

INDONESIA

# Central Sulawesi Earthquake, Tsunami, and Liquefaction: Population Needs

Multi-Sector Needs Assessment:  
Sub-District Profiles, Donggala  
Regency

February 2019



Funded by  
European Union  
Humanitarian Aid



KlasNas PP  
KEMENTERIAN SOSIAL  
REPUBLIK INDONESIA



unicef  
for every child



UNIVERSITAS MUHAMMADIYAH  
\* PALU \*  
MUHAMMADIYAH UNIVERSITY OF PALU



**REACH** Informing  
more effective  
humanitarian action



## Background and methodology

Following a 7.7 magnitude earthquake on 28 September, 2018, large parts of Palu, Donggala, Sigi, and Parigi Moutong regencies in Central Sulawesi province were destroyed by earthquake, tsunami, and liquefaction events. As of 10 December 2018, approximately 2,101 people have been killed, 1,373 are missing, and an estimated 133,631 individuals were displaced in informal settlements.<sup>1</sup> An estimated 15,000 houses have been destroyed and another 17,000 heavily damaged. However, four months after the initial disaster, there is still very little understanding of the needs and vulnerabilities of the affected population in Central Sulawesi Province.

To fill this gap, a Multi-Sector Needs Assessment (MSNA) was conducted by Humanitarian Forum Indonesia (HFI) and Universitas Muhammadiyah Palu (UNISMUH) with oversight from the Ministry of Social Affairs (Kemensos) and technical support from REACH, in 38 of 62 sub-districts in the four affected regencies of Central Sulawesi Province.

A sample of 118 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.<sup>2</sup> Results were weighted by population and generalizable to the crisis level with 95% confidence level and 10% margin of error.



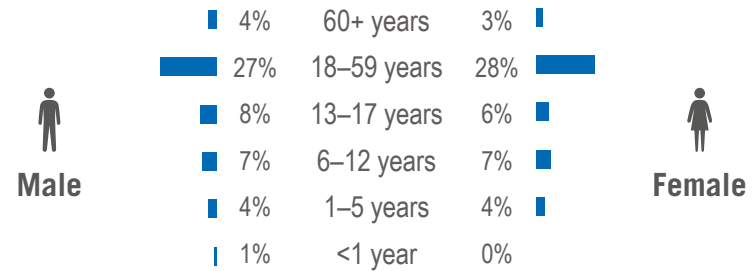
## Respondent metadata<sup>3</sup>

**118** Total households interviewed  
**45** Average age of respondent in years  
**36%** of respondents were female



## Demographics

### Household composition by gender and age



There was an average of **4** individuals reported per household

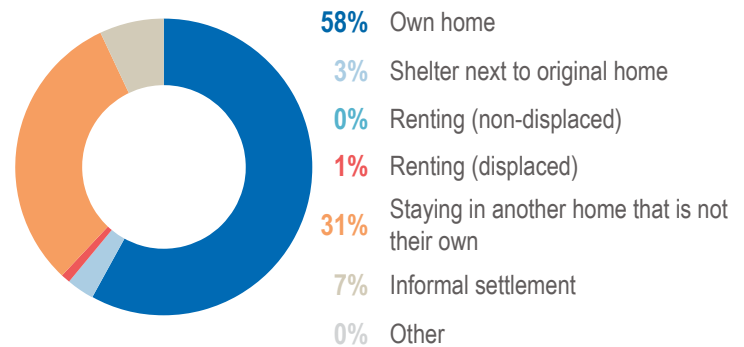
### Head of Household

**11%** of heads of households were female  
**20%** of heads of households were elderly  
**46** average age of the head of household in years

### Dependency ratio<sup>4</sup>

**0.7** average youth dependency ratio  
**0.2** average elderly dependency ratio  
**0.9** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



- Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
- The boundaries and names used on this map do not imply official endorsement or acceptance by REACH, UNICEF, HFI, or UNISMUH. Population data was extracted at desa-level from SIAK (Population Information Administration System) database, Ministry of Home Affairs (MoHA, 2017). Population of missing desas was imputed using data from the Indonesia Bureau of Statistics, 2010.
- Respondent metadata provides information on the respondents interviewed for the questionnaire. While the respondent was usually the head of household, if the head of household was not present at the time of interview, a member of the household knowledgeable about household affairs responded instead. This section only shows information on respondents, not the heads of household. Results in this section are not weighted by population, and should be considered as indicative.
- Age-dependency ratio was calculated by dividing the number of under-age and elderly (non-productive) individuals (0–17 years for youth and 60+ years for elderly) by the number of adult (productive) individuals in the population (18–59 years). Anything below 1 shows that the population is mostly adults of working-age who can provide for those who are not.
- Households were categorised based on whether they were still living on their original land, or if they were displaced by the disaster. Those living in their original home, renting (in the same location both before and after the disaster) or living in a tent/makeshift shelter next to their



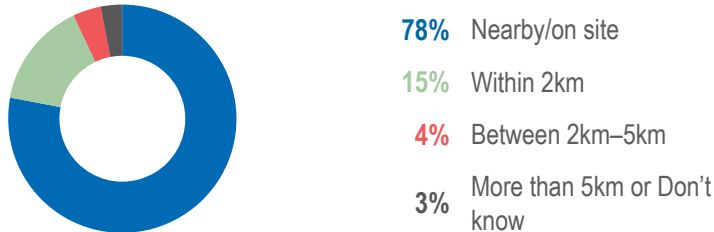


## Displacement and Protection

### Displaced population<sup>5</sup>

**42%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



### Non-displaced population<sup>5</sup>

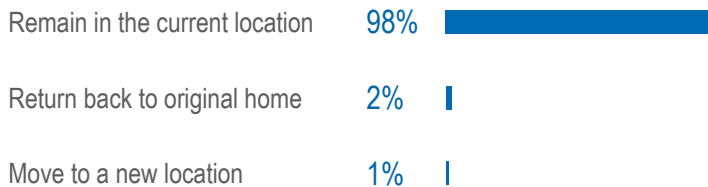
**1%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **0** IDP individuals in each displaced household hosted by a non-displaced household

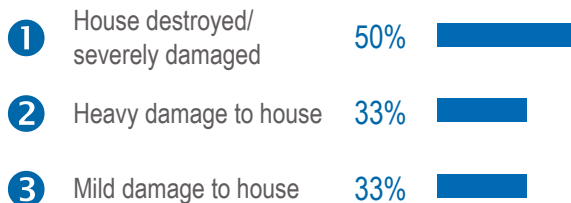
**0** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**13%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**3%** of households contained at least one member with a self-reported physical or mental disability

### Child Protection

**2%** of households contained at least one child that was separated from their usual caregiver

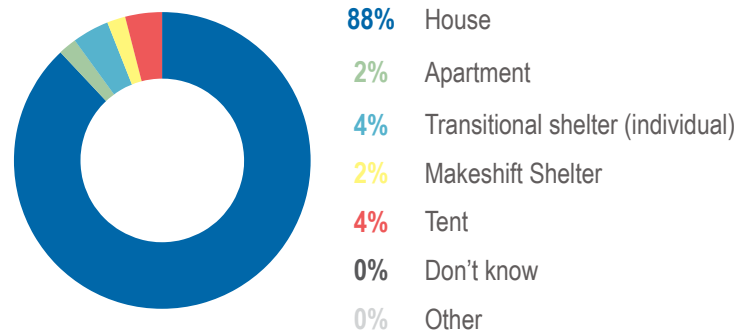
### Psychosocial Support

**51%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

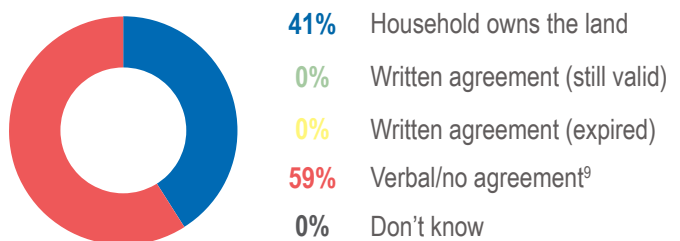
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**63%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**80%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

7. Single-choice question; only the top three responses are shown.

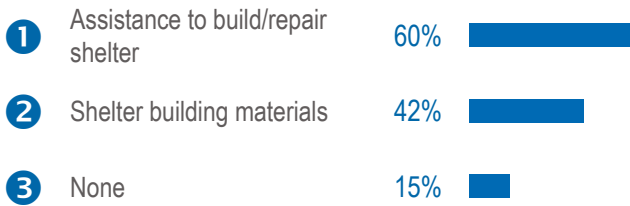
8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

9. In many households in Central Sulawesi, there is a cultural practice in which one household owns many plots of land, and other households are permitted to live on it without any formal agreement.

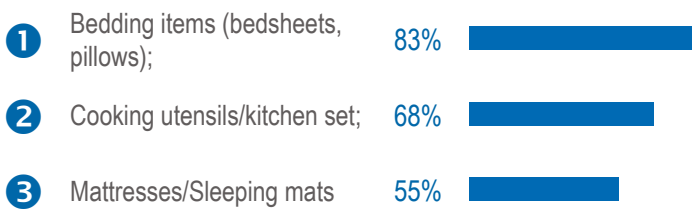




Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



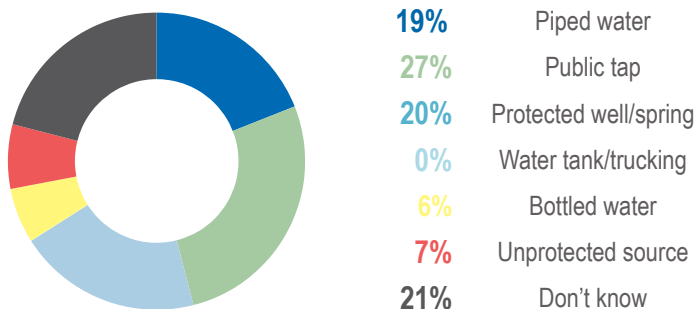
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

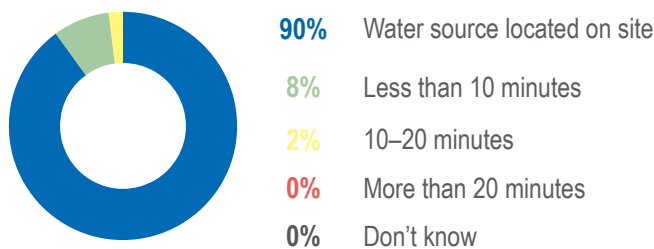
% of households acquired most of their drinking water from the following sources:



**97%** of households reported drinking water that had been treated and was safe to drink

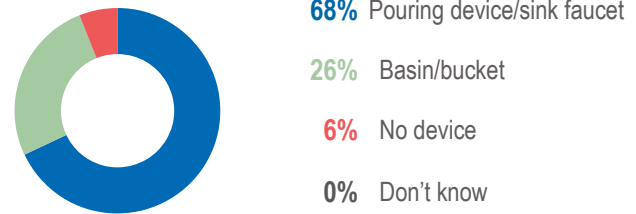
**86%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:

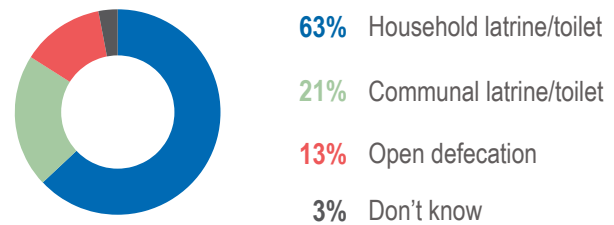


**82%** of households have water available for hand washing

**57%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



There is an average of **6** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**84%** of households with communal latrines reported their toilet had adequate lighting

**0%** of households with communal toilets reported that there are separate toilets for men and women

**81%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors



## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>

Before Disaster		January 2019	
<b>54%</b>	Agricultural	<b>1</b>	Agricultural <b>52%</b>
<b>12%</b>	Fishing	<b>2</b>	Fishing <b>12%</b>
<b>8%</b>	Service industry	<b>3</b>	Unemployed <b>12%</b>

10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.





