



Report:
Baseline User Needs survey –
Katlehong, South Africa
March 2024

REPORT

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Summary

This report presents findings from 104 responses to a survey conducted in Katlehong in March 2024. This survey provides insights into use and needs for weather information, to inform the co-production process. It also acts as a baseline of current weather information use against which change will be monitored at the end of the project. Sampling was geographical targeting people who have lived for over one year in Katlehong with a purposive intention to include women and people with disabilities.

Katlehong has a largely youthful population and comprises mainly long-term residents with good levels of formal education (the majority of the sample having completed secondary education). A small proportion (10.6%) disclosed having a disability. Cell phone ownership is widespread, and the majority of people have smart phones, which is similar regardless of gender or disability.

In terms of livelihoods, these are varied. The informal sector comprises approximately one fifth of the sample, with smaller proportions in waged employment or reliant on government or NGO grants. Interestingly a greater proportion of women are working in the informal sector or waged employment relative to men, whilst more men are unemployed. A greater proportion of women are reliant on government or NGO grants.

Heat/heatwaves and thunderstorms are regular occurrences in Katlehong, occurring more than once per year or more, whereas droughts and strong winds are less frequent. Overall people with disabilities tend to perceive weather events to occur more frequently than people without disabilities. The same two hazards also have the largest impacts, which is common regardless of gender or disability. Heat/heatwaves have particular impacts on health and capacity to work, whilst thunderstorms affect health, capacity to work, household earnings and assets.

Weather forecasts and early warnings are regularly accessed, at least once a day by three quarters of participants. More men than women, and more people with disabilities than without are not accessing forecasts at all. Those that are not accessing forecasts cite lack of awareness or access, including to communication media. When people do access forecasts, the majority of people claim to take notice of them and act upon them. There are few differences between men and women, but people with disabilities are less likely to act upon forecasts or early warnings. Reasons for not acting on forecasts relate to not understanding information, not believing it, or not knowing what to do with it. That said, there is significant interest in nowcasts with just under 90% saying they would be possibly or very useful.

The extent of support for disaster management is also variable and, despite fairly widespread knowledge of the public sector agency, and this being the main source of support, around one fifth of participants were unable to name any organisations that act to manage disaster risk.

1. Introduction

Weather and Climate Information Services (WISER) Early Warnings for Southern Africa (EWSA) is a project implemented by the University of Leeds in conjunction with South African Weather Services, Kulima Integrated Development Solutions, World Meteorological Organisation, Finnish Meteorological Institute, UK Centre for Ecology and Hydrology, Tyrsky Consulting, Mozambique's National Institute of Meteorology and Zambia Meteorological Department from March 2023-June 2025. The project will work with disaster risk management agencies and non-governmental organisations, focusing on women and people with disabilities, to reduce disaster risk through the co-production of new weather information services and early warnings.

To generate user-focused early warning alerts for severe thunderstorms that are understood and can be acted upon by urban communities, including women and people with disabilities, the project is working with urban communities in Zambia, Mozambique and South Africa. In Mozambique the urban communities are located in Katlehong in Ekurhuleni, to the east of Johannesburg. This report presents findings of a survey conducted in Katlehong in March 2024. This survey provides insights into use and needs for weather information, to inform the co-production process. It also acts as a baseline of current weather information use against which change will be monitored at the end of the project.

2. Setting in Katlehong

Katlehong covers an area of 55.36km² and is situated around 30km to the east of Johannesburg and south of Germiston. It now falls within the neighbouring City of Ekurhuleni metropolitan municipality. Settlement in this area dates to the 1940s, when in-migration occurred to the Gauteng province to provide labour in the mines. It then grew in the Apartheid years as a township because of the proximity to major cities. Together with the neighbouring townships of Thokoza and Vosloorus, Katlehong makes up part of Kathorus, which is the second biggest township after Soweto. The population in the 2011 census was just over 400,000, out of 3 million across the whole of Ekurhuleni.

Katlehonga's most significant challenges relate to poor service delivery and overcrowding. The area has some marshlands, and drainage provision is inadequate (Figure 1). As in the rest of South Africa, unemployment remains high.



Figure 1: Flash flooding in a Katlehong street due to poor drainage

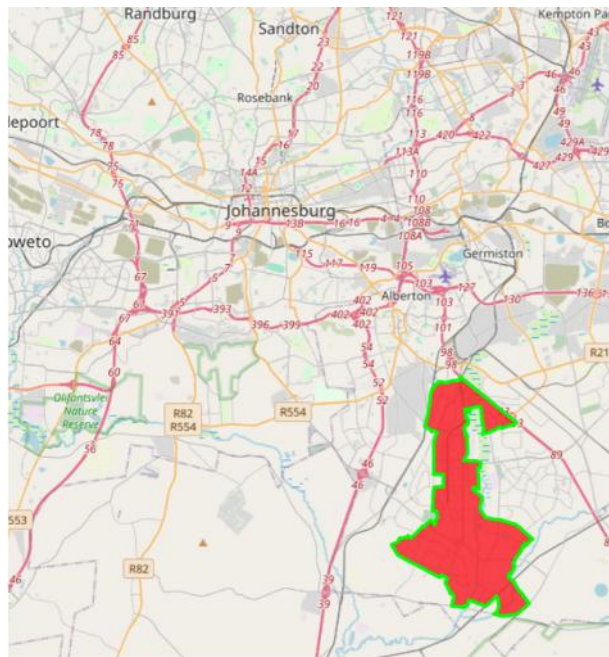


Figure 2: Katlehong's location (Source: https://www.citypopulation.de/en/southafrica/ekurhuleni/797031__katlehong/)

3. Method

The baseline user needs survey was collaboratively developed by the project team. It comprises sections on demographics and livelihoods, experience of extreme events, and forecast and early warning access and use with primarily closed answer questions. The sampling strategy was random in Katlehong but with an intention to ensure inclusion of women and people with disability, with a target of 100 participants. Eligibility to participate was based on residence or regular work in Katlehong for at least one year (to have experienced the weather conditions in the settlement) and consent.

Ten enumerators were recruited through local NGOs, the local councillor and the school, all of whom live in Katlehong and thus are familiar with the area. They were trained in the content of the survey and the process of electronic data collection through Kobo Toolbox, as was used here. The survey was conducted from 20-21st March 2024 (Figure 2).

A total of 114 surveys were collected. Quality checks identified three entries with no line or very limited data; as such, these were excluded from the analysis. Another seven entries were discounted from this analysis as these participants had lived in Katlehong for under a year. This resulted in a total of 104 entries which were complete and useable for the analysis. Of these, three individuals did not disclose their gender and thus these have been excluded from disaggregated analysis.



Figure 2: Male enumerator collects data with a Katlehong resident

4. Results

4.1 Demographics

4.1.1 Gender and age distribution

The majority of participants interviewed were female, totalling 57 while there were 44 male participants (Figure 3). The population is largely youthful, with 18-30, 31-40 and 41-50 making up the biggest categories. The lowest represented age category is over 71. Men are more prevalent in the 18-30 and 51-60 category, with women more prevalent in the 31-40 and 41-50 category.

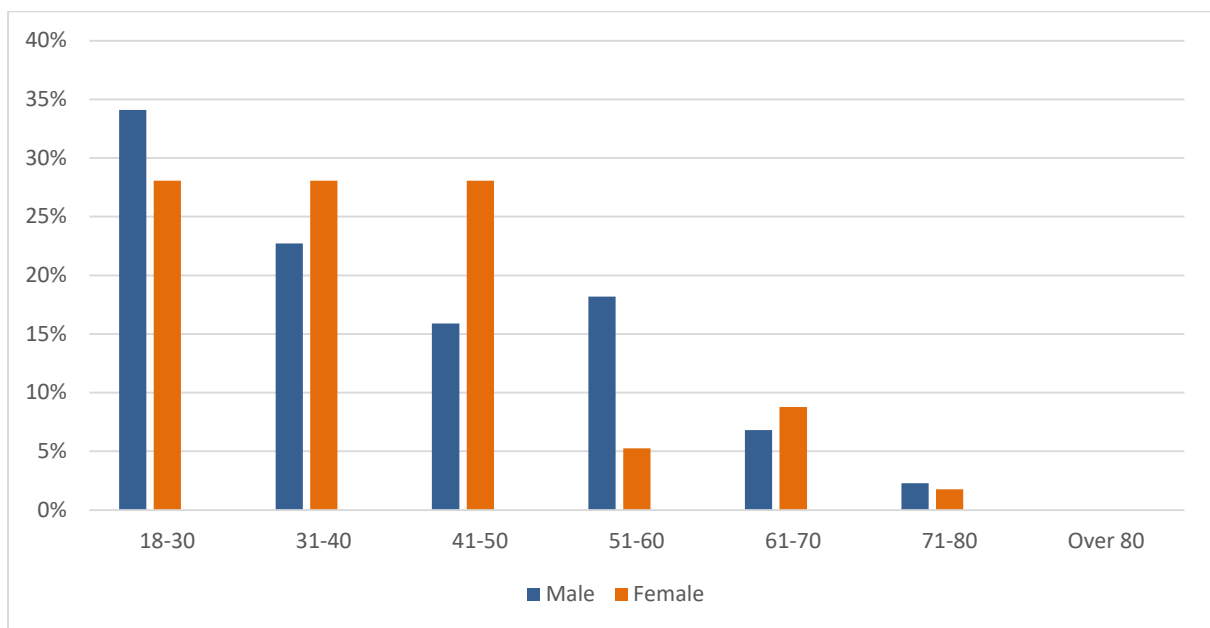


Figure 3: Age and gender distribution among participants

4.1.2 Residence Status

The majority of participants (68%) are long-term residents who have lived in Katlehong for more than ten years (Figure 4).

Katlehong township comprises several areas. The distribution of participants across these Katlehong areas is outlined in

Table 1. It is important to highlight that two participants reside in suburbs outside of Katlehong but work within the area. Despite living outside the immediate vicinity, they remain active members of the community. Therefore, their responses were considered essential and not excluded from the data analysis. These participants reside in neighbouring areas, namely Leondale, Germiston and Hillbrow, Johannesburg.

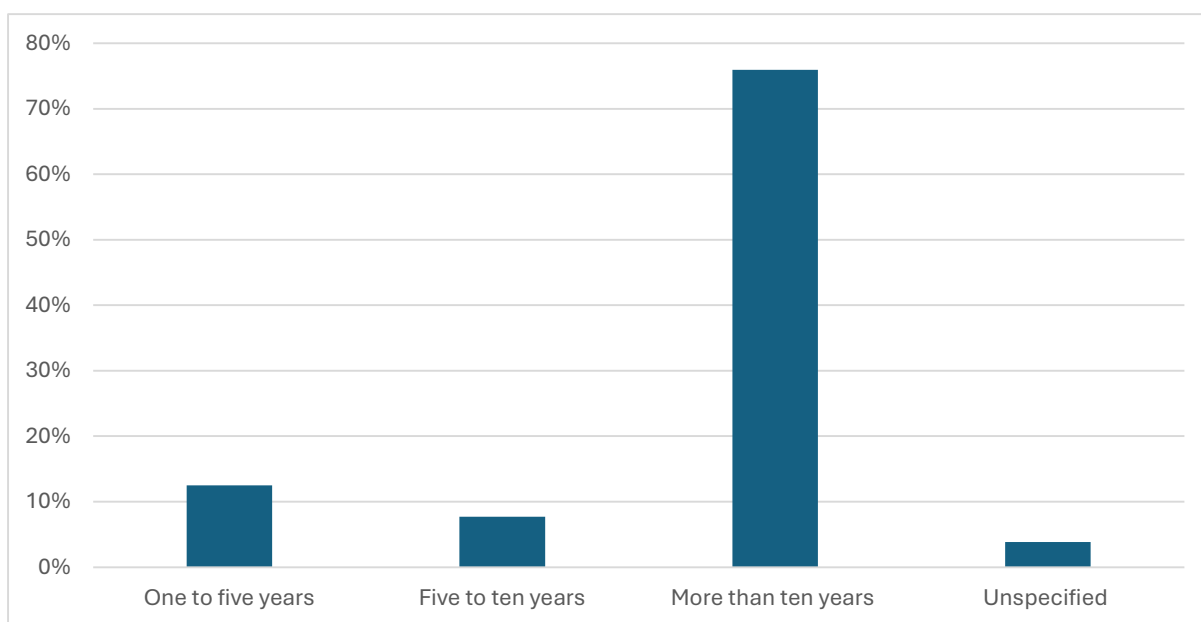


Figure 4: Residency duration distribution among interviewed Katlehong residents

Table 1: Number and percentage of participants by location within Katlehong

Location	Total number of participants
Khumalo, Katlehong	6
Sali, Katlehong	12
Zuma, Katlehong	27
Radebe, Katlehong	9
Mavimbela, Katlehong	26
Ndlanzi, Katlehong	3
Siphamandla, Katlehong	1
Mnisi, Katlehong	2
Sakhile Katlehong	2
Sluma, Katlehong	1
Twala, Katlehong	1
Phadima, Katlehong	1
Katlehong, Katlehong	2
Palm Ridge, Katlehong	1
Mgadi, Katlehong	1
Moseleke, Katlehong	1
Moleleki, Katlehong	1
Monise, Katlehong	1
Unspecified	4

