



Research Report

NIGERIA

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BBC WST

Nigeria Talks Climate

The public understanding of
climate change

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CONTENTS

- About *Africa Talks Climate*
- Executive summary
- Recommendations
- Acronyms used in this report
- 1 Background** 7
 - Climate change in Africa
 - Climate change in Nigeria
- 2 Research methodology** 9
 - Research objectives
 - Focus-group discussions
 - In-depth interviews
- 3 Citizen focus-group discussion findings** 10
 - What changes have Nigerian citizens experienced in their climate and environment over time?**
 - What do Nigerians know and understand about global climate change?**
 - Terminology
 - Frames of reference
 - How do Nigerians explain and respond to changes they are experiencing?**
 - Coastal flooding (Lagos)
 - Desertification and erosion (Jigawa)
 - Gully erosion (Abia)
 - Gas flaring and oil contamination (Rivers)
- 4 Interviews with opinion leaders** 19
 - What do Nigerian opinion leaders know and understand about climate change and what are their views on Nigeria’s response to climate change?**
 - An elite topic
 - Understanding climate change
 - Perceived impacts of climate change
 - How does the average Nigerian understand climate change?
 - Translation and terminology
 - What response is required?
- 5 Conclusion** 24
- References** 25
- Appendix: Methodology overview** 26

PHOTOGRAPHY

Lagos, George Osodi, 2004 (pages 11, 15); Parched ground during Namibia drought BBC, 2000 (pages 11, 16); Gully erosion, Imo State, Nigeria BBC WST, 2008 (pages 11, 17); Niger delta, George Osodi, (pages 11, 17).

About Africa Talks Climate

Climate change is one of the most important issues on the global political and economic agenda, yet it has taken at least 20 years to become an international priority. In many ways, this is because climate change was originally communicated as a scientific problem. Complex, confusing, and at times contested scientific information resulted in a slow public and political response to the climate crisis. The climate change debate has also taken place in industrialised nations, among a public largely safe from its worst effects. For many, climate change is an abstract concept.

In Africa, climate change is far from abstract - it is already determining the course of people's lives. Extreme weather events and greater unpredictability in weather patterns are having serious consequences for people who rely on land, lakes and seas to feed themselves and to earn a living. As a result, Africa's engagement with the issue is evolving rapidly, presenting an opportunity to leapfrog the slow evolution of western public opinion and political action.

African citizens' response to climate change is hampered by a fundamental shortage of relevant, useful information for African audiences. The intensive media coverage and public awareness campaigns prevalent in much of the industrialised world have been largely absent in Africa, particularly outside major urban centres. Too often, African voices are absent from the international climate debate.

Africa's response to climate change will be dictated by how well it is understood by its people. *Africa Talks Climate* is founded on the belief that those worst affected by the issue have the right to be better informed, in order to understand and respond effectively to their changing climate. Providing people with the information they need will therefore be crucial. Unfortunately, little is known about how climate change is currently perceived and understood by Africans; *Africa Talks Climate* seeks to address this. It is the most extensive research ever conducted on the public understanding of climate change in Africa. The research teams held discussions with more than 1,000 citizens from the Democratic Republic of Congo, Ethiopia, Ghana, Kenya, Nigeria, Senegal, South Africa, Sudan, Tanzania and Ugandaⁱ. They also carried out interviews with nearly

ⁱ Country selection was informed by: consultation with organisations working across Africa on climate change, the presence of a British Council or BBC World Service Trust office, and local research capacity. However, consideration was also given to the country's climate, demographics, geographical situation within Africa and a number of economic, media, and governance indicators.

200 opinion leaders, including policymakers, religious and community leaders, business people, and media and NGO representatives.

The overall objective of *Africa Talks Climate* is to assess public understanding of climate change and identify how communication and media could best support Africans' response to climate change. The research asked four main questions:

1. What changes have African citizens experienced in their climate and environment over time?
2. How do African citizens explain and respond to these changes?
3. What do African citizens know and understand about global climate change?
4. What do African opinion leaders know and understand about climate change and what are their views on their country's responses to climate change?

Only when governments, NGOs and the media are comfortable talking about climate change can they communicate it effectively to citizens. Only when citizens are clear about climate change and its implications for their lives can they respond effectively to it. Equipped with the knowledge that weather patterns are changing and that extreme weather events are more likely to occur, people will be able to debate the issues with their families, communities and governments, and discuss the risks and possible courses of action. This will enable them to prepare more effectively for the future.

Africa Talks Climate is the first step in developing long-term strategies for sharing information about climate change. It aims to support all those charged with communicating on climate change, whether they be international organisations, governments, the media, NGOs or community leaders.

Providing people with relevant information so that they can effectively address the issues that affect them most is at the heart of the work of the BBC World Service Trust. This is why, with its network of researchers across Africa, the Trust is uniquely positioned to support Africa's response to climate change by sharing its expertise in understanding and communicating with audiences.

For further information including a policy briefing and executive summary report from *Africa Talks Climate*, visit www.africatalksclimate.com.

Executive summary

From May to September 2008, The BBC World Service Trust's Research and Learning Group, on behalf of the British Council, conducted research in Nigeria to gauge public understanding of climate change. The research consisted of 24 focus-group discussions with Nigerian citizens, as well as 31 in-depth interviews with opinion leaders from government, religious institutions, the private sector, the media and civil society. The overall objective was to find out what people think about climate change, and how to tailor communication and media strategies to support Nigeria's response to climate change.

Key findings

- Most Nigeriansⁱ do not understand the science of climate change. They have, however, noticed changes in the weather and seasons. They tell of unusual changes in rainfall patterns, increases in temperature and the worsening of existing environmental problems. Most people do not connect these with global climate change.
- People in Nigeria are keenly aware of environmental degradation and depletion of natural resources. However, they make little distinction between this degradation and climate change.
- There is low awareness of the concepts of climate change and global warming among the Nigerian public. Many understand climate change to mean changes in the weather or seasons. Opinion leaders agree the general public has very low awareness of climate change concepts and terminology.
- There is a strong tendency among Nigerians to hold themselves individually and collectively responsible for local changes in the environment and the weather. There is little awareness that climatic problems – now or in the future – are likely to have causes that extend beyond Nigeria.
- Nigerians draw on existing knowledge and beliefs to explain the effects of climate change. For example, many think that deforestation in their local area reduces local rainfall, and some incorrectly believe that smoke from cars, bush fires and factories damages the ozone layer, making it hotter.
- There is a strong connection between faith and environmental stewardship in Nigeria; many people see changes in the weather as the will of God, and religious leaders emphasise humans' duty of care to God's creation
- Understanding of the global causes of climate change is confined to a small group of opinion leaders, with national government and NGO representatives holding the most knowledge, followed by local government officials, then the heads of local associations and religious or traditional leaders. While most opinion leaders can identify the impacts of climate change, fewer can accurately explain climate change processes.
- Climate change terminology is poorly understood and does not have standard translations in Igbo, Yoruba or Hausa. The language of climate change is not accessible to most Nigerians, and this prevents people from having a voice on the issue. Opinion leaders agree that the inaccessibility of climate change terminology is a barrier to public engagement.
- The media and schools are people's main sources of information

ⁱ A note about language: while this report refers to the views of "Nigerians", it only represents those Nigerians who participated in the research. Research participants have sometimes been referred to as "Nigerians" for ease of reading.

on climate change. Yet the media say they lack sufficient knowledge to inform audiences effectively.

- Most Nigerians criticise the government for a lack of visible action on climate change and the environment. Those government representatives interviewed were focused primarily on mitigation strategies such as regulating carbon dioxide emissions, as opposed to adaptation programmes.
- Local leaders are well positioned to take action on climate change adaptation and education in their communities, because of their proximity to local populations, their existing role providing grassroots support and a commitment to environmental issues. However, they tend to be some of the least informed among opinion leaders about climate change and its effects.

RECOMMENDATIONS

The information and communication needs of Nigerian citizens need to be at the heart of any national response to climate change. The ability of Nigerian people to respond effectively to climate change will be determined by the quality of the information available to them and how easily they can access it. Increased public understanding of climate change will enable citizens and communities to discuss the issue, adapt to the effects of climate change and make informed long-term choices about their future.

Opinion leaders need access to information on climate change. Local leaders from government and the community, including religious leaders, have unrivalled access to communities, and are in a position to communicate and inspire citizens to respond to climate change and implement local adaptation strategies. A faith-based approach could be particularly effective. Religious leaders are well placed to provide information on climate change within their communities, and the strategy would build on the existing relationship between faith and environmental stewardship.

Accessible and relevant public debate will also be key to increasing understanding of climate change. It will provide a forum for sharing experiences, bridge the gap between science and society, and enable people to exert political pressure, both internationally and on their own governments.

The media clearly have a critical role to play in responding to climate change, and in supporting others to communicate about climate change, including governments, national and international NGOs, scientists, religious leaders and community leaders. Three specific recommendations for all those charged with communicating on climate change follow:

Provide information

- Raise awareness of global climate change and the ways in which it relates to people's lives and livelihoods.
- Confirm people's observations that weather patterns are changing and that extreme weather events are likely to occur more often.
- Provide people with access to correct information about the causes of climate change.
- Build simple, correct mental models of how climate change works. In doing so, be mindful of people's existing frames of reference (eg in relation to trees, God, ozone depletion, smoke and heat) which can function as barriers or facilitators to effective climate-change communication.
- Invest in efforts to develop and test appropriate climate change terminology in local languages.

- Clarify how climate change does and does not relate to environmental degradation.
- Provide people and communities with access to information on practical ways to adapt to climate change and prepare for extreme weather events.
- Pay particular attention to the needs of information-poor rural communities. For them, climate change represents a tipping point. They need targeted information and resources that will enable them to cope with and adapt to its impacts.
- Communicate in ways that are locally relevant, using a variety of news and non-news platforms.
- Increase opinion leaders' understanding of global climate change so that they can communicate confidently on the issue and incorporate it into their decision-making.
- Increase opinion leaders' understanding of adaptation and its importance for Nigeria's response to climate change. Religious leaders are in a particularly strong position to help people to understand climate change, and to encourage planning and adaptation in relation to its impacts.
- Provide local leaders with access to information on climate change, bearing in mind that local adaptation strategies need to take into account local leaders' understanding of the issue.
- Provide information about climate change to the Nigerian public through the media and schools.
- Educate children about the causes and effects of climate change in school, as information can filter up to their parents who may not have the same access to information.

Facilitate policy and public debate

- Build the capacity of news and non-news media to support more effective public debate on climate change in Nigeria.
- Provide "public spaces", for example through TV talk shows, radio call-ins and other interactive media platforms, to exchange ideas and information, foster understanding and plan for action. Such spaces could also facilitate better cross-sector communication between government, NGOs, the private sector, the media, and local leaders, as well as with international actors.
- Draw on a range of Nigerian voices and experiences in discussions and debates: engage citizens, local interest groups, civil society actors, religious leaders, and policymakers from all levels of government.
- Build a sense of immediacy and encourage the sharing of current examples of adaptation to climate change. Harness Nigerians' understanding and experience of their changing weather and environment to create a relevant discourse that promotes citizen engagement in Nigeria's response to climate change.

Encourage accountability

- Develop mechanisms which enable Nigerian citizens and their representatives to move climate change on to the political agenda; and to exert pressure on their own governments with respect to climate change policies, adaptation funding, technology transfer, emissions reduction and other response strategies. Such mechanisms will also help Nigerian citizens and their representatives to communicate their own perspectives and demands to the rest of the world.

I Background

Climate change in Africa

As climate change threatens Africans' health and homes, and the natural resources upon which many depend to survive, Africa's population faces an urgent crisis.¹ It is predicted that Africa will be one of the regions worst affected by climate change.¹ For people struggling with the challenges posed by climate variability, environmental degradation and poverty, climate change represents a tipping point.

Rainfall patterns across Africa have already changed markedly, and yields from rain-fed agriculture could halve in the next decade.² A decline in yields is predicted to lead to a greater risk of malnutrition for people who rely on the land to eat, and increased food insecurity for those who rely on buying food in the marketplace.³ Indeed, there have been recent food crises in Kenya, Uganda, Somalia and Ethiopia.⁴ Imports may also be affected, and food aid is threatened by climate change in the midwest of the United States.