% of households reporting that the household main income was unemployment, before and after the disaster:

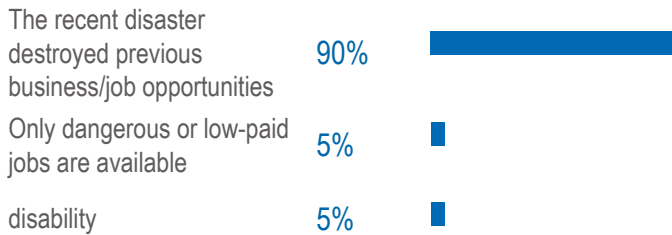
**Before Disaster**

**January 2019**

**6%** are unemployed **12%**

**16%** of households had at least one working-age household member that is not working

Main reported barriers to finding work:<sup>13</sup>



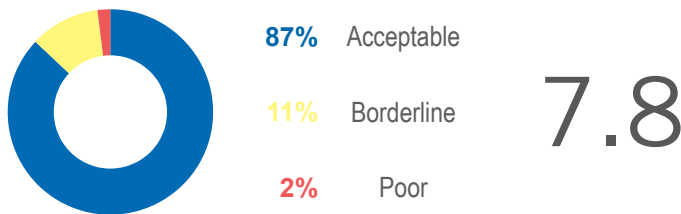
There is an average reported loss of **10%** of household income due to the disaster<sup>13</sup>



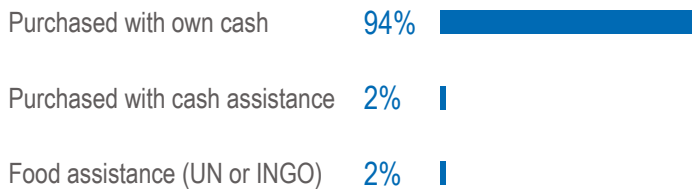
**Food Security**

**Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)**

Food Consumption Score<sup>14</sup> average rCSI score<sup>15</sup>



% of households per main reported source of food in week prior to data collection:<sup>18</sup>



**Education**

**Student attendance**

**2%** of households with children reported having school-aged children who were not attending school following the disaster

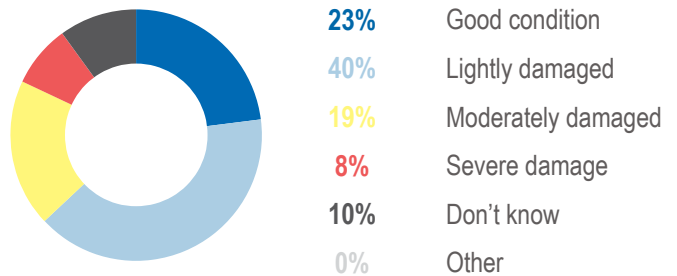
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>



**Condition of school facilities**

% of households reported the condition of the nearby school to be the following:



**Health**

**Immunization**

**8%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

**Illness and injury**

**33%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.

14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).

15. rCSI is a measure of food security that looks at a set list of five coping strategies that households might be using to make food last longer in the absence of sufficient foods. It uses 5 commonly practiced coping strategies across the world. rCSI was calculated by asking respondents how many days per week their household adopted different coping strategies to make food last longer. The number of days was then multiplied by a coefficient based on the coping strategy and added up. There are no officially established thresholds, but generally, scores between 0 and 3 are considered to be good, 4 to 9 is worrisome, and scores greater than or equal to 10 are concerning (WFP VAM Unit, Afghanistan, Guidance note: calculation of household food security outcome indicators, December 2012).

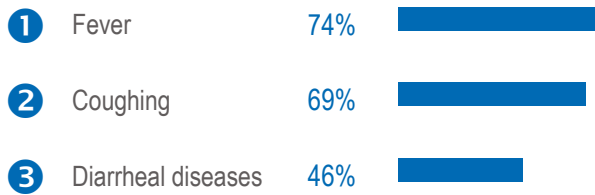
16. Single-choice question; only the top three responses are shown.

17. Respondents could select multiple responses; only the top three choices are shown.

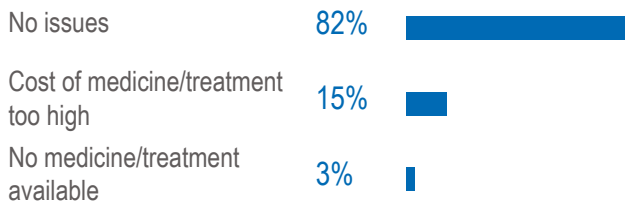




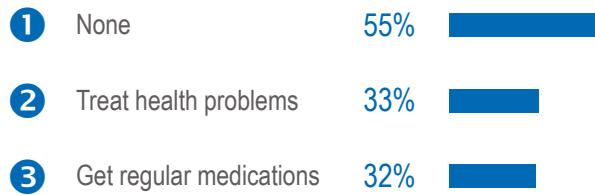
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

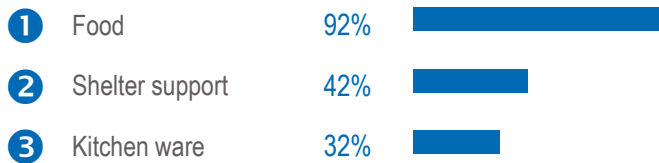


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

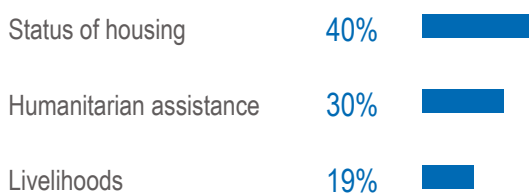
Top 3 most important priority needs as reported by households:<sup>20</sup>



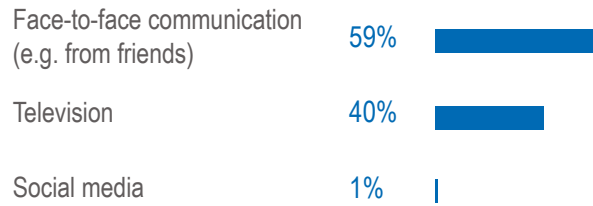
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



% of households by most preferred source from which they would like to receive new information:<sup>19</sup>

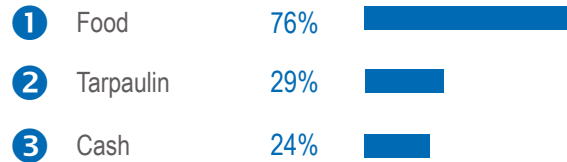


#### Humanitarian assistance

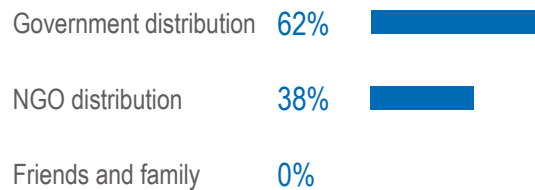
**18%**

of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



**33%**

of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

18. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.  
19. Single-choice question; only the top three responses are shown.  
20. Respondents could select up to three responses, therefore results may exceed 100%; only the top three choices are shown.





## Background and methodology

Following a 7.7 magnitude earthquake on 28 September, 2018, large parts of Palu, Donggala, Sigi, and Parigi Moutong regencies in Central Sulawesi province were destroyed by earthquake, tsunami, and liquefaction events. As of 10 December 2018, approximately 2,101 people have been killed, 1,373 are missing, and an estimated 133,631 individuals were displaced in informal settlements.<sup>1</sup> An estimated 15,000 houses have been destroyed and another 17,000 heavily damaged. However, four months after the initial disaster, there is still very little understanding of the needs and vulnerabilities of the affected population in Central Sulawesi Province.

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A sample of 112 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.<sup>2</sup> Results were weighted by population and generalizable to the crisis level with 95% confidence level and 10% margin of error.



## Respondent metadata<sup>3</sup>

**112** Total households interviewed  
**45** Average age of respondent in years  
**55%** of respondents were female



## Demographics

### Household composition by gender and age



There was an average of **4** individuals reported per household

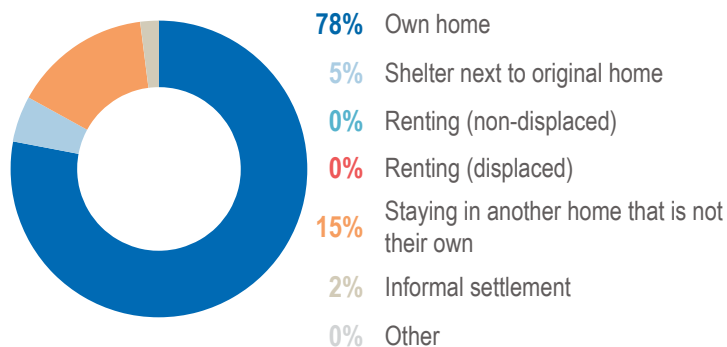
### Head of Household

**17%** of heads of households were female  
**23%** of heads of households were elderly  
**48** average age of the head of household in years

### Dependency ratio<sup>4</sup>

**0.8** average youth dependency ratio  
**0.3** average elderly dependency ratio  
**1.1** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



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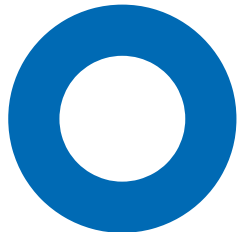


## Displacement and Protection

### Displaced population<sup>5</sup>

**22%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



**100%** Nearby/on site  
**0%** Within 2km  
**0%** Between 2km–5km  
**0%** More than 5km or Don't know

### Non-displaced population<sup>5</sup>

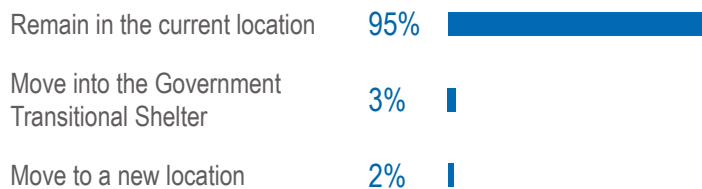
**1%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **0** IDP individuals in each displaced household hosted by a non-displaced household

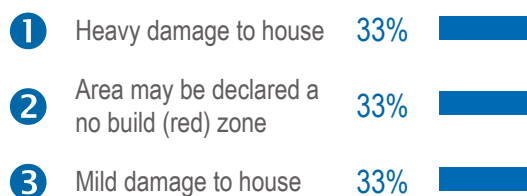
**0** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**14%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**0%** of households contained at least one member with a self-reported physical or mental disability

## Child Protection

**1%** of households contained at least one child that was separated from their usual caregiver

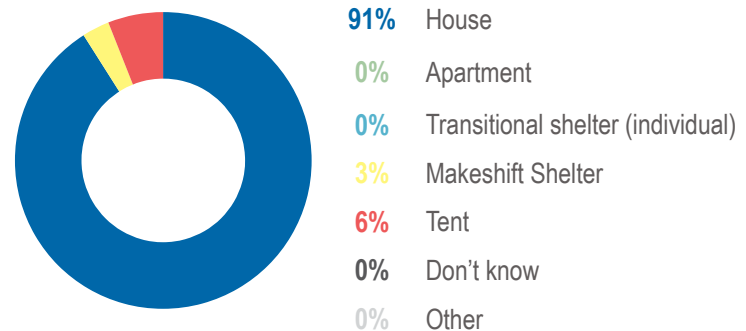
## Psychosocial Support

**54%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

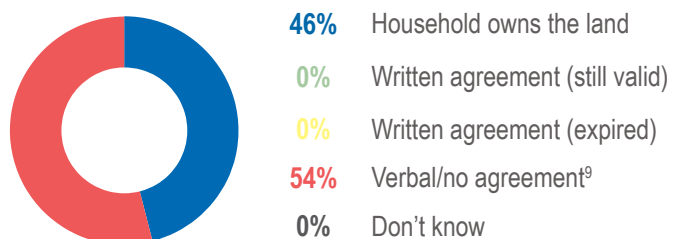
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**67%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**96%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

7. Single-choice question; only the top three responses are shown.

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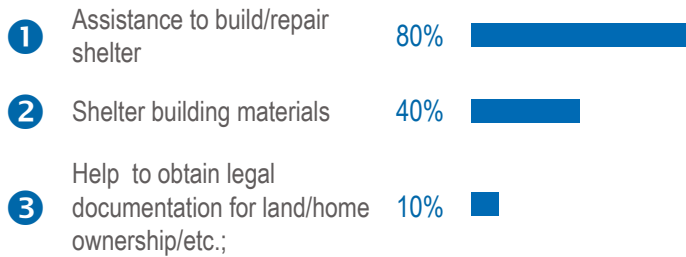
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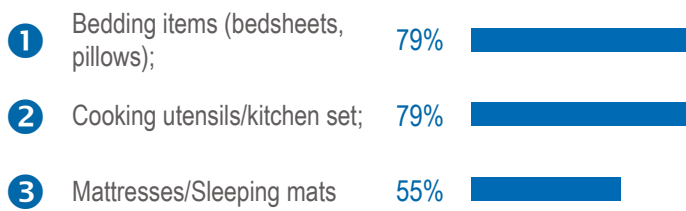




Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



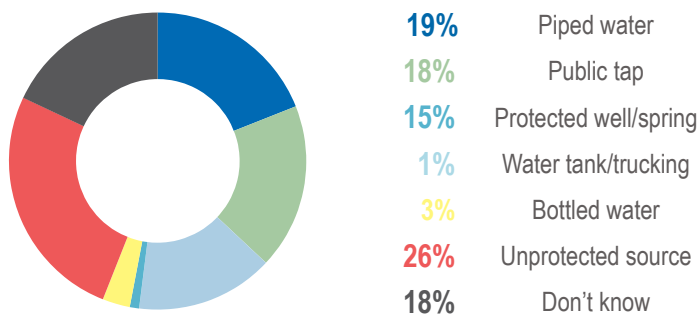
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

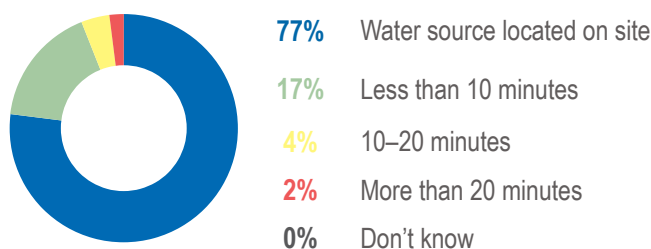
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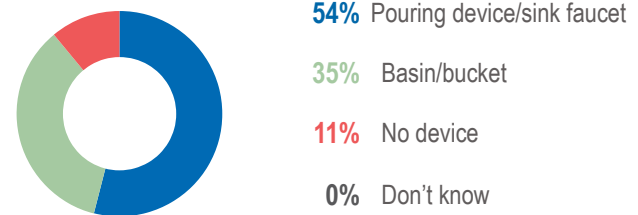
**87%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:

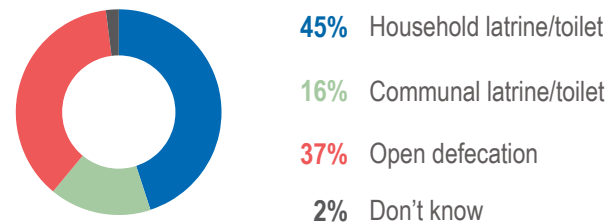


**82%** of households have water available for hand washing

**56%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



There is an average of **6** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**90%** of households with communal latrines reported their toilet had adequate lighting

**6%** of households with communal toilets reported that there are separate toilets for men and women

**88%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors



## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>

Before Disaster			January 2019	
<b>54%</b>	Agricultural	<b>1</b>	Agricultural	<b>55%</b>
<b>18%</b>	Fishing	<b>2</b>	Fishing	<b>16%</b>
<b>5%</b>	Unemployed	<b>3</b>	Unemployed	<b>8%</b>

10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.





