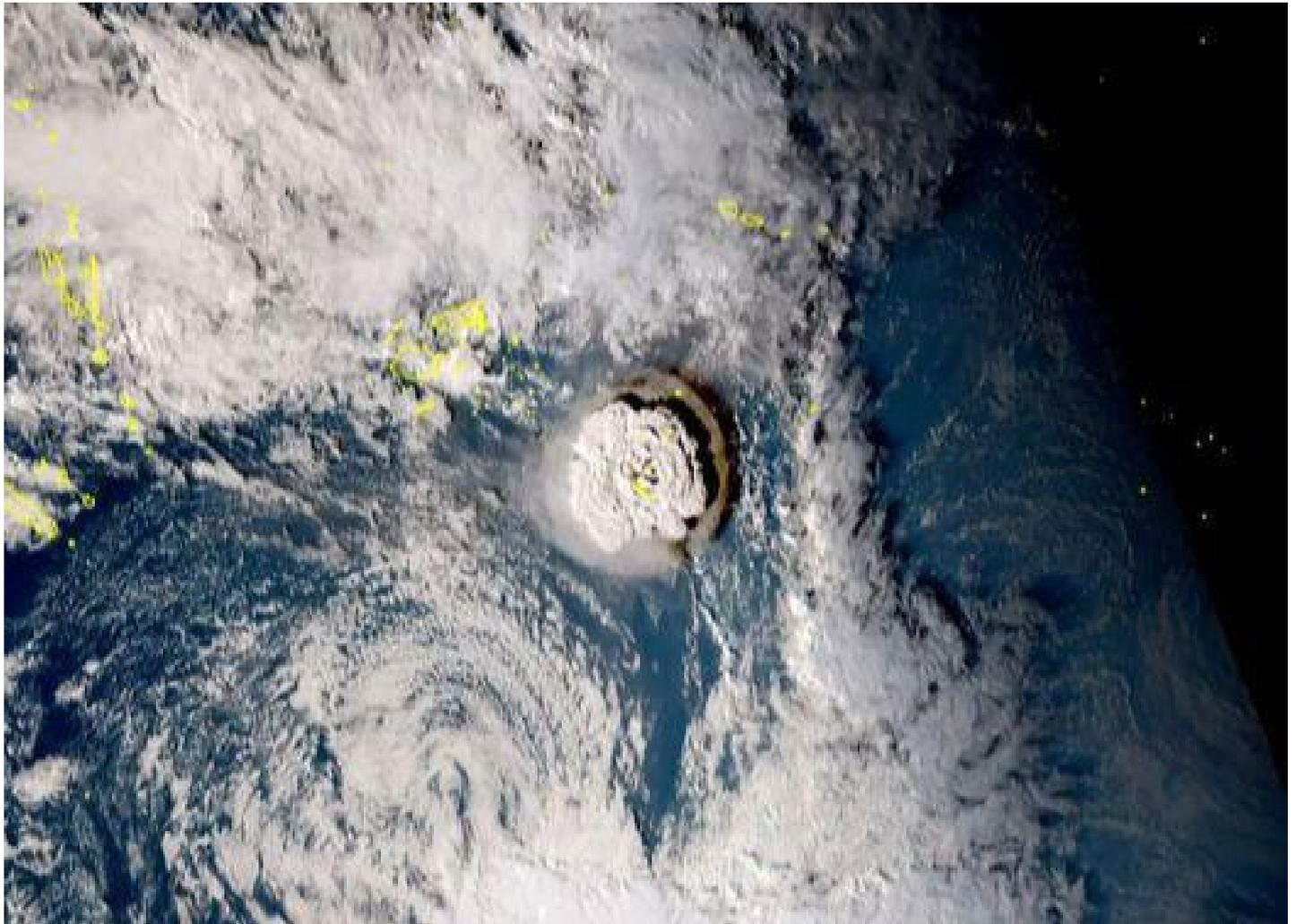




Supporting women.  
Defeating poverty.



**Hunga Tonga-Hunga Ha'apai  
Volcano & Tsunami Response,  
Kingdom of Tonga  
Baseline Report  
June 2022**

By MORDI TT and CARE Australia

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## I. Introduction

The purpose of the Hunga Tonga-Hunga Ha’apai Volcano and Tsunami Response program is to support the immediate and early recovery needs of people directly affected by the eruption of the Hunga Tonga–Hunga Ha’apai volcano. The program, delivered in partnership with MORDI Tonga Trust, Talitha Project and CARE Australia, works in the following sectors:

**Shelter and Settlements:** People have access to living spaces that are safe and adequate, enabling essential household and livelihood activities to be undertaken with dignity. Activities include the distribution and repositioning of emergency shelter materials (tarpaulins).

**Water, Sanitation, and Hygiene:** People have access to water that is palatable and of sufficient quality for drinking, cooking, and personal and domestic hygiene, without causing a risk to health. Activities include hygiene promotion messaging, distribution of cleaning equipment, hygiene kits and dignity kits, and technical and material support for restoring rainwater collection systems.

**Agriculture:** Primary production mechanisms receive protection and support. Activities include the technical and material support to restore home and community gardens and the rehabilitation of the MORDI nursery.

**Protection:** Provide information on GBV services available to at-risk populations and provide psychological support services to adolescents and children. Activities include conducting a GEDSI analysis, refresher GBV training for staff, provision of GBV referral booklets, PSS training for staff and PSS outreach visits to children in evacuation centres.

The program targets 20,000 people across three affected divisions (Tongatapu, Ha’apai, and ‘Eua). The objectives of the baseline study include:

1. To take a baseline measurement of program outcomes;
2. To collect data on current needs, to complement initial rapid needs assessments, and specifically look at needs through a gender and inclusion lens; and,
3. To consult communities on their preferences and needs for communication mechanisms and participation.

## II. Methodology

### Sampling

The baseline was conducted using a household level survey. It used a two-stage cluster sampling approach and was non-representative. Reducing the assessment burden on communities has been a guiding factor in developing a sampling approach. The first stage used a systematic sampling approach to select communities. Using a sampling interval of three, this resulted in the selection of 21 communities (Table 1). The second stage will use a sample of 250 people, which results in a sample of 12 surveys per cluster. Within each cluster, enumerators will use a quota system to target a balance of survey respondents in line with population ratios on gender and disability (Table 2).