Climate change is likely to alter the transmission patterns of diseases such as malaria.⁵ Increased incidences of cholera and meningitis are also thought to be linked to variations in climate. Health threats such as diarrhoea, asthma and stroke affect more people when temperatures rise.⁶

The stark impacts of changing rainfall patterns on Africa are manifest. A more powerful hydrological cycle will bring other challenges, including flooding. The Intergovernmental Panel on Climate Change (IPCC) says that "by the 2080s, many millions more people than today are projected to experience floods every year due to

ⁱ Of the 20 countries in the world most vulnerable to climate change (in socio-economic terms), 15 are African. See *The Anatomy of a Silent Crisis*, ref 1.

sea-level rise... [largely] in the densely populated and low-lying mega-deltas of Asia and Africa... small islands are especially vulnerable".⁷

The links between environmental degradation, political tension and conflict have been highlighted for many years.⁸ Environmental degradation reduces the supply of food and fresh water, and resources such as land. Climate change is predicted to exacerbate conflict in Africa, and in some cases is already doing so.⁹

Climate change in Nigeria

Climate change presents an additional stress for Nigerians already struggling with the challenges posed by climate variability, ongoing environmental degradation and widespread poverty.

Nigeria lies within a tropical belt with the dry Sahel region in the north. The land rises gradually from southern coastal plains to the northern savannas while the eastern highlands reach altitudes of up to 1,500 metres.¹⁰ The Niger Delta, a stretch of swampland, separates the highly populated eastern and western coastal plains.¹¹

Different climate cycles and Nigeria's great size produce a temperature range from 13C to 41C across the country. The approximate mean temperature is 27C.¹² Rainfall is highly variable; the coastal areas experience extensive rainfall, with a rainy season that can last anywhere between 9 and 12 months. The very dry Sahelian regions of the north-east and north-west have a much shorter rainy season of 3 to 4 months, bringing significantly less rainfall.

The interrelation of climate change with other factors is complex and knowledge of it is still evolving. However, rainfall predictions for

Perceptions and coverage of climate change: what do we already know?

To communicate effectively about climate change, it is critical to know how people understand it. While this review is not exhaustive, it is clear that there is a dearth of research on perceptions of climate change in Africa, and it will be essential to address this problem if communication is to improve. Opinion polls to date have largely focused on Nigeria, Kenya and South Africa. They reveal that many people are unfamiliar with "climate change", "global warming" and related terms.^{13, 14} This makes it difficult to interpret further opinion-poll results about climate change in Africa; most polls suggest that Africans view climate change less seriously than do non-Africans,^{15, 16} which may point to a lack of information concerning the relevance and implications for Africa, but could also reflect a lack of understanding of the questions asked.

Some small-scale perception studies hint at the impact climate change is having on African lives.^{17, 18, 19} Lack of information regarding climate change is seen by some as a critical barrier in dealing with its effects.^{20, 21} Indeed, research in the United States has shown that a limited understanding of climate change can restrict people's ability to distinguish between effective and ineffective response strategies.²²

A lack of public understanding of climate change is not exclusive to Africa.¹ A review of research on the perceptions of climate

ⁱ In the absence of extensive research on the public understanding of climate change in Africa, *Africa Talks Climate* also draws on existing research from outside Africa, whilst acknowledging that in many cases this research was conducted in a Western context, and therefore must be applied carefully to the African context.

change in the UK reveals public understanding as "patchy, but generally poor".²³ Similarly, research in the United States has shown that people often have basic misconceptions about climate change.^{24, 25} Although high levels of media coverage of climate change in the United States and the United Kingdom have not always translated into high levels of concern among the public, some research suggests this is because climate change is seen as a remote and non-urgent issue.^{26, 27} This is less likely to be the case in Africa, where most people are already experiencing the effects in their daily lives.

Although the media are seen to have a critical role to play in raising awareness and information provision on climate change, and disaster preparedness,²⁸ little research exists on the media coverage of climate change in African countries. However, a recent publication suggests that journalists covering climate change in many developing countries lack training, support from editors and access to information or people to interview.²⁹ It concludes that while news coverage of climate change in non-industrialised countries is increasing, the quantity and quality of reporting does not match the scale of the problem. It goes on to point out that a reliance on reports from Western news agencies, rather than locally relevant news, as well as sparse coverage of adaptation measures, means that audiences, particularly the world's poor, are being underserved. Finally, it hints at the potentially important role that non-news media (such as talk shows, dramas and public service announcements) can play in providing information to audiences on climate change.

Acronyms used in this report

BBC WST	BBC World Service Trust	FME	Federal Ministry of Environment
CDM	Clean Development Mechanism	NGO	Non-governmental organisation
CFC	Chlorofluorocarbon	R&L	BBC World Service Trust Research and Learning Group
GDP	Gross Domestic Product	UNFCCC	United Nations Framework Convention on Climate Change
IPCC	Intergovernmental Panel on Climate Change		



Nigeria point towards the dry period getting drier, more rainfall occurring during the wet period, and an overall shift in seasons. With torrential rains during the wet season becoming heavier and more destructive, floods will become more frequent in the south, thus intensifying the risk of landslides and erosion. It is expected that southern Nigeria, which is already hot and rainy, will experience continued increases in temperatures and precipitation.³⁰

Climate change is also predicted to exacerbate desertification, already a problem in the Sahel and Sudan ecological zones, and to cause a rise in sea level that will affect coastal areas as well as the low-lying islands within the Niger Delta.³¹ Coastal areas are home to 22.6% of Nigeria's population, and two major cities – Lagos and Port Harcourt – are at sea level and thus vulnerable to erosion and extreme storms.³² Energy supply and industrial infrastructure are also vulnerable to disruption from extreme weather events.³³

Water resources in Nigeria will be disturbed by the altered climate, especially in the arid and semi-arid regions. Higher temperatures will cause increased evaporation from surface water bodies. Domestic, agricultural and industrial use of water will be affected. The energy sector will also experience indirect effects of climate change as energy production mainly uses water through hydroelectric and thermoelectric processes. In particular, reduced river flow will affect electricity generation from hydroelectric power stations.³⁴

Rural-to-urban migration is expected to intensify, linked to economic development and industrialisation and aggravated by agricultural failures and a loss of arable land due to desertification. Some 3,500 sq km of land turn into desert each year, uprooting farmers and herdsman and causing internal migration towards coastal areas. This will lead to further rises in industrial and domestic waste and urban air and water pollution in general.

The impacts of climate change will be felt across multiple sectors. The government has identified four key sectors that need support as the country faces the adverse consequences of a rapidly changing climate: water resources, agriculture and fisheries, health and biodiversity.³⁵

The Nigerian economy depends heavily on agriculture – the main livelihood for almost 70% of Nigerians. Aridity will spread across already dry rangelands, meaning less pastureland for livestock. Rising temperatures will cause a surge in crop diseases and increase the numbers of crop eating insects. Periodic drought in the north will cause major disruptions in the agricultural calendar, shortening or lengthening crop cycles and affecting harvests, while agricultural areas in the coastal zones are predicted to submerge due to the rising sea level. Lower agricultural productivity and crop failure will intensify food insecurity, augment unemployment, give rise to mass migration and cause an overall increase in poverty.³⁶ Food security will be further threatened as fisheries are affected by higher temperatures. Fish species are likely to migrate as a result of increased salinity and combined with the loss of wetlands, this could lead to a collapse of fishing activities.

Higher temperatures are likely to result in health problems such as allergies, strokes, skin rashes, and dehydration. Higher death rates are also likely, especially among the elderly and young children, as a result of increased temperatures. A surge in infectious diseases such as malaria and cholera is expected as conditions become more favourable for parasites.³⁷

Nigeria presented its First National Communication in 2004,³⁸ listing the national producers of greenhouse gases, gauging the country's vulnerability to climate change, and suggesting policy approaches to adaptation and mitigation. Within Nigeria, the Federal Ministry of the Environment (FME) is the administrative body that enforces environmental laws and the Special Climate Unit has responded to climate change mostly with adaptation measures. Its policies include tree-planting activities, various short-term 'greening' projects and improving public health infrastructure. The federal government has also launched infrastructure programmes seeking to stop gully erosion and prevent further coastal flooding. There is also a government programme to combat desertification in northern Nigeria.³⁹

2 Research methodology

Research objectives

Nigeria Talks Climate was the pilot study for the *Africa Talks Climate* research project.¹ The research used to improve and refine the research methodology for the subsequent nine country studies.

The overall objective of *Nigeria Talks Climate* is to assess the public understanding of climate change and identify how communication and media can best support Nigeria's response to climate change.

The research focuses on four key questions:

1. What changes have Nigerian citizens experienced in their climate and environment over time?
2. How do they explain and respond to these changes?
3. What do they know and understand about global climate change?
4. What do Nigerian opinion leaders know and understand about climate change and what are their views on Nigeria's response to climate change?

The research consisted of 24 focus-group discussions with citizens and 31 in-depth interviews with opinion leaders across four states in Nigeria between August and September 2008ⁱ (see Appendix). The locations were: Lagos (Epe, Lekki and Ikeja); Jigawa (Hedeijia, Dutse and Digginsa); Abia (Aba, Umuahia); and Rivers (Obigbo).ⁱⁱⁱ Within each location, focus groups explored one key environmental issue which has been linked to climate change, or may be exacerbated by climate change in the future. The locations and issues were selected based on desk research and consultations with organisations working on climate change in Nigeria.

i The British Council requested that the Nigeria research be repeated in nine other countries to inform British Council work and other organisations' work on climate change in Africa. More focus groups and interviews were conducted in Nigeria than was the case in subsequent studies. In addition, the methodology was refined to allow the research to be scaled and repeated across the nine additional countries.

ii Nigeria Talks Climate uses qualitative research methods which generate non-numerical data and are particularly useful for exploratory investigation into topics for which there is little previous research. Through focus groups and in-depth interviews, Nigeria Talks Climate investigates the meanings people attach to climate change and explores how they experience climate-related issues and impacts.

iii Some interviews with opinion leaders were conducted in Abuja and Kano.

Lagos is Nigeria's most populous city and a coastal port. It has a high level of migration and urbanisation. Increases in sea level threaten the city and a large population already living in potentially hazardous areas.⁴⁰ Discussion in Lagos focused on citizens' perceptions and understanding of coastal flooding.

Jigawa is a state in the north-east of Nigeria and is a hot, dry region. Desertification has accelerated with climate change and increased temperatures, so focus groups discussed the causes, effects and responses to the growing desert.

Abia state is in south-eastern Nigeria. Rural areas of Abia are at risk of gully erosion, which threatens transportation links and livelihoods.

Rivers is a state in the south of Nigeria where most of the main oil firms are active; the industry is a significant presence in peri-urban Obigbo, where focus groups explored gas flaring.

Focus group discussions

The research set out to gather a broad range of views. Discussions were held with women and men, rich and poor, rural and urban. Given the implications of the selected local issue for certain livelihoods in each area, the study also purposefully sought out certain individuals – farmers and herdsman in Jigawa, home- or business owners on the coast in Lagos, or transport drivers in Abia, for example.

In Abia and Rivers, focus groups were conducted in Igbo, English, or Pidgin, depending on the participants. Discussions in Lagos were conducted in Yoruba and, at times, English. In Jigawa the focus groups were conducted in Hausa.

In-depth interviews

To understand the wider context of climate change in Nigeria, 31 in-depth interviews were conducted with opinion leaders with a particular interest in climate change, or an informed opinion from a certain field, region or subject area within that country. They included policymakers, religious leaders, business people, journalists and civil society representatives. For further information on the research methodology used and guiding principles, see the Appendix.