% of households reporting that the household main income was unemployment, before and after the disaster:

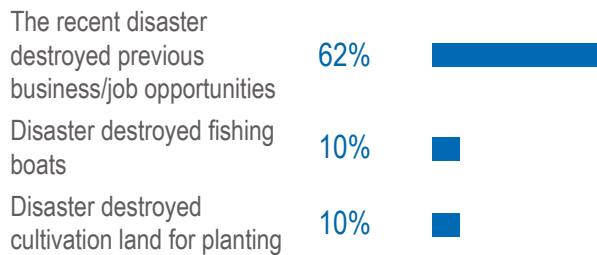
**Before Disaster**

**January 2019**

**5%** are unemployed **8%**

**19%** of households had at least one working-age household member that is not working

Main reported barriers to finding work:<sup>13</sup>



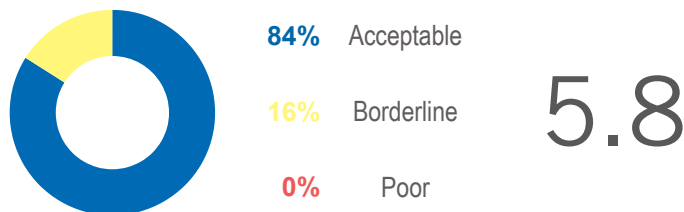
There is an average reported loss of **10%** of household income due to the disaster<sup>13</sup>



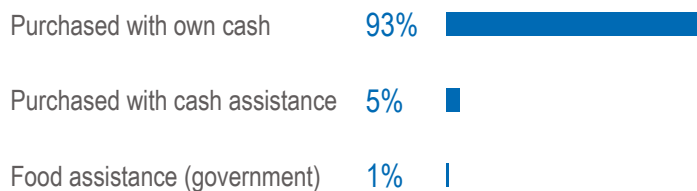
**Food Security**

**Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)**

Food Consumption Score<sup>14</sup> average rCSI score<sup>15</sup>



% of households per main reported source of food in week prior to data collection:<sup>18</sup>



**Education**

**Student attendance**

**1%** of households with children reported having school-aged children who were not attending school following the disaster

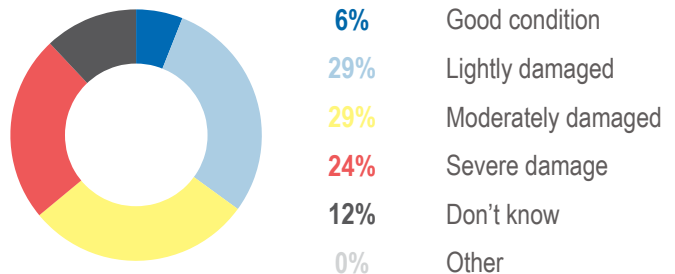
Among households where children were not attending school, there was an average of **0** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>

- 1** NA 0%
- 2** NA 0%
- 3** NA 0%

**Condition of school facilities**

% of households reported the condition of the nearby school to be the following:



**Health**

**Immunization**

**29%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

**Illness and injury**

**43%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.

14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).

15. rCSI is a measure of food security that looks at a set list of five coping strategies that households might be using to make food last longer in the absence of sufficient foods. It uses 5 commonly practiced coping strategies across the world. rCSI was calculated by asking respondents how many days per week their household adopted different coping strategies to make food last longer. The number of days was then multiplied by a coefficient based on the coping strategy and added up. There are no officially established thresholds, but generally, scores between 0 and 3 are considered to be good, 4 to 9 is worrisome, and scores greater than or equal to 10 are concerning (WFP VAM Unit, Afghanistan, Guidance note: calculation of household food security outcome indicators, December 2012).

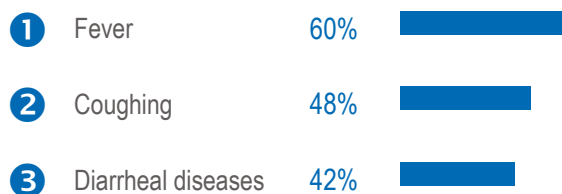
16. Single-choice question; only the top three responses are shown.

17. Respondents could select multiple responses; only the top three choices are shown.

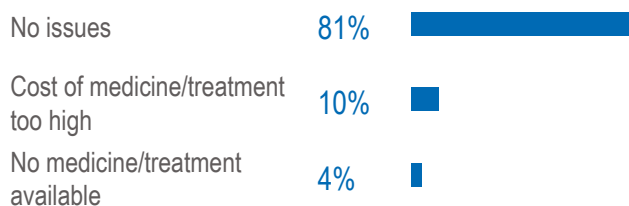




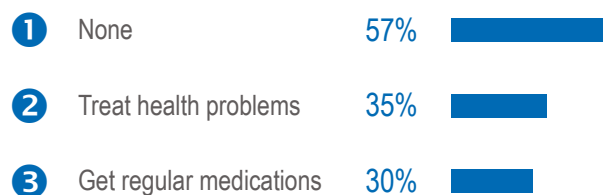
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

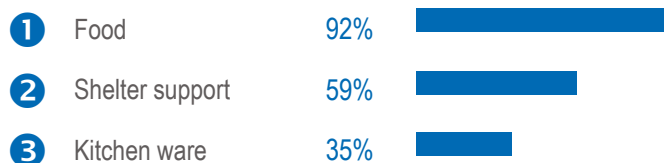


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

Top 3 most important priority needs as reported by households:<sup>20</sup>



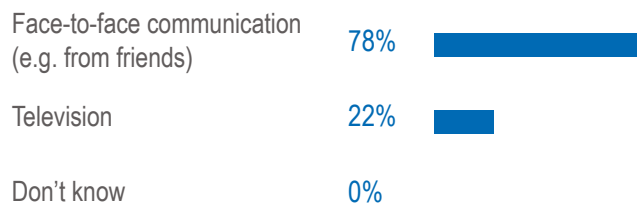
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



% of households by most preferred source from which they would like to receive new information:<sup>19</sup>

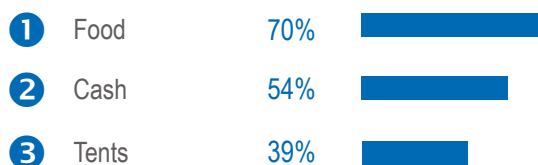


#### Humanitarian assistance

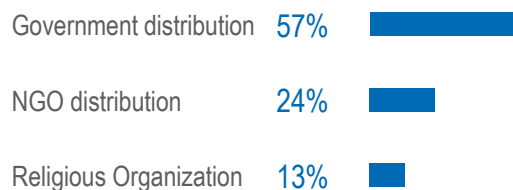
**62%**

of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



**29%**

of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

18. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.

19. Single-choice question; only the top three responses are shown.

20. Respondents could select up to three responses, therefore results may exceed 100%; only the top three choices are shown.



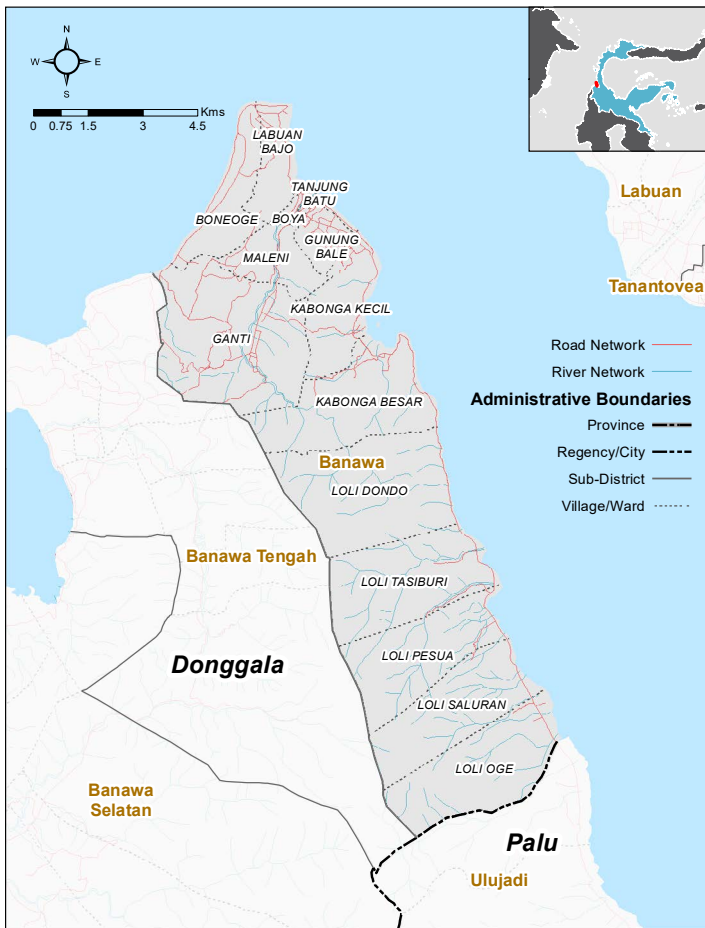


## Background and methodology

Following a 7.7 magnitude earthquake on 28 September, 2018, large parts of Palu, Donggala, Sigi, and Parigi Moutong regencies in Central Sulawesi province were destroyed by earthquake, tsunami, and liquefaction events. As of 10 December 2018, approximately 2,101 people have been killed, 1,373 are missing, and an estimated 133,631 individuals were displaced in informal settlements.<sup>1</sup> An estimated 15,000 houses have been destroyed and another 17,000 heavily damaged. However, four months after the initial disaster, there is still very little understanding of the needs and vulnerabilities of the affected population in Central Sulawesi Province.

To fill this gap, a Multi-Sector Needs Assessment (MSNA) was conducted by Humanitarian Forum Indonesia (HFI) and Universitas Muhammadiyah Palu (UNISMUH) with oversight from the Ministry of Social Affairs (Kemensos) and technical support from REACH, in 38 of 62 sub-districts in the four affected regencies of Central Sulawesi Province.

A sample of 112 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.<sup>2</sup> Results were weighted by population and generalizable to the crisis level with 95% confidence level and 10% margin of error.