4.1.4 Language

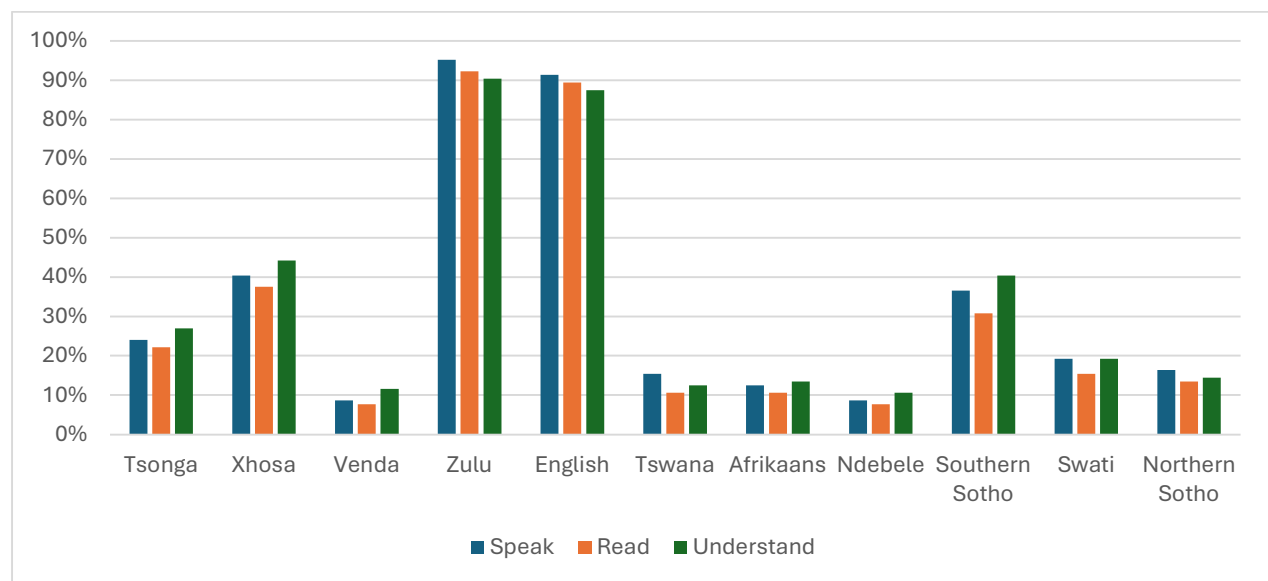


Figure 5: Language spoken/read/understood among participants¹

There is significant language diversity among the participants, with all of South Africa's 11 official languages represented. Zulu and English are spoken, read and understood by the vast majority of participants – at least 90% in the case of Zulu, and at least 88% in the case of English. Thus clearly any communication of weather forecasts and early warnings in these languages would be widely understood.

4.1.4 Education

Over 97% of all participants in the study have some level of formal education, with the majority of participants' (60%) highest level of education being at a secondary level (Figure 6). When disaggregated by gender, 2.3% of males and 1.8% of females have no formal education. The highest level of education attained by the majority of both males (54.5%) and females (61.4%) is secondary level. In the tertiary education category, a greater proportion of females than males have completed this level (35.1% compared to 27.3%). There are no males with unspecified educational backgrounds, whereas one female falls into this category.

¹ Not all respondents provided answers to all language questions therefore the total number of responses/percentages per subcategory will vary. These non-responses did not result in a significant statistical (5-10%) variance.

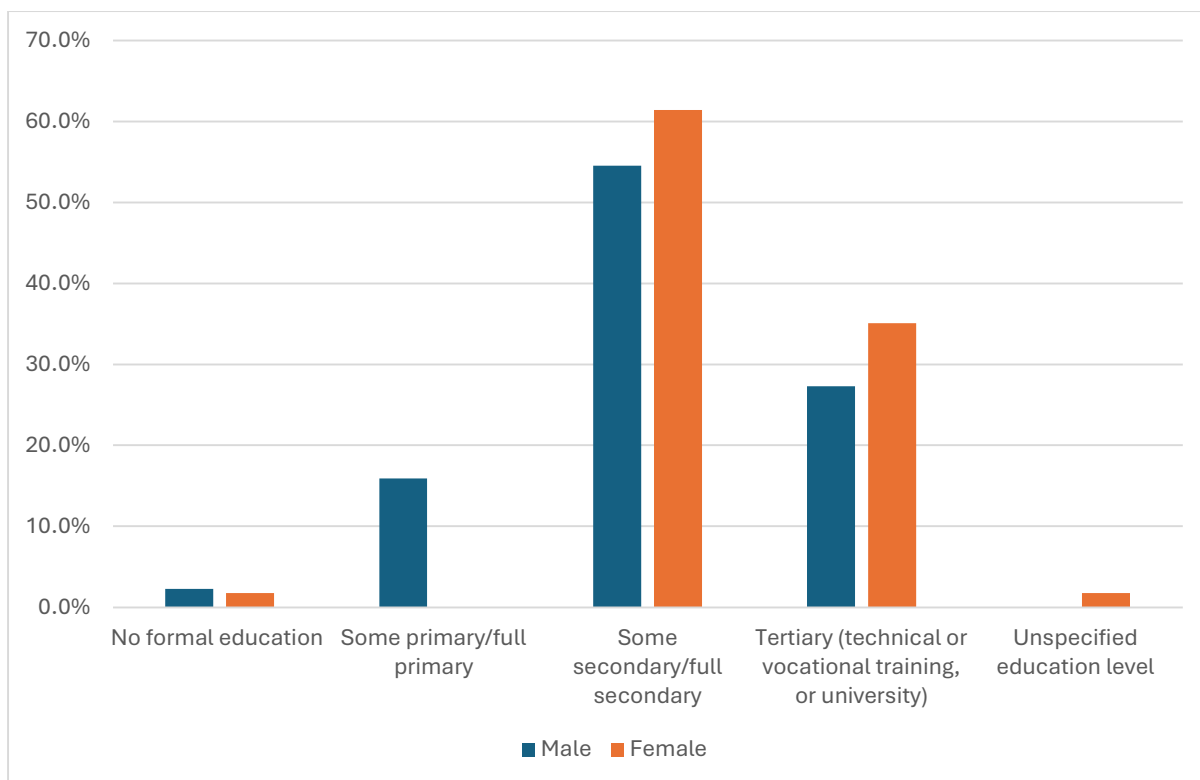


Figure 6: Educational background disaggregated by gender

4.1.5 Disability status

Given the focus of WISER EWSA on including women and people with disabilities, it was important to disaggregate the sample on the basis of (dis)ability. Definitions of disability differ and can be nuanced. The UN Convention on the Rights of Persons with Disabilities states that persons with disabilities include “those who have long-term physical, mental, intellectual or sensory impairments which, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others”. The majority of participants (89.4%) reported having no disabilities, while 10.6% disclosed that they have a disability (Figure 7). Among those with disabilities, a similar proportion of females and males reported having disabilities (10.5% and 11.4%) and not having disabilities (88.6% and 89.5%).

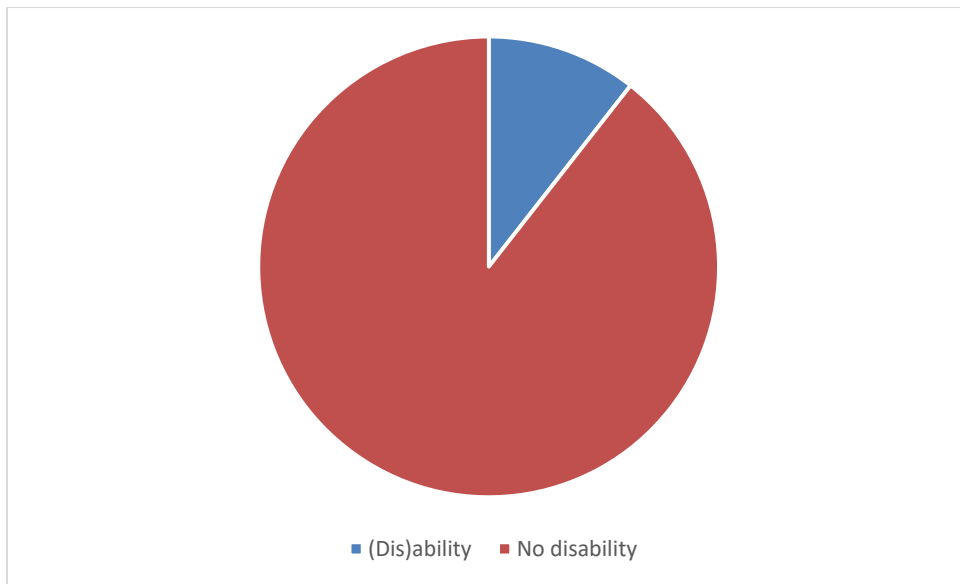


Figure 7: Disability status of participants

The types of disabilities that are experienced among participants varies. A third (36.4%) of these participants reported having a physical disability, with an equal percentage indicating a visual impairment. These represented the two of the most prevalent disability types among the group. Among people with disabilities, 9.1% are affected by a hearing impairment. Two participants (18.2%) disclosed 'other' disabilities but did not elaborate further on the nature of these disabilities.

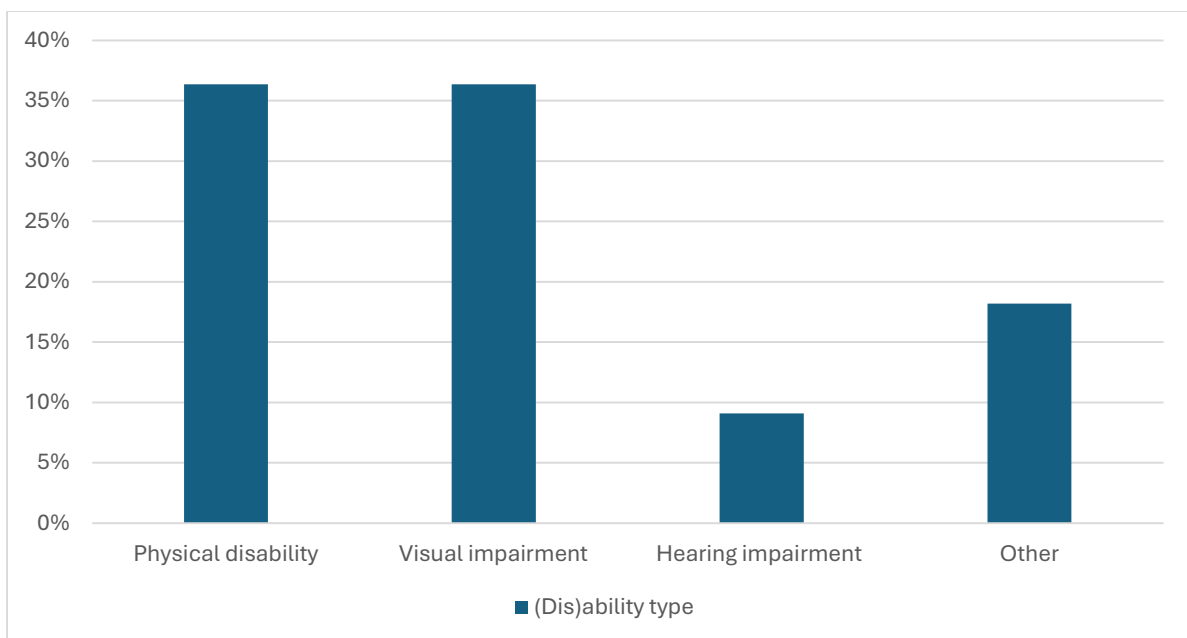


Figure 8: Type of disability among participants with disabilities

When disaggregating disability data by gender, a noticeably higher proportion of males (60.0%) report physical disability, in comparison to females (16.7%). Visual impairment is slightly more prevalent

among males (40.0%) than females (33.3%). A hearing impairment is reported by 16.7% of the females with disabilities, and women also reported the disabilities falling in the category of 'other'.