3 Citizen focus group discussion findings

There are different ways to know about climate change. One way is to understand the science: that human activities, such as the burning of fossil fuels for energy, are increasing the amount of heat-trapping gases in the atmosphere, which warms the earth and affects its climate system. Another is to experience it first hand: to witness over a lifetime changes in rainfall patterns that affect the harvest; to suffer from increased droughts, floods and other climatic disasters that can wipe out homes and crops; or to be at the receiving end of the spread of vector-borne diseases, such as malaria.

The findings from this research suggest that although most Nigerians do not know about climate change in the scientific sense, they have certainly experienced it. Observable changes in the weather and the seasons constitute most Nigerian people's knowledge of climate change; they live with the impacts of the changing climate in their day-to-day lives.

The research also shows that changes in climate are not noticed by Nigerians in isolation from broader environmental changes. People in Nigeria are keenly aware of environmental degradation and depletion of natural resources. They mention, for example, deforestation, pollution, and the growing desert. Indeed, the research reveals that most Nigerians appear to make little distinction between environmental degradation and climate change; changes in the weather and seasons form part of the broader changes people have observed over the course of their lifetimes.

Given that climate change is viewed in the wider context of environmental changes, it is important to understand how Nigerians perceive these changes. This report, while focusing on climate change, recognises the complexity of the relationship between climate change and environmental degradation.ⁱ It begins with an overview of the environmental changes that Nigerian citizens have experienced, and then focuses on four pre-selected issues. It moves on to examine people's understanding of climate terminology and concepts, and finally presents four key themes that shape people's understanding of the science of climate change. In subsequent sections, it explores what Nigerian opinion leaders know and think about climate change, and concludes with recommendations.

What changes have Nigerian citizens experienced in their climate and environment over time?

Throughout their lives, most Nigerians have observed changes in their weather and environment.ⁱⁱ They say that the regular pattern of seasons has shifted. For example, a woman from Abia says the rainy season now comes at a different time: "We know the rainy season starts around March and ends by August," she says, "but as of last year even on 23 or 24 December the rain was still falling."

Similarly, a man from Lagos explains that the harmattan (a dry, cold, inland wind) no longer arrives when expected: "Harmattan has also changed – we used to experience it from December to January but now in April we still experience it." Interestingly, some Nigerians notice changes in the seasons in relation to Ramadan. As a woman from Jigawa puts it: "When I was a child, the fasting normally came in a

summer season but now the nature has changed and the fasting comes in a winter season..." This is interesting, because the time of Ramadan shifts from year to year.

Other people talk not about shifting seasons but about the loss of distinct seasons, particularly rainy seasons. This man from Lagos is typical in his observation of change: "The rain used to have seasons then but now it rains anytime it wants," he says. There is no consensus on whether overall rainfall is less or more than it used to be but this is partially due to different climatic characteristics across the country: some areas have experienced more flooding while others have experienced drought and desert encroachment.

Many people have also noticed higher temperatures. "The weather is becoming hotter than it was during 1990s and 1980s," claims a man from Rivers. "All I know is that the sun is becoming hotter." Changes in temperature are often attributed to the sun or overpopulation because heat from the sun's rays and overcrowding are immediate sources of heat: "Nowadays there is too much sun, the heat is terrible. [It's not] like what we [were] used to," says a woman from Abia.

In northern Nigeria, many people have noticed a reduction in agricultural output due to drought and desert encroachment: "Years back, we use to have... trees and we use to grow groundnuts and local beans," a man from Jigawa remembers, "but there was this strong approach of drought that took over, and since then we don't grow them any more. The lack of trees gave way for the desert to come in."

Farmers in particular feel the effects: "In those days you could farm and harvest food that would last for a whole year, but these days your harvest can't last up to six months," says one in Jigawa. "If you had 10 cows you wouldn't be worried because they could go around and they fed well because there was grass, but now even if you have two cows you will be worried because there is no grass for them to eat." Clearly, farmers are worried by the change in their circumstances.

Similarly, food scarcity is a concern in parts of Nigeria. "In the 1990s, people used to come to this town to collect food like Garri... but this time around we go somewhere to buy [food] and look for all the things people used to come here and buy," says a man from Rivers.

Urban Nigerians tend to express different concerns, including lack of space and overpopulation. "The population was not like this five years ago," claims a woman from Lagos, "but now the population is such that the traffic will stand still till midnight... the population is too much." Traffic, along with people building houses too close together and in inappropriate places, are seen as the results of overpopulation.

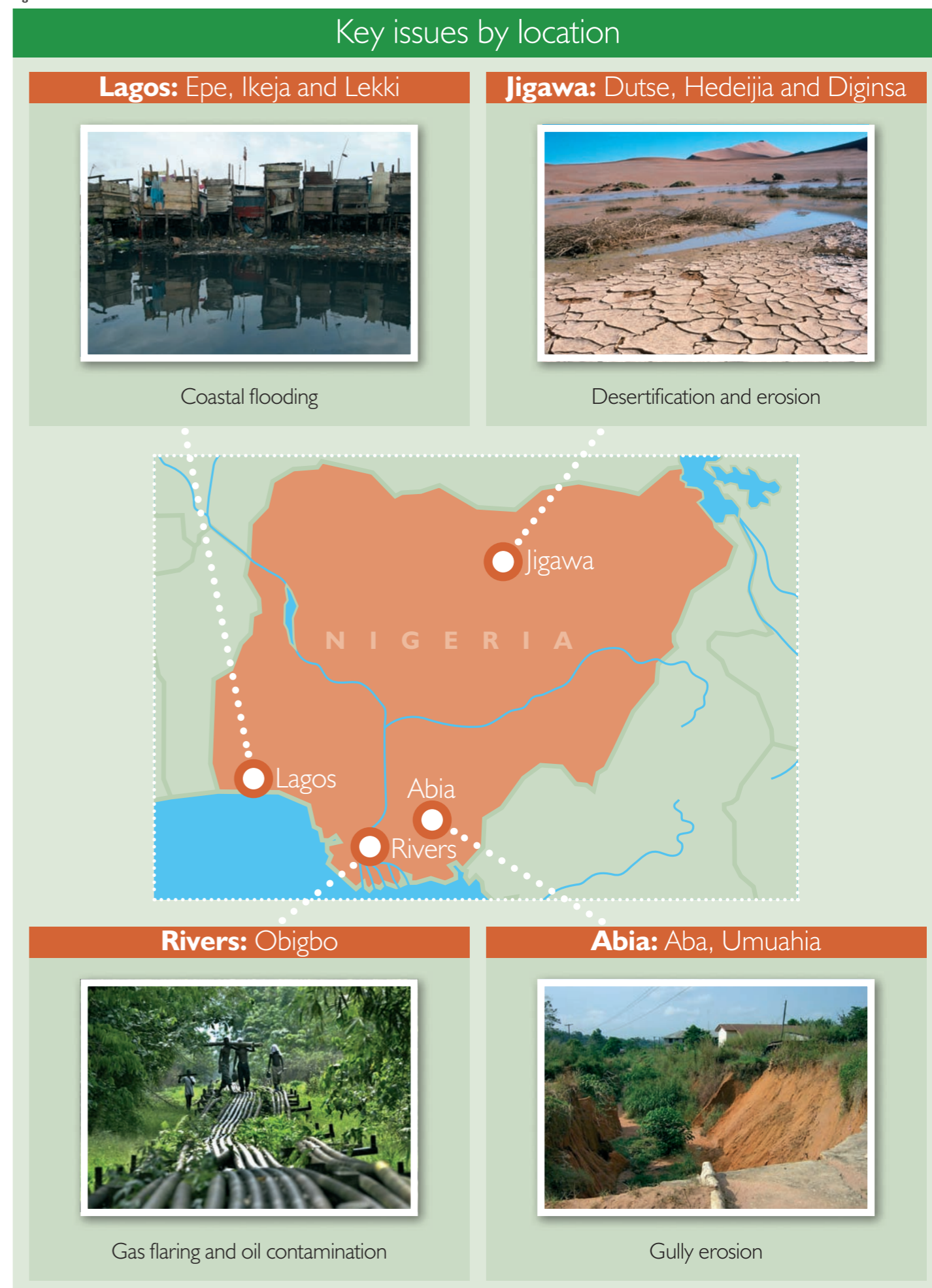
There is a general sense that the environment has been degraded. People mention several problems when they discuss environmental change, as a woman from Abia says: "What I have to say about the natural environment around here is that it is rough," she says. "Things are very expensive. The roads are not good and they are also not motorable. Farming here is also not too good."

A man from Lagos says: "A decade ago, Nigeria was blessed with natural, good vegetation and conservation... but now, because of pollution, industrial pollution... the ozone would be distressed." This quote signifies a sense that ozone destruction is sometimes part of the general environmental degradation that constitutes climate change in the minds of many.

While Nigerians are clearly experiencing environmental and climatic changes, they do not necessarily link them to global climate change.

iii A colloquial term, common in Nigeria, for food made from cassava tubers (also known as tapioca).

Figure 1



What do Nigerians know and understand about global climate change?

Despite articulating local challenges and recognising differences in nature, weather, and the surrounding environment, people rarely link such changes to the global phenomenon of climate change. Not only does climate change terminology not resonate with people, they also generally do not have a clear and accurate understanding of climate change concepts.

In this context, *Nigeria Talks Climate* explores how people make sense of climate change terminology and react to information about climate change. It emerges that four key themes are shaping people’s understanding of climate change, and affecting the way in which they explain its effects.

Terminology

Despite recognising the impacts of their changing weather, people have a low awareness of climate change, as both a term and a concept. Most people think the term refers to seasonal changes or immediate changes in the weather. “*Climate change means the season has changed,*” says a man in Abia, “*The raining season and the dry season... has changed.*”

Recognition of the term global warming is also low among the public. Those who do recognise the term understand it as a human-induced increase in global temperatures, but most understand it as a localised and sometimes seasonal increase in temperature. A student in Jigawa explains, “*To my understanding, I think it is when the weather is hot, that is what global warming is.*”

Despite low awareness of climate change and global warming, a small number of people do mention the “greenhouse effect”. There does not appear to be a consensus on what it is, although a few people give an explanation of it and some know that it is connected to global warming but are unclear how the connection works. Several people conflate it with prior knowledge of ozone depletion. The following quote from a man in Lagos illustrates the confusion that surrounds these terms and concepts, and their connection to one another:

“Pollution from here perforates the ozone, which is a thin sheet. So when it is being perforated, the ultraviolet rays of the sun can easily heat the earth directly. That is why it is getting hotter. There are what we call greenhouse gases... that is carbon monoxide, which is sulphur oxide also. Those ones are going to cause another layer, so when the sun’s rays penetrate, those ones would also block it and the sun would bounce back... so that is what changes the climate over a long period. It is a continuous process.”

While he knows about ozone depletion and can give a general explanation of the greenhouse effect, he mixes the two together, a common mistake. While some people have a good visual conception of what the ozone layer is, they are unclear about its connection to climate change and global warming. Another example is a young man from Lagos who explains how he thinks global warming can be addressed: “*My Dad uses a car, so it releases carbon monoxide, which destroys the ozone layer... if he [did] not drive his car, there would be a reduction of gases.*” Once again, ozone depletion is confused with

global warming; he emphasises reducing carbon emissions in relation to ozone depletion.

Frames of reference

In the absence of a solid scientific understanding of climate change, people reach for explanations that build on their existing knowledge. The discussions on the terms and concepts of climate change and global warming revealed four important themes that influence participants’ understanding:

1. Emphasis on trees
2. The will of God
3. Ozone confusion
4. Localised heat and smoke

Such pre-existing concepts are often referred to as “frames of reference”.⁴¹ These are critical, because they shape people’s understanding of, and reactions to new information. When exposed to new information, people often use existing beliefs, knowledge, and values to help them process it. The likelihood that people accept or reject new information depends heavily on what they already know and believe.

Crucially, people are more likely to reject new facts and information than they are to dismiss their own existing frames of reference. If new information contradicts a person’s beliefs, it is likely to be rejected. However, if that information is delivered in a way that complements people’s knowledge and values, people are more likely to accept it.

In this way, the four themes – or frames of reference – can function as barriers or as facilitators to effective communication on climate change. Understanding these frames of reference can help communicators in Nigeria make their content relevant to their audiences. It is essential, therefore, to understand how existing knowledge and concepts are triggered when communicating about climate change.