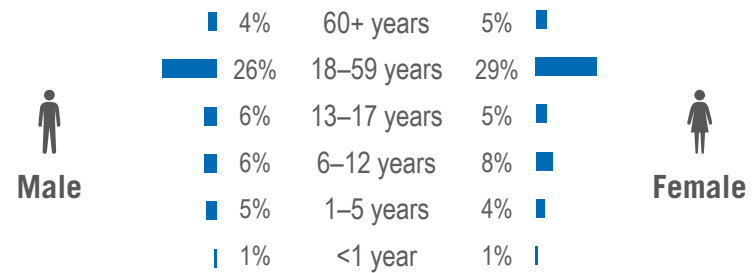
## Respondent metadata<sup>3</sup>

**112** Total households interviewed  
**45** Average age of respondent in years  
**64%** of respondents were female



## Demographics

### Household composition by gender and age



There was an average of **5** individuals reported per household

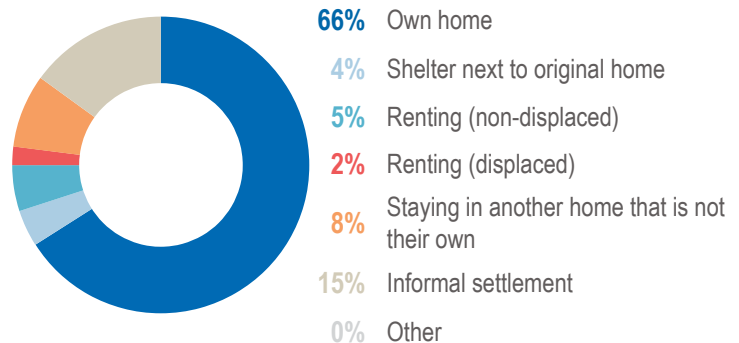
### Head of Household

**14%** of heads of households were female  
**19%** of heads of households were elderly  
**48** average age of the head of household in years

### Dependency ratio<sup>4</sup>

**0.8** average youth dependency ratio  
**0.3** average elderly dependency ratio  
**1** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



- Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
- The boundaries and names used on this map do not imply official endorsement or acceptance by REACH, UNICEF, HFI, or UNISMUH. Population data was extracted at desa-level from SIAK (Population Information Administration System) database, Ministry of Home Affairs (MoHA, 2017). Population of missing desas was imputed using data from the Indonesia Bureau of Statistics, 2010.
- Respondent metadata provides information on the respondents interviewed for the questionnaire. While the respondent was usually the head of household, if the head of household was not present at the time of interview, a member of the household knowledgeable about household affairs responded instead. This section only shows information on respondents, not the heads of household. Results in this section are not weighted by population, and should be considered as indicative.
- Age-dependency ratio was calculated by dividing the number of under-age and elderly (non-productive) individuals (0–17 years for youth and 60+ years for elderly) by the number of adult (productive) individuals in the population (18–59 years). Anything below 1 shows that the population is mostly adults of working-age who can provide for those who are not.
- Households were categorised based on whether they were still living on their original land, or if they were displaced by the disaster. Those living in their original home, renting (in the same location both before and after the disaster) or living in a tent/makeshift shelter next to their



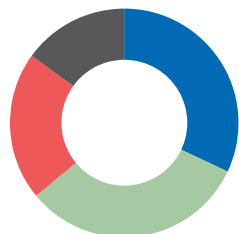


## Displacement and Protection

### Displaced population<sup>5</sup>

**29%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



**32%** Nearby/on site  
**32%** Within 2km  
**21%** Between 2km–5km  
**15%** More than 5km or Don't know

### Non-displaced population<sup>5</sup>

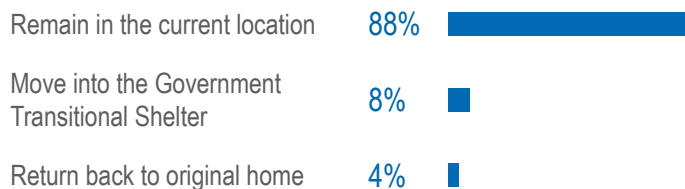
**4%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **4** IDP individuals in each displaced household hosted by a non-displaced household

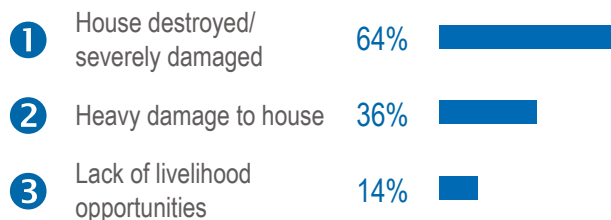
**0.5** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**20%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**3%** of households contained at least one member with a self-reported physical or mental disability

## Child Protection

**4%** of households contained at least one child that was separated from their usual caregiver

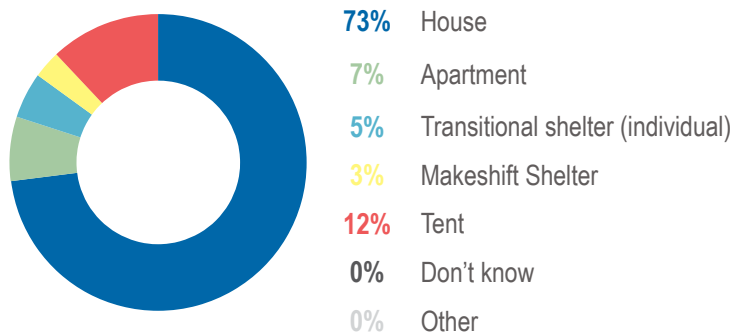
## Psychosocial Support

**49%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

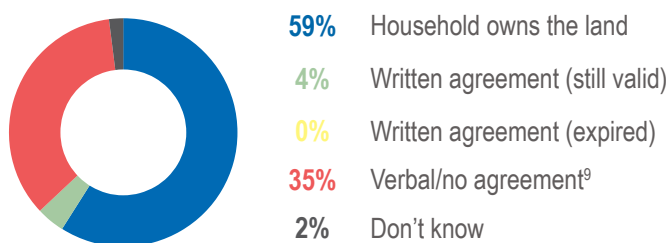
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**71%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**70%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

7. Single-choice question; only the top three responses are shown.

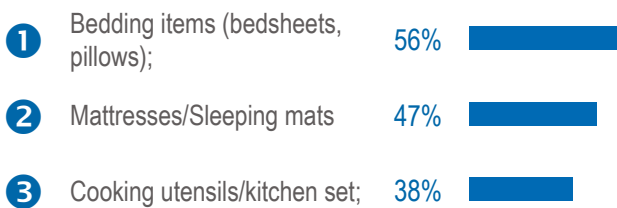
8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

9. In many households in Central Sulawesi, there is a cultural practice in which one household owns many plots of land, and other households are permitted to live on it without any formal agreement.

Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



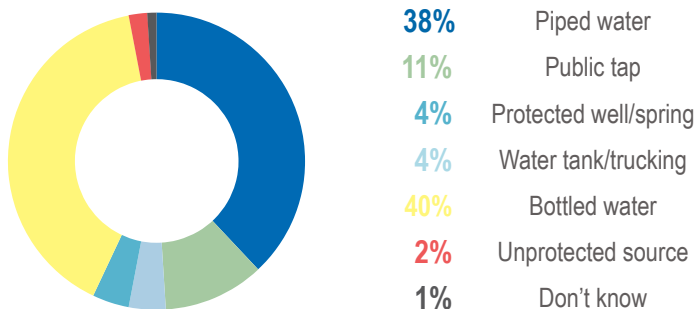
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

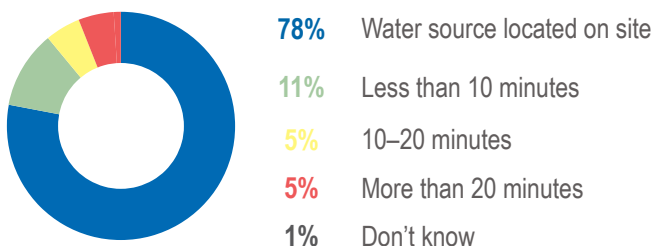
% of households acquired most of their drinking water from the following sources:



**94%** of households reported drinking water that had been treated and was safe to drink

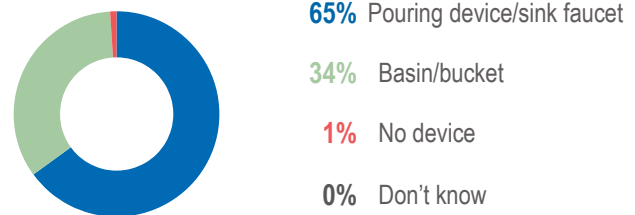
**88%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:

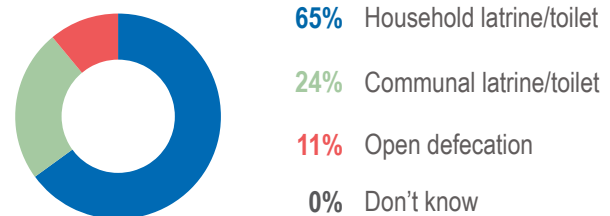


**96%** of households have water available for hand washing

**63%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



There is an average of **20** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**78%** of households with communal latrines reported their toilet had adequate lighting

**1%** of households with communal toilets reported that there are separate toilets for men and women

**73%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors



## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>

Before Disaster		January 2019	
<b>20%</b>	Fishing	<b>1</b>	Small business owner <b>16%</b>
<b>19%</b>	Small business owner	<b>2</b>	Service industry <b>13%</b>
<b>12%</b>	Service industry	<b>3</b>	Unemployed <b>13%</b>

10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.

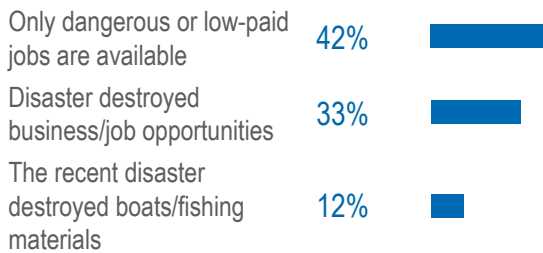


% of households reporting that the household main income was unemployment, before and after the disaster:



**21%** of households had at least one working-age household member that is not working

Main reported barriers to finding work:<sup>13</sup>

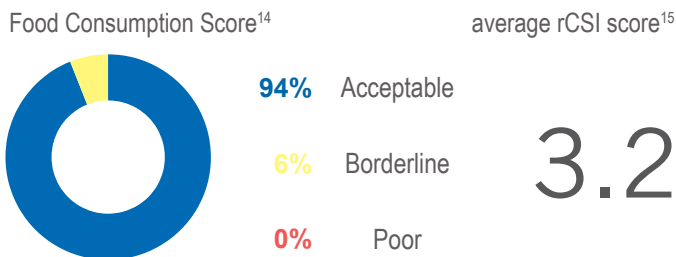


There is an average reported loss of **10%** of household income due to the disaster<sup>13</sup>



## Food Security

### Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)



% of households per main reported source of food in week prior to data collection:<sup>18</sup>



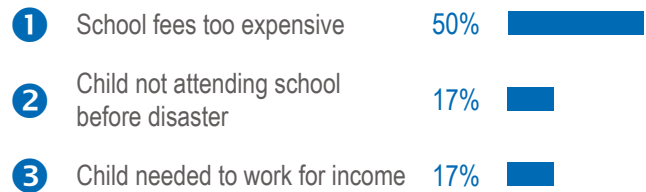
## Education

### Student attendance

**5%** of households with children reported having school-aged children who were not attending school following the disaster

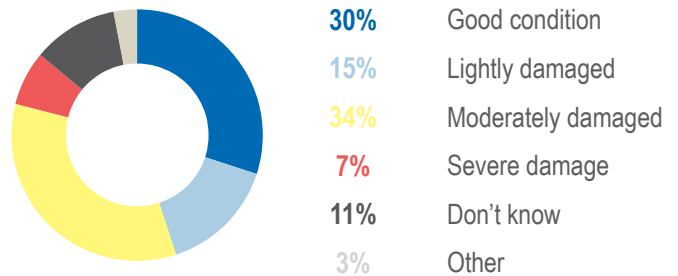
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>



### Condition of school facilities

% of households reported the condition of the nearby school to be the following:



## Health

### Immunization

**1%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

### Illness and injury

**45%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.

14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).

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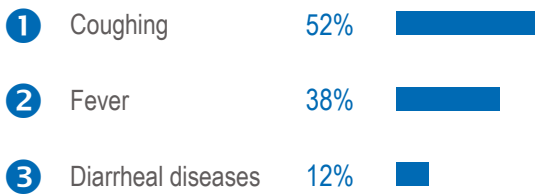
16. Single-choice question; only the top three responses are shown.

17. Respondents could select multiple responses; only the top three choices are shown.

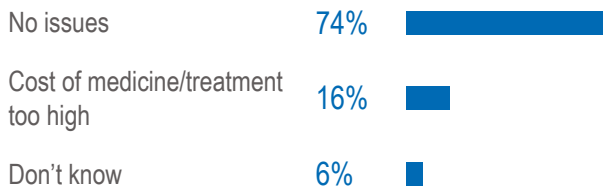




Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

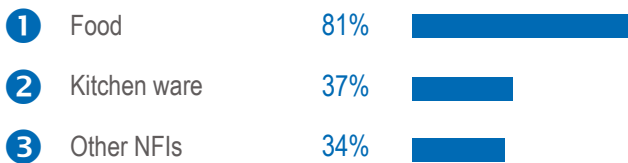


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

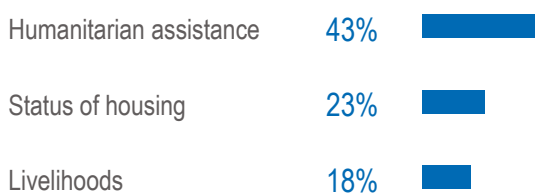
Top 3 most important priority needs as reported by households:<sup>20</sup>



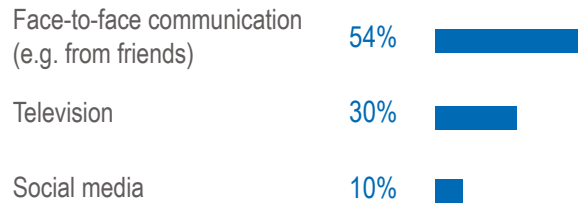
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



% of households by most preferred source from which they would like to receive new information:<sup>19</sup>

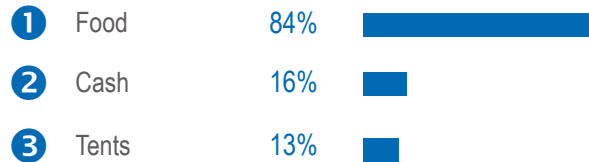


#### Humanitarian assistance

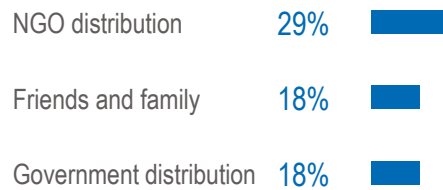
**34%**

of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



**74%**

of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

18. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.  
19. Single-choice question; only the top three responses are shown.  
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## Background and methodology

