permission of BBC Media Action. Unless otherwise stated the report is copyrighted material of BBC Media Action. BBC Media Action reserves the right at any time and from time to time to modify, discontinue, temporarily or permanently, the online PDF form of this report and any means of accessing or utilising the report at its sole discretion. BBC Media Action is not responsible for the accuracy of the translation of the report.

Attribution and no endorsement

When using the findings in this report, users agree to provide attribution to BBC Media Action. However, users may not publicly represent or imply that BBC Media Action is participating in or has sponsored, approved or endorsed the manner or purpose of the use or reproduction of the report.

No association

Users may not use any trademark, or logo of BBC Media Action or the BBC without BBC Media Action’s prior written consent and without entering a BBC trademark licence.



No warranties

This report's findings are believed to be correct at the time of publication. BBC Media Action cannot guarantee the accuracy or completeness of the report. BBC Media Action, and any of its officers, trustees, agents, employees and sub-contractors, are not responsible for any errors or omissions or for results obtained from the use of this information and disclaims any representations or warranties of any kind, express or implied, including, without limitation, any warranty of fitness for a particular purpose or non-infringement, to the fullest extent permissible under any applicable laws.

Limitation of liability

Each person using this report assumes full responsibility for its use and understands and agrees that BBC Media Action is not responsible or liable for any claim, loss or damage arising from the use of the report, including, without limitation, any direct, indirect, incidental, special or consequential damages.

If you have questions about this BBC Media Action Climate Asia report, or would like to request permission for reuse of the data or any information on the Climate Asia site, please send an email to climate.asia@bbc.co.uk.

ACKNOWLEDGEMENTS

BBC Media Action would like to thank everyone who agreed to be interviewed and take part in the Climate Asia research project in Indonesia. All Climate Asia data, including this report, a climate communication guide, information on our research methods and the tools we used to conduct our research are available on www.bbc.co.uk/climateasia.

BBC Media Action is the BBC's international development organisation. The content of this report is the responsibility of BBC Media Action. Any views expressed in this paper should not be taken to represent those of the BBC itself, or of any donors supporting BBC Media Action's work.

This report is part of the Climate Asia project funded by the UK Department for International Development (DFID).

This report was compiled and written by Tan Copsey, Syarifah Dalimunthe, Leonie Hoijsink and Naomi Stoll

Series editors: Sonia Whitehead and Damian Wilson

Production editor: Diana Shaw

Design by LONO Creative (www.lonocreative.com)

Front cover photo by Chris Stowers, Panos

The authors thank the following people for their contribution to the research and writing of this report: Amanda Katili and Agus Supangat of the Indonesia National Council of Climate Change (DNPI); Deddy Ratih of the Wahana Lingkungan Hidup (WALHI); Stuart Bruce at the UK Department for International Development (DFID); Rheinhardt Sirait, Arifin Saleh and staff members of Indigenous Peoples' Alliance of the Archipelago (AMAN); Valentinus Heri and staff members of the Riak Bumi Foundation; Riza Damanik, Abdul Halim and staff members of The People's Coalition for Fisheries Justice (KIARA); Rahmah Saraswati of BauBau Regency Planning Association; Helen Rea and Ratnayu Sitaresmi of Climate Asia Indonesia; Faby Tumewa of the Institute for Essential Service Reform (IESR); and Titik Sasanti of the Gita Pertiwi Foundation.

BBC Media Action is registered in England and Wales under Charity Commission number 1076235 and Company number 3521587.

Registered office: Broadcasting House, Portland Place, London W1A 1AA, United Kingdom

Tel: +44 (0) 20 8008 0001

Fax: +44 (0) 20 8008 5970

Email: media.action@bbc.co.uk

Climate Asia data portal: www.bbc.co.uk/climateasia

BBC Media Action website: www.bbcmediaaction.org

©BBC Media Action 2013

