



The heat is on

Ugandan citizens' views on and experiences of the climate crisis

1. Introduction and Summary

Climate change is a global crisis, but one where the impacts are first felt locally. Changing weather patterns – higher temperatures, less predictable rainfall, and more frequent extreme weather – are all predicted by models of the global climate, and can all have serious negative effects on lives and livelihoods. While Ugandans bear little of the responsibility for causing global heating, we face a future in which the country's citizens will shoulder a heavy burden of coping with its effects. Indeed, that future is already here as global environmental institutions and the Uganda National Meteorological Authority (UNMA) documenting changing weather patterns over recent years.

This brief presents data on Ugandan citizens' experiences and views on the climate crisis. To what extent do they understand climate

change and its causes. What changes in weather patterns have they observed in the past decade, what effect has this had on their lives and how are they coping with these effects? What actions do citizens say should be taken to counteract the climate crisis, and who should bear this responsibility? And to what extent are citizens' views on the urgency of action to address climate change linked to their own personal experiences of changing weather patterns?

Data for the brief comes from Twaweza's *Sauti za Wananchi*, a nationally-representative, high-frequency mobile phone panel survey. Information on the overall methodology is available at www.twaweza.org/sauti, and more detail on panel members can be found in the brief introducing the second panel¹. For

1 <https://twaweza.org/download/voices-of-the-people-introducing-the-second-sauti-za-wananchi-panel/>

this brief, data were collected from 2,622 respondents in the third round of calls to the second Sauti za Wananchi panel, conducted between 22 September and 11 October 2022.

The key findings are:

- Most citizens understand “climate change” as referring to changes in weather patterns
- 6 out of 10 citizens point to cutting down trees as the cause of climate change
- Overall, citizens say they are experiencing some changes in local seasons and weather patterns
- Citizens in the north and east of Uganda are more likely to report temperature increases than those in other regions
- The most widely reported impact of environment changes in the past 5-10 years is a decline in agricultural yields
- Most citizens say it has become harder to secure basic necessities such as food for their household in the past 5-10 years
- The main ways citizens say climate and environmental change has affected them are reduced productivity and food shortages
- Citizens are taking a wide range of steps to cope with climatic and/or environmental challenges
- 7 out of 10 citizens say the climate overall is getting worse
- Citizens’ main suggestion for reducing the effects of climate and/or environmental change is tree planting
- Citizens see addressing climate change in Uganda as a responsibility of both the national government and citizens
- Citizens are evenly divided on whether or not climate change needs to be stopped
- Citizens’ sense that climate change needs to be stopped is closely linked to their personal experience of a changing climate

2. Twelve insights on citizens’ experience of a changing climate

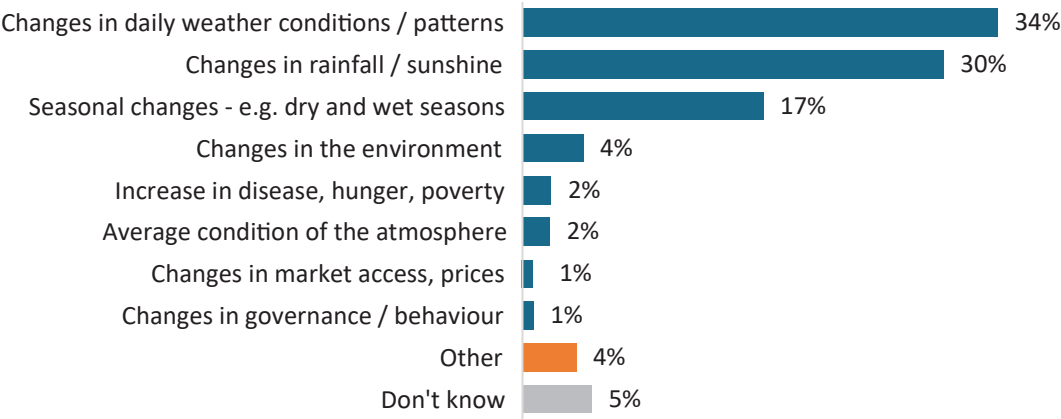
Insight 1: Most citizens understand “climate change” as referring to changes in weather patterns

Three out of ten citizens (34%) explain the term “climate change” as referring to changes in daily weather conditions and patterns, three out of ten (30%) say it refers to changes in patterns of rain and sun, and two out of ten (17%) say it refers to changing wet and dry seasons. Overall, this means eight out of ten citizens (81%) explain climate change as referring to changes in the weather.

Small numbers explain the term as referring to general changes in the environment (4%), increases in disease, hunger and poverty (2%), or in the average condition of the atmosphere (2%).

It should be noted that none of these definitions is incorrect. They each describe some aspect of the global process by which an increased concentration of carbon dioxide and other gases in the earth’s atmosphere is causing an increase in temperatures and changing weather patterns. It is, however, worth highlighting that for Ugandan citizens, climate change is primarily about local impacts – weather and seasons in particular – rather than global matters. (not shown in charts)

In your own words, what is “climate change”?²



Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);
Base: all respondents; n=2,622

Insight 2: 6 out of 10 citizens point to cutting down trees as the cause of climate change

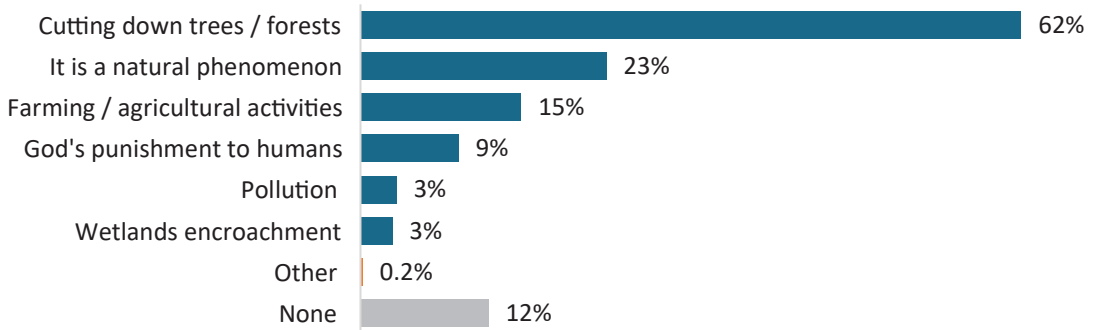
Six out of ten citizens (62%) say that cutting down trees and forests is among the main causes of climate change. Two out of ten (23%) say it is a natural phenomenon and a smaller number (15%) say it is due in part to farming and agricultural activity.

One out of ten citizens (9%) say it is punishment sent by God(s), and fewer say it is due to pollution (3%) or wetland encroachment (3%).

Once again, the point worth noting here is not whether these answers are right or wrong, but what Ugandans perceive the causes to be.

² Percentages in charts may not add up to 100% due to rounding.