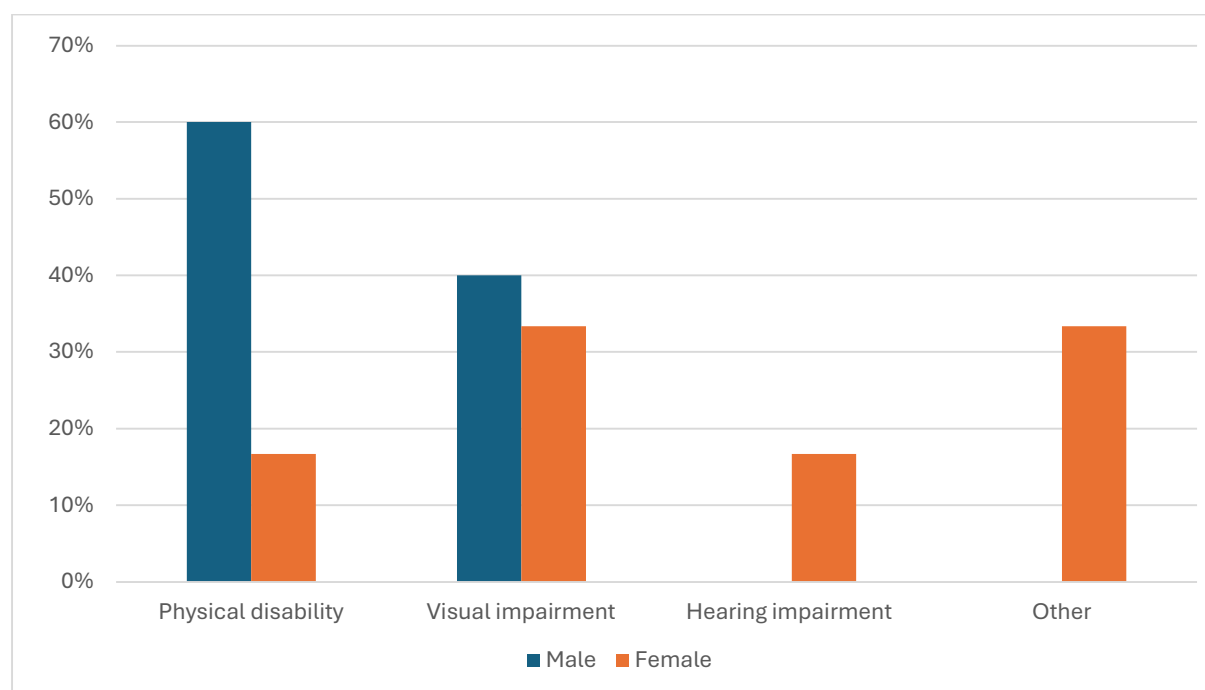


Figure 9: Disability type disaggregated by gender

4.1.6 Livelihoods status

Participants engage in a range of livelihood activities (Figure 10). The biggest proportion of both men and women is in the informal sector, accounting for 17% of males and 20% of females. Government or NGO grants and waged employment in the formal sector account for similar proportions: with 7% of males and 13% of females reliant on government or NGO grants, and 10% of males and 14% of females engaged in waged employment in the formal sector. Less than 10% of males and females are unemployed with no alternative source of income (i.e. no mention of government or NGO grants or informal sector), whilst two women are in full time education, and one woman is reliant on remittances. Interestingly a greater proportion of women are working in the informal sector or waged employment relative to men, whilst more men are unemployed. A greater proportion of women are reliant on government or NGO grants.

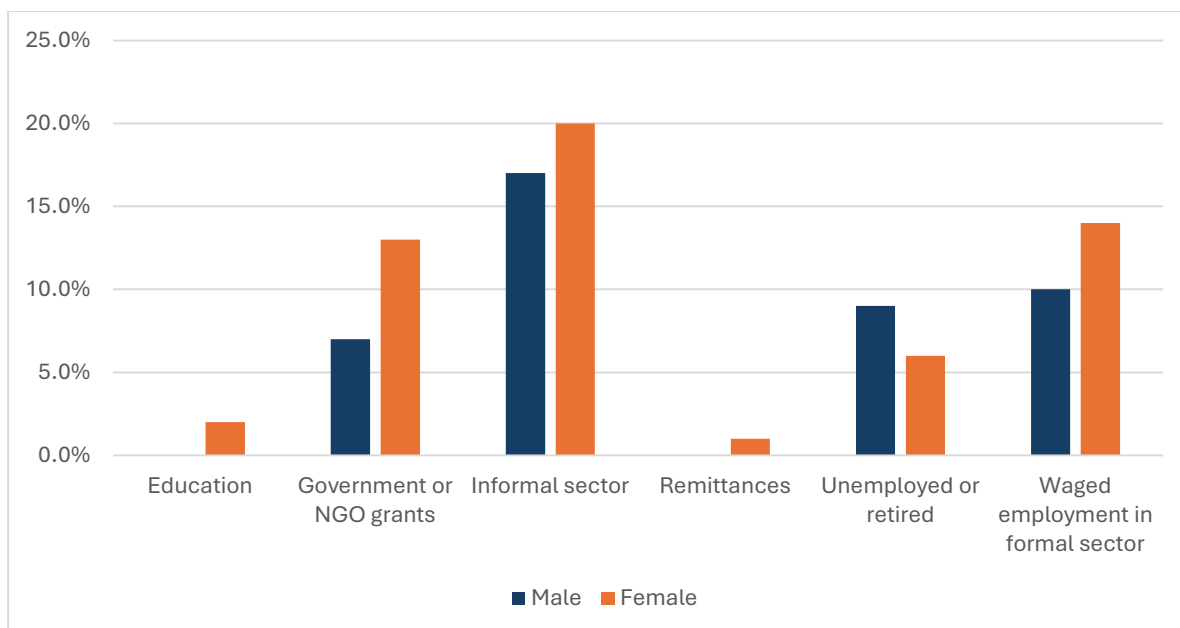


Figure 10: Livelihoods disaggregated by gender

4.1. 8 Cell phone ownership and access

Cell phone ownership is common, with 95.2% owning a cell phone, of which 82.7% state that their cell phone has smart phone capabilities (Figure 11). Four participants (3.8%) have access to a cell phone through a household member, with all of these being a smart phone device. Only one participant (1%) does not own or have access to a cell phone.

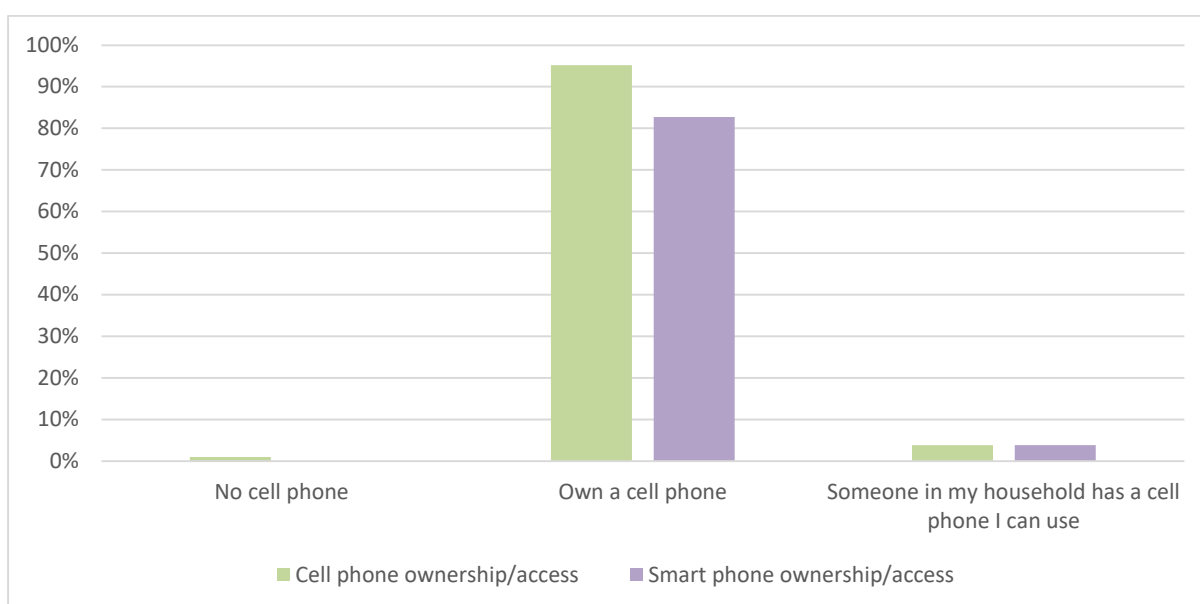


Figure 11: Cell phone and smartphone access and ownership among participants

In disaggregating cell phone ownership by gender, there are negligible differences between men and women (Figure 12). Among male participants, a significant majority (97.7%) reported personally owning a cell phone, while a smaller percentage (2.3%) indicated relying on a household member's phone for use. Among female participants, 93.0% reported personal ownership of a cell phone, with 5.3% relying on a household member's device. Notably, the one person in the sample without a cell phone was a woman.

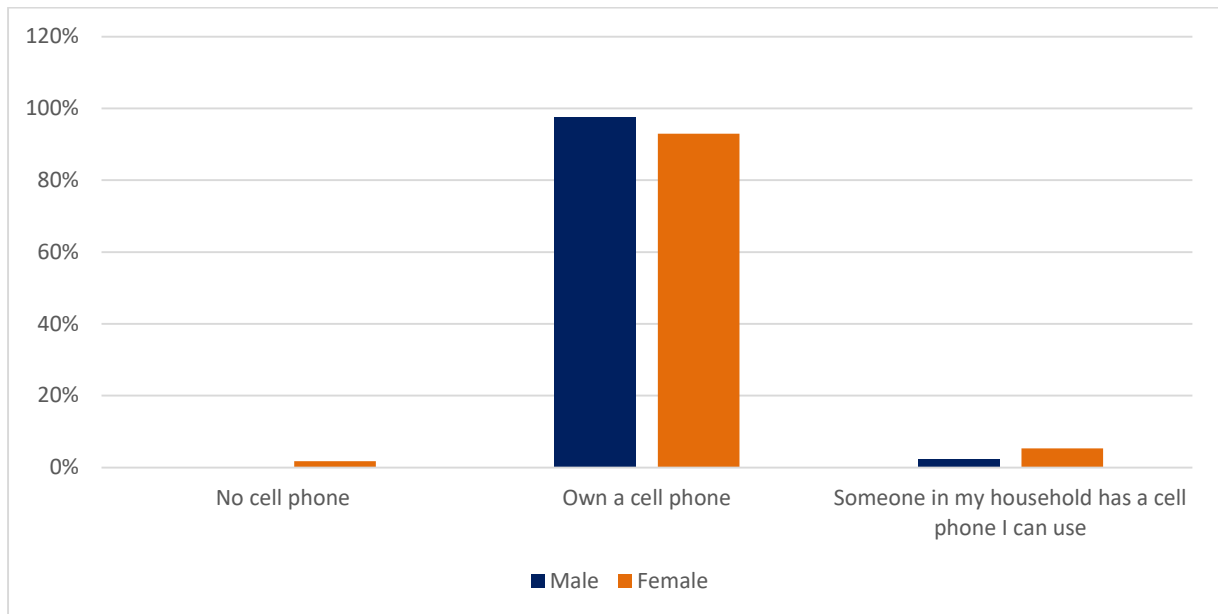


Figure 12: Cell phone ownership disaggregated by gender

In disaggregating cell phone ownership by disability, among participants without a disability, the majority (96.8%) reported personal ownership of a cell phone, while a smaller proportion (3.2%) relied on a household member's phone for use (Figure 13). Conversely, among people with disabilities, a lower percentage (81.8%) owned a cell phone personally, with a higher reliance (9.1%) on household members' devices for communication. Notably, 9.1% of participants with a disability reported not owning a cell phone, compared to none among those without a disability.

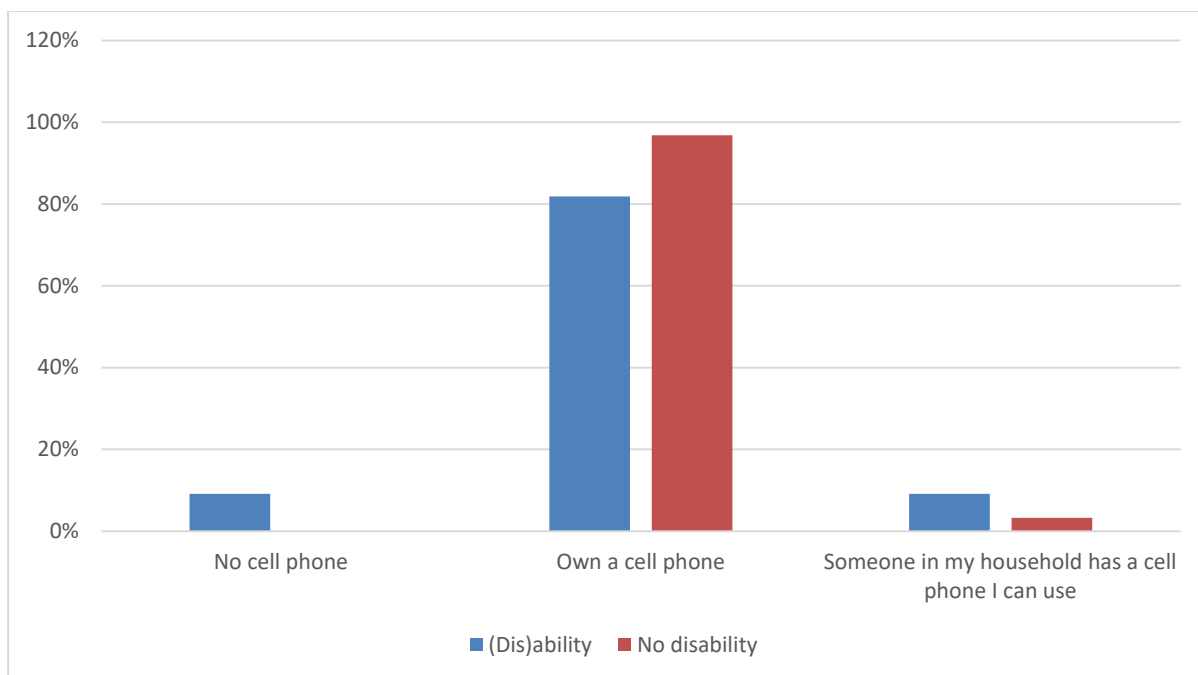


Figure 13: Cell phone ownership disaggregated by disability

4.2 Experience of extreme events

4.2.1 Perceived extreme event occurrence

Heat/heatwaves and thunderstorms are regular occurrences in Katlehong, occurring more than once per year or more (Figure 14). In contrast, droughts were perceived as less frequent, with a high number of participants tending to experience them infrequently or rarely. Strong winds were also encountered to varying degrees of frequency. For heat/heatwaves, the majority of participants (94.2%) report experiencing heatwaves very often (more than once per year). An equal but much smaller percentage of participants (1.9%) experience heatwaves often or infrequently. Similarly high proportions of participants report experiencing thunderstorms very often (82.7%) report experiencing thunderstorms very often, with the second highest percentage (8.7%) experiencing them often. Much smaller numbers of participants (5.8%) stated that they experience thunderstorms infrequently, and even fewer (1.9%) said thunderstorms are a rare occurrence.