*Table 1: Communities included in the baseline sample*

Island	District	Community	Island	District	Community
Tongatapu	Tatakamotonga	Holonga	Ha'apai	Lulunga	Tungua
Tongatapu	Tatakamotonga	Ha'asini/Hamula	Ha'apai	Lulunga	Matuku
Tongatapu	Tatakamotonga	Fatumu	Ha'apai	Mu'omu'a	Mango
Tongatapu	Lapaha	Nukuleka	'Eua	'Eua-motu'a	Tufuvai
Tongatapu	Lapaha	Manuka	'Eua	'Eua-motu'a	Ha'atu'a
Tongatapu	Lapaha	Afa	'Eua	'Eua-fo'ou	Futu
Tongatapu	Nukunuku	Matafonua	'Eua	'Eua-fo'ou	Fata'ulua
Tongatapu	Nukunuku	Vaotu'u	'Eua	'Eua-fo'ou	Petani
Tongatapu	Nukunuku	Ha'akame			
Tongatapu	Kolovai	Te'ekiu			
Tongatapu	Kolovai	Ha'utu			
Tongatapu	Kolovai	Ha'avakatolo			
Tongatapu	Kolovai	Ha'atafu			

### Survey Implementation

The baseline data collection was initially anticipated in late February 2022, however, the advent of community transmission of COVID-19 in Tonga resulted in two lockdowns that impacted staff's ability to conduct data collection exercises. The first lockdown was from February 2 to 21, and the second affected staff from March 20 to April 11. During these periods, staff were unable to access the internet, which delayed finalizing and translating the survey tool, and faced strict movement restrictions, which prohibited household data collection. The final data collection period was May 6 to May 26; the COVID-19 outbreak ultimately delayed the collection by 2.5 months and extended the collection period from an anticipated three to 20 days.

The baseline survey was led by implementing partner MORDI Tonga Trust. The Local Government Office was informed that MORDI would be conducting surveys in the communities and, once approved, the community officials – Town Officers and District Officers – were contacted to elicit their help.

MORDI sourced extra staff from Tonga National Youth Congress (TNYC) as enumerators for the initial face-to-face rounds in mainland Tongatapu. These enumerators were given a refresher enumeration training conducted by the supervisors of the survey. A pilot testing of the Kobo Toolbox survey was practiced on site, which helped identify required translation corrections and gave the enumerators an opportunity to familiarize themselves with the survey and ask questions.

The enumerators were briefed daily and allocated target communities, starting in the morning and working until afternoon hours before returning to HQ's. Tablets were loaded and cleaned daily after every debrief session; each supervisor was tasked with reviewing the data collection and following up with each team member when required. These surveys were conducted with very little hindrances and were meeting quota targets exceedingly well.

Due to the COVID-19 lockdowns that took place in mainland Tongatapu, travel restrictions to outer islands were not lifted during the collection period. The remainder of the surveys targeting communities in outer islands of 'Eua and Ha'apai had to be conducted by phone.

### Limitations & Challenges

The biggest challenge the team faced was through the phone survey; people were more responsive through face-to-face surveys in comparison to phone surveys. There were truly no options but to rely on the Town and District Officer to provide phone numbers of his/her community members to survey, which may have introduced a bias not present in the selection process in Tongatapu (eg. people with phones). The provision of lists was often delayed for many days. When a list was provided, many on the list couldn't be contacted for various reasons such as out of service, out of network service area, call drops, bad service, same person with different number or names, etc.

Ha'apai islands had the worst cell phone network coverage. Many numbers were out of service, and those that could connect either kept dropping or there were problems hearing each other. This may have impacted the quality of the data collected through this method. When calls kept, dropping the receiver would not answer when called back. Others refused to answer the survey saying they have already answered many surveys and could not be persuaded otherwise to participate (surveys conducted by other national agencies and non-government agencies post-disaster).

Due to the difficulties of obtaining phone numbers, the team was informed to use snowballing methods for potential respondents that would meet the criteria. Snowballing was largely unsuccessful as many did not want to provide other phone numbers.

### Survey Demographics

The survey exercise reached its geographic targets, interviewing a total of 252 people across 21 communities from 'Eua, Ha'apai and Tongatapu. This included a balance of youth (18-38 years), adults (39-59 years), and elders (60+ years); males and females; and people with and without disabilities. Children (people under 18) were not included in the sample. The full demographic breakdown is available in Table 2.

*Table 2: Breakdown of people interviewed in the baseline exercise, by age, sex, and disability status*

Interviewee demographics	Without disability	With disability	Total per age/sex category	Total as a %
Youth Male	26	1	<b>27</b>	<b>11%</b>
Adult Male	53	8	<b>61</b>	<b>24%</b>
Elder Male	18	9	<b>27</b>	<b>11%</b>
Youth Female	44	7	<b>51</b>	<b>20%</b>
Adult Female	55	4	<b>59</b>	<b>23%</b>
Elder Female	21	6	<b>27</b>	<b>11%</b>
<b>Total per disability category</b>	<b>217</b>	<b>35</b>	<b>252</b>	
<b>Total as a %</b>	<b>86%</b>	<b>14%</b>		

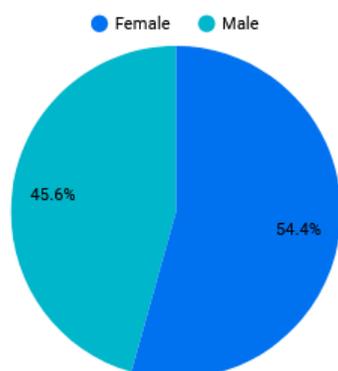


The breakdown of respondents by gender, disability and age shows a balanced sample across groups (Graphs 1-3). Interviewees with disabilities were slightly under the quota target (19%, which was calculated based on prior program data records as the approximate percentage of people with disabilities in the target population), which may be linked to the feedback that enumerators found it challenging to locate and screen for people with disabilities to include in the sample, due to interviewees hesitance to identify as having a disability and in some cases, changing their responses.

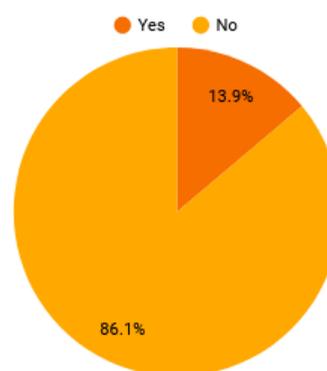
**Recommendation:** Prior to the next data collection exercise, enumeration teams work with the inclusion and disability advisors/representatives from organisations for people with disabilities to develop screening and interviewing approaches for people with disabilities.