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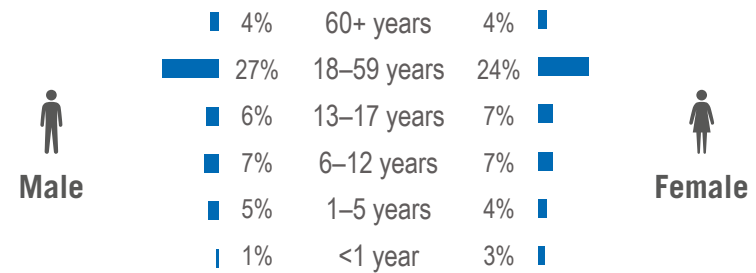
## Respondent metadata<sup>3</sup>

**101** Total households interviewed  
**41** Average age of respondent in years  
**69%** of respondents were female



## Demographics

### Household composition by gender and age



There was an average of **5** individuals reported per household

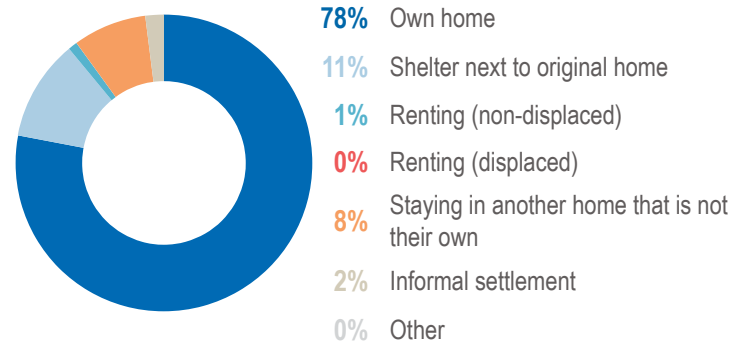
### Head of Household

**13%** of heads of households were female  
**15%** of heads of households were elderly  
**45** average age of the head of household in years

### Dependency ratio<sup>4</sup>

**0.9** average youth dependency ratio  
**0.2** average elderly dependency ratio  
**1.1** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



- Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
- The boundaries and names used on this map do not imply official endorsement or acceptance by REACH, UNICEF, HFI, or UNISMUH. Population data was extracted at desa-level from SIAK (Population Information Administration System) database, Ministry of Home Affairs (MoHA, 2017). Population of missing desas was imputed using data from the Indonesia Bureau of Statistics, 2010.
- Respondent metadata provides information on the respondents interviewed for the questionnaire. While the respondent was usually the head of household, if the head of household was not present at the time of interview, a member of the household knowledgeable about household affairs responded instead. This section only shows information on respondents, not the heads of household. Results in this section are not weighted by population, and should be considered as indicative.
- Age-dependency ratio was calculated by dividing the number of under-age and elderly (non-productive) individuals (0–17 years for youth and 60+ years for elderly) by the number of adult (productive) individuals in the population (18–59 years). Anything below 1 shows that the population is mostly adults of working-age who can provide for those who are not.
- Households were categorised based on whether they were still living on their original land, or if they were displaced by the disaster. Those living in their original home, renting (in the same location both before and after the disaster) or living in a tent/makeshift shelter next to their



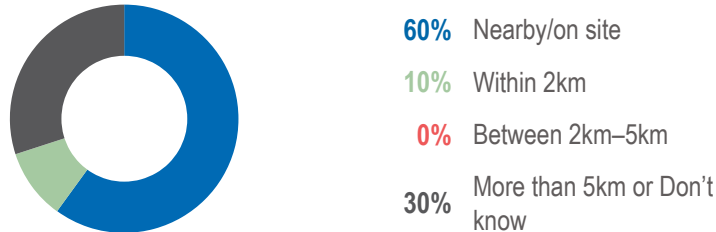


## Displacement and Protection

### Displaced population<sup>5</sup>

**21%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



### Non-displaced population<sup>5</sup>

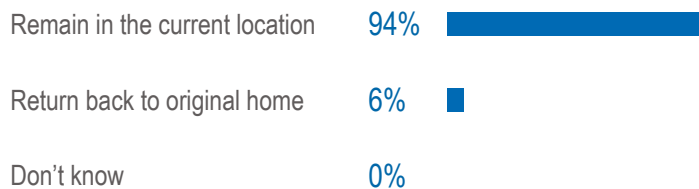
**3%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **3** IDP individuals in each displaced household hosted by a non-displaced household

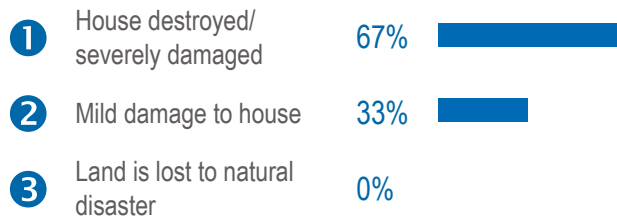
**0.4** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**24%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**1%** of households contained at least one member with a self-reported physical or mental disability

### Child Protection

**2%** of households contained at least one child that was separated from their usual caregiver

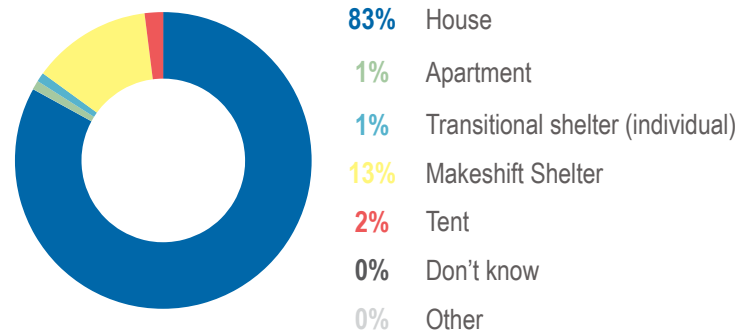
### Psychosocial Support

**64%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

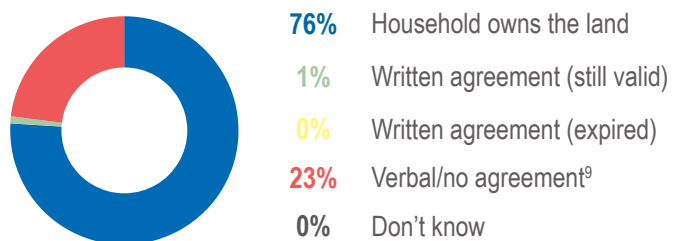
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**69%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**75%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

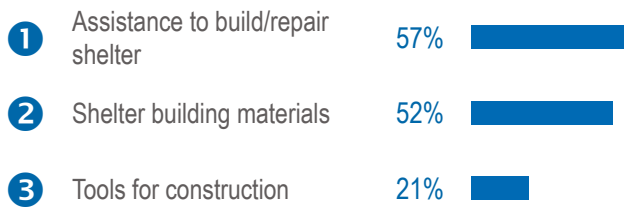
7. Single-choice question; only the top three responses are shown.

8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

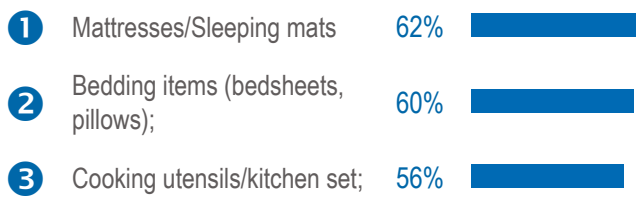
9. In many households in Central Sulawesi, there is a cultural practice in which one household owns many plots of land, and other households are permitted to live on it without any formal agreement.



Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



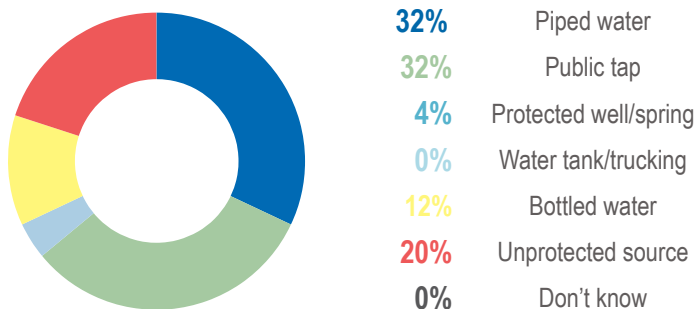
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

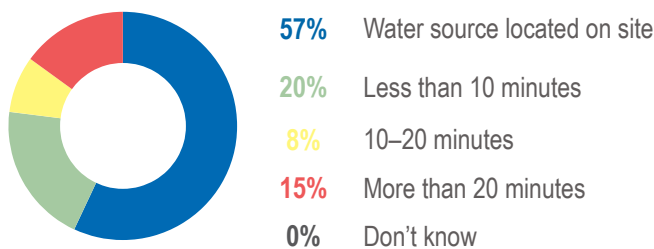
% of households acquired most of their drinking water from the following sources:



**93%** of households reported drinking water that had been treated and was safe to drink

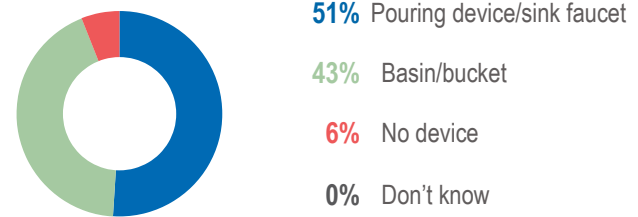
**68%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:

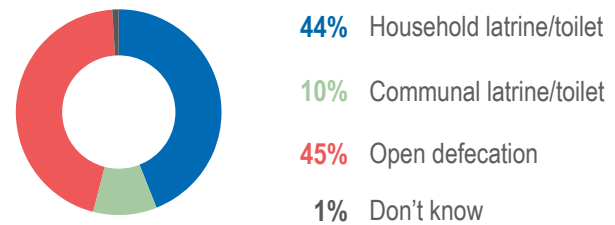


**94%** of households have water available for hand washing

**62%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



There is an average of **11** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**80%** of households with communal latrines reported their toilet had adequate lighting

**0%** of households with communal toilets reported that there are separate toilets for men and women

**78%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors



## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>

Before Disaster		January 2019	
<b>62%</b>	Agricultural	<b>1</b>	Agricultural <b>61%</b>
<b>12%</b>	Fishing	<b>2</b>	Vocational profession <b>13%</b>
<b>11%</b>	Vocational profession	<b>3</b>	Fishing <b>8%</b>

10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.





% of households reporting that the household main income was unemployment, before and after the disaster:

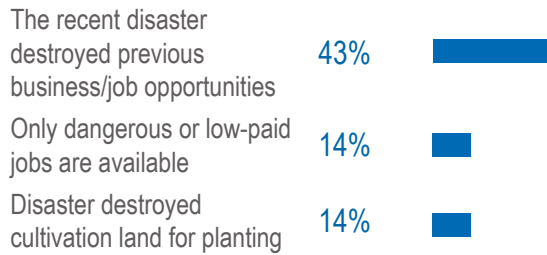
**Before Disaster**

**January 2019**

**3%** are unemployed **6%**

**14%** of households had at least one working-age household member that is not working

Main reported barriers to finding work:<sup>13</sup>



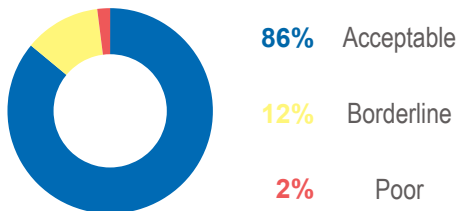
There is an average reported loss of **0%** of household income due to the disaster<sup>13</sup>



**Food Security**

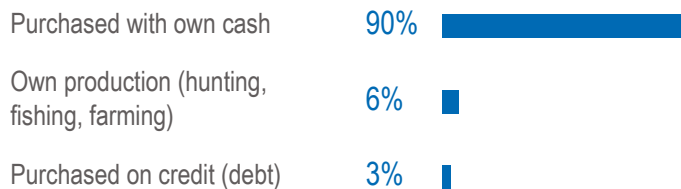
**Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)**

Food Consumption Score<sup>14</sup> average rCSI score<sup>15</sup>



**3.1**

% of households per main reported source of food in week prior to data collection:<sup>18</sup>



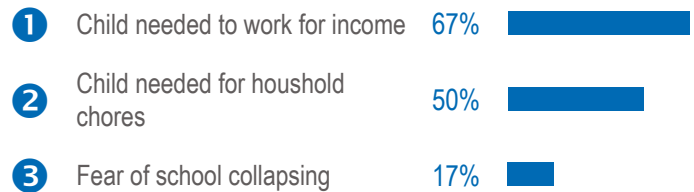
**Education**

**Student attendance**

**8%** of households with children reported having school-aged children who were not attending school following the disaster

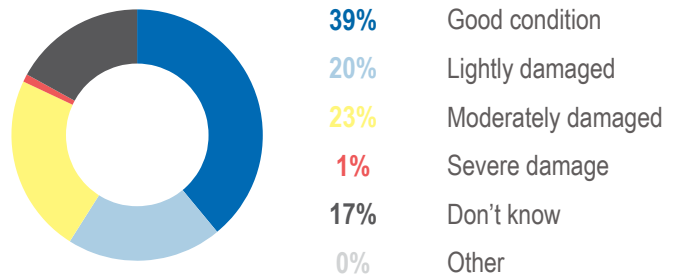
Among households where children were not attending school, there was an average of **2** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>



**Condition of school facilities**

% of households reported the condition of the nearby school to be the following:



**Health**

**Immunization**

**8%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

**Illness and injury**

**48%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.

14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).