Emphasis on trees

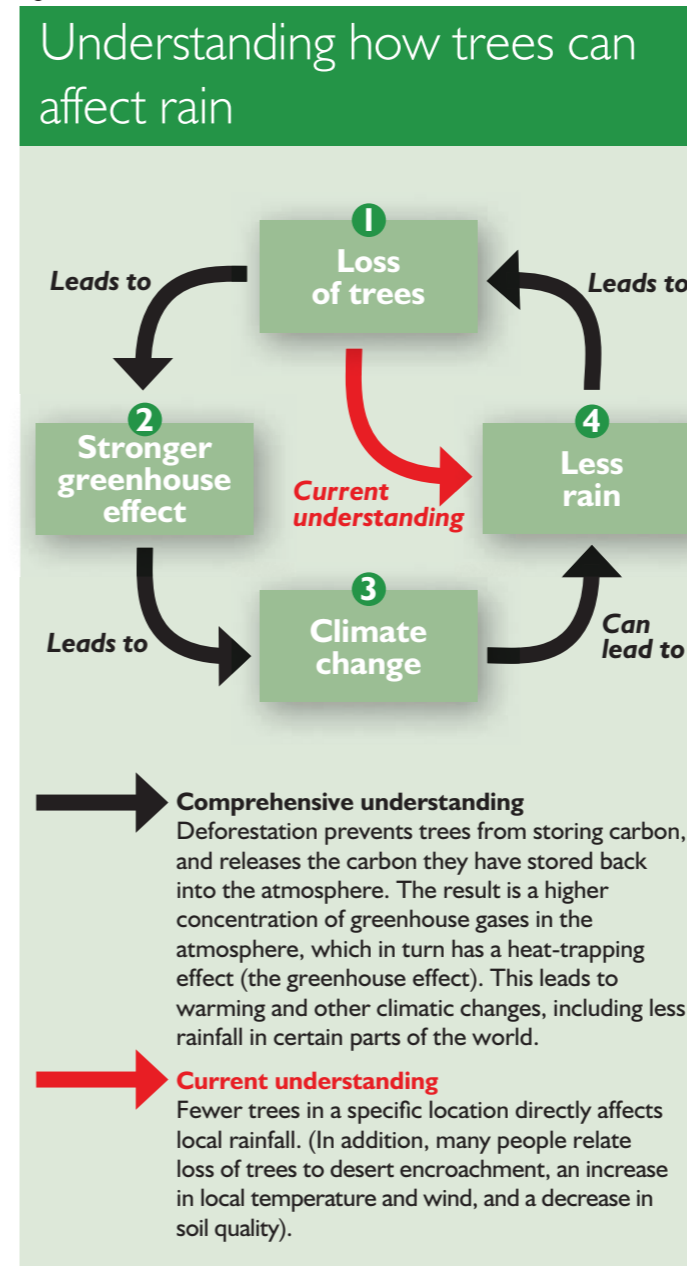
Nigerians’ understanding of the concept of climate change is shaped by the importance they place on trees. They are seen as a means of protection, a barrier against drought, heat, and unusual seasons. People also see trees as protection against extreme weather, as a woman in Jigawa says, “*Cutting down trees... allows heavy wind that blows off houses’ roofs... trees are supposed to reduce the penetration of heavy wind into our environment.*” A man from Lagos says: “*I think there should be a law that every house should plant a tree, so that it can absorb the harsh weather conditions.*”

Although people link trees to changing weather and environmental conditions, there is little understanding of their ability to act as carbon sinks, reducing the greenhouse gas emissions that cause climate change. The exception was in Lagos, where several people mention this: “*We should encourage ourselves to plant trees so that the emissions that are released will be absorbed by the plants and give oxygen,*” says an older man.

Some people have a general sense that trees create fresh air.

Interestingly, the Igbo term used for “climate change” was also used to describe “global warming”. However, two different terms for “global warming” were used in discussions with Hausa and Yoruba groups: *dumaman yanayi* in Hausa and *aiye ton moru* in Yoruba.

Figure 2



“Trees, what they breathe out is oxygen, and we human beings... breathe in oxygen. So if we have those trees around us, just check any area that we have trees, you will see the kind of breeze that comes to that place,” a fisherman from Rivers says. A student from Lagos complains: “*You hardly see people grow trees, grasses and other plants... [which] help to take away the poisonous gases caused by industries.*”

Others mentioned the role of trees in preventing erosion and desertification. “*In most areas, people are told not to cut down trees because it gives way to desert and climate change,*” says a man from Jigawa, “*but some people turn deaf ears and go ahead to cut down trees, causing desert to take place.*” An older farmer explains: “*Our environment here is a desert area, which can be reduced by planting of trees.*” Another asserts: “*Even our house is at risk if there are no trees to prevent the desert.*”

Nigerians also notice that the shade provided by trees reduces heat in their locality. A woman in Abia points out: “*Trees and green forest to some extent shade the earth’s surface; where they are cut down, it increases the heat.*”

With all these perceived good effects, trees are seen as the most important, and in many cases the only, way to address climate change that most Nigerians can think of. While forest conservation

and tree planting are positive activities and should not be discouraged, this belief in the supreme importance of trees could create the false sense that all climatic problems can be addressed through tree-planting.

Recommendations for communicators

Build on people’s existing knowledge of trees to help create wider understanding of the role of deforestation in global climate change. Try to do so without removing people’s sense that their local actions matter. Help people move beyond the idea that tree-planting is a cure for all environmental and climate ills. Expose them to other mitigation and adaptation options.

The will of God

Regardless of faith (predominantly Christian or Muslim), Nigerians often invoke a monotheistic God to explain changes in the weather. Because they do not separate “climate” from “weather” and believe that God controls the weather, many claim God is also responsible for climate change. A farmer from Jigawa, an area beset by the growing desert, tells of a village he once knew: “*Now the whole place is dried up and there is no single water in that place now – [it was] God’s will.*”

Some Nigerians, although not in Lagos, see the negative effects of the changes in the weather and environment as a punishment for sin. “*God is punishing us for our activities,*” says a man in Abia. A woman from Rivers agrees: “*It is our sin, it is we human beings that cause the problem.*” Another claims: “*Things are not the way they used to be and we think it is sin that causes it... I feel God is annoyed with the inhabitants of this earth... that is why we have things happening the way they are not supposed to be.*”

A sense of passivity, that changes to the weather are “out of their hands”, accompanies this belief for some Nigerians, particularly fishermen and farmers in rural Jigawa. “*The rivers, the rain are from God. Heavy wind, which leads to desert encroachment, is from God, so we can only pray for the relief of it but no one can stop it,*” says one local farmer. Despite their understanding of how human activity can cause desertification, these farmers still feel helpless in the face of changing environmental conditions.

Other Nigerians think that human activities influence the changes to their natural environment, simultaneously believing that only God can influence the weather. In Lagos, some believe God is responsible for the natural environment but also recognise the destructive influence of humankind. A woman from Lagos says: “*We were taught that by... felling of trees, it is man. By burning of bushes, it is man. So, I believe it is man that is actually causing it.*”

Many Nigerians see weather as God’s domain, while also holding the conviction that human behaviour is responsible for the degradation of their environment, rural or urban. “*God is perfect; we are the ones disturbing the work of God,*” claims a woman from Lagos. It may be useful to keep this in mind when communicating about climate change: many people in Nigeria have a sense of responsibility towards their environment, while still believing that God controls the weather.

Recommendations for communicators

Be sensitive to people’s faith when communicating climate change. Involve faith leaders in climate change communication. Where possible, facilitate climate change discussions that complement ideas of environmental stewardship present in some religions.

Words for “climate change” and “global warming”

In Nigeria, three different terms for “climate change” were explored within the focus groups. In Yoruba speaking groups in Lagos, the term *iyi pada oju ojo* was used, while in Hausa speaking groups in Jigawa, the term *sauyin yanay* was used. For Igbo speaking groups in Abia, *mgbenwe uboch* was used.

Ozone confusion

Many Nigerians appear to confuse climate change with ozone depletion. While a few correctly identify that holes in the ozone layer allow more ultraviolet rays through, they also incorrectly attribute increased temperatures and other climate change effects to ozone depletion. A woman from Lagos explains: "Waste products [and] carbon monoxide are going up, polluting everywhere, and this affects the ozone layer and the sun is getting closer... we have to learn how to use things that pollute our environment less and try to live in a healthy environment so that we can keep the ozone layer and the climate changes less."

Some people link greenhouse gas emissions with ozone depletion. "Global warming is being caused by the use of fertiliser, use of cosmetics, flaring of gas and some other things," claims a man in Lagos. "When it escaped to the air it caused holes to the ozone level... which the ultraviolet sun now penetrates into all the earth."

Recommendations for communicators

Make use of people's awareness of atmospheric ozone depletion to explain climate change, correcting misconceptions at the same time. Emphasise which human activities produce the greenhouse gases that cause climate change. Explain the science of climate change in a visual way that resonates with people, as ozone holes do.

Localised heat and smoke

Many Nigerians connect their conception of global warming (which they understand as an increase in local temperatures) to the production of local heat and sometimes local smoke. "Here you see a family with 12 people inside one room, so only the carbon dioxide they are releasing is enough to make the environment heat up," claims an older woman from Jigawa. "[The government] is contributing to this increase in temperature by not giving us light, because if there's light people will not buy a generator," claims another woman from Abia.

Of the few people who connect increased temperatures to greenhouse gas production, most were either from a higher

socio-economic group or had heard about global warming in the media. "There was something I was listening on the radio they were saying... about greenhouse something... saying that something is shifting or melting in the sky which is the reason the weather is becoming very very hot," says a man in Rivers.

Some individuals tend to link global warming to heat and conflate it with their understanding of gases and the ozone layer. As a woman in Lagos says: "The other day I was browsing the net. They were saying something about the ozone layer... that because of the burning of things, burning of wood, the use of some chemicals... they are affecting the ozone layer."

Nigerians also associate these increases in ambient temperature with immediate sources of heat, caused by overcrowding and generator usage, for example. "Overpopulation on the surface of the earth, you know when there is such pressure it can lead to increases in temperature," explains a woman from Abia. Although ambient heat can indeed increase local temperature, this is not the mechanism by which global warming occurs.

Nigerians' sense of heat is closely connected to signs that they can see, such as smoke. Smoke given off by burning vegetation, as well as fumes from factories, cars and generators, arose frequently in the discussions. The emphasis that people place on visible smoke may help make the idea of greenhouse gas emissions easier to understand – a thickening blanket of gases around the earth, for example. This is also a disadvantage, however, as the main sources of greenhouse gases are not visible and smoke does not equal greenhouse gases.

The four themes relating to trees, God, ozone, and heat appear consistently when Nigerians explain how they understand climate change concepts and terminology. The four themes also emerge frequently in discussions concerning personal experiences with local climatic and environmental problems. The themes can function as barriers or as facilitators to effective climate change communication. It is essential for communicators to understand them and take them into account when designing communication strategies. It is also important to keep them in mind when looking at how Nigerians discuss changes occurring in their environment.

How do Nigerians explain and respond to changes they are experiencing?

Many of the changes that Nigerians observe are potentially linked to climate change, and could be exacerbated by climate change in the future. To understand whether people connect local issues to climate change and to find out how people are currently coping and may cope in the future if the problems become more severe or frequent, people were asked to discuss specific issues affecting their region. In each location, discussions focused on a different local issue, as follows:

1. Coastal flooding (Lagos)
2. Desertification and erosion (Jigawa)
3. Gully erosion (Abia)
4. Gas flaring and oil contamination (Rivers)

Issues were pre-selected following desk research and conversations with NGOs working on climate change in Nigeria. Participants were invited to discuss the selected issue in their area and shown images representing the effect of that issue on their environment. The subsequent discussions sought to understand people's attitudes towards these problems and how they perceive the causes, effects and possible responses to them.

Figure 1 on page 11 shows the issues discussed in each location.