In comparison to experiences of heatwave and extreme thunderstorm events, the data shows a contrast for drought events. Only 5.8% experience droughts more than once a year (i.e. very often), while the highest (46.2%) proportion of participants encounter them once in a five-year period (i.e. infrequently). Strong winds are experienced with varying frequencies, with 38.5% encountering them more than once a year and 26.9% experiencing them once a year.

When looking at extreme event occurrence by gender, there are few differences (Figure 15). Both males and females perceive heatwaves as a highly frequent occurrence, with 93.2% of males and 96.5% of females reporting experiencing heatwaves very often. Similarly the majority of males (79.5%) and females (84.2%) experience thunderstorms very often. A small percentage of males (2.3%) and females (1.8%) encounter thunderstorms less than once every five years (i.e. rarely). Droughts are less

common for both genders, with 43.2% of males citing them as infrequent and 34.1% citing them as rare, whilst for females 43.2% cite that they occur infrequently and 34.1% cite that they occur rarely. Likewise for strong winds, the majority of both genders report encountering strong winds very often (males: 36.4%, females: 42.1%) or often (males: 29.5%, females: 24.6%), with relatively smaller percentages experiencing them rarely.

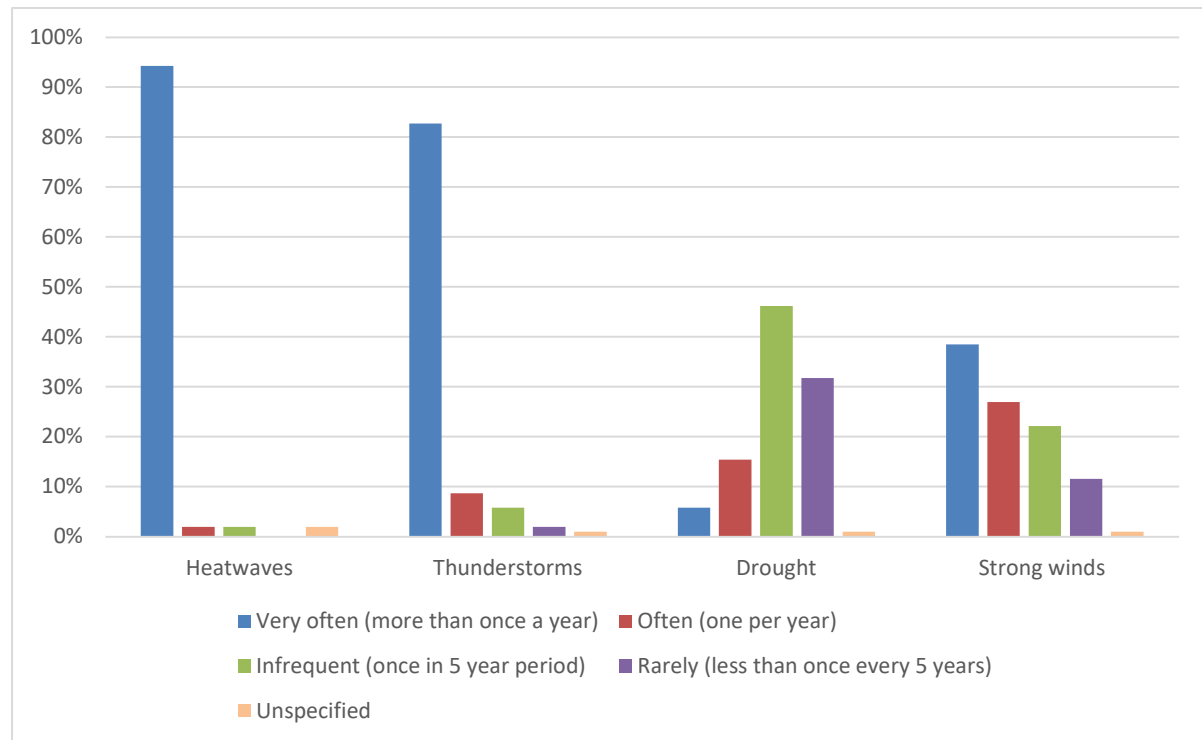


Figure 14: Perceived occurrence of weather events among all participants

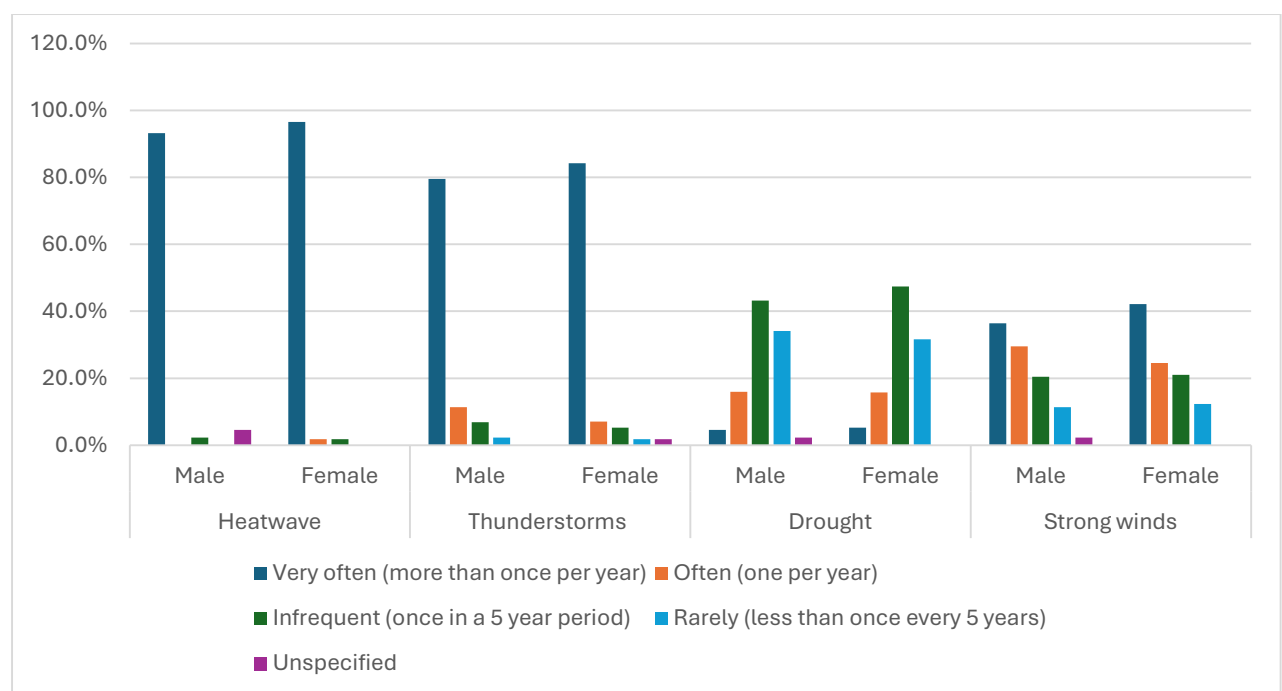


Figure 15: Perceived occurrence of weather events by gender

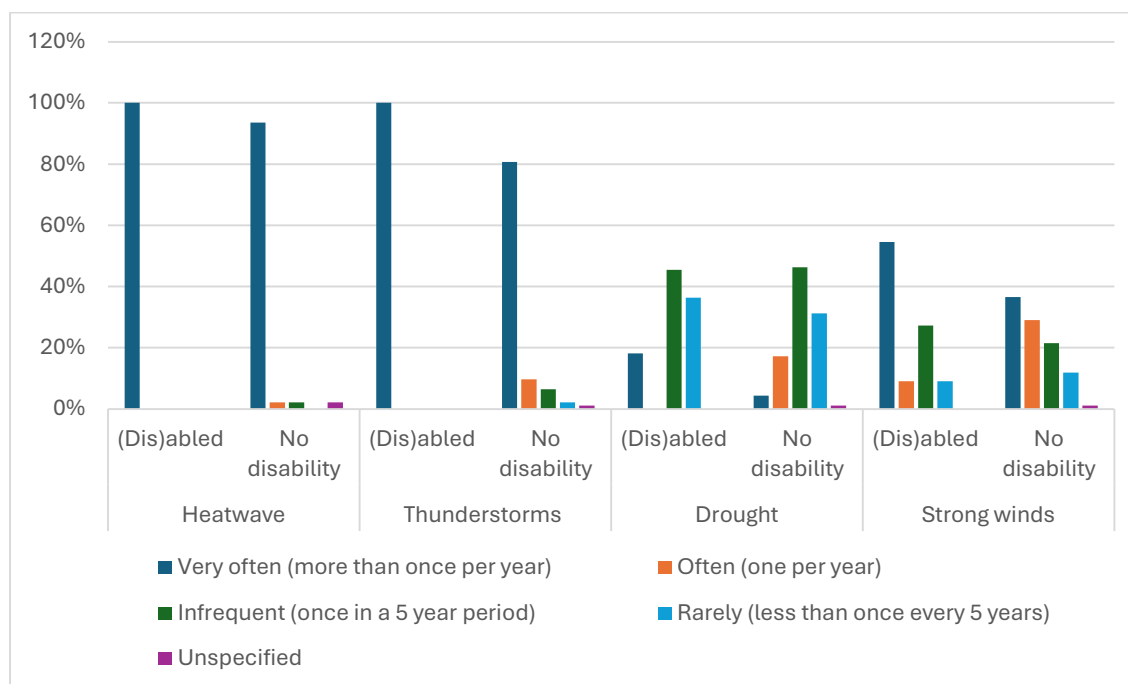


Figure 16: Perceived extreme event occurrence frequency by disability

When disaggregating perceived occurrence of weather events by disability, there are some small differences. People with disabilities tend to perceive heatwaves, thunderstorms, strong winds and drought as occurring more frequently compared to those without disabilities (Figure 16). In the case of heatwaves and thunderstorms, slightly higher proportions of people with disabilities perceive them as occurring very often, relative to those without (100% of people with disabilities compared with 93.5% of people without disabilities in the case of heatwaves, and 100% of people with disabilities compared with 80.6% of people without disabilities in the case of thunderstorms). Although there is much more variety in perception of frequency of experiencing strong winds, a higher proportion of people with disabilities perceive them to occur very often (54.5%) compared with people without disabilities (36.6%), with more people without disabilities reporting them as occurring often (29%) or infrequently (21.5%). Drought is perceived as less frequent across the board, but still a larger proportion of people with disabilities perceive it to occur very often (18.2%) compared with people with no disabilities (4.3%).

4.2.2 Ranking of extreme events by impact

Patterns for the impacts of extreme event (based on impact on individuals and their households over the past five years) mirror the occurrence (Figure 17Error! Reference source not found.). The majority of participants identified heatwaves as the most impactful event (48.1%), with thunderstorms most commonly ranked as the second choice (by 46.2% of participants). Strong winds were the most

predominantly ranked third choice, affecting 46.2% of participants. Drought was ranked as least impactful by the majority (58.7%) of participants.