15. rCSI is a measure of food security that looks at a set list of five coping strategies that households might be using to make food last longer in the absence of sufficient foods. It uses 5 commonly practiced coping strategies across the world. rCSI was calculated by asking respondents how many days per week their household adopted different coping strategies to make food last longer. The number of days was then multiplied by a coefficient based on the coping strategy and added up. There are no officially established thresholds, but generally, scores between 0 and 3 are considered to be good, 4 to 9 is worrisome, and scores greater than or equal to 10 are concerning (WFP VAM Unit, Afghanistan, Guidance note: calculation of household food security outcome indicators, December 2012).

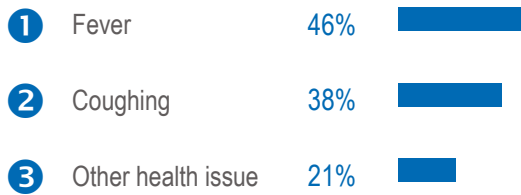
16. Single-choice question; only the top three responses are shown.

17. Respondents could select multiple responses; only the top three choices are shown.





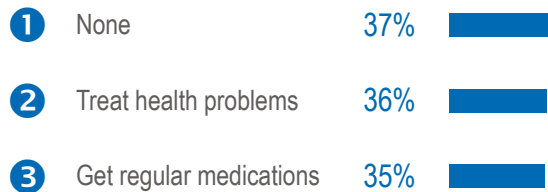
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

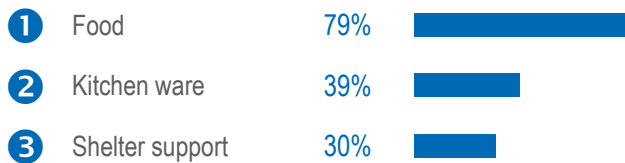


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

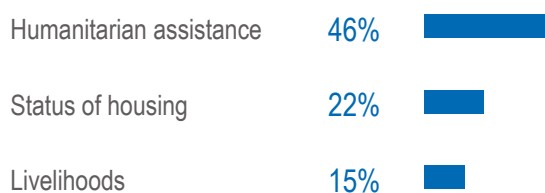
Top 3 most important priority needs as reported by households:<sup>20</sup>



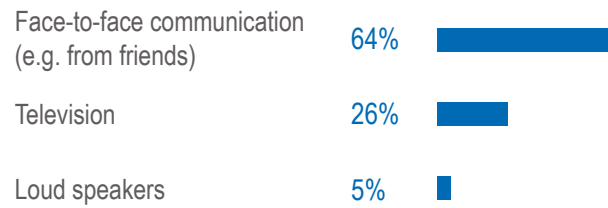
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



% of households by most preferred source from which they would like to receive new information:<sup>19</sup>

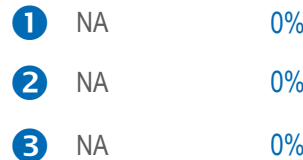


#### Humanitarian assistance

0%

of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



0%

of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

18. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.

19. Single-choice question; only the top three responses are shown.

20. Respondents could select up to three responses, therefore results may exceed 100%; only the top three choices are shown.



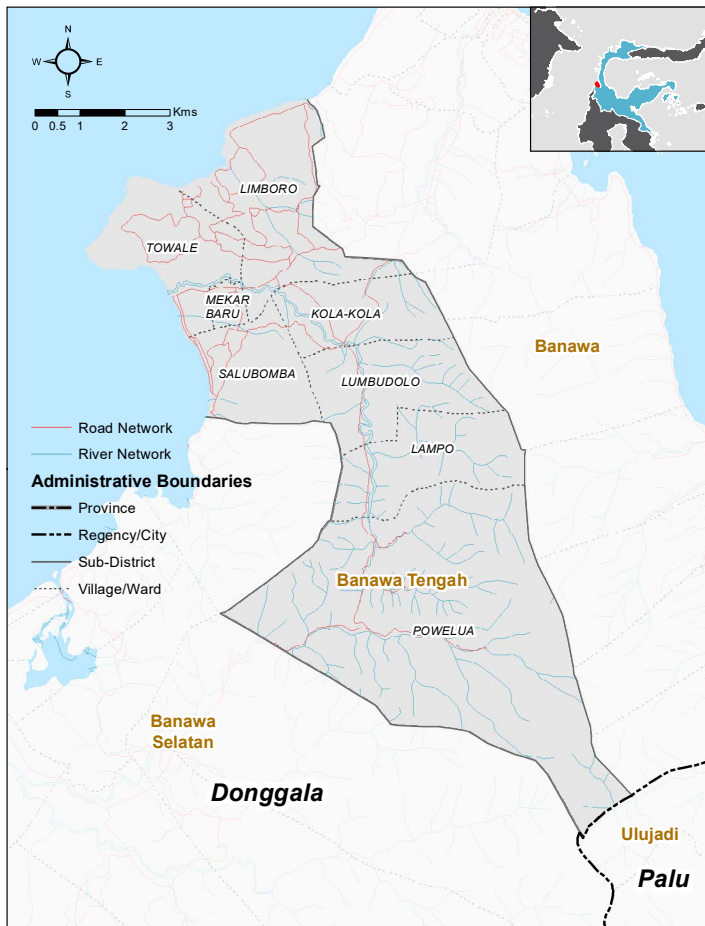


## Background and methodology

Following a 7.7 magnitude earthquake on 28 September, 2018, large parts of Palu, Donggala, Sigi, and Parigi Moutong regencies in Central Sulawesi province were destroyed by earthquake, tsunami, and liquefaction events. As of 10 December 2018, approximately 2,101 people have been killed, 1,373 are missing, and an estimated 133,631 individuals were displaced in informal settlements.<sup>1</sup> An estimated 15,000 houses have been destroyed and another 17,000 heavily damaged. However, four months after the initial disaster, there is still very little understanding of the needs and vulnerabilities of the affected population in Central Sulawesi Province.

To fill this gap, a Multi-Sector Needs Assessment (MSNA) was conducted by Humanitarian Forum Indonesia (HFI) and Universitas Muhammadiyah Palu (UNISMUH) with oversight from the Ministry of Social Affairs (Kemensos) and technical support from REACH, in 38 of 62 sub-districts in the four affected regencies of Central Sulawesi Province.

A sample of 98 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.<sup>2</sup> Results were weighted by population and generalizable to the crisis level with 95% confidence level and 10% margin of error.



## Respondent metadata<sup>3</sup>

- 98** Total households interviewed
- 43** Average age of respondent in years
- 67%** of respondents were female



## Demographics

### Household composition by gender and age



There was an average of **5** individuals reported per household

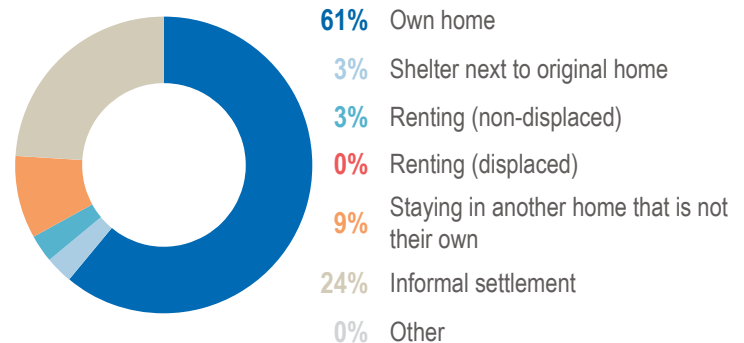
### Head of Household

- 6%** of heads of households were female
- 14%** of heads of households were elderly
- 46** average age of the head of household in years

### Dependency ratio<sup>4</sup>

- 0.8** average youth dependency ratio
- 0.2** average elderly dependency ratio
- 1** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



1. Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
2. The boundaries and names used on this map do not imply official endorsement or acceptance by REACH, UNICEF, HFI, or UNISMUH. Population data was extracted at desa-level from SIAK (Population Information Administration System) database, Ministry of Home Affairs (MoHA, 2017). Population of missing desas was imputed using data from the Indonesia Bureau of Statistics, 2010.
3. Respondent metadata provides information on the respondents interviewed for the questionnaire. While the respondent was usually the head of household, if the head of household was not present at the time of interview, a member of the household knowledgeable about household affairs responded instead. This section only shows information on respondents, not the heads of household. Results in this section are not weighted by population, and should be considered as indicative.
4. Age-dependency ratio was calculated by dividing the number of under-age and elderly (non-productive) individuals (0–17 years for youth and 60+ years for elderly) by the number of adult (productive) individuals in the population (18–59 years). Anything below 1 shows that the population is mostly adults of working-age who can provide for those who are not.
5. Households were categorised based on whether they were still living on their original land, or if they were displaced by the disaster. Those living in their original home, renting (in the same location both before and after the disaster) or living in a tent/makeshift shelter next to their



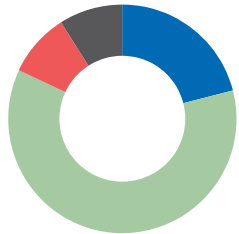


## Displacement and Protection

### Displaced population<sup>5</sup>

**36%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



**21%** Nearby/on site  
**61%** Within 2km  
**9%** Between 2km–5km  
**9%** More than 5km or Don't know

### Non-displaced population<sup>5</sup>

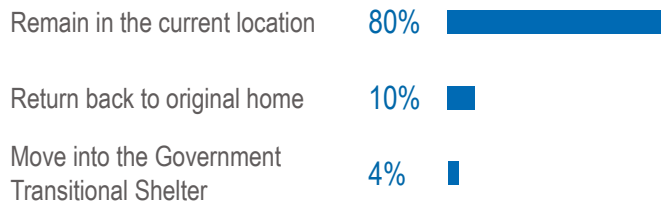
**0%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **0** IDP individuals in each displaced household hosted by a non-displaced household

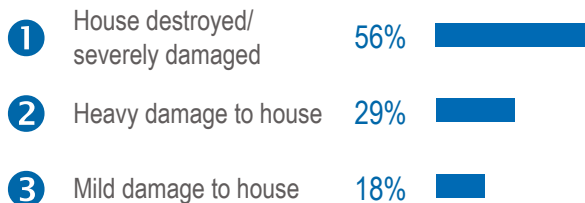
**0** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**14%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**3%** of households contained at least one member with a self-reported physical or mental disability

### Child Protection

**1%** of households contained at least one child that was separated from their usual caregiver

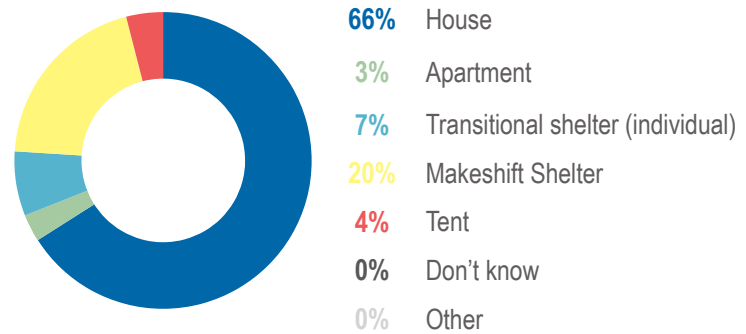
### Psychosocial Support

**64%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

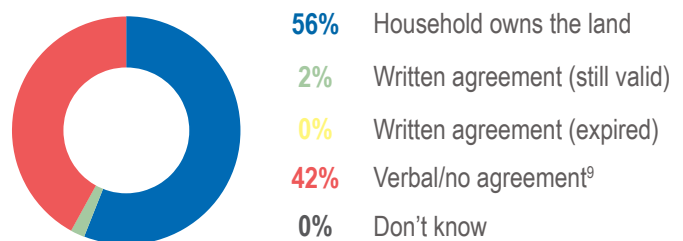
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**81%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**83%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

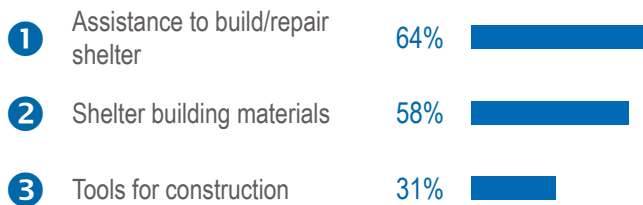
7. Single-choice question; only the top three responses are shown.

8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

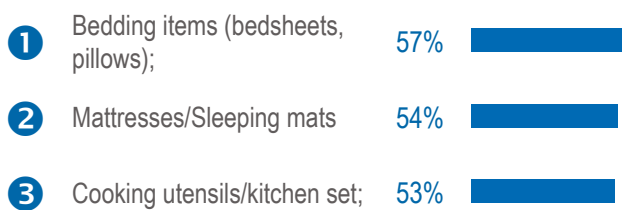
9. In many households in Central Sulawesi, there is a cultural practice in which one household owns many plots of land, and other households are permitted to live on it without any formal agreement.



Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



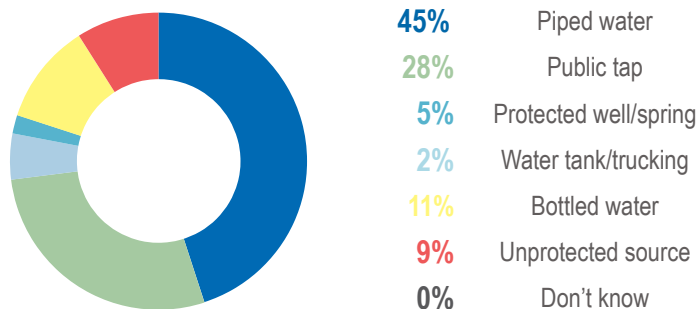
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

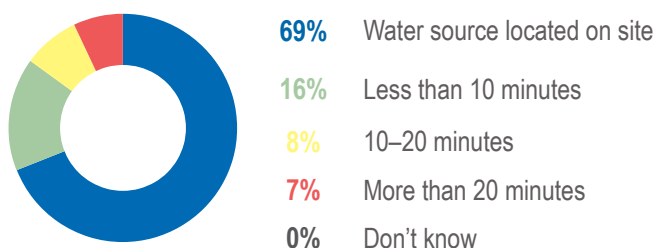
% of households acquired most of their drinking water from the following sources:



**92%** of households reported drinking water that had been treated and was safe to drink

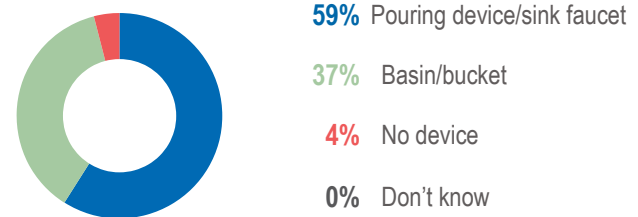
**86%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:

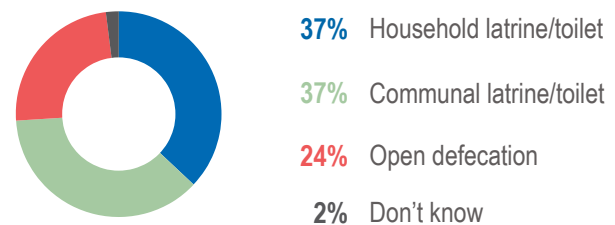


**93%** of households have water available for hand washing

**66%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



There is an average of **18** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**63%** of households with communal latrines reported their toilet had adequate lighting

**1%** of households with communal toilets reported that there are separate toilets for men and women

**78%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors



## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>

Before Disaster		January 2019	
<b>29%</b>	Agricultural	<b>1</b>	Agricultural <b>28%</b>
<b>26%</b>	Fishing	<b>2</b>	Fishing <b>20%</b>
<b>9%</b>	Vocational profession	<b>3</b>	Unemployed <b>12%</b>

10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.







% of households reporting that the household main income was unemployment, before and after the disaster:

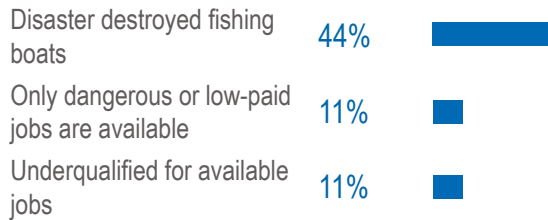
**Before Disaster**

**January 2019**

**6%** are unemployed **12%**

**9%** of households had at least one working-age household member that is not working

Main reported barriers to finding work:<sup>13</sup>

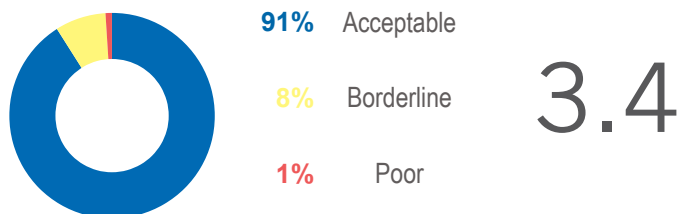


There is an average reported loss of **10%** of household income due to the disaster<sup>13</sup>

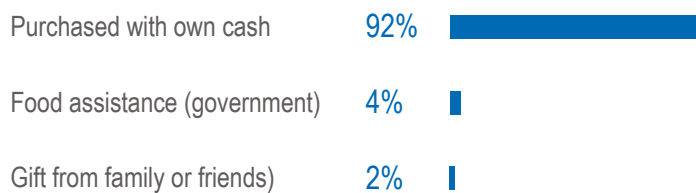
**Food Security**

**Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)**

Food Consumption Score<sup>14</sup> average rCSI score<sup>15</sup>



% of households per main reported source of food in week prior to data collection:<sup>18</sup>



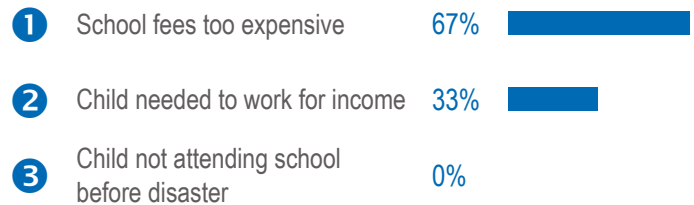
**Education**

**Student attendance**

**4%** of households with children reported having school-aged children who were not attending school following the disaster

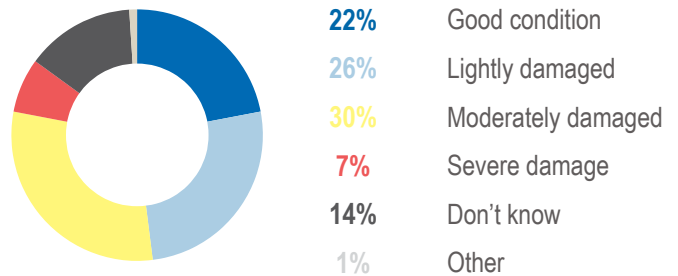
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>



**Condition of school facilities**

% of households reported the condition of the nearby school to be the following:



**Health**

**Immunization**

**4%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

**Illness and injury**

**50%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.

14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).

15. rCSI is a measure of food security that looks at a set list of five coping strategies that households might be using to make food last longer in the absence of sufficient foods. It uses 5 commonly practiced coping strategies across the world. rCSI was calculated by asking respondents how many days per week their household adopted different coping strategies to make food last longer. The number of days was then multiplied by a coefficient based on the coping strategy and added up. There are no officially established thresholds, but generally, scores between 0 and 3 are considered to be good, 4 to 9 is worrisome, and scores greater than or equal to 10 are concerning (WFP VAM Unit, Afghanistan, Guidance note: calculation of household food security outcome indicators, December 2012).

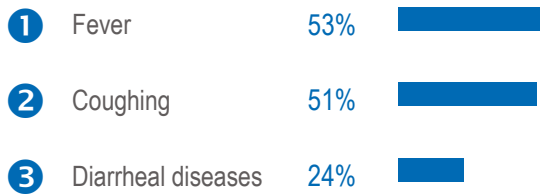
16. Single-choice question; only the top three responses are shown.

17. Respondents could select multiple responses; only the top three choices are shown.

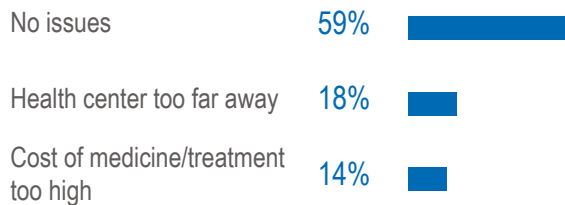




Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

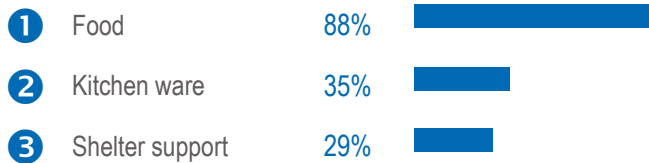


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

Top 3 most important priority needs as reported by households:<sup>20</sup>



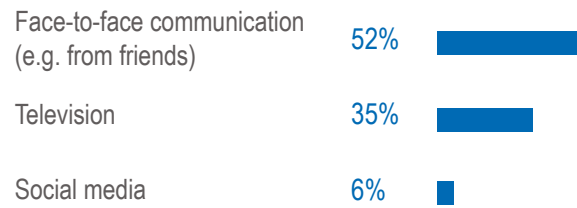
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



% of households by most preferred source from which they would like to receive new information:<sup>19</sup>

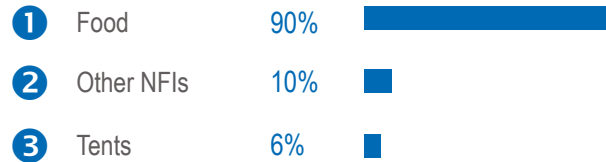


#### Humanitarian assistance

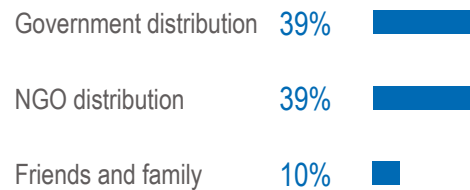
**32%**

of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



**52%**

of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

18. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.

19. Single-choice question; only the top three responses are shown.

20. Respondents could select up to three responses, therefore results may exceed 100%; only the top three choices are shown.



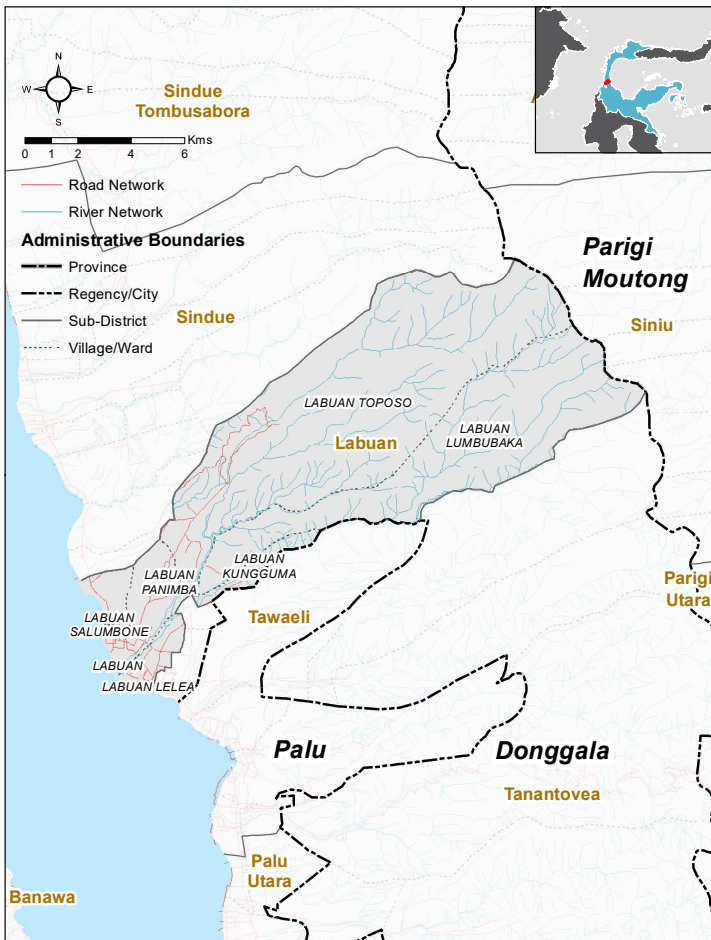


## Background and methodology

Following a 7.7 magnitude earthquake on 28 September, 2018, large parts of Palu, Donggala, Sigi, and Parigi Moutong regencies in Central Sulawesi province were destroyed by earthquake, tsunami, and liquefaction events. As of 10 December 2018, approximately 2,101 people have been killed, 1,373 are missing, and an estimated 133,631 individuals were displaced in informal settlements.<sup>1</sup> An estimated 15,000 houses have been destroyed and another 17,000 heavily damaged. However, four months after the initial disaster, there is still very little understanding of the needs and vulnerabilities of the affected population in Central Sulawesi Province.

To fill this gap, a Multi-Sector Needs Assessment (MSNA) was conducted by Humanitarian Forum Indonesia (HFI) and Universitas Muhammadiyah Palu (UNISMUH) with oversight from the Ministry of Social Affairs (Kemensos) and technical support from REACH, in 38 of 62 sub-districts in the four affected regencies of Central Sulawesi Province.

A sample of 99 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.<sup>2</sup> Results were weighted by population and generalizable to the crisis level with 95% confidence level and 10% margin of error.