Coastal flooding (Lagos)

Coastal flooding is almost always recognised as a problem in Lagos, as most people who live there have witnessed or experienced it. However, it is often confused with flooding caused by blocked drains or excessive rainfall, and so is not connected to climate change.



In Lagos, coastal flooding is a recognised problem. However, people living there do not differentiate between coastal and rain-fed flooding when discussing the impact of flooding on their daily lives. While most discuss how flooding affects their travel and the transportation infrastructure, no-one appears to see coastal flooding as a potentially catastrophic threat to the city. Most mention overpopulation and overbuilding as the primary causes of coastal flooding which they do not connect to changes in climate. A woman laments: "It is human beings – how can they build houses near the river?" Another agrees that building in the wrong places causes flooding: "it is this issue of sending the ocean away to build a house very close to it, so when it rains heavily... the ocean may come back." Flooding is seen to be caused entirely by humans.

However, several people connect coastal flooding to the effects of global warming. Male secondary school students are the most likely to mention rising sea levels around the world. However, several older men and woman discussed global warming correctly as well. A woman demonstrates her understanding of the global causes of flooding: "Rain increases it, but [it] is that melting of that area... where the Eskimos live, that ice area is melting fast, in fact, it is making

the ocean bigger and expanding." A man says: "The water has been there [since] before we were born, global warming caused [the floods]". Several people refer to melting ice caps and connect them to rising sea levels. In this group in Lagos we see an understanding of climate change as a global phenomenon that is not apparent in Jigawa, Abia, or Rivers.

Nigerians from rural outlying areas and lower socio-economic groups discuss how flooding has damaged their homes, personal property and livelihoods – traders who cannot travel to market, for example. People from higher socio-economic groups tend to see the effects of flooding as an inconvenience rather than a grave threat to their livelihoods and property. They mention how flooding decreases their ability to move around, and rarely mention it affecting their own homes or causing widespread property damage. "Any time it rains I stay indoors. You can't even go to the office," claims a professional woman.

Most people's responses to flooding are reactive. There is a sense that this unprecedented change in the local environment cannot be solved by their efforts and all they can do is deal with crises when they occur. The understanding of the causes of the flooding that some people show does not translate into an understanding of how to prevent it.

Some people mention the hand of God. A teenager from Ikeja states: "In the days of Moses, we never heard anything like flooding, but in this our generation we are experiencing flood which is caused by our own carelessness. Then definitely it is only God that can save us." This sense of helplessness and culpability is a common response. Most people just talk about their responses once flooding happens as opposed to any steps they might take to prevent it, as a teenager from Erekoto Epe says: "Whenever it rains, we move our things, even our TV is placed above the water level so that it does not get spoiled."

Mythology enters the discussion with a group of women in the suburb of Ikeja, who claim that coastal flooding is caused by a sea

Rural–urban migration and urbanisation

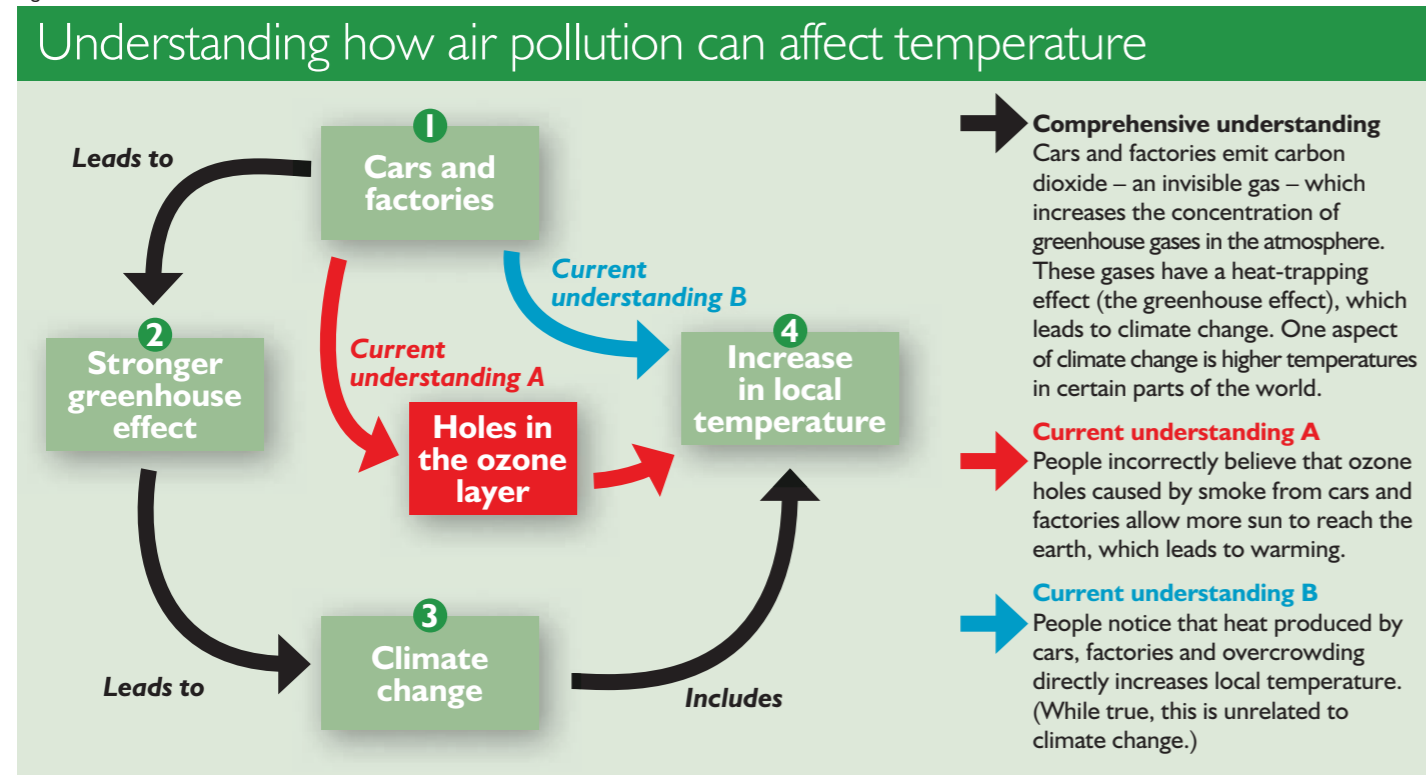
Africa's urban population is rapidly growing. Climate change has the potential to further increase migration from rural to urban areas as people flee its effects (IPCC).

While climate change is not the sole cause of rural-urban migration, its effects may cause people to leave rural areas. As a man from Abia points out: "There are situations whereby the people living in the rural area, due to infertility of the land, tend to move to the urban areas. And also if climate conditions are not checked it may render people homeless and they will migrate to the city."

"Yes there are a lot of people [moving] because of the way the desert has taken over most of our land," explains a man from Jigawa. "Most of them don't have lands to farm on, so they migrate to the city to start selling goods or start a business."

While many Nigerians see urbanisation as a necessary and positive thing, those in cities complain of the effects of urbanisation in already crowded areas. "When people migrate from the rural area to the urban area they experience accommodation problems and this makes them squat in different places like drainages," says a man from Abia. "Urbanisation causes climate change," says one woman. "This is because of the congestion in the cities, everybody wants to live in the city and this has led to climate change."

Figure 3



goddess. Land reclamation, in which the sea is pushed back so more houses can be built, angers the goddess and she causes the floods. "Some people build houses on top of the canal where water should have passed... the sea will get angry with them," a woman explains. When asked if the sea really gets angry, another says: "Yes, if you are disturbing it." It is interesting that, while the women believe that a sea goddess is responsible for flooding, it is still irresponsible environmental damage by mankind that has provoked her.

The only preventative measure people mention in relation to flooding is clearing refuse out of local drains. "We called our landlord to know what we could do, he then said we should do the gutter, then later it blocked again," says one woman. However, clearing drainage (often referred to as "gutters") is generally seen as something the government is responsible for, not individuals. "We humbly ask that they please provide drainages for us", says one young boy.

Desertification and erosion (Jigawa)

Desertification and erosion are highly visible in Jigawa, where most of the population feels their effects. Many people are making active attempts to adapt, and while they are aware of the immediate causes, very few see any connection between climate change and what they are experiencing.



Desertification is an increasing concern in northern Nigeria. The people in Jigawa – farmers and herdsman in particular – are understandably worried about its destructive effect of desertification and erosion on their lives and livelihoods.

Many people in Jigawa see deforestation as the most significant cause of desertification. To them, removing trees from an area means it is likely to become a desert. "You will find that in most areas people are told not to cut down trees because it gives way to desert and climate change," says a man from Diginsa, "but some people turn deaf ears and go ahead and cut down trees, causing deserts to take place." An older man claims: "[Nomads] use cutlasses to cut trees to feed their animals, and their animals kill young trees."

Some people from urban areas claim that farmers are responsible for erosion and desertification because they use fertiliser and destroy forests. "To me the farmers are contributing to this problem by using fertiliser, which is destroying the soil fertility," says one urban woman. An older fisherman from Hadejia agrees that farmers are responsible "because they cut down trees in the name of clearing their farms".

The people of Jigawa are painfully aware of the effects of desertification, and are keen to talk about its impacts on farming, food security and their livelihoods. Many mention the

changes that desertification has wrought. "When I was young this village had a history of groundnut production", says one man, "but now our land doesn't accept groundnuts even if you plant them, they will never germinate. This is because of desertification..."

A herdsman from the same area has a similar story:

"Ten years ago we were not in this place. We migrated from one village near Niger because of a shortage of food to feed ourselves and our animals. Our animals were dying, no water, everywhere was dry, that is the reason why we migrated from our place to settle here."

One major concern is the impact of desertification on agriculture and herding and thus on the local and regional economy. "It does affect us as individuals because if it takes over farmland it affects feeding and cash crops and there will be an increase in food prices in the market," a young female student asserts. A herdsman points out: "We are facing a shortage of cattle here; its affecting them because we cannot transport enough [food] for them and it will be expensive... [this] is affecting the economy and the nation at large."

Several people describe how desertification and the changing environment have forced them to change grazing lands and livelihoods, and, in severe cases, to migrate to a different area. The severity of the problem may explain why people in Jigawa have taken more action than people in other areas.

Responses to desertification in Jigawa are active attempts to slow the expanding desert, and people here have more to say about practical responses than in the other regions. Some farmers are using agricultural techniques to slow desert encroachment. "There is a type of grass which I use in fencing my farm to prevent the desert [from expanding] into my farm," explains a farmer from Hedejia.

Many appear to have received advice on adaptation, such as this farmer: "There is this system of planting that agricultural experts teach us... if our farmland is in this condition, they give us two options: to make a long mound; [and to] plant soya beans at the border of our farmland. Even if there is heavy wind it is hard for the wind to blow off the crops."

“People are told not to cut down trees because it gives way to desert and climate change, but some people turn deaf ears and go ahead”
 MAN FROM DIGINSA

“This village had a history of groundnut production, but now... even if you plant them, they will never germinate”
 MAN FROM JIGAWA

Such initiatives could reflect the prevalence of radio broadcasting on adaptation techniques for farmers and the Federal Government's initiatives to promote dry season farming and tree planting. "There is a programme which is run on the radio in Kano about how to fight desertification," says a woman from Dutse.

Tree-planting, often mentioned by housewives, is taking place, as are adaptive measures such as planting grass and changing crops. In addition, some farmers have diversified into fishing. The people in Jigawa appear to be responding more actively to the effects of climate change than in the other areas.

Gully erosion (Abia)

Gully erosion is recognised as a problem for farmers, traders and the general public, and many are aware of its immediate causes. Several measures are being taken to prevent it but adaptation and repairs are mostly seen as the government's responsibility.



Gully erosion is the removal of soil along drainage lines by surface water runoff. Once formed, gullies will continue growing unless action is taken to stop them. It is a growing threat in Abia, where many people have seen its effects. Most people associate the causes of gully erosion with a combination of two factors: the weather and insufficient local infrastructure.