*Graphs 1-3: The breakdown of sample respondents by gender, disability and age group.*

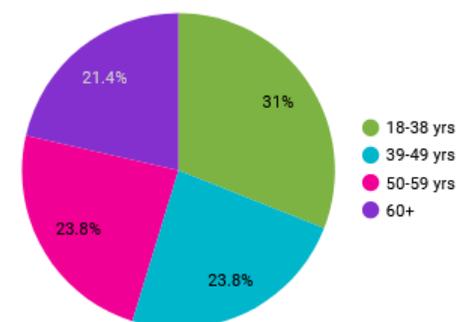
**Percentage of respondents by gender**



**Percentage of respondents with a disability**



**Percentage of respondents by age group**



Overall, most respondents reported a primary income source of either regular salary/wages (26.2%), sale of agricultural produce (25%) or sales of handicrafts (20.6%). There are some gender differences evident in reported sources of incomes: Sales of agricultural produce are more frequently reported by males (33.9%) than females (17.5%); sales of handicrafts are more frequently reported by females (27%) than males (13%); remittances are reported more frequently by females (18.2%) than males (7.8%) and sales of fisheries were more frequently reported by males (13.9%) than females (6.6%). The high percentage of respondents reporting a regular salary or wages was an unexpected finding, due to the fact the target population are in rural areas; this was reported by both sexes (females 27.7%, males 24.3%).

**Recommendation:** Review assumptions around population profile and sources of income, specifically sources of salary or regular wages

**Recommendation:** Review reported livelihood findings with respect to planned livelihoods recovery program activities and what sectors the disaster has impacted the most.

Graph 4: The breakdown of sample respondents by primary source of income (livelihood) and highest level of education achieved

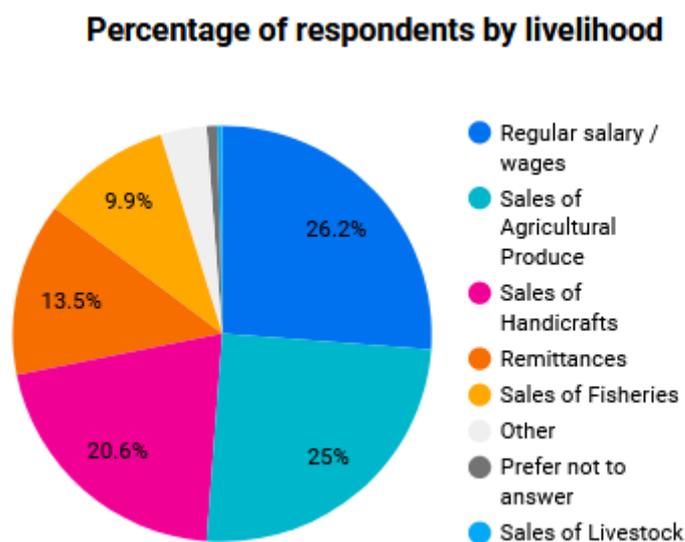


Table 3: Breakdown of sample by education level and sex

Highest level of education	Female no disability	Female with disability	Male no disability	Male with disability	Overall
Primary School	3%	0%	6%	17%	5%
Secondary / High School	55%	65%	60%	61%	58%
Tertiary School / University	42%	35%	32%	22%	36%
Prefer not to answer	1%	0%	2%	0%	1%

The majority of respondents (58%) reported secondary education as the highest level of education achieved, followed by 36% tertiary education and 5% primary school. Table 3 shows there are some differences in educational attainment when disaggregated by sex and disability, with females reporting higher levels of education attainment than males, and males with disability the lowest levels.

**Recommendation:** Review program approaches, particularly IECs and other information provision activities, for suitability to predominant levels of education. Identify where targeted communications may be required to reach minority groups who have experienced less access to education.

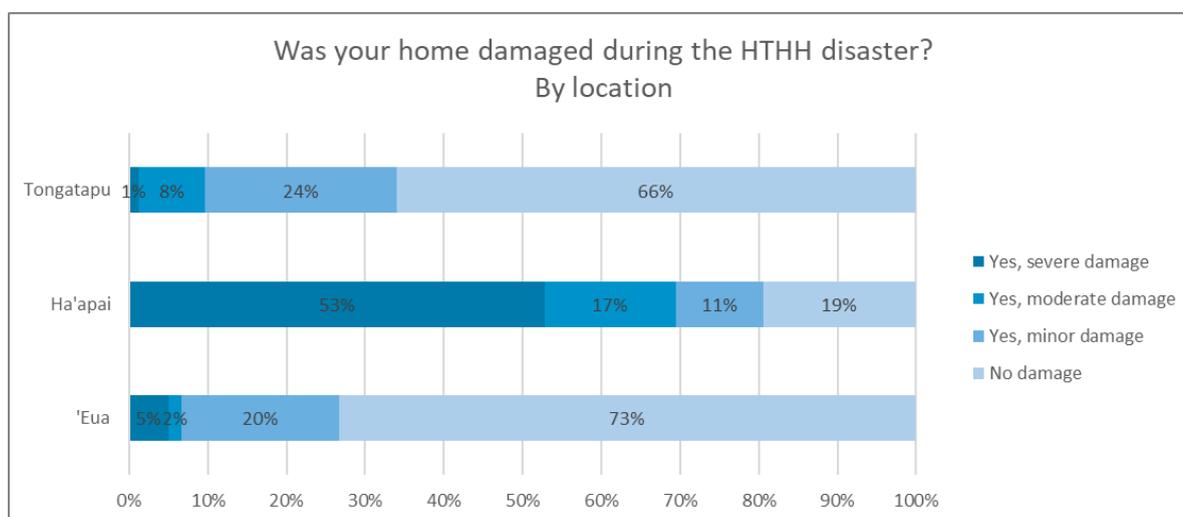
### III. Findings

#### Shelter

##### Level of damage

A total of 10% of respondents overall reported severe damage to their homes, 8% moderate damage, 21% minor damage, and 61% no damage (Graph 5). The impact was most severe on respondents from Ha'apai of which 53% reported severe damage and 17% moderate, compared to respondents from Tongatapu (1% severe, 8% moderate) and 'Eua (5% severe, 2% moderate). This finding is consistent with the geographic location of the volcano and direction of the tsunami waves; Ha'apai was closest in proximity.