What causes climatic change?(multiple responses permitted)



Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);

Base: all respondents; n=2,622

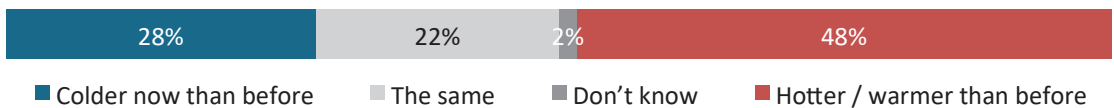
Insight 3: Overall, citizens say they are experiencing some changes in local seasons and weather patterns

Citizens are more likely to say the temperature in the past 5-10 years has been warmer than before (48%) than cooler (28%).

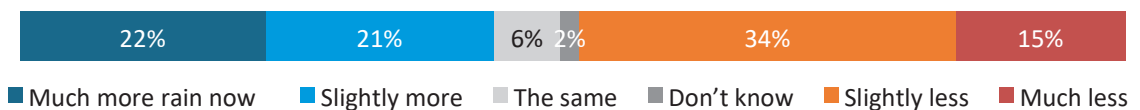
In terms of rainfall, citizens are a little more likely to say they are experiencing less rain (49%) rather than more (43%) in the past 5-10 years. They are less evenly divided on the start and duration of the rain season, however, with well over half of citizens saying the rain season has been starting later (62%) and being shorter (57%) than before.

Looking back about 5-10 years, have you noticed any changes in the following?

Temperature



Amount of rain in the rainy season



Start of rainy season



■ Starts much earlier now ■ A little earlier ■ The same ■ Don't know ■ Slightly later ■ Much later

Duration of the rainy season



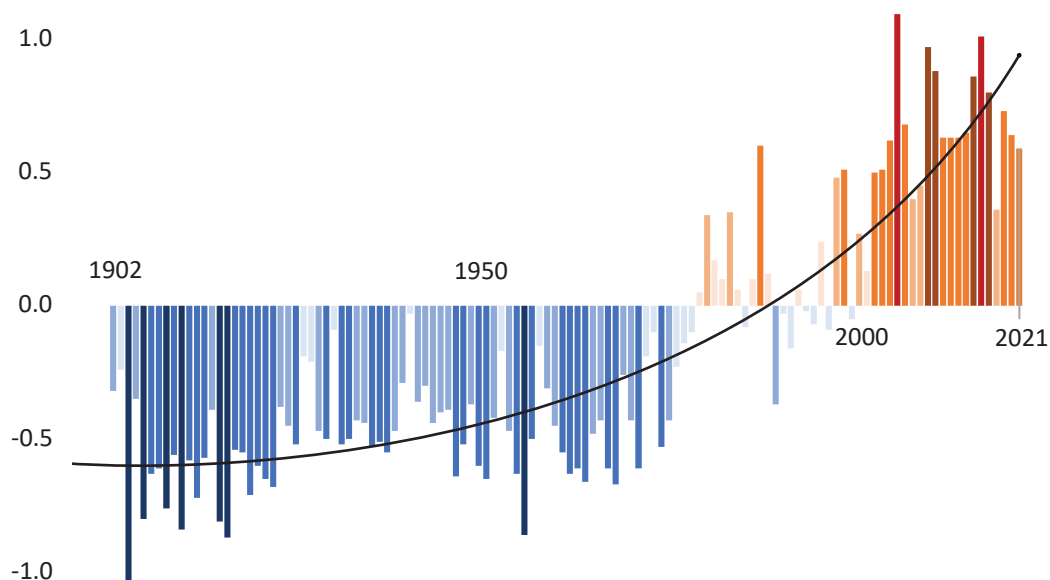
■ Much longer now ■ Slightly longer ■ The same ■ Don't know ■ Slightly shorter ■ Much shorter

Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);

Base: all respondents; n=2,622

When it comes to temperatures, the scientific evidence backs up the citizens' perceptions. Global monitoring of weather conditions and climate change show that the temperature in Uganda in the past ten to twenty years has been substantially warmer than was previously the case. Since around 1975, a clear pattern can be seen of rising temperatures, such that all years since 2000 have had above-average temperatures in Uganda, while almost all years before the 1980s had below-average temperatures.

Average annual temperature in Uganda, 1902-2021, relative to 1971-2000 average(°C)



Source: *Berkeley Earth / Institute for Environmental Analytics (IEA)*
(See <https://showyourstripes.info/c/africa/uganda>)

It is less straightforward to examine changes in rainfall patterns, as different changes are predicted by climate models in different parts of the country, as well as increased variability between one year and the next.

Some of this is indeed being reported by monitoring stations. According to the 2019 State of the Climate of Uganda report, by the Uganda National Meteorological Authority (UNMA), the past decades have seen “significant increasing trends” in rainfall in the east, northeast and patches of the southwest of Uganda, and “decreasing trends” in the northwest, west and central parts of the country³.

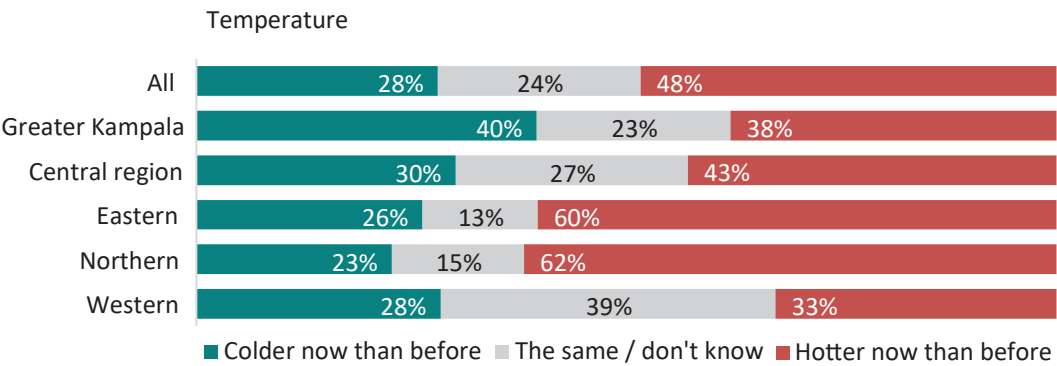
The report also noted that both too much and too little rain are causing problems. While the challenges of too little rain are clear, the report also found that “extreme rainfall events during 2019 led to flooding and landslides that affected thousands of people across the country.”