Although weather events contribute to erosion, many people feel that rain and wind alone are not sufficient to cause erosion. One woman points out that: "Rain destroys the road because of lack of drainage system and gutters. If there are drainages then the roads will not be destroyed by rains." The construction of new roads and houses without regard for their effect on the natural environment is also seen as a contributing factor. "They didn't allow the natural water to flow the natural way because they think it's time to go and build a house," says one woman. "The water is really affected because some of the sand will go and cover the natural flow of the river".

The effects of gully erosion are observed similarly by the people of Abia. They claim that gully erosion has degraded their land, decreased agricultural production and inhibited transportation and trade by damaging roads. "I know that water washes off the soil and also destroys houses and even lives", says one woman. A young boy claims: "When we plant certain seeds like maize, when [gully erosion] occurs it flushes everything, and when we come to harvest we will find nothing."

According to some, the damage caused by gully erosion can ruin entire villages. A woman from Umuahia describes a place she used to know:

"I visited recently and that place used to be... erosion free. [The town] cracked... sending the people into exile... that ditch [created by] erosion has separated the two towns that used to exchange, or communicate, or interact in terms of market activities. And its inhabitants are being relocated to somewhere they don't like by the government."

Because of its effect on agriculture and transportation, the effects of erosion are felt beyond the farmers and villagers who lose their property and livelihoods to it. There appears to be an indirect effect on the local economy. A woman claims: "I grew up in Aba and when I was small things were ok; the roads were good... but now things have changed and foodstuffs are expensive."

A female trader from Umuahia says, "If I were to take some of my goods to some villages, market... if I am disturbed by the erosion I can no longer go there. There are so many places where you could go and sell all those things and make your money [but] you can't even go to such places."

In response to gully erosion, most people see strategies, such as repairing roads and improving the built environment, as the government's responsibility. A few describe initiatives that individuals and local communities have taken to prevent erosion, such as a woman from Aba who explains, "Sometimes people plant grasses or trees to prevent it and also the construction of gutters will help in preventing erosion." An older woman discusses the merits of preventative measures: "There is a saying that goes 'a stitch in time saves nine'. I notice something coming up and I think within my capacity I can try even if it's just a crack... I will fill it up and keep blocking it... depending if it is nearer to your own place, like the road where we live, we normally put sand inside a bag to prevent that kind of mild erosion encroaching."

The people of Abia are well aware of the immediate effects of erosion. Some are also aware of strategies to prevent it worsening, but also that the problem may be too large for them to address on their own.

Gas flaring and oil contamination (Rivers)

The people of Rivers are more aware of the immediate effects of the oil industry on their lives and livelihoods, particularly oil contamination, than they are about gas flaring as a cause of climate change. To them, gas flaring is a problem because of all the smoke it produces, which ruins the air they breathe.



People in Rivers are not always aware of gas flaring as a major environmental concern. They prefer to discuss oil contamination, and some mention gas flaring in relation to their general concerns about the effects of the oil industry on their lives. Gas flaring is the burning of waste gas released by pressure relief valves on an oil plant from an elevated pipe. Oil contamination is the effect of oil spills and leakages.

The people of Rivers see unchecked industrial development and government neglect as the main causes of oil contamination and gas flaring. They point to physical and visual manifestations of the oil industry as proof, including pipelines, gas flares, and smoke. As a woman from Obigbo explains:

"There is this thing that we see, a thick smoke, they call it mife... sometimes when you breathe and put your finger in

your nose, you will bring out [a] black substance. They say that causes it. Then there's another fire that burns at the other side which brings those black things that come with the rains."

Some people see a connection between the oil industry and increased temperatures, although only locally. Visible smoke plays a role in their perceptions. When asked if there is a relationship between the oil industry and a global increase in temperature, a woman in Rivers says: "Yes, because of the smoke that comes out."

Residents of Rivers lay most of the blame for problems in their environment on the government's lack of regulation of the oil industry. Of secondary concern are individuals who vandalise equipment to profit from illicit petrol sales. "We have all these oil bonkers. They are the ones that contribute. Even this oil spillage we are having, they are the people that open the pipes so they are the key cause of it," claims a man from Obigbo.

The way people in Rivers see the effects of the oil industry depends on whether they feel most affected by oil contamination or gas flaring. Those that mention oil contamination focus on its effects on the land and agriculture. "It burnt houses and made the crops wither. Nothing came out so all the things that were planted then were lost," says a woman in Obigbo.

A man from the same area laments: "In Rivers state in the 1980s when I used to farm with my parents, to plant yam you just cut out the head of the yam and plant it. [Then] when it's time for harvesting, you harvest a very big yam, but not [here]. Here you put in a very big yam but you won't get anything." Similarly, a woman says, "Some used to get a lot of fish out of fishing but now because of the oil that covers the whole of the river, they don't get as much fish as before..."

Individuals who feel most affected by gas flaring tend to mention its effects on precipitation and the air they breathe. An older woman remembers: "Before, when it rained, we considered it as the best water we could get. I lived with my grandmother and we used to collect rain in a basin. That was the water we served to guests. Now, if you put your basin out to collect rain, you will notice some black things and you can't even wash clothes with the water."

"[Oil] spoils things," says one of her peers. "It causes sickness." "So [many] sicknesses," claims another, "it causes malaria, typhoid, and cholera." A sense of helplessness pervades the discussion of the oil industry in Rivers. "Three years ago it happened here, we have an oil well here and whole crops around there were killed and nobody came to our rescue," one man claims. People mention adaptation measures less than those in other groups. This could be because people complain frequently to the government but receive no response, or simply because the problem appears insurmountable. In a typical comment, a woman says: "We want the government to come and help us. It is the government that produces all those things, so the government should come and help us."

Only two people mention ways in which they have attempted to deal with oil contamination issues. A woman says: "When oil covers the farmland and everything is dying and there is no help, what we do is to gather fowl dung and put it on the land so that it can make the soil

fertile enough to produce what you will eat." A fisherman's methods probably contribute to greenhouse gas emissions: "So all the crude oil... was in the river and stayed on the water surface, so me as a fisherman... I try to solve that problem... we waited and later decided to light a fire on it to see if the fire would burn it fast so the crude oil was burning and there was a kind of chemical coming out and the smoke was going up too."

Awareness of responses to local environmental issues

Overall, Nigerians have little awareness of action being taken to address climate change. A significant amount of criticism is directed at the national government for their failure to take action or provide assistance.

Overall, most Nigerians are not aware of government, religious, NGO, community or individual responses to local environmental issues. Many people criticise the national and state governments for a lack of visible action, and it is clear that they see them as responsible. In Jigawa, a woman says: "To me, the government is in the right position to tackle such issues because they have all the resources." It is the national government that gets the most blame, though. "When we ask the local government they say that the state must give them something, and when you ask the state they'll say federal. You know everything comes from the federal, from up to down," claims a fisherman in Rivers.

Some people name local authorities as a source of information as well as assistance during environmental crises such as floods. Religious centres are not normally seen to be involved in activities addressing environmental issues, although a few people mention them providing aid when an environmental disaster occurs, and a young girl in Abia mentions some advice: "Yes they do help in their own way, for example, the Muslim mosques... advise us to plant trees around our environment," she says. A man from Jigawa agrees, "Yes, they are helping, because they preach to us to plant trees and they tell us the bad effects of not having trees around us." The public sector or community associations are seen to be the least active, although a few people name community-based organisations dealing with sanitation, such as a weekly rubbish collection.

It is rare for people to cite NGOs by name, although a few people mention that they are involved in tree-planting projects and that they provide information on environmental issues and agricultural adaptation strategies.

This study also suggests that students in Nigeria are getting their information about climate change in schools and are more informed about the causes of climate change than older generations.

Those seeking practical means of addressing the effects of climate change, particularly in rural areas, are getting their information from the media. Farmers also mention the usefulness of agricultural radio shows which provide information about alternative farming methods.

4 Interviews with opinion leaders

This research draws on 31 interviews with opinion leaders across six sectors: government (national, regional, municipal), the media, the private sector, religious institutions, local and national associations (for example, farming associations), and NGOs.

What do Nigerian opinion leaders know and understand about climate change and what are their views on Nigeria's response to climate change?

An elite topic

Scientific knowledge of climate change is restricted to a small number of opinion leaders in Nigeria. Climate change is perceived to be a scientific topic that the average person is not knowledgeable enough to discuss.

At the time the research was conductedⁱ, levels of understanding varied among opinion leaders, although most were comfortable in discussing their perceptions of climate change. Although this research relies on relatively few interviews, they do reveal important differences in levels of understanding among opinion leaders.

Knowledge about climate change appears to be concentrated within the national government and NGOs. Leaders of local associations, traditional leaders, and religious leaders have the lowest levels of understanding. The media, private sector and local leaders are more specific to the individual: some have an advanced understanding of climate change concepts, some do not, and many have a mixed understanding of climate change issues. Media representatives are the least confident talking about climate change and are well aware that they lack this knowledge.

Understanding climate change

While all opinion leaders can talk about climatic impacts, very few feel they have sufficient knowledge to explain climate change.

Opinion leaders from the national government and NGOs were confident in talking about climate change. They acknowledge the global scale of the problem and generally have a good idea of causes, effects and definitions relating to climate change. As a national government official in Abuja says: "Climate change is not a problem limited to Nigeria; it's a problem that is affecting the whole world because... technology could not catch up with our use of forest fuel."

Local government leaders have mixed levels of understanding. Some are on a par with their peers in the national government and some are closer to traditional leaders. Among traditional or religious leaders and heads of community associations, knowledge of climate change is much lower; for them climate change is generally understood as natural changes in the weather or irregular changes wrought by God. The exception is Lagos, where opinion leaders generally have an advanced understanding. These three groups also tend to conflate climate change with environmental degradation.

ⁱ It should be noted that more than a year has passed since these interviews took place, and opinion leaders' understanding of and engagement with climate change may have altered since then. The government has recently shown increased engagement with the issue, taking measures such as a road tax in Abuja, where car owners will pay tax relative to the engine capacity, fuel consumption and gas emission levels on their vehicles.

“Climate change is not a problem limited to Nigeria; it's a problem that is affecting the whole world”

NATIONAL GOVERNMENT
OFFICIAL, ABUJA

"Climate and the things happening in our nation, the way I am looking at it, some are good and some are not good. Some of these ones that are not good are, for instance, erosion and flood, and the bad condition of our roads causing accidents leading to untimely death."

Traditional leader

As with many members of the general public, opinion leaders equate climate change with changes in the weather and that these changes are caused by God:

"Climate change is from God, no one can change it. Sometimes when such changes happen, we think it is not right, while it is [in fact] the right thing from God."

Head of community association, Jigawa

However, this belief that God is responsible for changes in the weather does not preclude an understanding of human responsibility, or rule out a scientific explanation. This religious leader in Jigawa state is aware that there could be additional reasons for the changes in the environment:

"There could be a scientific measure to this which is due to our negligence, due to our disrespect for nature and the environment we reside in. At the same time, we should be open to the fact that God could be making a categorical statement that he is God, the creator of the universe."

While most private-sector representatives can define climate change, they also confuse the effects of climate change with general environmental degradation (such as blocked drains or litter) and day-to-day weather changes. This confusion is reflected in their assertions that their businesses do not contribute to climate change – even a representative from a petroleum company does not think his company contributes towards climate change. For them, responsibility is connected to waste and other physical by-products, as a private-sector representative from the financial services industry says: "We are a financial institution... there is no by-product from our business."

Media representatives are in a similar position in that they have a mixed understanding of climate change. While many see it as a global issue, some confuse the effects of climate change with naturally occurring seasonal changes in weather. "It's a natural thing; it's not man-made," says a media representative. Some claim that the causes of climate change include emissions, gas flaring, deforestation, and forms of environmental degradation such as pollution. However, misunderstanding remains:

"When you urinate or spit, it will be evaporated to the sky and

later descend and come in the form of pollution and when the environment is polluted, it leads to climate change.”

Media organisation representative

There is a range of climate change understanding in the media, and most representatives say that they would like to increase their understanding.