Graph 5: Level of shelter damage sustained, by location.



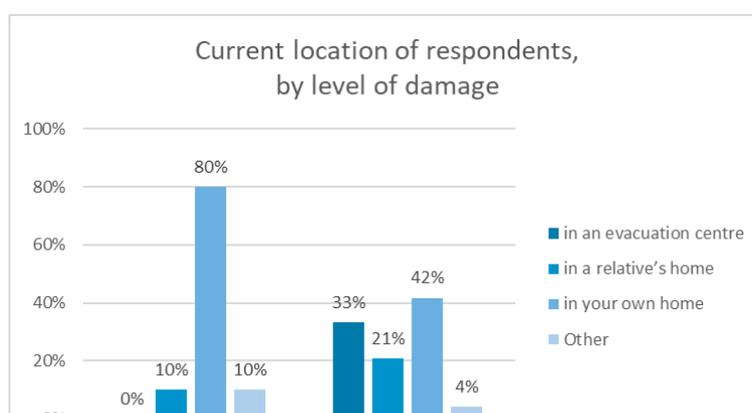
Further community-level breakdown of the data provides guidance for shelter targeting and highlights the need for further, individualised assessments to identify shelter needs. The Initial Damage Assessment (MORDI, Jan 2022) for this response assessed and classified communities by three levels of damage: major tsunami damage, tsunami damage, and ash/dust damage. This resulted in a list of 13 communities identified as tsunami damaged. Baseline results however include respondents from 10 communities *outside* this list of 13 reporting moderate and severe damage. An interpretation session with program staff concluded this warranted further investigation, with two possible explanations identified: there may be people with unidentified shelter needs requiring support, or there may be inaccurate responses in the data set.

**Recommendation:** Project staff conduct visits to the identified communities to verify the accuracy of the shelter data, by visually assessing the condition of homes in these locations.

##### Safety

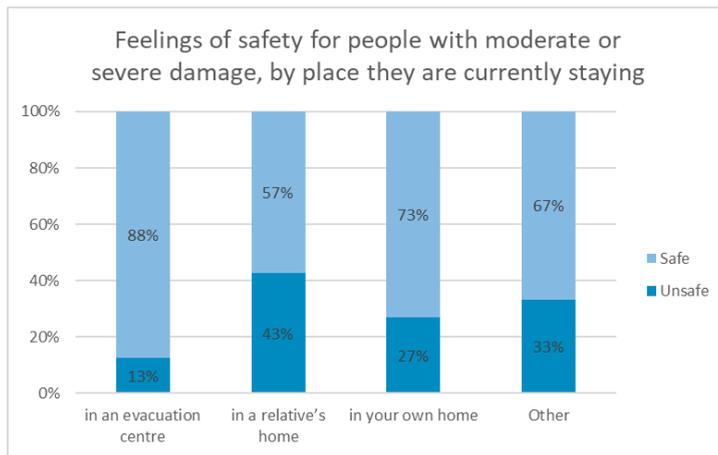
To better understand the current situation of people who have experienced shelter damage, Graph 6 shows the breakdown of where people moderately and severely impacted are currently staying. This shows 80% of those moderately

Graph 6: Breakdown of where people who report moderate or severe shelter damage are currently residing



impacted and 42% of those severely impacted report currently staying in their own homes. This may indicate either a rapid rebuild, or people living in their damaged dwellings. Those in evacuation centres entirely consist of people from the community of Mango; this was one of the catastrophically damaged communities that are being permanently relocated.

**Graph 7: Perception of safety reported by the subset of people who experienced moderate or severe damage, disaggregated by location of current residence.**



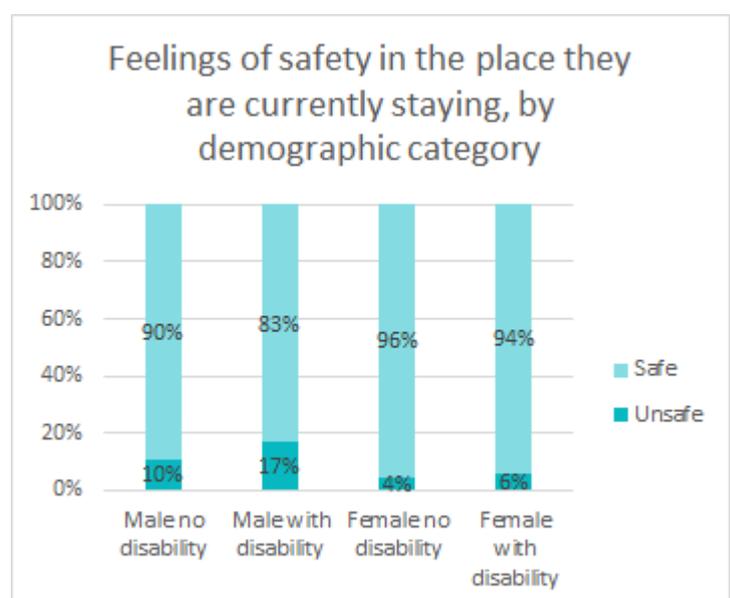
Respondents were also asked about their feelings of safety in the place they were currently staying. Overall, 8% reported feeling unsafe. Graph 7 looks only at the subset of people who report moderate to severe damage; in this subset, the figure increases to 27% feeling unsafe. Further analysis to understand the places in which people are not feeling safe show the greatest feelings of lack of safety are among those who are staying in relatives' homes (43% of whom feel unsafe), followed by those staying in 'other' places (33% of whom feel unsafe and, in this case, reflects a respondent staying in a tent).

Data on feelings of safety was also examined by gender and disability status. This revealed an unexpected finding where 10% of males with no disability and 17% males with disability report not feeling safe in the place they are currently staying, compared to 4% of females with no disability and 6% of females with a disability. This finding may be to do with challenges enumerators faced in terms of gathering accurate disability data, perhaps underrepresenting males with disability (although this won't explain the unexpected gender difference) and warrants further investigation.

**Recommendation:** Follow up with people who experienced significant damage but are not in evacuation centres. Are people residing in damaged houses, or has there been a rapid rebuild? What safety issues exist?