Insight 4: Citizens in the north and east of Uganda are more likely to report temperature increases than those in other regions

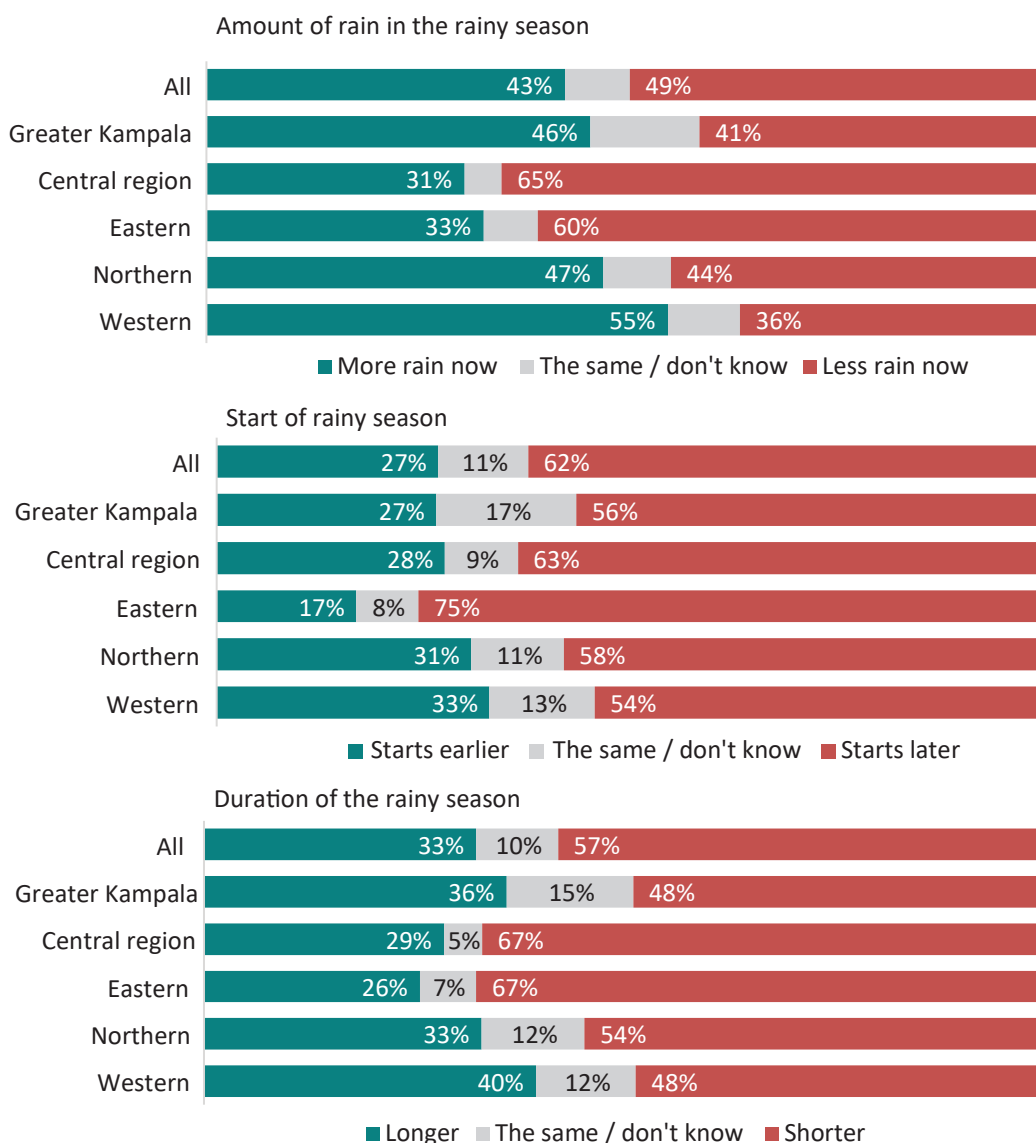
Citizens in the north (62%) and east (60%) of Uganda are more likely to report increased temperatures in recent years than those in other regions.

Residents of eastern parts of the country are also more likely than others to report that rain has decreased, that the rainy season has been starting later and is not lasting as long as before. This self-reported experience is not in line with the 2019 State of the Climate report, but may reflect specific variations experienced in particular regions during 2021 and 2022. As noted above, the anticipated effects of climate change on rainfall include both an increase in some places and a decrease in others, as well increased unpredictability and increased likelihood of extreme weather events – including floods as well as droughts.

Looking back about 5-10 years, have you noticed any changes in the following?



3 State of the Climate of Uganda 2019, see <https://www.unma.go.ug/download/state-of-climate-of-uganda-2019>



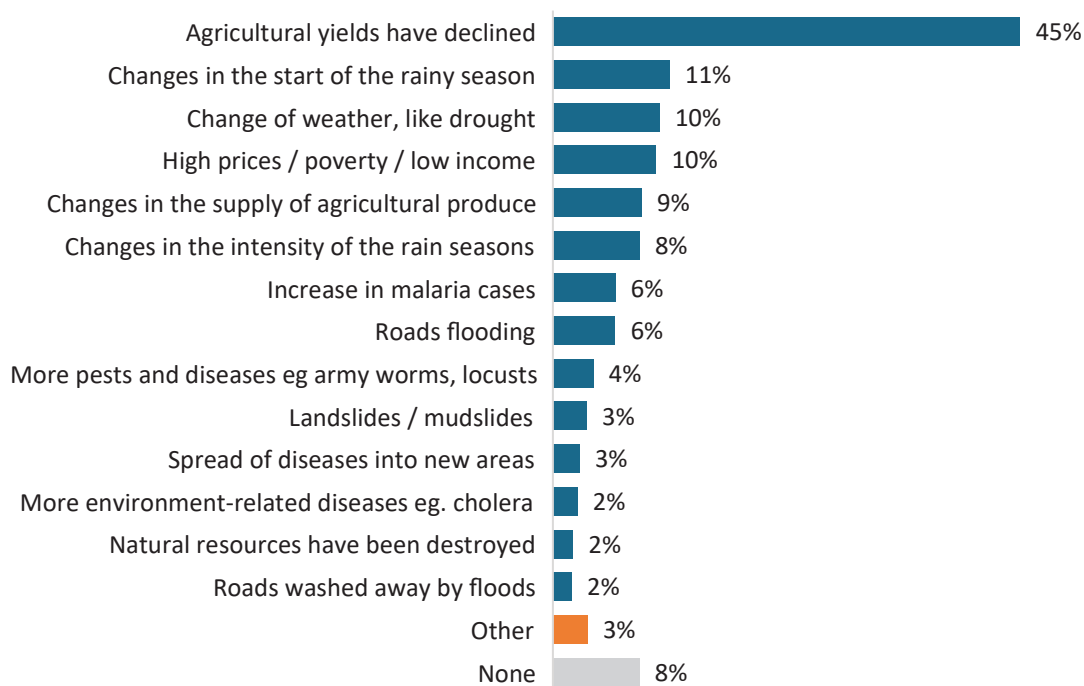
Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);
Base: all respondents; n=2,622

Insight 5: The most widely reported impact of environment changes in the past 5-10 years is a decline in agricultural yields

Close to half of citizens (45%) report observing declining agricultural yields in the past 5-10 years, more than any other form of environmental change.

Significant numbers also report observing changes in the start of the rainy season (11%) and changing weather conditions (10%), along with a wide variety of other changes.