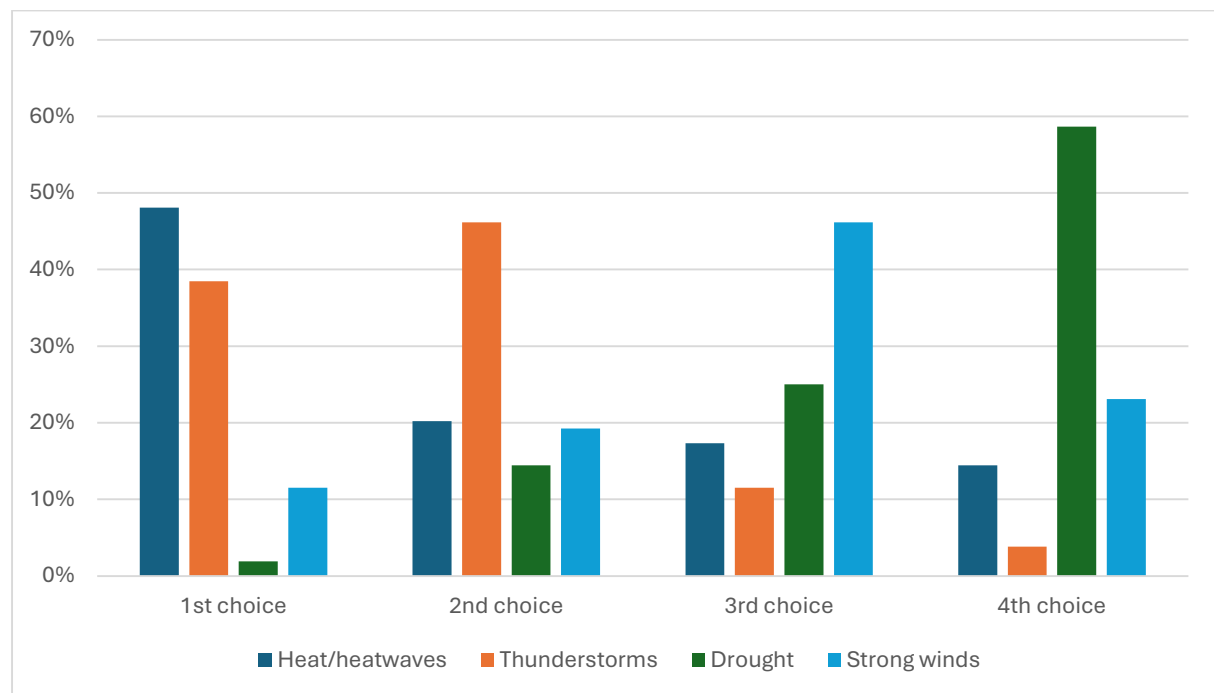


Figure 17: Ranking of extreme event according to negative impact to participant and their household over the last five years

A similar pattern on the impacts of extreme events occurs when the data is disaggregated by gender. Heatwaves are the first choice for both males and females, with thunderstorms ranked as either first or second in terms of most impactful (Figure 18). Droughts and strong winds are more likely to be the third or fourth ranked choice in terms of impact.

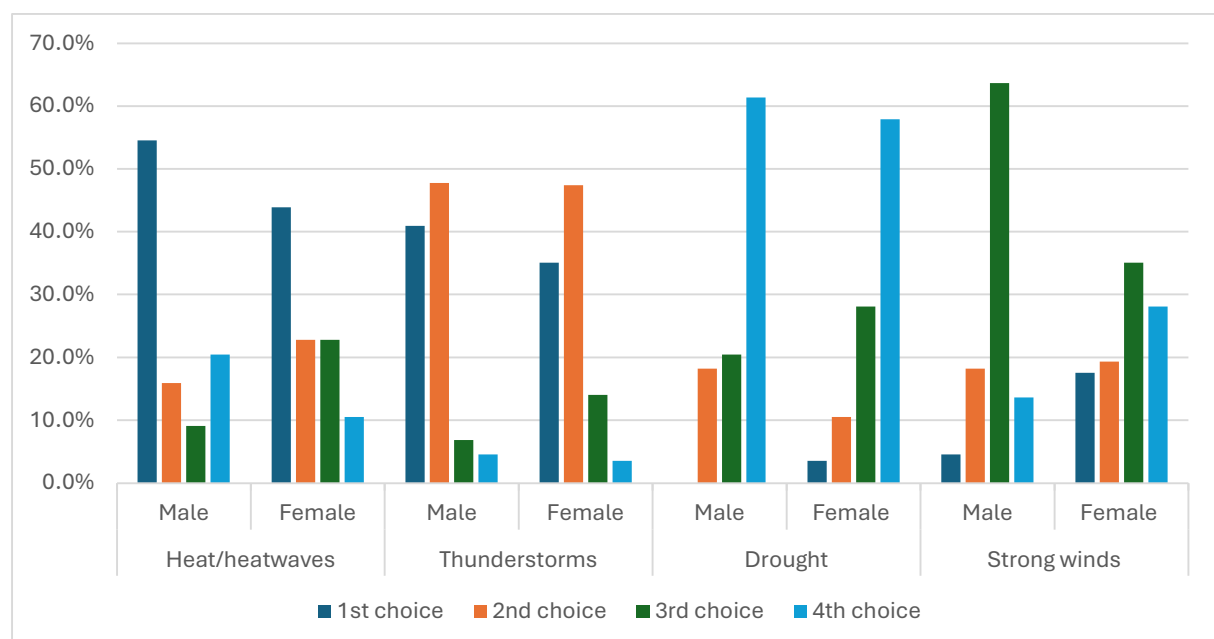


Figure 18: Ranking of extreme event according to negative impact to participant and their household over the last five years disaggregated by gender

When disaggregating impact by disability, the patterns are the same. Heat and heatwaves emerge as the top ranked impact for people with and without disabilities, followed by thunderstorms and strong winds (Figure 19). Drought is once again ranked as the least impactful weather event, although it is interesting to note that an equal percentage (36.4%) of people with and without disabilities ranked drought and strong winds as a third choice.

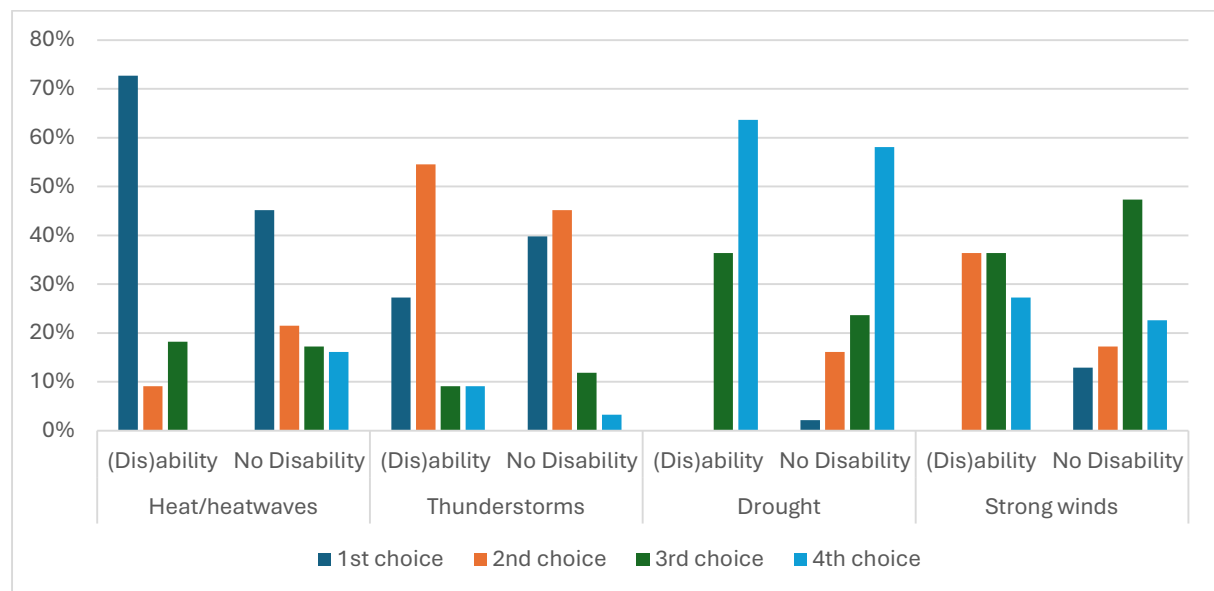


Figure 19: Ranking of extreme event according to negative impact to participant and their household over the last five years disaggregated by (dis)ability

4.2.3 Effects of extreme events

The findings, above, show that across the entire sample group, even when disaggregating for gender and disability, that the most commonly encountered and impactful extreme events are heat/heatwaves and thunderstorms (that may also bring high winds and flash floods). As such, the focus of this subsection will be the effects of these specific events on participants and their households (Figure 20). In addition to predetermined impact dimensions, the ‘other’ category gave an opportunity for participants to self-specify other impacts. In practice, the majority of responses here were to reinforce impacts which had already been represented in another domain, so the open-ended elaborations are also presented here as quotations.

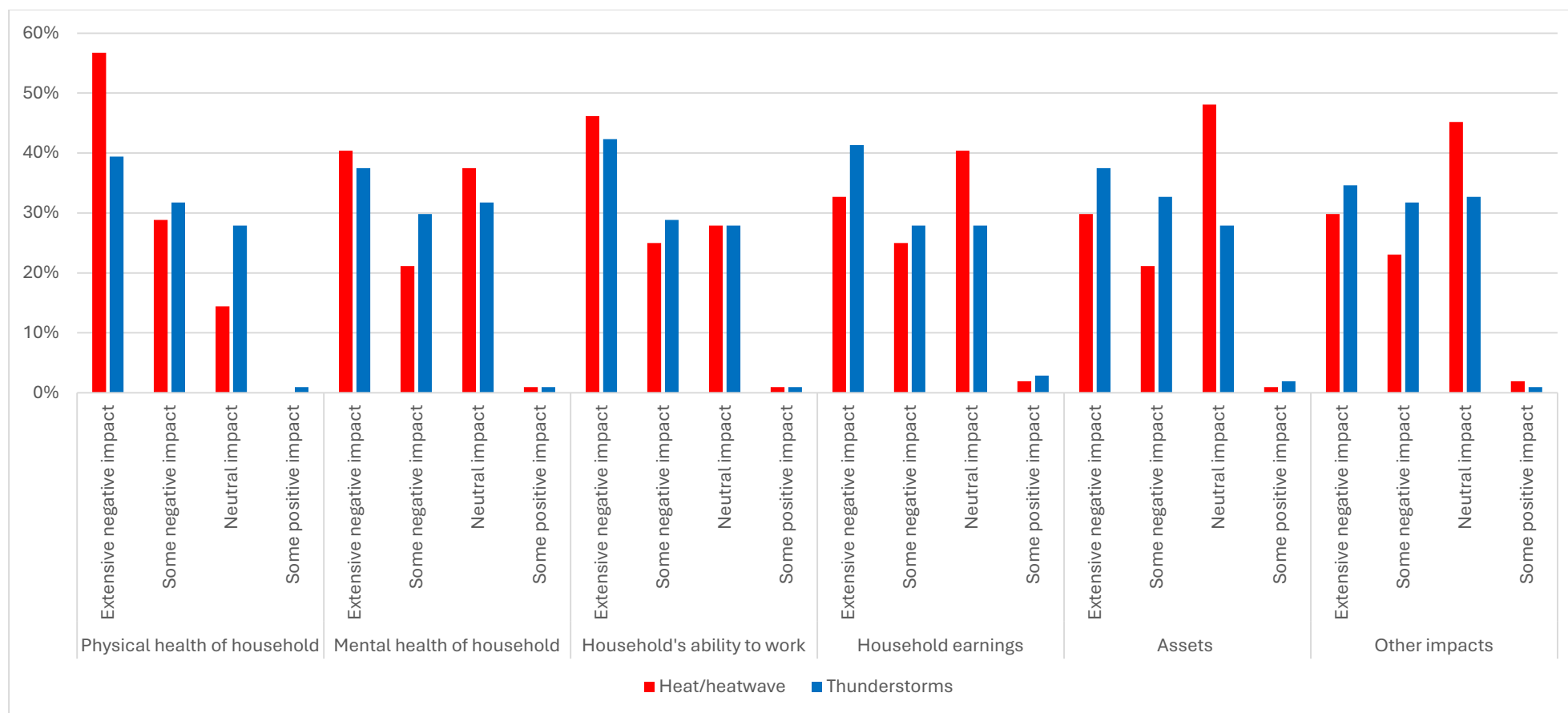


Figure 20: Effects of Thunderstorms and heat/heatwave events on households

4.2.3.1 Impact of heat/heatwave events

Heat/heatwave events have particularly negative impacts on physical and mental health, with 56.7% and 40.4% of participants respectively reporting extensive negative impact. When asked to elaborate participants report various physical health impacts during extreme heat/heatwave events including increased blood pressure, dizziness and fainting. Further examples of physical impacts felt by participants are highlighted in the extracts, below:

"Inability to function due to medical conditions..." (Participant 23, Female, Disability)

"When is hot we become dehydrated, and I have a skim condition so I cannot be in the heat sun." (Participant 64, Male, No Disability)

"Heat waves make us become dehydrated and as an older person I have hot flushes and I struggle a lot when it comes to hot seasons." (Participant 69, Female, No disability)

"[I have] eczema which flares up when it's hot and itchy and uncomfortable" (Participant 77, Female, No disability)

"...seizures when it gets too hot. Blood pressure and problems with her feet" (Participant 96, Female, No disability)

"We are getting sick" (Participant 92, Male, disability)

"Nose bleeding and heavy headaches" (Participant 104, Male, disability)

Heat/heatwaves events also have effects on wellbeing, with a significant number of participants (46.2%) note a slowdown in business activity and their own ability to work during extreme heat. Some individuals stating that the heat makes it difficult to work or to actively seek opportunities which compromises overall household earnings, for example:

"...I become demotivated to do my job" (Participant 80, Male, No disability)

"She fails to work properly" (Participant 16, Female, Disability)

"Crops don't grow it has a negative impact on my business..." (Participant 75, Male, No Disability)

"...can't concentrate on her [my] work" (Participant 32, Male, No disability)

This likely has a knock-on effect on household earnings, which was cited to be subject to extensive or some negative effects by just over half of participants. Effects of heatwaves on assets were less negative, with extensive negative impact cited by 29.8% of participants, some negative impact cited by 21.2%, and nearly half (48.1%) citing neutral impact.