**Recommendation:** Further investigation to understand why more males than females report feeling unsafe. Did challenges collecting disability data affect this finding? Or is there an undetected safety issue, possibly the recent COVID-19 outbreak causing people to feel unsafe?

**Graph 8: Perception of safety reported by demographic category**



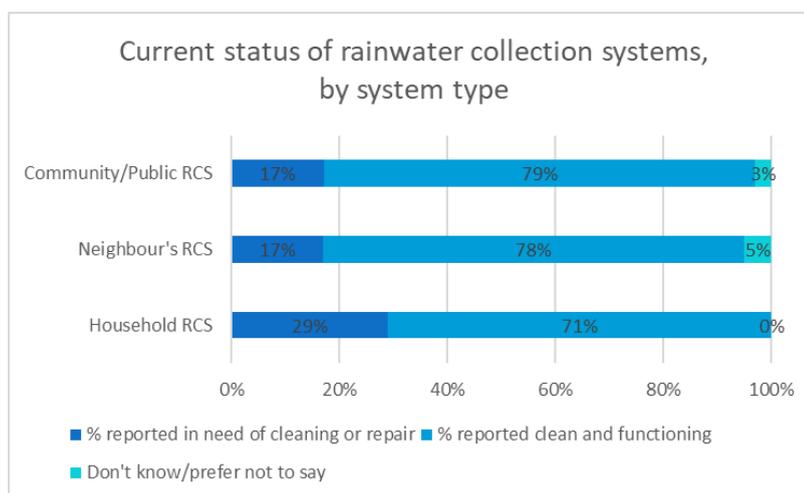
## Wash, Sanitation and Hygiene

The baseline data collection for the WASH sub-sector focused on establishing a baseline for those needing rainwater collection systems support and those targeted by hygiene promotion.

### *Rainwater collection systems*

The data shows that only 3% of respondents overall did not report accessing rainwater collection systems prior to the data collection, confirming that rehabilitation of these rainwater systems are a priority area for WASH response. Respondents were asked whether the rainwater collection system they access was clean and functioning, post-disaster. Graph 9 shows the results: 29% household systems, 17% neighbour's systems, and 17% community systems need cleaning and repair. This measurement will be taken again at endline, to identify if the status of rainwater collection systems has improved following the rehabilitation activities.

**Graph 9: The status of rainwater collection systems, by type of system.**



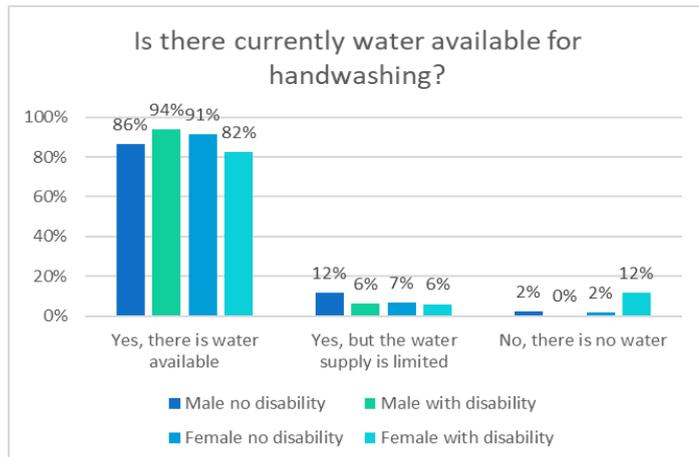
### Handwashing facilities

Pre-disaster, levels of access to handwashing facilities were high, with only 4% of overall respondents reporting that prior to the disaster they had no hand washing place in their dwelling or yard/plot. Within this subset, males with disability more frequently reported no handwashing place (17% of males with disability).

### Water for handwashing

Of those with handwashing facilities in their dwelling or yard/plot prior to the disaster, overall, 89% have water currently available (Graph 10). The group most affected by a lack of water are females with disability (12% no water) and the group most affected by limited water supply is males with no disability (12% limited water).

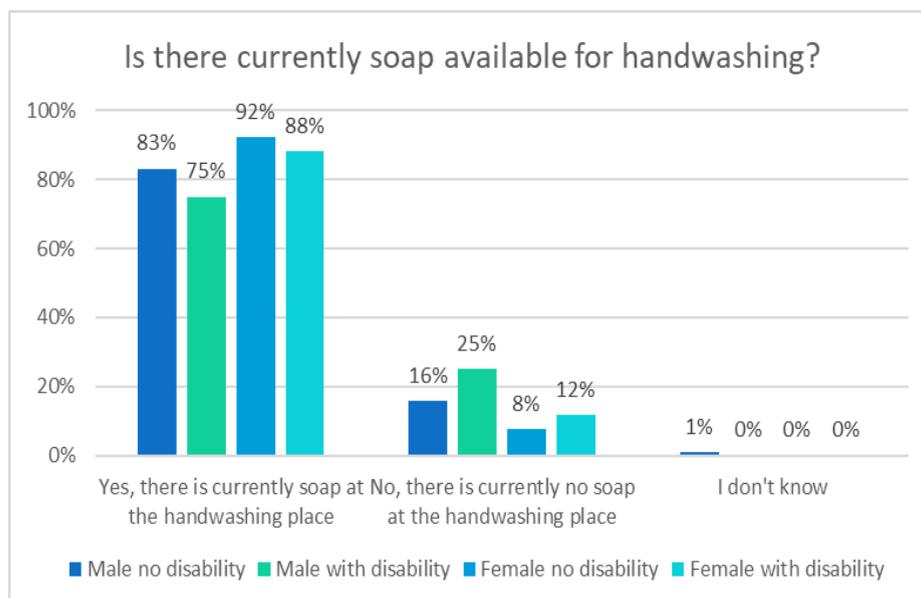
**Graph 10: Current water access for handwashing, by demographic category.**