Perceived impacts of climate change

While climate change is understood to be global in scope, opinion leaders’ knowledge of its effects is mostly confined to Nigeria or their own locality. Key concerns include desertification, flooding, erosion, drought, decreased food security, threatened livelihoods, health, transportation problems and energy supply.

Regardless of whether they are referring to climate change, global warming or environmental changes, opinion leaders are concerned about the effect of changes on Nigerian food security, livelihoods, and health. Those with less understanding of climate change seem to be more likely to be concerned with transportation problems, energy supply issues, or localised air pollution.

Opinion leaders who are familiar with climate change are particularly concerned about its impact on agriculture, giving the impression that farmers are the most vulnerable to the effects of climate change. A national government official in Abuja points out:

“Perhaps what is of direct relevance to the general public, particularly in agriculture, are rainfall patterns. As you are aware, in sub-Saharan Africa... agriculture is predominantly rain fed. Probably about 95%, if not more, of our agricultural practice depends on natural rainfall rather than irrigation. So, if agriculture depends on rainfall, it means that any shift in the pattern of rainfall affects agriculture.”

“Perhaps what is of direct relevance to the general public, particularly in agriculture, are rainfall patterns... Probably about 95%, if not more, of our agricultural practice depends on natural rainfall rather than irrigation... It means that any shift in the pattern of rainfall affects agriculture”

NATIONAL GOVERNMENT OFFICIAL, ABUJA

The more informed opinion leaders also see migration as a direct effect of climate change, as people are forced to leave areas now uninhabitable. A local government official in Jigawa state expresses concerns about “climate change refugees”:

“Climate change affects migration... once fertile land has become less fertile, where the desert has taken over the fertile land, it is natural that the people... will move to other areas in order to get greener pastures... that will bring about urbanisation or high concentration of people in one area.”

To others, climate change refugees are poised to become a security threat, as people compete for disappearing resources. A national government official in Abuja mentions Lake Chad, which Nigeria shares with three other countries and which is a source of income and survival for many Africans: “Lake Chad is a typical example [of] a security issue, because right now we are going to have climate change refugees and you will find some of these nomadic people taking up arms and force, trying to acquire grazing land...”

How does the average Nigerian understand climate change?

Opinion leaders and representatives generally agree that, while most Nigerians have experienced the effects of climate change, they have little knowledge of the causes, and their understanding is hampered by the terminology associated with it.

Most opinion leaders think that the average Nigerian does not understand climate change, particularly the terminology used.

“The average person on the street, when you are talking about ‘climate change’, will think that you are speaking Greek or Latin or Chinese. The average person is not aware. [The] level of awareness can be summed to be less than 1% of the population”.

National government official, Abuja

Some say Nigerians do not have any concept that the climate is changing and think that any changes are a natural, seasonal occurrence: “An ordinary, uneducated Nigerian would say... harmattan comes and goes, seasons come and go, and he will ask what you mean by ‘climate change’,” says a private-sector representative. And according to a few, this lack of understanding is reinforced by a perception of climate change as a Western issue:

“No, they will not know... Nigerians still look at it as one of those white scientific ideas that has nothing to do with us as a country”

Media organisation representative, Abuja

“It’s not something I have checked, but the average Nigerian will just tell you that it’s something that happens in Europe or somewhere.”

National government official, Abia

A few opinion leaders point out that Nigerians understand climate change in that they are aware of its impacts but that they do not understand the causes or terminology used:

“The people affected by climate change in Nigeria are females and children and the issue is that they don’t even [know], so there is a need for awareness, a need to sensitise. They don’t know the causes of climate change but they know the effect because they feel it...”

Local government representative, Jigawa

i This large, shallow lake on the edge of the Sahara, bordered by Nigeria, Niger, Chad and Cameroon, has diminished in size by more than 90% since the 1960s.

“Climate change is a relative term, devoid of a... particular definition, because [it] means different things to different people”

GOVERNMENT LEADER, JIGAWA

Translation and terminology

Opinion leaders see climate change terminology as a barrier to public understanding of the concept. Communicators need to use relevant, comprehensible language to engage and inform Nigerians who lack scientific knowledge of climate change.

Most opinion leaders see the terminology surrounding climate change as the primary obstacle to understanding. As a government leader in Jigawa says:

“Climate change is a relative term, devoid of a particular or a definite and acceptable definition, because climate change means different things to different people depending upon the context in which you use it.”

Some explain that it is hard to gauge what a person knows about climate change when they do not understand the terms used:

“People may not get you correctly... but maybe if you can come clearly with a simple language to ask them [if] at times the whole world is changing... maybe they’ll be able to explain to you clearly [because] they [will then] understand your question clearly.”

There is some agreement that the term “climate change” is too elitist for many Nigerians to understand and that it does not communicate the essentials. Many interviewees suggest alternative terms that could be used instead. And some suggest taking the approach used to educate people about HIV and AIDS:

“It could be ‘everyday weather’, everybody will understand that... rather than using a big grammar. The name can be explained in pidgin, through TV drama, like HIV.”

Private-sector representative, Lagos

Some opinion leaders’ recommendations for terminology are related to the belief that climate change should be explained as a local issue and made more relevant to the lives of affected people, as a private-sector representative in Lagos again suggests:

“I would rather use something local... ‘climate change’ is too big to be understood by people, especially by illiterates.”

However, a few opinion leaders see “climate change” as an acceptable term with which to educate the public; a clear term that does not underestimate their intelligence. As a national government official in Abuja says: “I do think [climate change is] a good term to use... it talks about changes, it connotes the effects... it’s an accurate term and it’s not a term that is demeaning.”

Where does responsibility lie?

While most opinion leaders agree that there is a need to raise awareness of climate change, there is a tendency to focus on adapting to its effects as opposed to addressing its causes. Many agree that those providing information about climate change need to focus on the effects of climate change in particular areas and make it relevant to people’s experience and lives.

There is a general agreement among opinion leaders that raising awareness of climate change among Nigerians is essential. “If we could enlighten the common man then we have hope for brighter tomorrow,” says an NGO representative in Lagos. And many point out that Nigerians would benefit from learning about climate change with reference to their personal experience.

“[The average person] will not know the true connotation of ‘climate’ or of ‘environment’; neither would he know the difference between environment and climate. For each person it’s different [because of their] particular community and aspects of climate change [affecting them]”

National government representative, Abuja

Most leaders believe that informing people about the effects of climate change is essential to making the issue relevant and for getting to address the causes, as an NGO representative in Lagos says: “If they understand the effects of climate change, they will do things right to protect all these from happening.” A private-sector representative in Lagos adds: “Preach it to them... let them know the effect on their health, their future and their environment.”

However, opinion leaders in Nigeria do not have many recommendations for educating the public in terms of mitigation strategies. Tree-planting is the most common suggestion. A private-sector representative in Lagos suggests:

“They should reduce the way they cut trees. They should plant more whenever they cut any tree. They should stop pushing the water away, it will have a long-term effect because one day it’s going to bounce back. Another thing is pollution. People should stop putting refuse into the water, because that is water that is used for our consumption.”

Very few people suggest explaining climate change as a global phenomenon, or teaching the whole scientific concept to the general public. There is no resistance to the idea; it simply does not come up among opinion leaders’ suggestions.

“I’ll just tell them that there’s a shift in our climate, the world around us has changed and then use things that are very practical to demonstrate that... if you’re having less rainfall or if you’re having extended summers... then you can now begin to talk about the reason why this is and then what are the causes, then you begin to talk about what makes it to be.”

National government representative, Abuja.

Many opinion leaders, particularly those in the private sector, demand more regulation and enforcement by the government on waste dumping and industrial emissions. These are the only specific, concrete recommendations anyone makes. As a private-sector representative in Lagos states:

“We need laws to check the indiscriminate dumping of refuse. We need policies to check emissions from factories and companies etc, and we need law policies as well as to check regular maintenance on vehicles.”

Government response

Government representatives appear to be focusing on mitigation in their response to climate change, and mention research and technology initiatives. Opinion leaders from outside government either criticise a lack of government effort, or are unaware of any action they have taken to address climate change.

Government representatives at the national level frame the government’s response in terms of mitigation. While some mention car-pooling and expanding mass transit, most mention high-level mitigation initiatives.

“Nigeria is championing the first international green hall of fame... where we are going to recognise citizens, cooperate, countries that have low or neutral carbon footprints-, it will be an annual event and such people will be encouraged”,
National government representative, Abuja

Federal government representatives say little about how the government could help Nigerians adapt to climate change, choosing instead to focus on raising awareness – although they do not specify how they will go about raising it. Other opinion leaders in Nigeria generally complain that the national government is not taking enough action against climate change or its effects. A media representative in Lagos comments: *“Sincerely I will say no, they are paying lip service to [climate change].”*

“I tell you something, I don’t think government has a policy against climate change. I don’t think so. I’ve not read any one. Once in a while, you hear them mention things like that but it’s not [a] priority” echoes a local government representative in Abuja.

NGO representatives are pointed in their criticism. Some claim that current environmental regulations go unenforced because of the government’s *“unholy relationship with industrialists.”* They claim that even preventative measures, such as tree-planting, are ineffective because of the government’s lack of commitment: *“There’s no potent government policy. What government does is to orchestrate what we call ‘green plantation’ once in a while. They just go to one local area and say they are planting trees, but there is no continuity in projects.”*

Climate change and environmental degradation issues, such as flooding and erosion, are addressed by the government as one-off problems and not as part of something larger: *“What they do in the states is to consider it as a disaster. When it happens and it affects lives, government will go with relief materials and then it is over,”* according to an NGO representative in Abuja.

A traditional local ruler even says he wrote to the government for help in dealing with erosion, but received no response:

“What I say is that the traditional rulers, wherever they are, any crack or anything in your community let the government know so that they can come to your rescue before it’s too late... but if the government is notified they don’t do anything until it costs a human life. It’s up to them.”

Most opinion leaders believe that that the federal government is not doing enough to tackle climate change, though most are aware of government tree-planting initiatives. Some private-sector representatives say that the Lagos state government is more active in tackling other issues such as blocked drains and roads.

Local responses: government, traditional and religious

Local leaders, whatever type, take the most local action in addressing the effects of climate change. While they are the least informed about climate change, it is clear that many are valuable sources of help and information to local communities.

Local traditional and religious leaders have responded to climate change problems with their own educational outreach efforts. They have been involved in organising local tree- and grass-planting initiatives, as well as digging drainage systems along local roads.

“The best way to handle global warming, desertification or climate change is by planting trees because trees can protect the environment from desert encroachment, they will make the environment richer and fertile for agricultural activities... and for the emission of oxygen, which is required for human survival.”

Local government official, Jigawa

“We tell them that after eating whatever they eat, they should throw the food wrappers... into the rubbish bin, not into the gutters as this would cause blockage to the drainage and water cannot flow through to where it’s been directed.”

Local traditional ruler

Local leaders offer advice which they believe is related to climate change, such as encouraging food sellers and traders to wear warm clothes at the market, teaching people how to use natural fertiliser, explaining the dangers of fishing during the rainy season, organising community efforts to prevent erosion, and cleaning up waste in their community or local market area. Otherwise, the role of local rulers in relation to climate change is a supportive one, helping communities manage disasters that occur. A religious leader explains:

“People look up to me as a leader and a social provider or social worker rather than a pastor... because they are suffering neglect from the relevant authorities that should

“[The average person] will not know the true connotation of ‘climate’ or of ‘environment’; neither would he know the difference between environment and climate”

NATIONAL GOVERNMENT REPRESENTATIVE, ABUJA

“I tell you something, I don’t think government has a policy against climate change”

LOCAL GOVERNMENT REPRESENTATIVE, ABUJA

provide all those social amenities for them.

Local rulers appear to be the best placed to help their communities prepare for the impacts of extreme weather. It could be highly beneficial to provide them with relevant information about climate change to share with their communities.

Community association response

While community associations’ members are affected by climate change, their leaders rarely make the connection between climate change effects and its causes, so naturally they have not taken much action to address it.