4.2.3.2 Impact of thunderstorms

The impacts of thunderstorms are more consistent across all dimensions. Extensive or some negative impacts are reported on physical health (total of 71.1%), mental health (total of 67.3%), household's ability to work (total of 71.1%), household earnings (total of 69.3%) and assets (total of 70.2%). However around one third of the sample also cited the impacts on each of these dimensions as neutral.

When explaining impacts on ability to work and overall earnings, some participants explained:

“As an Uber driver u cannot work when there are floods coz I need to protect my car”
(Participant 67, Male, No disability)

“...cause a struggle when we want to get to work” (Participant 104, Male, Disability)

In terms of assets, participants cited damage caused to homes and moveable assets, such as cars, as well as to public infrastructure such as water pipes:

“It damages our houses” (Participant 17, Female, No disability)

“Car windscreen get broken and plants get damaged” (Participant 34, Male, Disability)

“Blocking of drains and then water gets into our houses” (Participant 53, Male, No disability)

“Floods always damages our household furniture...” (Participant 69, Female, No disability)

“Infrastructure and wall damage” (Participant 80, Male, No disability)

An interesting additional theme which emerged in open-ended answers was that of restriction of movement. A significant number of participants explicitly mentioned that thunderstorms (and the resulting floods) hampered their movement. This restriction of movement may hamper participants ability to earn an income.

4.3 Forecast access and use

4.3.1 Access to forecasts and early warnings

Three quarters of the participants are regularly accessing forecasts and early warning (i.e. once per day or more frequently) (Figure 21). Half of participants (50%) access weather forecasts or early warnings on a daily basis, with 25% of participants accessing information *more* than once a day. A combined 16.3% of participants access information less frequently (i.e. sometimes or rarely), while 8.7% do not access weather forecasts or early warnings at all.

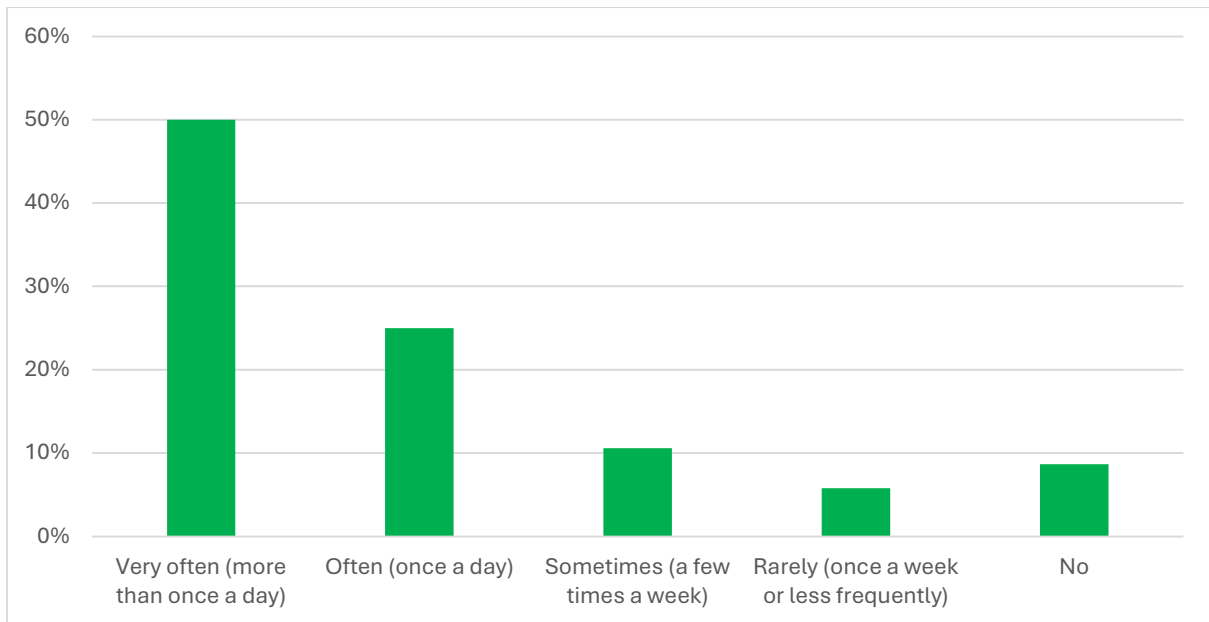


Figure 21: Frequency of access to weather forecasts or early warnings of weather events among participants

The reasons for **not** accessing weather forecasts or early warnings vary among respondents. As shown in Figure 22 the largest proportion of these participants (57%) cited lack of awareness of or access to forecasts/warnings. Smaller proportions (29%) reported limited access to radio, TV, or internet/social media as a reason for not accessing forecasts. Notably no one cited disability, lack of need, or lack of connectedness with forecast providers as reasons for not accessing forecasts. The one person included under 'other' stated not following the information without reason.

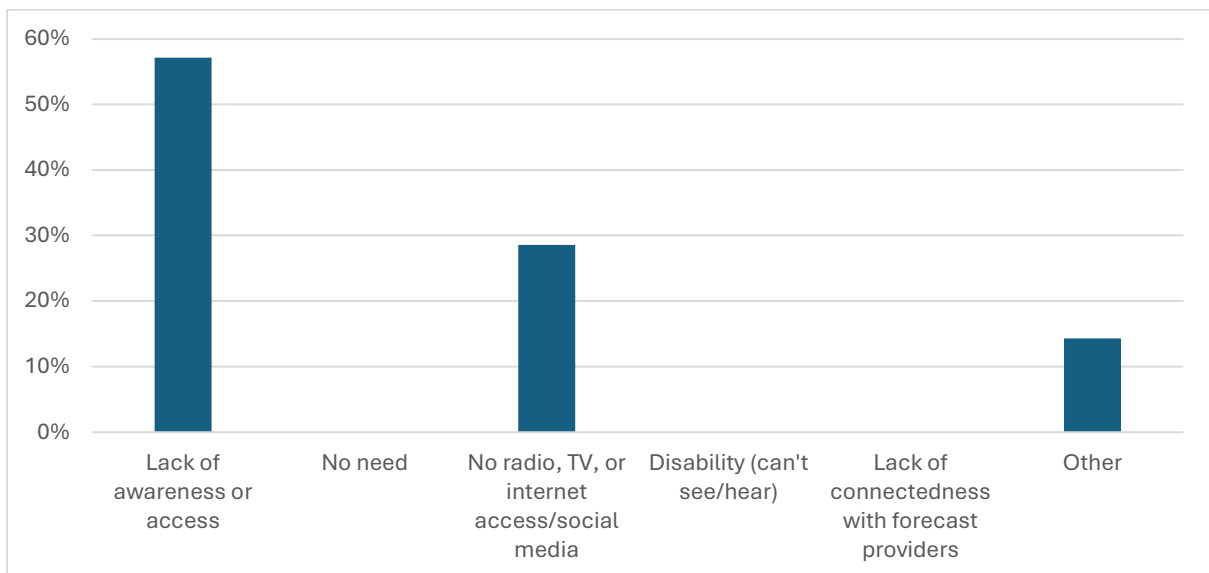


Figure 22: Participants' reasons for not accessing weather forecasts or early warnings

When disaggregating by gender, both males and females access weather forecasts and early warning at least daily in fairly equal proportions. However a larger proportion of males' access forecasts more

than once per day (61.4% compared with 42% of females), whilst a larger proportion of females access once per day (36.8% compared with 9.1%)(Figure 23). A larger percentage of males (13.6%) tend to not access forecasts or warnings at all, compared to a smaller number of females (5.3%).

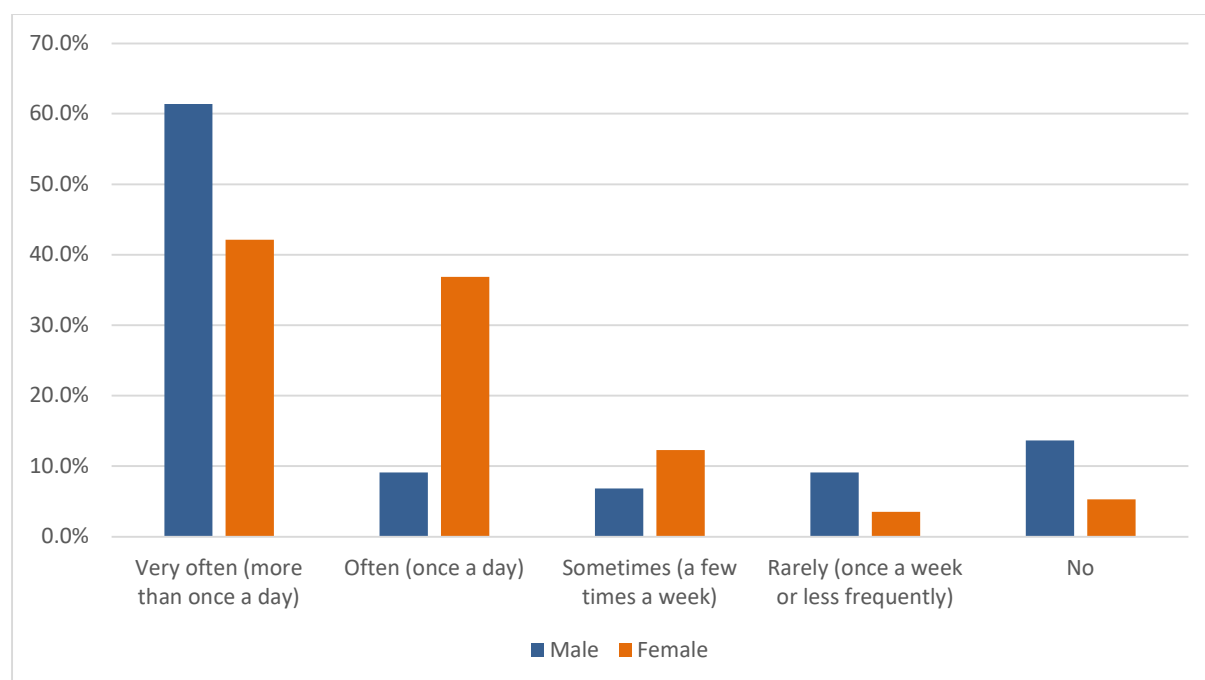


Figure 23: Frequency of access to weather forecasts or early warnings of weather events disaggregated by gender

When disaggregating by disability, similar proportions of people with (54.5%) and without (49.5%) disabilities access weather forecasts on a daily basis, although a higher proportion of people without disabilities access forecasts once per day (26.9%) compared to those with disabilities (9.1%) (Figure 24). Overall, 76.4% of people without disabilities are accessing forecasts and early warnings at least daily, compared with 63.6% of people with disabilities. A higher percentage (27%) of people with disabilities tend to not access forecasts and warnings at all, compared to those without disabilities (6.5%). Hence there is significant potential to increase access to early warnings and weather forecasts, particularly by people with disabilities.

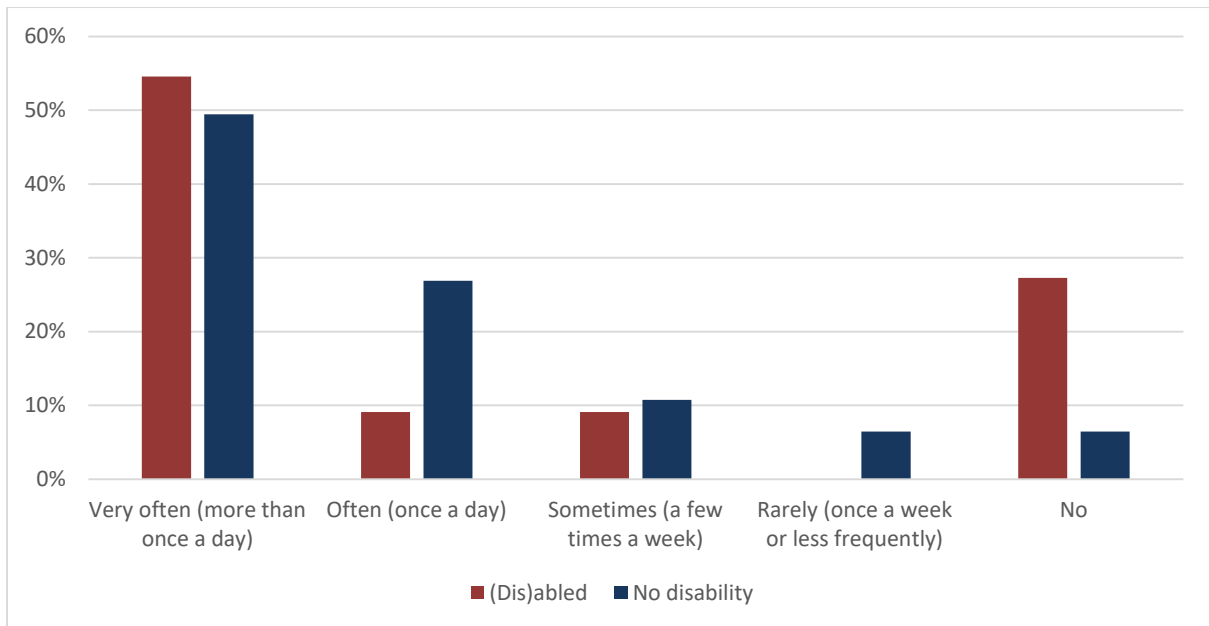


Figure 24: Frequency of access to weather forecasts or early warnings of weather events disaggregated by (dis)ability

4.3.2 Engagement with forecasts and early warnings

For those people that do receive weather forecasts and early warnings, the majority of participants claim to ‘practically always’ both take notice of forecasts (52.9%) and act on them (48.1%) (Figure 25). A further third of participants also stated that they ‘sometimes’ both take notice of forecasts (33.7%) and act on them (32.7%). This finding suggests that a prominent portion of participants demonstrate consistent and proactive behaviour in both noticing and acting upon forecasts.