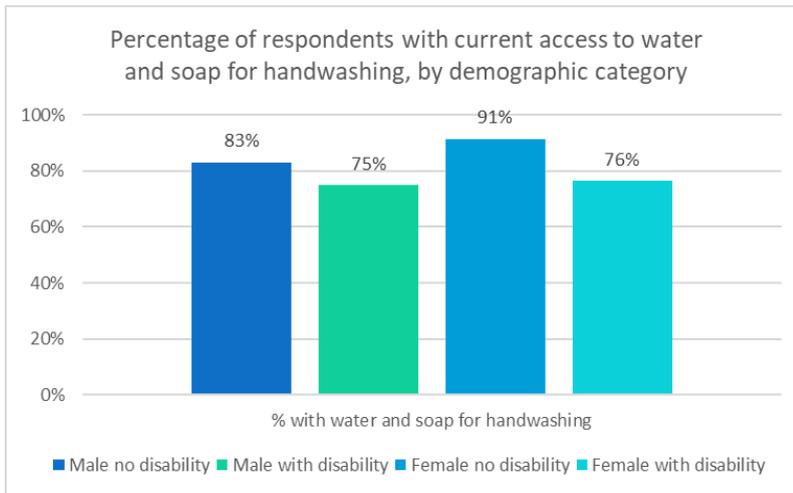
### Soap for handwashing

A total of 87% of respondents report having soap at their handwashing place and 12% report having no soap (Graph 11). This high result may be linked to the rapid distribution of hygiene kits, most of which was completed by the time the baseline was conducted, or the influence of the recent COVID-19 outbreak and communications, or social desirability bias. The group most affected by lack of soap are males with disability (25%). Of the 12% who currently have no soap, 73% also did not have soap for handwashing prior to the HTHH disaster, indicating the lack of soap may have been pre-existing. Of those who do not have soap but did prior to the disaster, reasons for a lack of soap now include financial hardship, inability, lack of time to get to the shops, or a temporary lack of soap.

**Graph 11: Current availability of soap at handwashing facilities, by demographic category.**



**Graph 12: Percentage of respondents with current access to water and soap, by demographic category.**

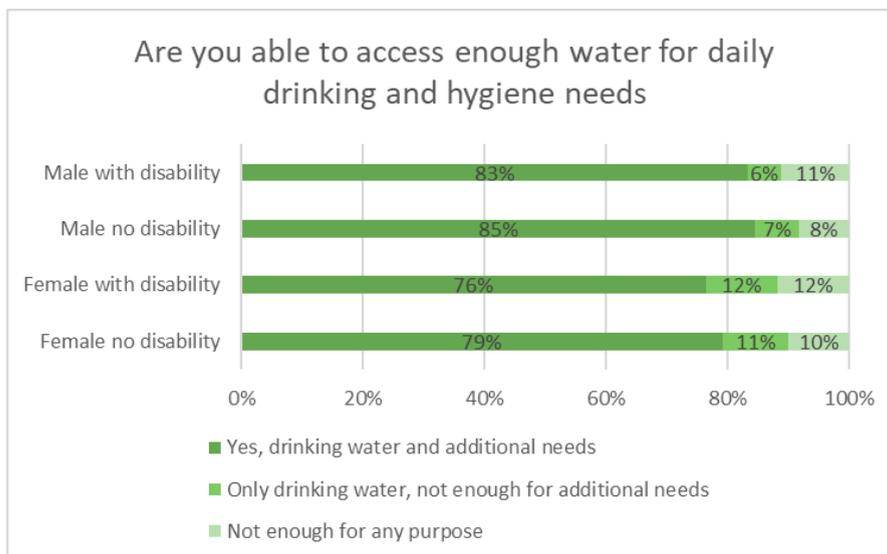


The percentage of respondents who currently have both water and soap for handwashing is **84% of people overall**. This figure will be used as the baseline figure for hygiene promotion activities. Graph 12 shows some differences in access by demographic category, with less respondents with disability reporting access to both water and soap for handwashing than respondents without disability.

**Access to water**

Finally, respondents were asked if they could access enough water for daily drinking and hygiene needs. Overall, 10% of respondents reported not being able to access enough water for any purpose; for females and males with disability this figure was slightly higher (12% and 11% respectively). Overall, 9% of respondents reported accessing enough water for drinking but not for other purposes and 81% reported accessing enough water for drinking and hygiene needs. Graph 13 shows the full breakdown.

**Graph 13: Current access to water for daily drinking and hygiene needs**



**Recommendation:** Review program WASH activities to ensure the approach is disability inclusive and target WASH efforts towards households with members with disability.

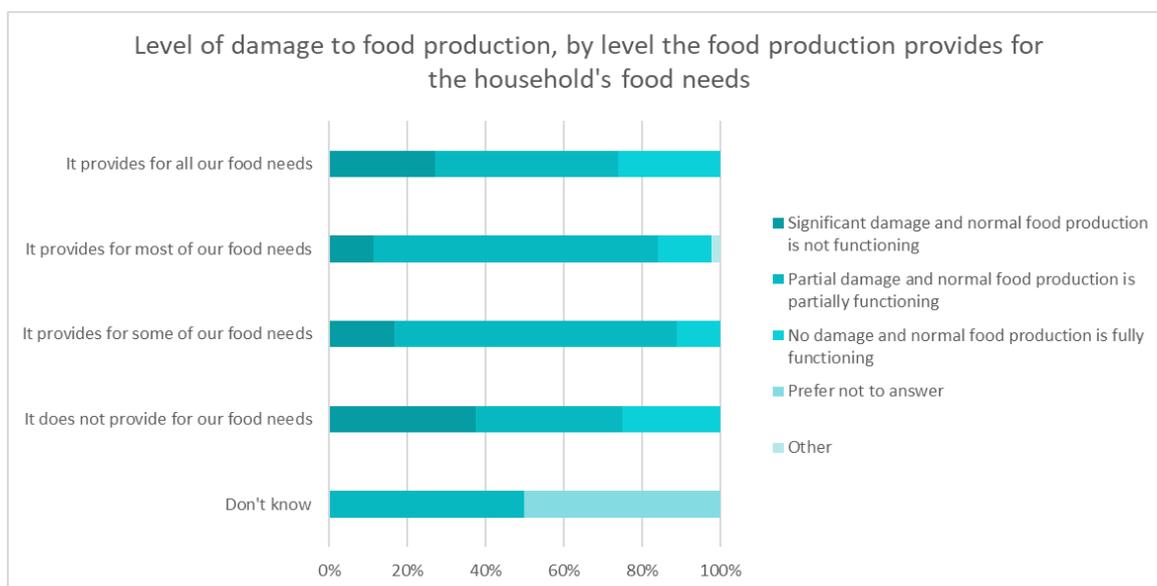
## Agriculture

### Impact of agricultural damage

Overall, 73% of respondents produce food in a town or tax allotment.<sup>1</sup> This trend is similar across all demographic categories. Geographically, respondents from 'Eua and Ha'apai more frequently report producing food (82% and 83% respectively) compared to Tongatapu (67%).