What other environmental changes have you observed during the last 5-10 years?
(multiple responses permitted)



Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);

Base: all respondents; n=2,622

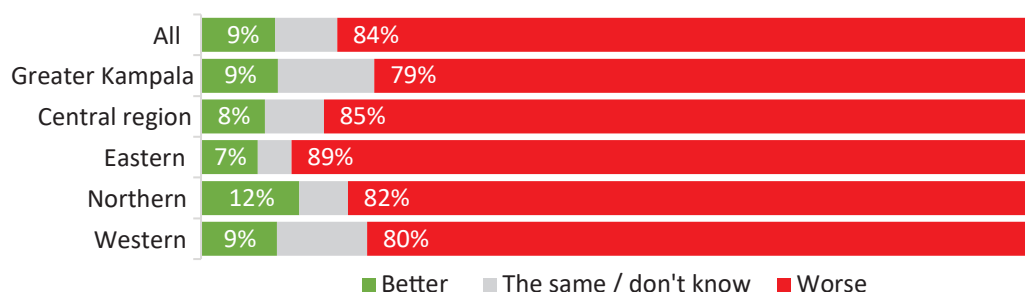
Insight 6: Most citizens say it has become harder to secure basic necessities such as food for their household in the past 5-10 years

A large majority of citizens (84%) say the situation for securing basic household necessities such as food has become slightly (41%) or much (43%) worse over the past 5-10 years, compared to a small number (9%) who say the situation has become better over this time.

This pattern is broadly consistent across different regions of the country.

Over the past 5-10 years, have you experienced any changes in the situation regarding how you secure basic necessities for you and your household e.g. food?





Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);

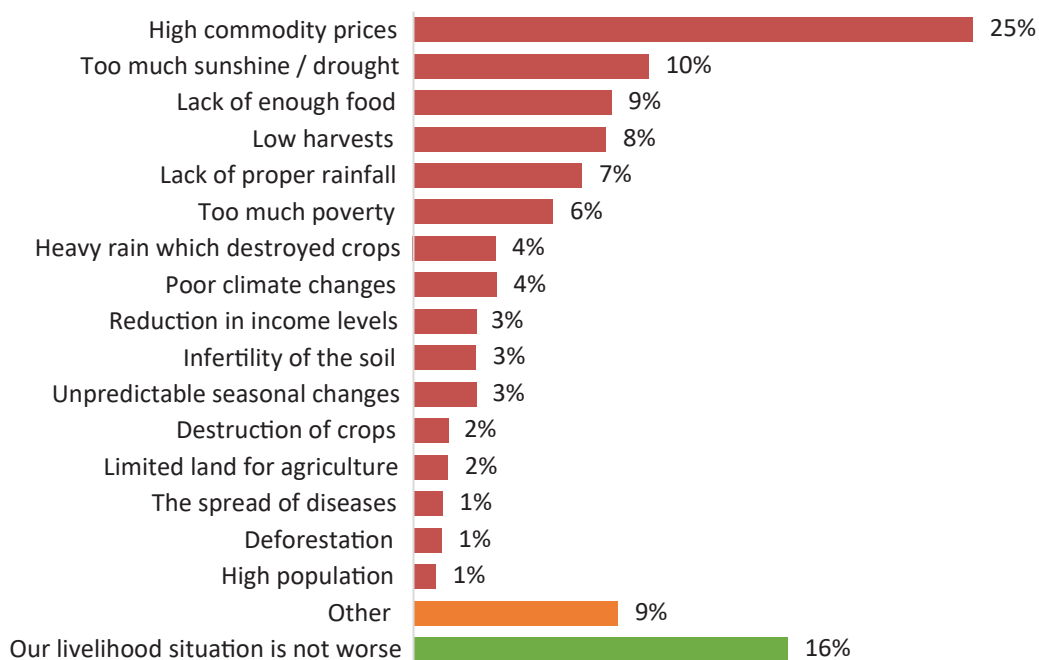
Base: all respondents; n=2,622

The main factor citizens point to as explaining why the situation has become worse is high commodity prices, cited by one out of four citizens (25%). Other reasons given include drought (10%), lack of food (9%) or insufficient harvests (8%), and lack of proper rainfall (7%).

It is likely that some of citizens' experiences of worsening livelihood pressures are also due to global factors, such as the Coronavirus pandemic and the war in Ukraine, both of which have led to increased prices for some commodities, including fuel and food.

What caused the change in your livelihood situation to make it worse?

(multiple responses permitted)



Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);

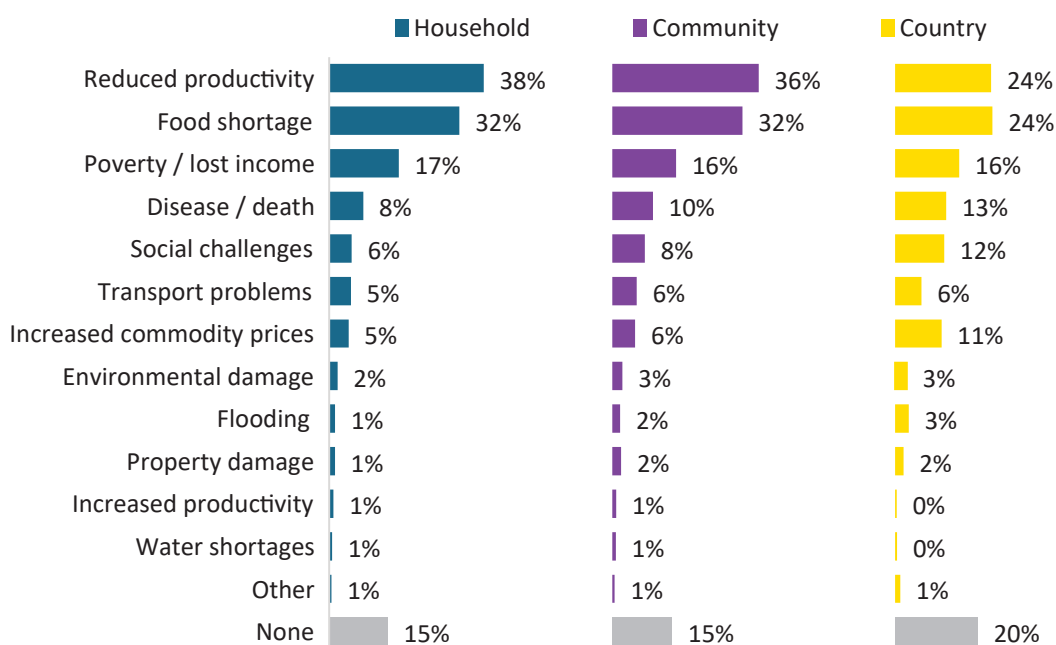
Base: all respondents; n=2,622

Insight 7: The main ways citizens say climate and environmental change has affected them are reduced productivity and food shortages

Citizens report that climate and/or environmental changes in the last 5-10 years have affected their households most in terms of reduced productivity (38%) and food shortages (32%), followed by lost income / increased poverty (17%). These are also the main community-level and national-level effects of environmental and/or climate change as reported by citizens.

Other impacts mentioned by citizens include increased disease and death, a wide range of social challenges⁴, transport problems, and increased commodity prices.