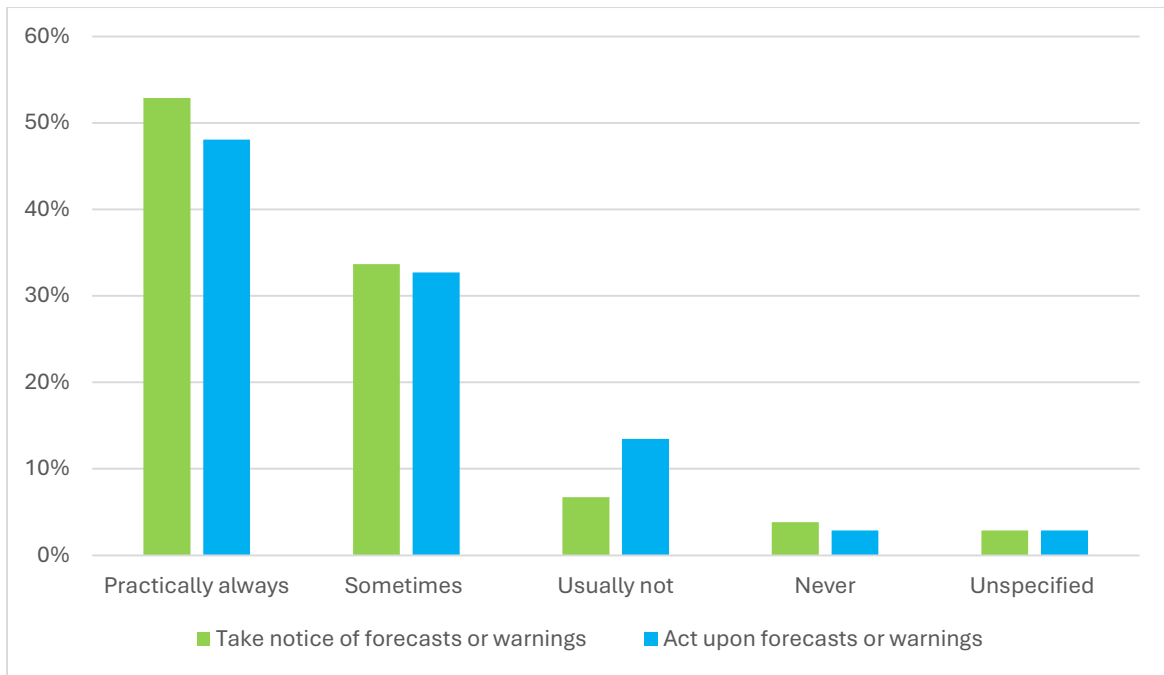


Figure 25: Response rates for taking notice of and acting upon forecasts or warnings among all participants

In disaggregating the above data by gender, there are few discernible differences. High proportions of both men and women practically always or always take notice of forecast or warnings and act upon them (Figure 26). Figure 26). Less than 10% each of men and women say that they never take notice of or act on forecasts and early warnings.

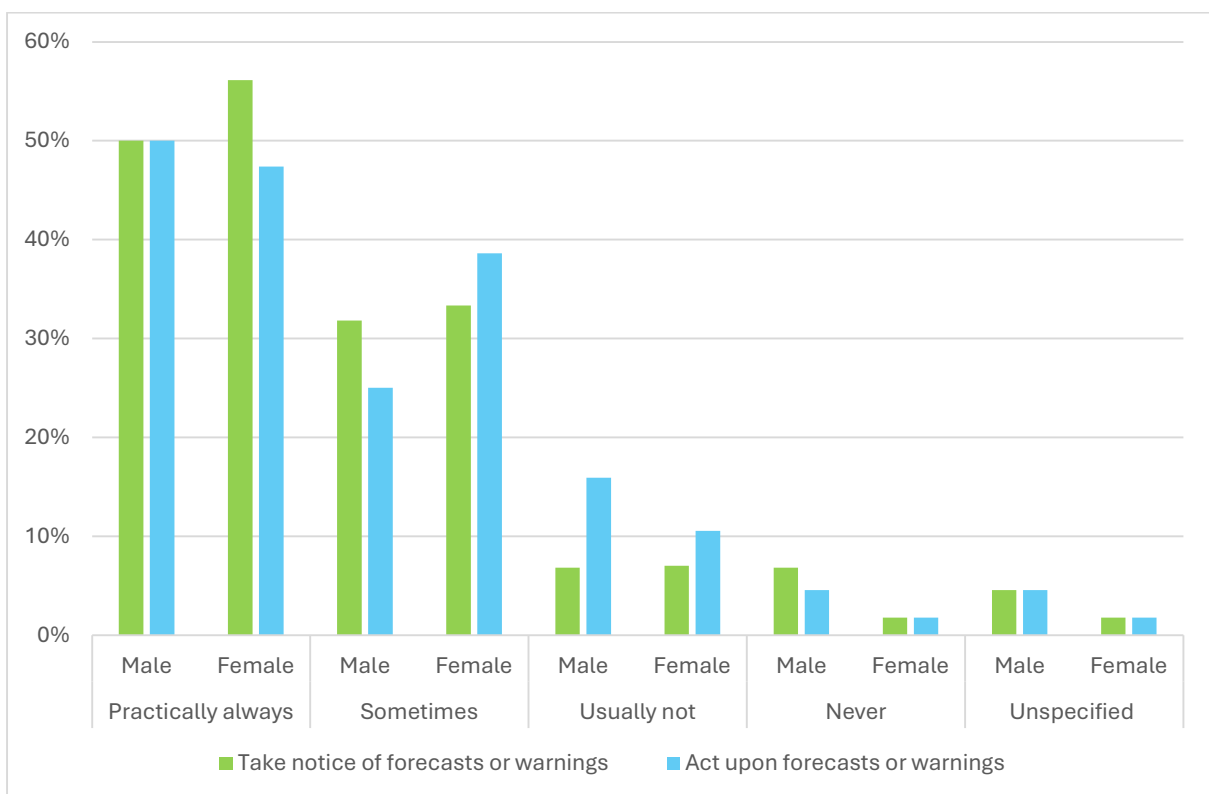


Figure 26: Response rates for taking notice of and acting upon forecasts or warnings disaggregated by gender

When disaggregating by disability, again there are few differences between people with disabilities and people without (Figure 27). However a greater proportion of people with disabilities say they sometimes take notice of forecasts and early warnings (27.3%) compared to the proportion who say they sometimes act on them (9%). A substantially higher proportion of people with disabilities also state that they usually do not (27.3%) or never (18.2%) act upon weather forecasts, in comparison to people without disabilities.

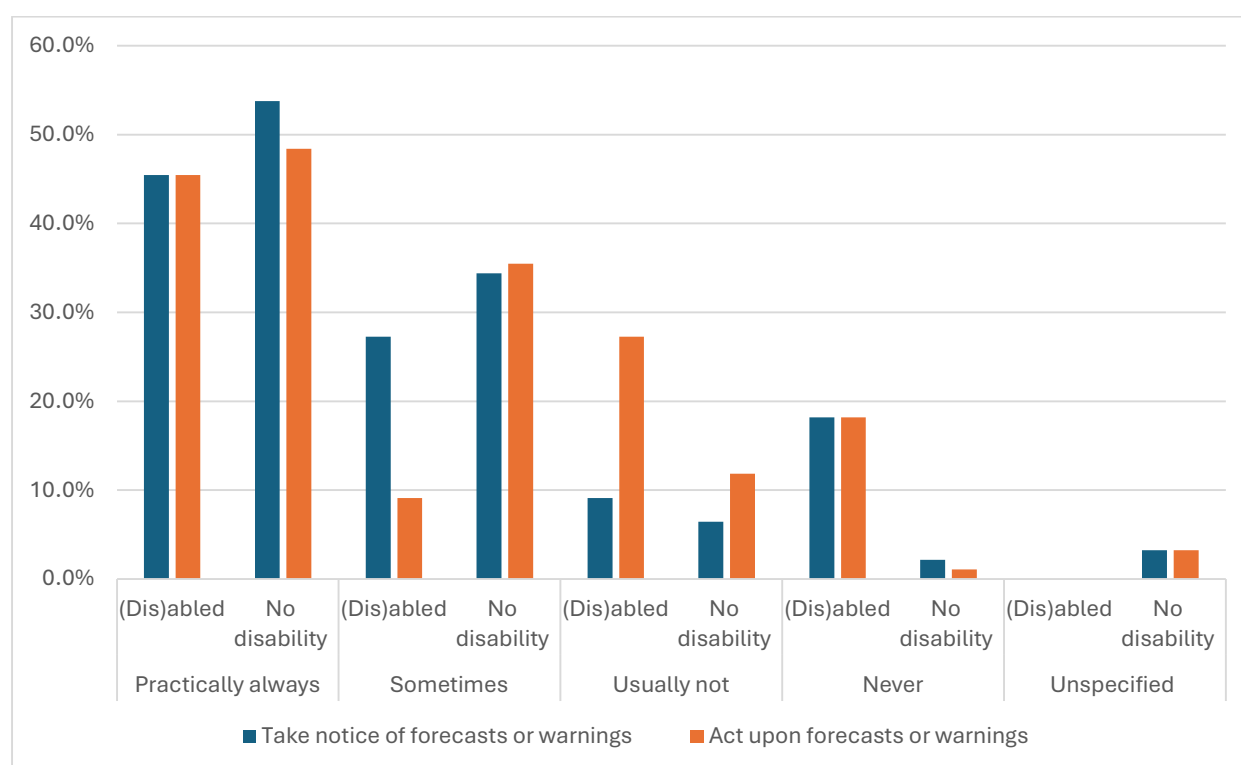


Figure 27: Response rates for taking notice of and acting upon forecasts or warnings disaggregated by (dis)ability

The participants who indicated that they usually do not or never act on forecasts or warnings (accounting for 16.3%) were presented with a wide range of reasons for their non-action from which they could choose one or more reason(s) which have been clustered into several categories as per Box 1.

Box 1: Reasons for not acting on forecasts and early warnings

Credibility of information or messenger:

- ☐ I do not understand the information; I do not believe the information.
- ☐ I do not trust the person/organisation issuing them).

Utility and usability of information:

- ☐ I do not understand what I should do with the information.
- ☐ I do not think they are useful.

Barriers to response:

- ☐ I do not receive it with sufficient lead time to act on it.
- ☐ I do not have sufficient physical ability to take actions (e.g. I am not able to move quickly).
- ☐ It would cost me too much money to take the actions (e.g. I cannot afford transport costs, or the potential loss to my livelihood).

- o I do not have access to resources/services to enable action (e.g. not enough public transport for everyone to travel, no local availability of sandbags, etc.).

Reasons relating to credibility of the information or messenger (35.3%) and utility and useability of the information (29.4%) are the most common reasons cited for not information, with a smaller proportion (17.4%) citing barriers to use (Figure 28). Not understanding the information and not understanding what to do with the information are fairly common responses that can inform the content and communication of weather forecasts and early warnings to make them more accessible.