When the level of damage to food production is compared to the number of respondents who rely on food production for their food needs, **74% of people who rely on food production for some degree of their food needs have also had their production significantly or partially damaged (Graph 14).**

Graph 14: Level of damage to food production, by the level of reliance on food production for the household

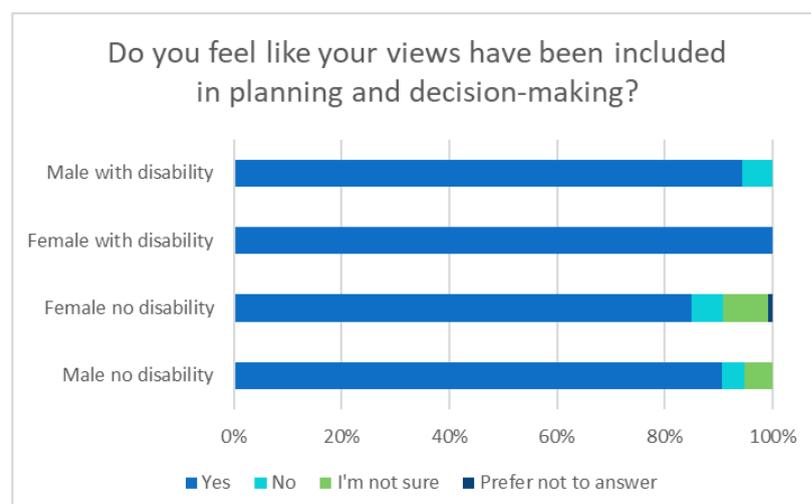


## Accountability

### Participation

Overall, 89% of respondents reported feeling that their views have been included in response planning and decision making (Graph 15).

Graph 15: Perception of participation



<sup>1</sup> All land in the Kingdom of Tonga belongs to the Crown and is subdivided into allotments for the people. A town allotment is land for residential purposes and a tax allotment is rural land for farming.

### Feedback and complaints preferences

The majority of respondents preferred to submit feedback and complaints by talking directly with program staff (77% overall), followed by calling staff via phone (44% overall) and talking to a community representative (38% overall). This is supported by program staff experiences, in that people are happy to communicate more informally but are hesitant to engage with formal complaints procedures, such as a written complaint. Table 4 shows the full breakdown of feedback and complaints preferences, by demographic category.

Table 4: Breakdown of feedback and complaints preferences

Feedback and Complaints Options	Female no disability	Female with disability	Male no disability	Male with disability
Directly talk to program staff, in person	77%	71%	77%	78%
Talk to a community representative who can share my view	40%	29%	35%	50%
Call program staff on the phone	51%	18%	42%	33%
Text message program staff	9%	0%	10%	6%
Use a messaging app to contact program staff	16%	12%	12%	28%
Communicate with program staff on social media	14%	0%	12%	11%
Email program staff	8%	0%	1%	22%
Anonymous feedback box	16%	0%	5%	28%
Be involved in committees or focus groups	13%	12%	7%	39%
Participate in surveys or interviews	20%	18%	14%	39%
Other	0%	6%	1%	0%
Prefer not to answer	0%	6%	5%	0%

### Information provision preferences

Similarly, when asked about preferences for information provision, respondents leaned towards in-person options. One more unexpected result was a preference for radio; during interpretation sessions, it was discussed how this may be a preference due to lack of connectivity and other communication options in some geographic locations, but overall, radio wasn't used much by the program.

Posters were also considered a popular medium by the program, particularly colourful and well-designed products. However, this preference is not reflected in the data, so may need further consideration or consultation.

### Recommendation:

Review the use of radio and posters/IECs in program. Is this matching people's feedback on provision of information preferences?

Table 5: Breakdown of information provision preferences

Information Provision Options	Female no disability	Female with disability	Male no disability	Male with disability
In person, at my house	38%	35%	64%	67%
In person, at community meetings	39%	41%	38%	28%
Through representatives in my community	38%	35%	23%	39%
Social media	33%	18%	27%	28%
Newspapers	14%	18%	7%	28%
Radio	30%	35%	25%	50%
TV	15%	12%	10%	33%
Posters	4%	0%	2%	6%
Information booklets or other handouts	3%	6%	3%	11%
Other	3%	0%	0%	6%
Prefer not to answer	1%	6%	2%	0%

### Activity participation preferences and needs

Respondents indicated a preference for weekday activities, although not overwhelmingly, with ‘weekdays in the morning’ being the most common response at just over half (52%). When disaggregated by sex and disability (Table 6) there does not seem to be any significant differences based on demographic categories nor geographic locations, so it may be a simple reflection of the different lives and priorities of respondents. During the interpretation session, it was noted that mornings tend to be an unsuitable time for women and the program team held gardening activities in the late afternoon. Given the data doesn’t entirely reflect this, it may be worth considering if this is an assumption or if it’s still correct for that particular target group of women.

**Recommendation:** Scheduling of program activities should consider the fact there is no single optimum time for participants. Planning should consult with the specific groups involved for smaller activities and also consider how and if activities schedules should be rotated to ensure equal opportunities for access to all people in the community.

Table 6: Participation time and day preferences

Preferred participation times	Female no disability	Female with disability	Male no disability	Male with disability
Weekdays in the morning	51%	41%	51%	78%
Weekdays in the afternoon	45%	35%	39%	39%
Weekdays in the evening	50%	35%	52%	50%
Saturdays in the morning	27%	18%	27%	28%
Saturdays in the afternoon	23%	18%	26%	28%
Saturdays in the evening	24%	24%	30%	44%
Sundays in the morning	3%	0%	2%	0%
Sundays in the afternoon	3%	0%	1%	0%
Sundays in the evening	3%	0%	5%	6%
Other	3%	0%	2%	6%
Prefer not to answer	1%	6%	3%	0%

### Additional support to participate

All respondents were asked whether they, or anyone in their household, required additional support to participate in program activities. Unexpectedly, more than half of respondents reported that either themselves or someone in their families required additional assistance, across demographic categories (Table 7).

In particular, a higher-than-expected number of respondents indicated help was required to travel to or from a location. Given that activities occur directly in the villages where people live, this is a surprising result. During the interpretation session, it was posited that this may be due to other factors, such as rising fuel costs, more so than mobility issues.