Community associations appear to be doing little to address climate change. Some leaders mentioned initiatives to keep markets clean. One leader, the head of an association in Jigawa, stood alone in taking some action against erosion: *“Erosion can delay our means of transportation. Therefore, we... buy soil and fill the affected areas.”* None of the other opinion leaders knew of any initiatives being carried out by local associations.

Private-sector response

Few opinion leaders in the Nigerian private sector see a connection between their business activities and climate change, and most have do not appear to have undertaken action to address its causes or effects, aside from abiding by government regulations.

The private sector gives the impression that it has not yet undertaken any initiatives to address climate change, aside from abiding by governmental regulations, as a representative from the financial services industry explains: *“The [environmental] policies that [the Lagos state governor] introduced, we are 100% behind him.”* This may be because they do not link climate change to carbon emissions: *“No. Like I said before, the only concern is about radiation from our equipment. But that is not a major problem because almost everyone has an electromagnetic field,”* according to a representative from the petroleum industry.

None of the other opinion leaders could think of anything the private sector was doing to address climate change. It should be noted that these interviews, as with all the others, took place more

than a year ago, and that the private sector may now be playing a more active role in responding to climate change.

Media response

The media have been carrying out reporting on environmental issues, but most are aware that they could do more. Many opinion leaders in other sectors see a large role for the media in addressing climate change.

Several media organisations report on environmental issues in general, but most do not address climate change itself:

“Enlightenment programmes on radio and TV, ministries are sponsoring to create awareness... of both the environmental problems and to ginger up people’s support in solving these problems, especially those that are man-made”

Media representative from Jigawa

Several also mention their efforts to reach rural people with environmental reporting as they are the most affected by environmental issues:

“Much of our broadcasting these days is targeted at the rural people so we talk to them in their language. I think they are better informed and because they are better informed they are more concerned.”

Several opinion leaders have suggestions for the media, which include making the public more aware of climate change, linking climate change to everyday impacts, using vivid examples, breaking down existing myths about climate change and religion, and avoiding confusing terminology. One local government representative in Jigawa suggests incorporating the media into overall climate change strategy and is one of several to liken climate change to HIV and AIDS.

“There hasn’t been enough awareness, education or advocacy. It’s something we need to teach in school, something we need to show in our TV programmes, in universities. More programmes and more enlightenment on as with HIV and AIDS. When AIDS first came there was a problem. People didn’t know what it was and how to deal with it. But now people know very well how to deal with the problem.”

5 Conclusion

This research reveals low public awareness and understanding of global climate change in Nigeria. There is little understanding of climate change terminology, and most terms do not have standard translations in the local languages. Most Nigerians recognise that their climate is changing, but few are aware of the term “climate change” and its correct meaning. Climate change is often literally interpreted to mean “changes in the weather”, both usual or unusual. In this context, most Nigerians have their own ways of explaining why their weather patterns and environment have changed. They draw on existing knowledge and beliefs to explain the changes they have witnessed and to process new information on climate change.

While many Nigerians see a link between human activity and changes in climate, this is not because they understand that rising levels of greenhouse gases in the earth’s atmosphere lead to climate change. Instead, they link human activities, such as tree-felling and pollution, to degradation of the local environment and changes in weather patterns. Some people, particularly in rural locations, also believe that changes in the weather are the will of God and that they are therefore powerless to act.

Nigerian opinion leaders are generally better informed about climate change than the general public and many point out that few Nigerians understand climate change. However, they need to know more about climate change in order to communicate confidently on the issue and incorporate it into their decision-making. Although the media, together with schools and local actors, are the main sources of information on environmental change, there is strong evidence to suggest that the media and local actors lack sufficient knowledge to effectively inform people about climate change and facilitate public discussion.

Given the links that many Nigerians make between climate and faith, religious leaders could play an important role in increasing public understanding of climate change and encouraging planning and adaptation to the inevitable consequences. However, the research suggests that many religious leaders currently lack sufficient knowledge and understanding of climate change. Efforts to increase religious leaders’ awareness and understanding of climate would need to be integrated into future communication strategies.

It is clear that communication and information provision is going to be central to Nigeria’s response to these challenges. Many opinion leaders spontaneously mention the need for better communication on climate change and all agree that the general public needs more information. Although this research sets out to present the perceptions of the Nigeria public on climate change, and not to detail a climate change communications strategy, various communications implications can be drawn from it.

Provide information

Firstly, the media has a critical role to play in providing information on climate change and supporting others to do so, including governments, national and international NGOs, scientists, religious leaders and community leaders. Nigerian citizens have a fundamental right to access information on issues that affect their lives. Increased awareness and understanding of climate change will enable citizens and communities to discuss the problem, adapt to climate change effects and make informed long-term choices about their future.

Efforts to improve climate change communication need to confirm to people that weather patterns are changing and that extreme weather events are more likely to occur. They also need to raise awareness of global climate change and the ways in which it relates to people’s lives and livelihoods. People need information on ways to adapt and prepare climate change and prepare for extreme weather events.

Communication efforts should also help people to build simple, correct mental models of how climate change works, being mindful of people’s existing understanding. In order to do this appropriate climate change terminology should be developed and tested in local languages. Evidence and facts need to be communicated in a way that is locally relevant using a variety of news and non-news platforms.

Facilitate policy and public debate

Secondly, the media needs to facilitate accessible public debate. Nigeria is being affected by climate change. Internally driven, relevant debate on the issue is essential. The news and non-news media will shape and mediate that debate to a very substantial extent. For that reason, building the capacity of the media and providing support for “public spaces” which enable discussion on climate change that draws on Nigerian voices and experiences, engaging citizens, local interest groups, civil society actors, religious leaders and policymakers from all levels of government, will be crucial. These spaces, which can be created through talk shows, call-ins and other popular interactive platforms, can be forums to exchange information, create understanding and plans for action. They can also serve to facilitate better cross-sector communication between government, NGOs, the private sector, the media, and local and community leaders.

Encourage accountability

Thirdly, debate can increase accountability, enabling citizens to exert pressure on their own governments with respect to climate change policies: adaptation funding, technology transfer, emissions reduction and other response strategies. Only when Nigerian citizens are fully informed about, and able to debate climate change, will they begin to influence the national and international climate change policies and processes which affect their lives.

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- Synthesising the findings of studies from more than 35 non-industrialised countries, this report suggests that resources need to be devoted to bringing journalists and potential sources together into professional networks and that editorial support for climate change needs strengthening. It concludes: “such steps could help to shift climate change coverage from environmental stories to the more marketable political, economic, and human interest stories... less often told”. See *Time to Adapt? Media Coverage of Climate Change in non-Industrialised Countries*, by M Shanahan (2009), in *Climate Change and the Media*, edited by T Boyce and J Lewis, Peter Lang Publishing
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Appendix Methodology overview

Nigeria Talks Climate employs a qualitative research design. Qualitative approaches – which generate non-numeric data – are particularly useful for exploratory research on topics for which there is little previous research. Through focus groups and in-depth interviews, Nigeria Talks Climate investigates the meaning that people attach to climate change, and explores how they experience climate-related issues and impacts.

A total of 24 focus groups with citizens and 31 in-depth interviews with opinion leaders were carried out across four states in Nigeria between August and September 2008.

The four fieldwork locations were selected on desk research and discussions with NGOs working on climate change in Nigeria. At national government level, three senior officials were interviewed; one from a department tasked with addressing climate change. In the media sector, representatives came from public and private television, public and private newspapers, and public radio. In the private sector, two telecommunications companies, two banking companies, one energy company and two manufacturing companies were represented in the interviews. At the local government level, representatives from Abia, Jigawa, Lagos, and Rivers states were interviewed. Two religious leaders and a traditional leader were interviewed. The associations represented traders, farmers, and fisherman. Finally, representatives from three NGOs were interviewed, one of which focuses on climate.

Focus-group discussions

A diverse range of views were sought with participants from across a variety of age and gender groups, geographic locations, and socio-economic levels. However, given the implications of some local issues for certain livelihoods in each, the study purposefully sought out some individuals (such as farmers and herdsmen in Jigawa, home or business owners on the coast in Lagos, traders and transport drivers in Abia). The focus groups were single sex and contained approximately eight people within a particular age range. The age ranges were: 14-18; 19-25; 19-35; and 36-60. Age and gender were taken into consideration in order to facilitate easy conversation among participants.

The members of each focus group also occupy a similar socio-economic class or profession. Socio-economic groupings were determined by profession (artisans, traders) or levels of household wealth (home ownership, for example) in the city. Profession (farmer, fisherman) was used in rural areas

Structure of the discussions

The discussion guide was developed in English and translated into Hausa, Igbo, and Yoruba. To begin, participants were taken through a warm-up exercise to explore their visual conceptions of their environment. The second section explored participant's stories of change (e.g. the changes that people had observed in their climate and environment over time) before gauging participants' familiarity with the ideas of climate change and global warming. Participants were asked directly if they had ever heard the terms, where they had heard them, and what they thought they meant. The third section was used to gauge participants' views on the causes of climate change. They were also asked to express their opinions on the following statement:

Scientists are saying that the temperature of the earth is increasing. Some say that humans have caused this change.

The fourth section was different for each region. It explored the

pre-selected issue for each location (such as gully erosion in Abia).ⁱ Subsequent sections explored issues such as responses to environmental problems, information sources, and urbanisation. The discussion guide was piloted in Abuja.

In-depth interviews

To understand the wider context of climate change in Nigeria a series of in-depth interviews were also conducted at the group, organisation and system levels to support the findings from the focus groups.

The overall objective of these interviews was to understand the range of perspectives among policy makers and opinion formers to inform a media campaign on climate change in Nigeria.

Policy makers and opinion formers were selected after consultations with organisations working on climate change in Nigeria and desk research. Due to a promise of complete anonymity, it is not possible to identify these opinion leaders by anything other than their sector and location. The programme of interviews can be divided into the following sectors:

Sector	Number interviewed
National government (3 national; 6 local)	9
Media	5
Private sector	6
Religious leaders	4
Local associations (such as farming associations)	4
NGOs, academics	3
Total	31

The in-depth face-to-face interviews were conducted in the following locations: Abuja, Jigawa, Kano, Lagos and Abia. A small number were conducted by telephone. A discussion guide was developed in English and translated into Hausa, Igbo and Yoruba where necessary. Each interview was conducted by a member of the Research and Learning team or supporting freelance staff. Each interview lasted approximately 45 minutes. Fieldwork was conducted between 4 August and 12 September 2008.

A fieldwork summary of the interview was written up at the end of each interview. Interviews were audio recorded, translated when necessary, transcribed and analysed by the Research and Learning team at the BBC World Service Trust

Analysis and reporting

All focus group discussions and interviews were recorded and transcribed. Recordings were transcribed in English by the focus group moderators. A similar process was used to produce transcripts for the in-depth interviews.

The focus group transcripts were systematically coded using a code frame. This code frame was generated through a detailed

ⁱ Based on the Nigeria pilot study, the discussion guide was modified in two ways for the subsequent nine *Africa Talks Climate* country studies: 1) climate change terminology and concepts were introduced later in the discussion; and 2) local issues discussed were selected by participants and rather than pre-selected.

consultation process that began with open coding, which enabled the researchers to group the data according to emerging themes. An overall assessment of these themes was used to produce a research presentation, which was used in conjunction with the coded data to produce this report.

The interview transcripts were first summarised and then analysed individually, drawing out key insights about pre-determined themes and questions, before comparing the findings across sectors and across Nigeria as a whole.

Guiding principles

Africa Talks Climate endeavoured to adhere to the following guidelines:

- This research initiative will be led by BBC WST's Research and Learning Group (R&L) researchers working across Africa.

- R&L London will co-ordinate the research and provide support for research design, analysis and reporting.
- Informal advisory networks will be established at a strategic and country level to guide research approach, delivery and reporting.
- Thematic training will draw on local academic or other institutions with expertise and local knowledge such as the International Development Research Centre (IDRC).
- All moderators and interviewers undertaking fieldwork will receive intensive skills-based and thematic training on climate change.
- Any research agency employed to help deliver fieldwork will employ local researchers/moderators and their work will be quality controlled by R&L.

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