How has climate / environmental change in the last 5-10 years affected your ...? (multiple responses permitted)



Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);

Base: all respondents; n=2,622

Insight 8: Citizens are taking a wide range of steps to cope with climatic and/or environmental challenges

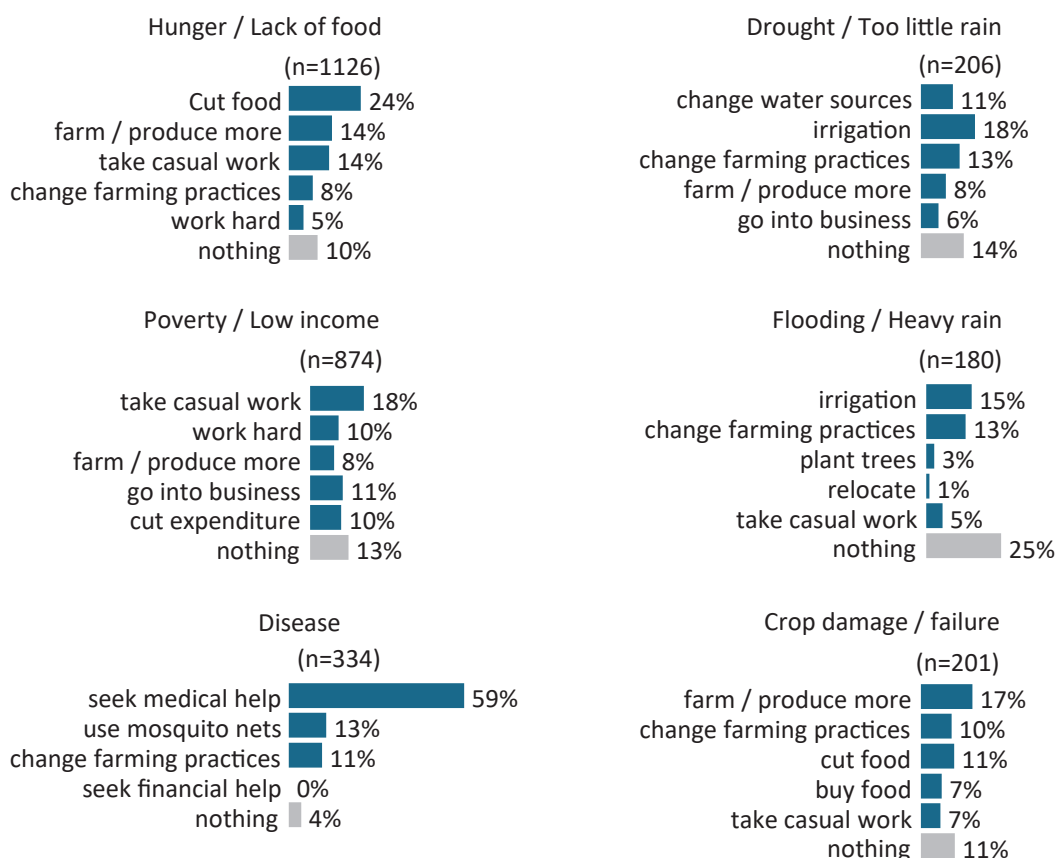
In response to hunger and the lack of food, households' main response is to cut food consumption, followed by increasing production and taking casual work. In response to poverty / low income, the responses include taking casual work, working harder, producing more food, going into business and cutting expenditure.

⁴ including alcoholism, domestic violence, lost schooling, displacement of people, etc.

In response to increased disease, the main action taken is to seek medical help, along with increased use of mosquito nets and adopting different agricultural practices. Citizens adapt to drought by changing water sources, increased use of irrigation and adopting different farming approaches. They adapt to flooding and/or heavy rain by changing water sources and increased use of irrigation. And they respond to crop damage by farming more and changing their farming practices.

It is also important to note that significant numbers of those affected by these challenges report that they are not taking any action in response. This is most particularly the case with flooding, where a quarter of households affected (25%) report taking no action. This may well be because they feel powerless to do anything.

How are you coping with the climatic / environmental challenges you face at household level?

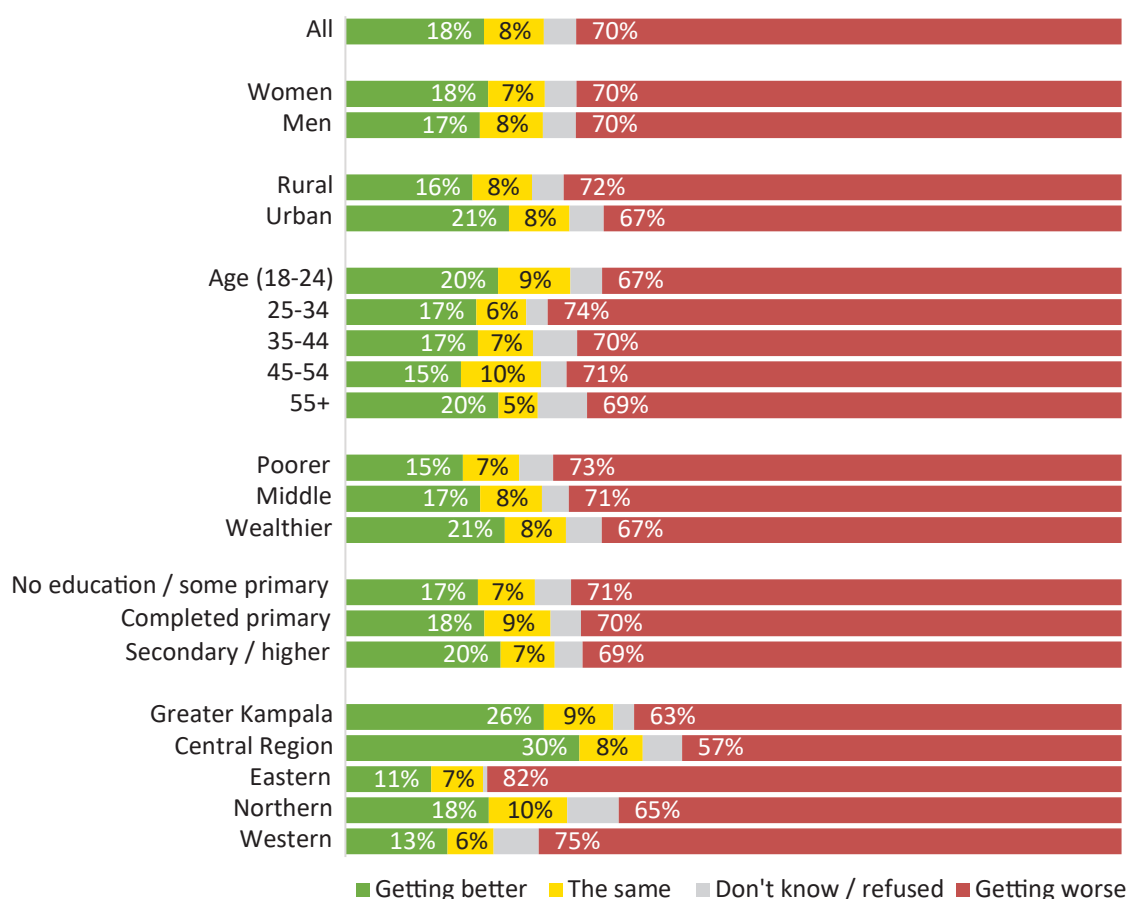


Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);

Insight 9: 7 out of 10 citizens say the climate overall is getting worse

Seven out of ten citizens (70%) say the climate is overall getting worse, while two out of ten (18%) say it is getting better. This is broadly consistent across different demographic groups, though residents of Greater Kampala and the Central Region are a little more positive than others about the direction of change.