**Recommendation:** Follow up with the enumeration team to confirm how the question on support required to participate in activities was asked and if this may have influenced responses.

Overall, the data demonstrates the need for program staff to be considering the array of different needs participants may have and to develop approaches that maximise inclusion.

Table 7: Supports needed to attend program activities

Does the respondent/HH require additional support to participate	Female & Male	Female, no Male	Male, no Female	HHs with Elders (one or more)	Respondent with disability
No, we don't require any additional assistance	46%	44%	33%	43%	31%
Interpreter for our language	19%	31%	22%	19%	34%
A sign language interpreter	5%	13%	0%	6%	14%
Chairs or seating	21%	38%	11%	23%	40%
Help to travel to and from the location	37%	31%	44%	43%	46%
Help to lift or carry items	25%	31%	22%	29%	43%
Large print written materials	11%	13%	0%	15%	26%
Audio recording of written materials	4%	13%	0%	5%	6%
Other	1%	0%	0%	1%	3%
Prefer not to answer	3%	0%	0%	3%	6%

### Effectiveness of response

Respondents were asked what support they received so far following the HTHH disaster. Food and WASH support was widely reported, which was unsurprising given the survey was conducted in areas where the program had implemented hygiene kit distribution and an ongoing agricultural support program.

Overall, 19% of respondents indicated they needed assistance but had not yet received any support; shelter support reported was also low (5% overall, which is lower than the 18% indicating severe or moderate damage). This finding supports the prior observation (see Shelter section of this report) that there may be a subset of people who require support but have not yet received it and that this needs further investigation.

Table 8: Assistance provided following the HTHH disaster, as reported by respondents

Support received by respondents	Female no disability	Female with disability	Male no disability	Male with disability
I needed assistance but did not receive anything	 19%	 12%	 21%	 22%
Shelter	 4%	 12%	 5%	 6%
WASH	 55%	 65%	 54%	 72%
Energy (solar lights , generators etc)	 13%	 24%	 8%	 6%
Cash	 29%	 29%	 31%	 17%
Food	 58%	 65%	 62%	 50%
Toolkits	 13%	 24%	 7%	 11%
Other	 8%	 12%	 6%	 6%
Prefer not to answer	 2%	 6%	 1%	 0%
I did not need any assistance	 5%	 0%	 4%	 0%

## IV. Conclusions

The baseline exercise has provided the project with a significant amount of information about the status of shelter, WASH and agriculture needs in the target communities. This is particularly important to inform current program decision-making as, at the time of project inception, there was limited communications from Tonga and initial needs assessments were not yet available. In addition, since the volcano and tsunami event, the country has experienced a COVID-19 outbreak and multiple periods of lockdown and movement restriction, which has also impacted the situation of people affected.

The findings have indicated that the reach of the shelter activities need not be as wide-ranging as initially anticipated before needs data was available, with 82% of respondents reporting no or minor shelter damage. Implementing program staff report that most people who experienced minor damage to their houses have repaired or rebuilt in the first four months after the disaster, and therefore no longer need assistance. At the other end of the scale, there are communities where the shelter impact was so catastrophic that the support required is beyond the scope of shelter kits and Build Back Safer awareness messaging, requiring a pivot in initial response strategies. However, the survey did result in two key findings: that there are people with shelter needs in certain geographic areas potentially not captured by initial assessments, and that people moderately and severely impacted by the disaster report a higher-than-average level of feeling unsafe (27% versus 8% overall), many of whom may be living in damaged dwellings. Therefore, it is recommended to further assess and identify tailored shelter support options to meet the needs of households in unsafe living situations.

The program distributed drinking water and prepositioned hygiene kits to immediately address the needs of communities during a time when water was feared to be contaminated and tsunami damage had impacted water supply. Given the lower-than-expected level of widespread shelter damage sustained, the fact that 84% of respondents currently report access to water and soap for handwashing, and the fact water supply has been restored and declared safe, the data points towards the acute WASH phase having passed and water supply normalized. Thus, there is limited need for further WASH kits or extensive hygiene promotion support (noting COVID-19 knowledge, attitudes and practices were not assessed in this exercise). What is needed is continued support for cleaning and repair of rainwater collection systems.

The baseline findings for agriculture activities largely supported initial estimates of damage and impact, demonstrating that program activities planning to provide material and technical support for agriculture remain well aligned. People rely on their town and tax allotments for household food supplies, and these have been significantly affected by the disaster, which has implications for longer term food security if not addressed.

The challenges faced by the survey team have implications for ongoing MEAL work. Efforts will be made to reduce the assessment burden on communities, for example, through exploring qualitative key informant approaches over household surveys for gathering feedback and to rotate the sampled communities for survey work.

## V. Recommendations

**Recommendation:** Prior to the next data collection exercise, enumeration teams work with the inclusion and disability advisors/representatives from organisations for people with disabilities to develop screening and interviewing approaches for people with disabilities.

**Recommendation:** Review assumptions around population profile and sources of income, specifically sources of salary or regular wages

**Recommendation:** Review reported livelihood findings with respect to planned livelihoods recovery program activities and what sectors the disaster has impacted the most.

**Recommendation:** Review program approaches, particularly IECs and other information provision activities, for suitability to predominant levels of education. Identify where targeted communications may be required to reach minority groups.

**Recommendation:** Project staff conduct visits to the identified communities to verify the accuracy of the shelter data, by visually assessing the condition of homes in these locations.

**Recommendation:** Follow up with people who experienced significant damage but are not in evacuation centres. Are people residing in damaged houses, or has there been a rapid rebuild? What safety issues exist?

**Recommendation:** Further investigation to understand why more males than females report feeling unsafe. Did challenges collecting disability data affect this finding? Or is there an undetected safety issue, possibly the recent COVID-19 outbreak causing people to feel unsafe?

**Recommendation:** Review program WASH activities to ensure the approach is disability inclusive and target WASH efforts towards households with members with disability.

**Recommendation:** Review the use of radio and posters/IECs in program. Is this matching people's feedback on provision of information preferences?

**Recommendation:** Scheduling of program activities should consider the fact there is no single optimum time for participants. Planning should consult with the specific groups involved for smaller activities and also consider how and if activities schedules should be rotated to ensure equal opportunities for access to all people in the community.

**Recommendation:** Follow up with the enumeration team to confirm how the question on support required to participate in activities was asked and if this may have influenced responses.