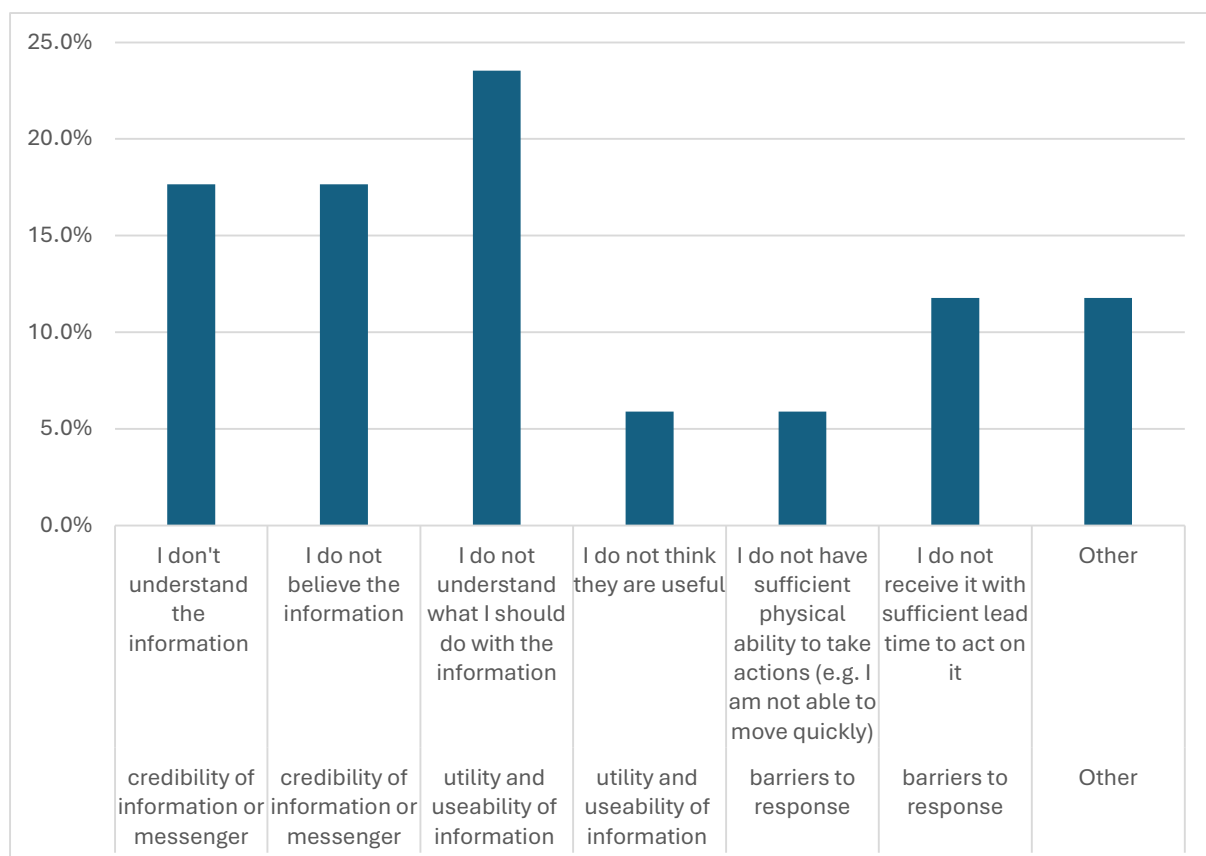


Figure 28: Reasons for usually not or never acting on forecasts or warnings

4.3.3 Perceived usefulness of 0–6-hour warnings

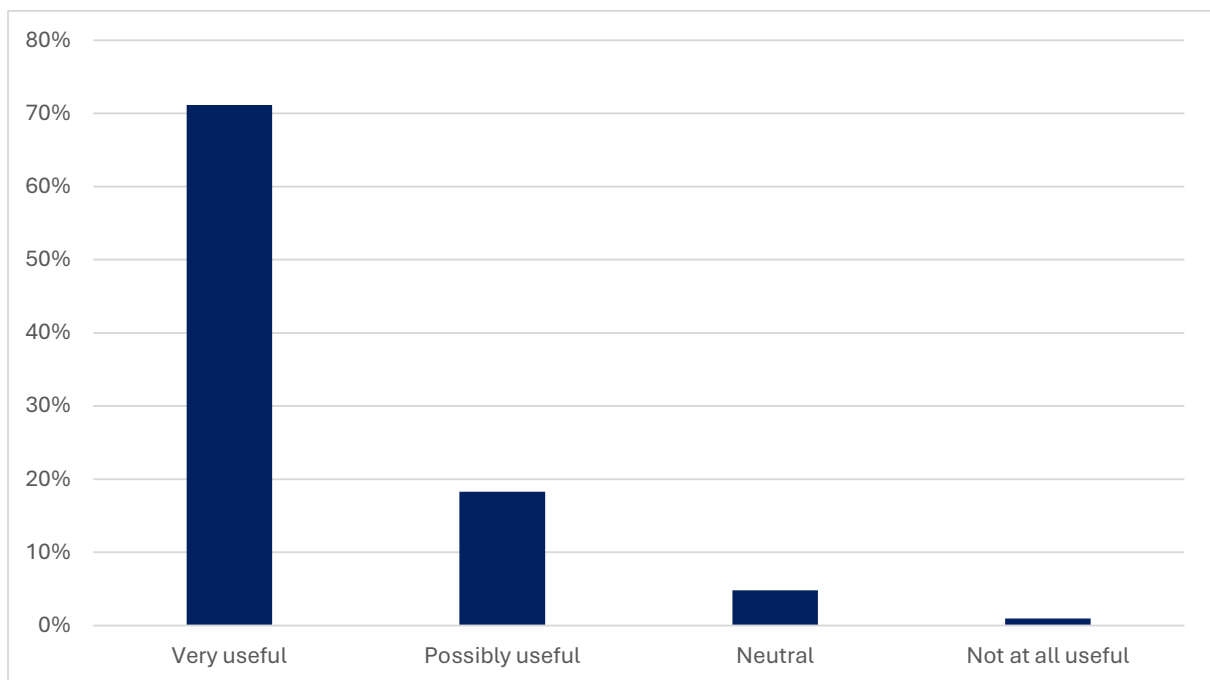


Figure 29: Perceived usefulness of 0–6-hour thunderstorm warnings

Although such short-range information does not currently exist, participants were asked to rate the usefulness of a 0–6-hour thunderstorm warning and its associated level of damage. All participants provided a positive response to this question, with the highest percentage of participants (71.2%) opting for ‘very useful’ and the second highest percentage (18.3%) saying that such a warning would be ‘possibly useful’. Given that thunderstorms are one of the most frequent hazard events, and one which causes the most negative impacts, this response is unsurprising.

4.4 Participant knowledge of and engagement with organisations which support disaster risk reduction in Katlehong

National, provincial or municipal disaster management organisations were identified most commonly by participants (54.8%) as actively supporting disaster risk reduction in Katlehong (Figure 30). Local government agencies (25%) were the next most commonly cited, followed by church/religious institutions (13.5%). It is noteworthy that a relatively high percentage of participants (21.2%) did not identify any specific organizations in response to this question. However, it is unclear whether this lack of identification stems from a genuine lack of knowledge or a choice not to answer the question².

² Participants were able to select more than one institute with which they had engaged.

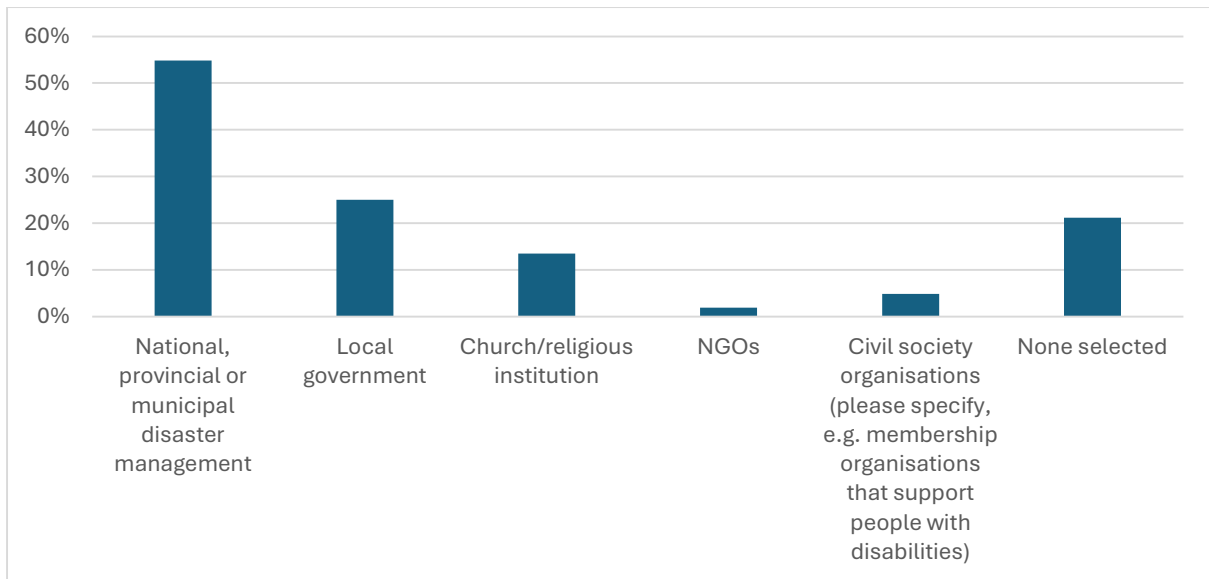


Figure 30: Participants knowledge of organisations which support DRR in Katlehong

In terms of engaging with such organisations regarding metrological hazards (e.g., attending training, receiving monetary/in-kind support, participating in community meetings), 68 participants indicated that they had. Within this group, the majority (63.2%) reported interaction with National, provincial or municipal disaster management (Figure 31).

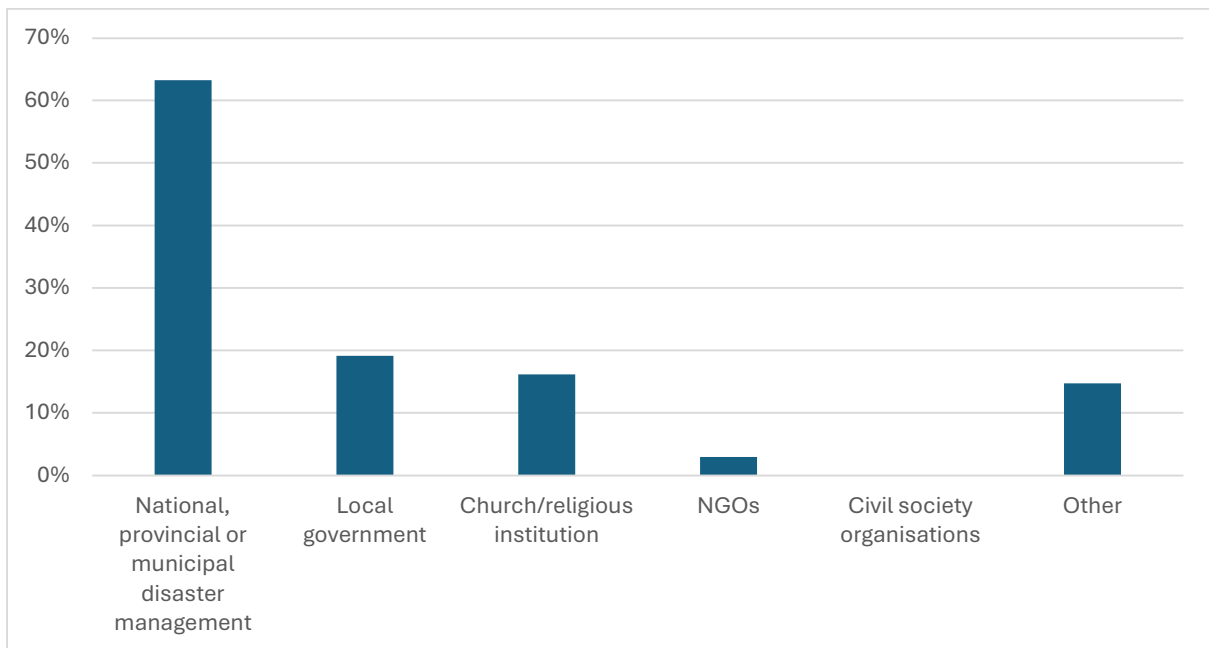


Figure 31: Participants engagement with organisations which support DRR in Katlehong

5. Conclusion

This survey has enabled painting a picture of the reality of circumstances in Katlehong which can inform a useful and inclusive process of co-production of useful and useable weather information and early warning alerts.

Katlehong has a largely youthful population and comprises mainly long-term residents with good levels of formal education (the majority of the sample having completed secondary education). A small proportion (10.6%) disclosed having a disability. Cell phone ownership is widespread, and the majority of people have smart phones, which is similar regardless of gender or disability.

In terms of livelihoods, these are varied. The informal sector comprises approximately one fifth of the sample, with smaller proportions in waged employment or reliant on government or NGO grants. Interestingly a greater proportion of women are working in the informal sector or waged employment relative to men, whilst more men are unemployed. A greater proportion of women are reliant on government or NGO grants.

Heat/heatwaves and thunderstorms are regular occurrences in Katlehong, occurring more than once per year or more, whereas droughts and strong winds are less frequent. Overall people with disabilities tend to perceive weather events to occur more frequently than people without disabilities. The same two hazards also have the largest impacts, which is common regardless of gender or disability. Heat/heatwaves have particular impacts on health and capacity to work, whilst thunderstorms affect health, capacity to work, household earnings and assets.

Weather forecasts and early warnings are regularly accessed, at least once a day by three quarters of participants. More men than women, and more people with disabilities than without are not accessing forecasts at all. Those that are not accessing forecasts cite lack of awareness or access, including to communication media. When people do access forecasts, the majority of people claim to take notice of them and act upon them. There are few differences between men and women, but people with disabilities are less likely to act upon forecasts or early warnings. Reasons for not acting on forecasts relate to not understanding information, not believing it, or not knowing what to do with it. That said, there is significant interest in nowcasts with just under 90% saying they would be possibly or very useful.

The extent of support for disaster management is also variable and, despite fairly widespread knowledge of the public sector agency, and this being the main source of support, around one fifth of participants were unable to name any organisations that act to manage disaster risk.