Looking at overall climatic changes, would you say things are getting better, worse or remaining the same?



Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);

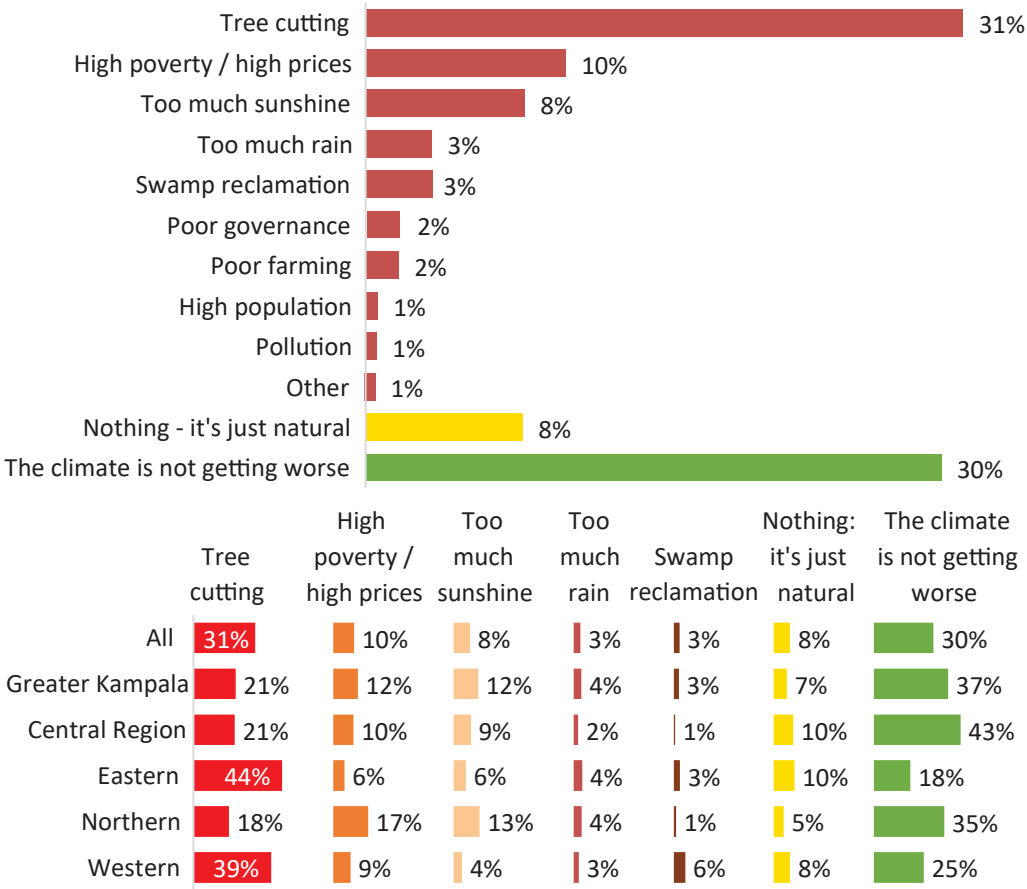
Base: all respondents; n=2,622

The main reasons given for saying the climate is getting worse is rising prices (20%), followed by increased drought (14%) and excessive rains (11%). The main reasons given for saying the climate is getting better is that we have got some rain (9%) (not shown in charts).

The main causes for climate and/or environmental change as cited by citizens are tree cutting (31%), economic difficulties (10%) and excessive sunshine (8%). Some (8%) say it is just a natural process.

Residents of Western and Eastern Uganda are more likely than others to point to tree cutting, while residents of Northern Uganda are more likely than others to point to high poverty and to excessive sunshine.

What is causing the environment / climate to get worse?



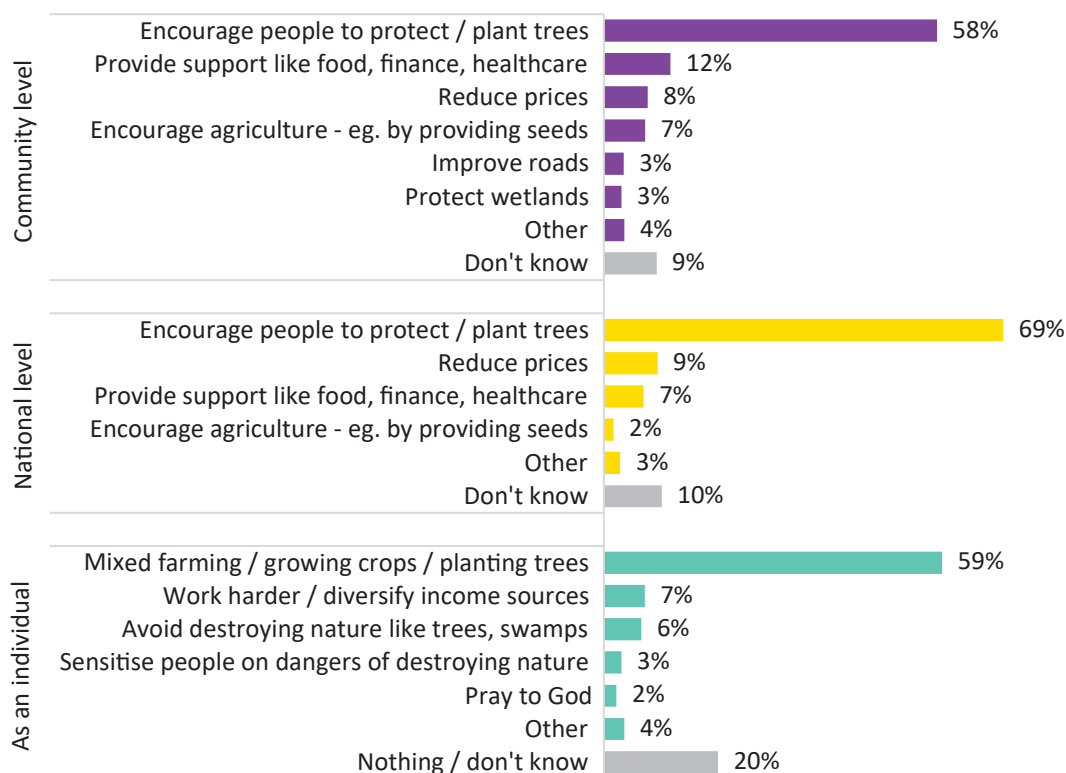
Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);
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Insight 10: Citizens' main suggestion for reducing the effects of climate and/or environmental change is tree planting

Tree planting is citizens' main suggestion both for government action and for steps that can be taken as individuals to reduce the effects of climate and/or environmental change⁵. Six out of ten (58%) say the government should be planting trees and/or encouraging people to do so at community level, while seven out of ten (69%) say the same for government action at national level, and six out of ten (59%) say individuals can plant trees and/or practice mixed farming.

Other actions for both government and individuals lag well behind this suggestion. A significant number say they don't know what should be done, particularly by individuals (20%).

What should the government do at community / national level to reduce the effects of climate / environmental change? And what can you do as an individual?



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Base: all respondents; n=2,622

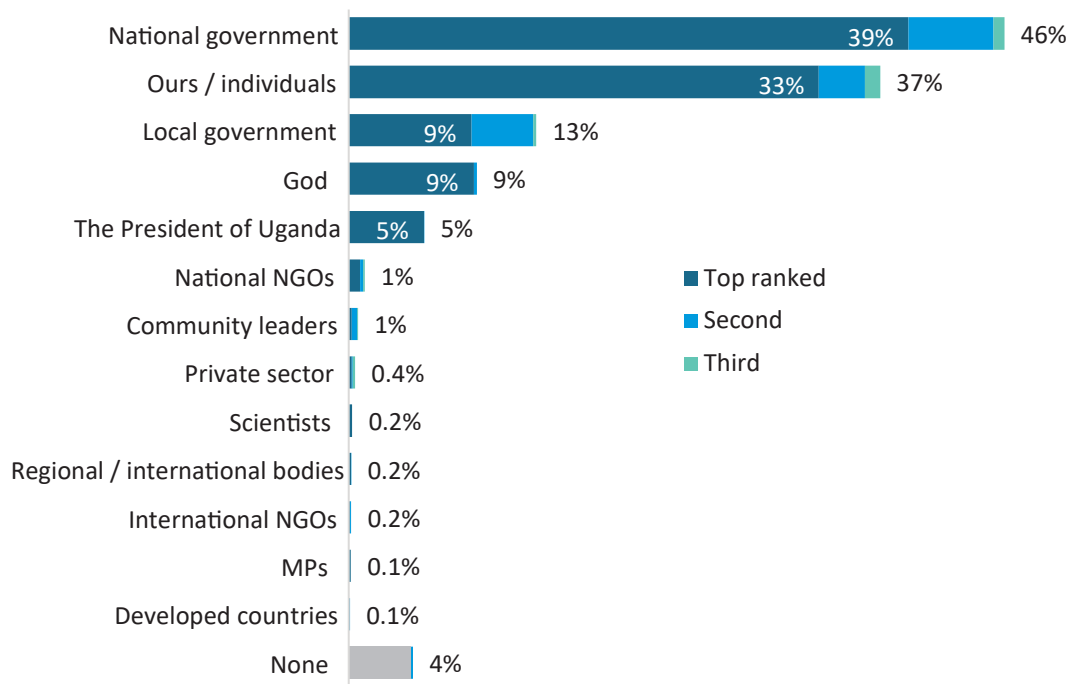
5 The presence of trees can have a significant local effect on rainfall patterns, as well as on controlling soil erosion, flooding and landslides. Trees also play a vitally important role in removing carbon dioxide from the earth's atmosphere, thus helping to combat the main cause of climate change. However, it should be noted that the scale of the current crisis facing the global climate means that tree planting will be far from sufficient to prevent harmful warming.

Insight 11: Citizens see addressing climate change in Uganda as a responsibility of both the national government and citizens

Five out of ten citizens (46%) say the national government should be responsible for addressing climate change challenges in Uganda, while four out of ten (37%) say individuals should be responsible for this. Smaller numbers point to either local government (13%), God (9%) or the President of Uganda (5%).

Very few suggest that the responsibility should lie with either NGOs (1%), community leaders (1%), the private sector (0.4%), regional and international bodies (0.2%), MPs (0.1%) or developed countries (0.1%).

Which top three institutions / actors, in order of importance, do you think are responsible for solving the climate change problem in Uganda?



Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);
Base: all respondents; n=2,622

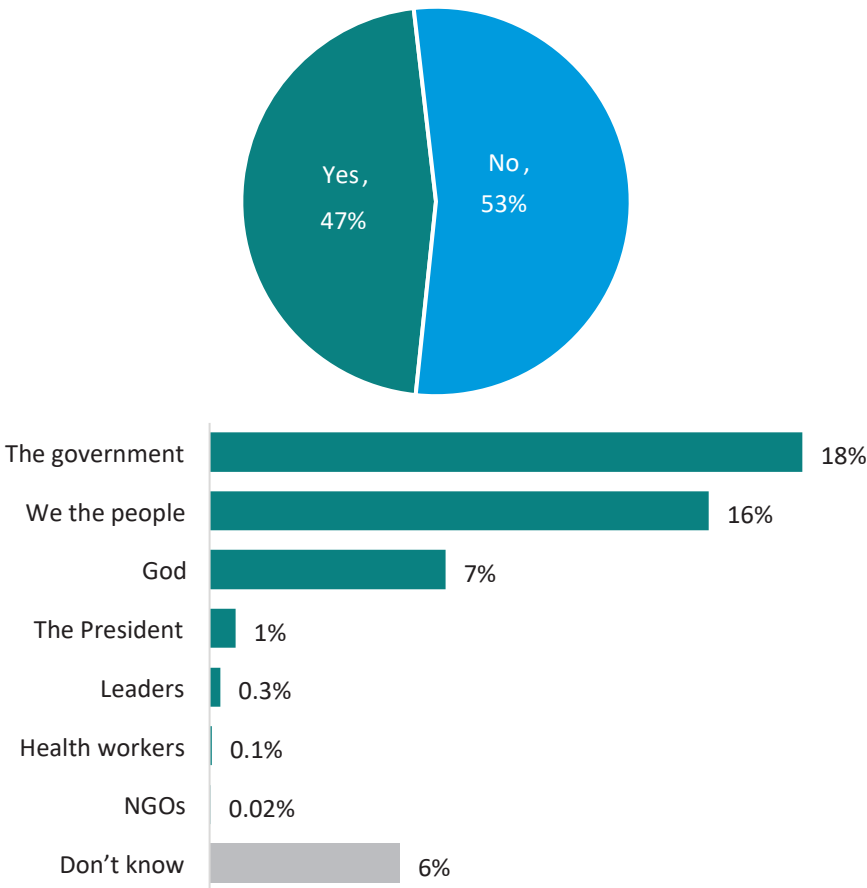
These responses are broadly consistent across different demographic groups, though men, younger citizens and those with higher levels of education are more likely than others to call for citizens to take responsibility (not shown in charts).

Insight 12: Citizens are evenly divided on whether or not climate change needs to be stopped

Just under half of citizens (47%) say climate change needs to be stopped, while just over half (53%) say this is unnecessary.

As to who should be responsible for stopping climate change, citizens are again split between placing the responsibility on the government and on citizens, with a significant minority also hoping that God will do this.

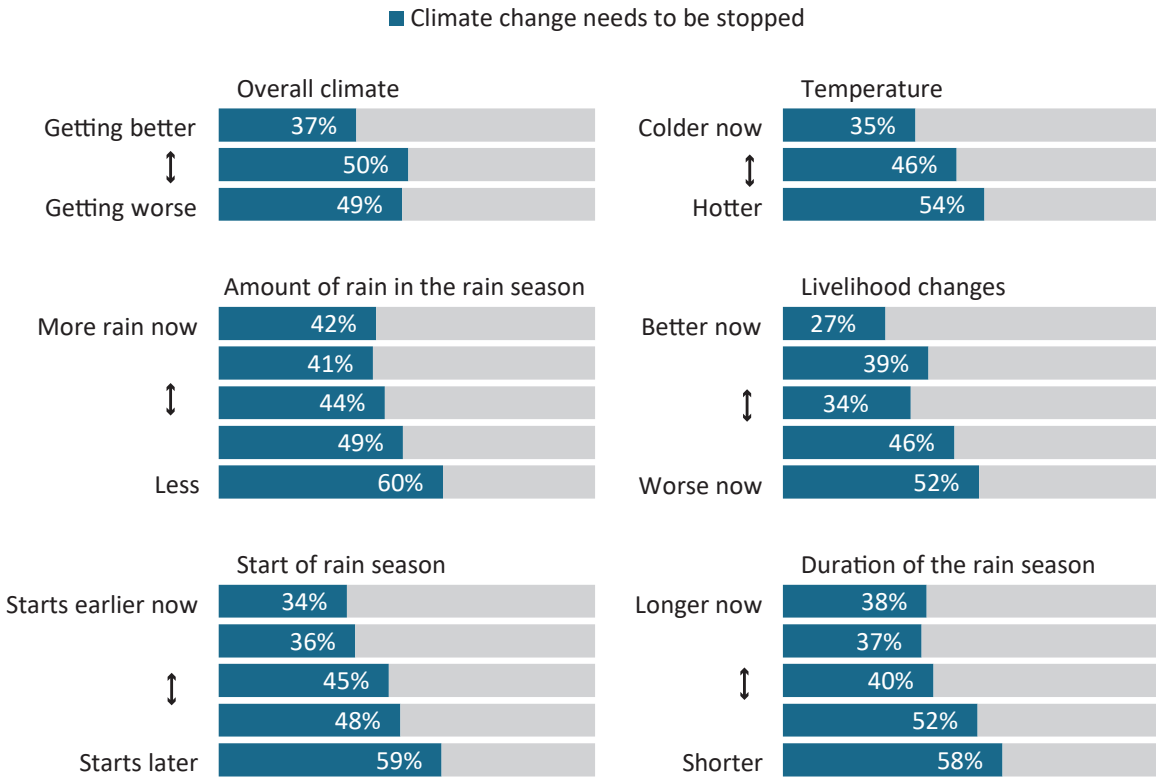
Do you think climate change needs to be stopped? If so, by who?



Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);
Base: all respondents; n=2,622

Citizens who have personally observed negative changes⁶ in the climate (and their associated livelihoods) are more likely to say that climate change needs to be stopped than those who have not observed any change or who have experienced positive change⁷. This finding is consistent across citizens' experiences of the climate overall, temperatures, amount of rain, start and duration of the rain season and overall livelihoods.

Percentage who think climate change needs to be stopped by perceived experience of a changing climate:



Source: *Sauti za Wananchi* mobile phone panel survey round 3 (Sep-Oct 2022);
Base: all respondents; n=2,622

6 This assumes that less rain, higher temperatures, later starts to the rain season and shorter rain seasons are all negative rather than positive.

7 This should be interpreted with caution. We cannot, for example, conclude that citizens' experience of a changing climate is causing them to say climate change needs to be stopped. Instead, we can conclude that perceptions of negative change and desire to prevent further change are associated.

3. Conclusions

This brief presents data on perhaps the most significant global issue of our times: the climate crisis. It does not present data on how much carbon dioxide has been released into the earth's atmosphere, nor on the models used by climate scientists to anticipate the effects on our weather, nor indeed on the (lack of) money provided by the wealthier nations whose actions have created the problem to assist the poorer countries who are expected to bear the heaviest burden as a result. However, it does present a new and vitally important perspective on the situation: the experiences and opinions of Ugandan citizens. This is the view from the frontline of our planet's emergency. These are voices that must be heard.


We can break down the findings into three main areas: citizens' understanding of climate change, their experience of its effects, and their ideas on how it can be addressed.

Let us look first at citizens' understanding of climate change. On this, the picture painted by this data is one of a disappointing but unsurprising lack of understanding. We should not be surprised that citizens understand climate change as being almost exclusively about changing weather patterns and forests, with almost no mention of carbon dioxide or other greenhouse gases. After all, the damaging release of carbon into the atmosphere was not done by Ugandan citizens and climate science is a complex matter understood properly by only a small number. Nevertheless, it is far from ideal that Ugandans' understanding of the topic appears to be so low.

On the specific issue of trees and forests – the loss of which is blamed by citizens for climate change, and the recovery of which is presented as the most promising solution – there is some overlap between citizens' perspectives and the best available science. The loss of tree cover has two climate-related effects: a local effect on rainfall, soil erosion, flooding, etc, and a global effect on atmospheric carbon dioxide levels. However, even here we must be sceptical: the scale of the coming changes to our climate is beyond anything that efforts to increase tree cover can hope to cope with. Protecting and planting trees is better than not doing so, but it is a long way short of being a solution to the problems we face.

Which brings us to the second main topic of this brief: citizens' ideas for what should be done to address climate change. On this topic, the effects of a limited understanding of climate change are clear. Citizens cite (almost exclusively) tree planting as the solution, and they point to the Ugandan government (and citizens) as those responsible for finding and delivering effective responses. On both points, these ideas are a long way from being sufficient. Only a massive global effort to reduce carbon emissions – well above that which is already underway – can hope to slow, halt and then reverse global warming. And only a massive global effort – again well above what we have seen thus far – can help poorer countries to adapt and cope.

Finally, perhaps the most important theme of this brief is citizens' experiences of the effects of a changing climate. And here we see clear signs that citizens are already observing some changes in both temperatures and rainfall. The changes are complex and slow, and the weather



has always seen a lot of variation from place to place and year to year. As such, matching citizens' experiences with reported long-term changes in weather patterns and with the effects of climate change is far from straightforward. Nevertheless, citizens report that temperatures have risen in recent years, that the rainy season has been starting later and lasting less time than before. On temperature in particular, this is entirely consistent with climate monitoring reports.

What is perhaps more significant, however, is the knock-on effects of changing weather patterns on people's livelihoods. And here the picture is clear: citizens report declining yields, increasing prices for food, and food shortages. Other factors surely contribute something to this as well, including the ongoing effects of the Coronavirus pandemic and the war in Ukraine on global food and fuel prices. But it is clear from the data in this brief that citizens are already seeing the effects of climate change in the local weather and on their agricultural productivity.

As the consequences of global warming become more severe in the coming years, we should expect much more of this: hotter temperatures, less predictable rain, more extreme weather. And we should expect the impacts on lives and livelihoods to become more serious.

All of which means we need a much more substantial global response than we have seen up to now. We need to find ways to dramatically cut carbon emissions as quickly as possible, to channel support to those who need it to adapt to the effects of climate change, and, yes, to increase forest cover. Both globally and locally, we urgently need to find ways to live in harmony with the natural world. Our lives and future depend on it.