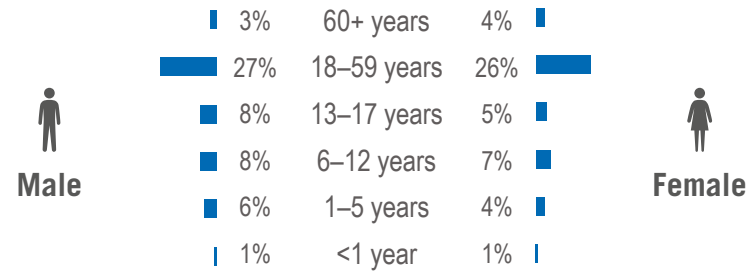
## Respondent metadata<sup>3</sup>

**99** Total households interviewed  
**46** Average age of respondent in years  
**52%** of respondents were female



## Demographics

### Household composition by gender and age



There was an average of **5** individuals reported per household

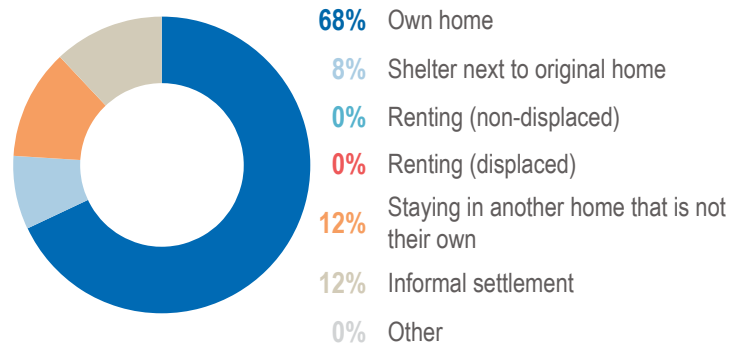
### Head of Household

**18%** of heads of households were female  
**15%** of heads of households were elderly  
**48** average age of the head of household in years

### Dependency ratio<sup>4</sup>

**0.9** average youth dependency ratio  
**0.2** average elderly dependency ratio  
**1.1** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



- Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
- The boundaries and names used on this map do not imply official endorsement or acceptance by REACH, UNICEF, HFI, or UNISMUH. Population data was extracted at desa-level from SIAK (Population Information Administration System) database, Ministry of Home Affairs (MoHA, 2017). Population of missing desas was imputed using data from the Indonesia Bureau of Statistics, 2010.
- Respondent metadata provides information on the respondents interviewed for the questionnaire. While the respondent was usually the head of household, if the head of household was not present at the time of interview, a member of the household knowledgeable about household affairs responded instead. This section only shows information on respondents, not the heads of household. Results in this section are not weighted by population, and should be considered as indicative.
- Age-dependency ratio was calculated by dividing the number of under-age and elderly (non-productive) individuals (0–17 years for youth and 60+ years for elderly) by the number of adult (productive) individuals in the population (18–59 years). Anything below 1 shows that the population is mostly adults of working-age who can provide for those who are not.
- Households were categorised based on whether they were still living on their original land, or if they were displaced by the disaster. Those living in their original home, renting (in the same location both before and after the disaster) or living in a tent/makeshift shelter next to their



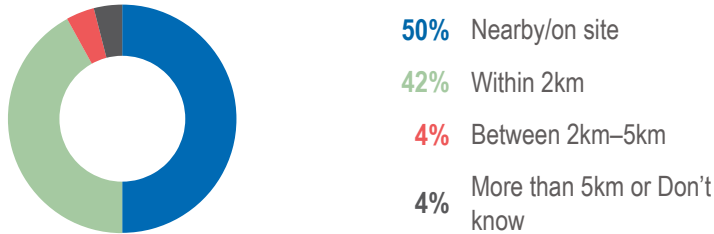


## Displacement and Protection

### Displaced population<sup>5</sup>

**32%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



### Non-displaced population<sup>5</sup>

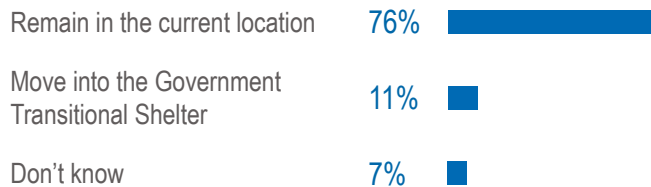
**13%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **2** IDP individuals in each displaced household hosted by a non-displaced household

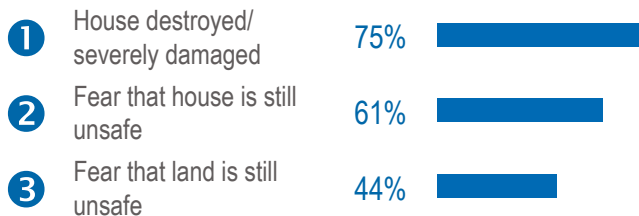
**0.5** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**30%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**11%** of households contained at least one member with a self-reported physical or mental disability

### Child Protection

**5%** of households contained at least one child that was separated from their usual caregiver

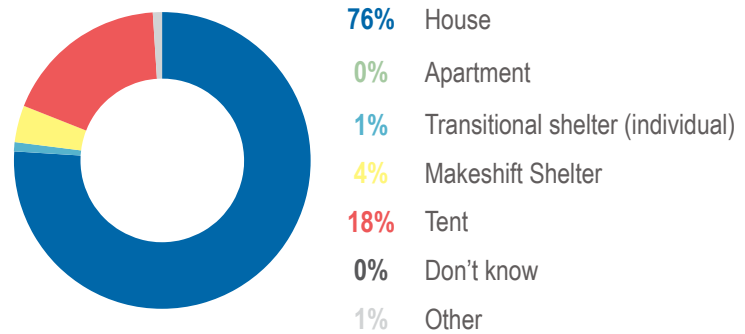
### Psychosocial Support

**74%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

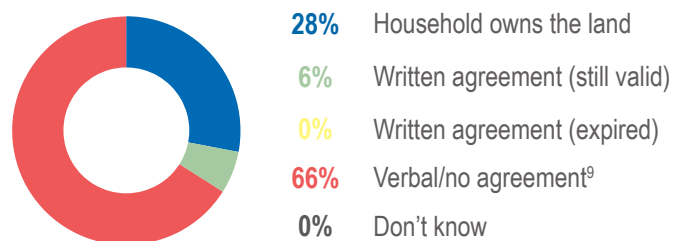
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**81%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**70%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

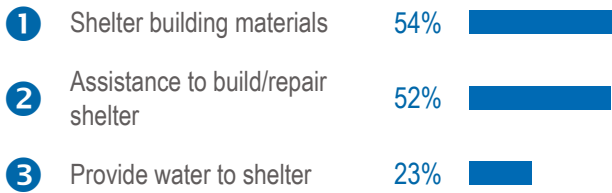
6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

7. Single-choice question; only the top three responses are shown.

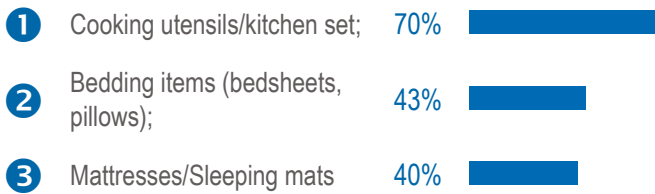
8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

9. In many households in Central Sulawesi, there is a cultural practice in which one household owns many plots of land, and other households are permitted to live on it without any formal agreement.

Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



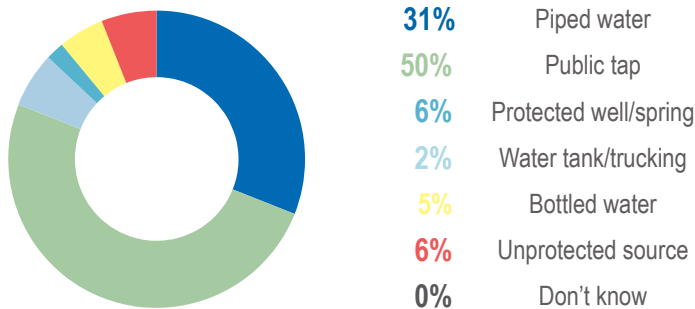
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

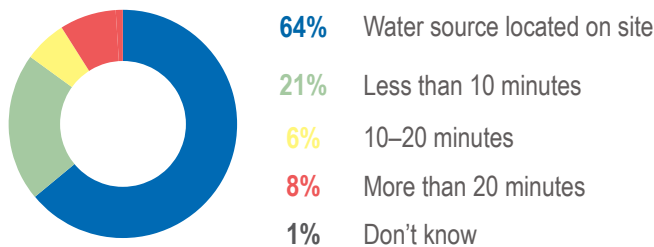
% of households acquired most of their drinking water from the following sources:



**94%** of households reported drinking water that had been treated and was safe to drink

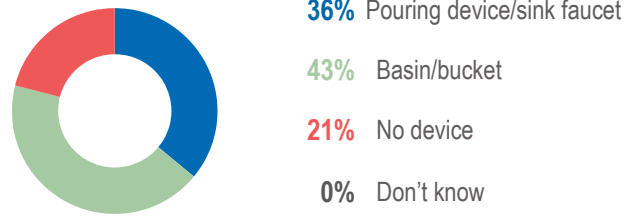
**71%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:

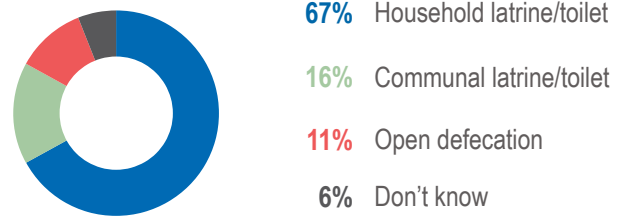


**91%** of households have water available for hand washing

**72%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



There is an average of **16** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**79%** of households with communal latrines reported their toilet had adequate lighting

**4%** of households with communal toilets reported that there are separate toilets for men and women

**83%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors

## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>

Before Disaster		January 2019	
<b>35%</b>	Agricultural	<b>1</b>	Agricultural <b>29%</b>
<b>23%</b>	Small business owner	<b>2</b>	Small business owner <b>23%</b>
<b>10%</b>	Construction	<b>3</b>	Unemployed <b>19%</b>

10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.



% of households reporting that the household main income was unemployment, before and after the disaster:



**32%** of households had at least one working-age household member that is not working

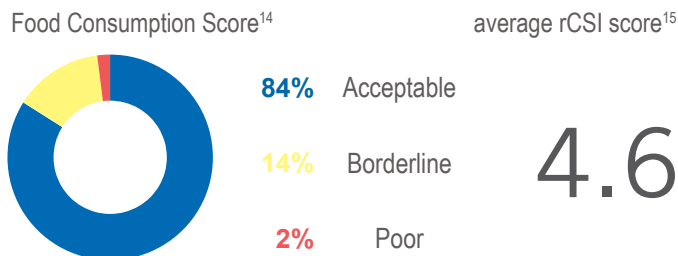
Main reported barriers to finding work:<sup>13</sup>



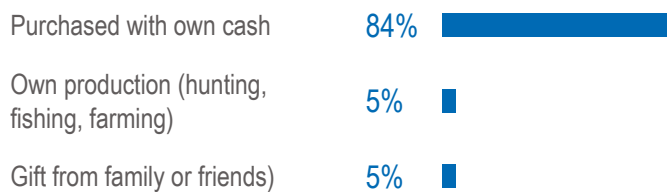
There is an average reported loss of **10%** of household income due to the disaster<sup>13</sup>

## Food Security

### Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)



% of households per main reported source of food in week prior to data collection:<sup>18</sup>



## Education

### Student attendance

**8%** of households with children reported having school-aged children who were not attending school following the disaster

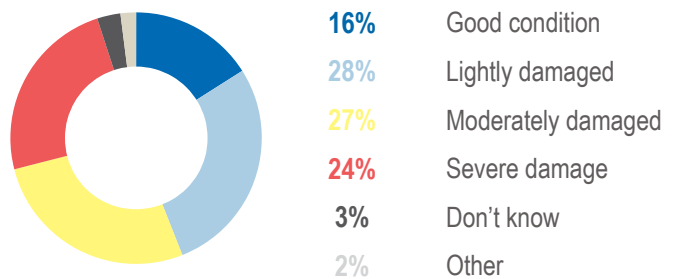
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>



### Condition of school facilities

% of households reported the condition of the nearby school to be the following:



## Health

### Immunization

**40%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

### Illness and injury

**66%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.

14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).

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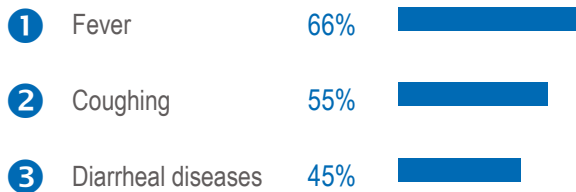
16. Single-choice question; only the top three responses are shown.

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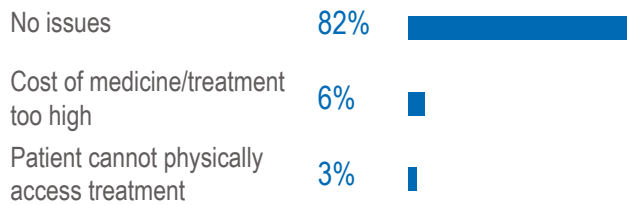




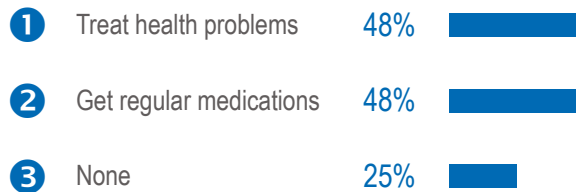
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

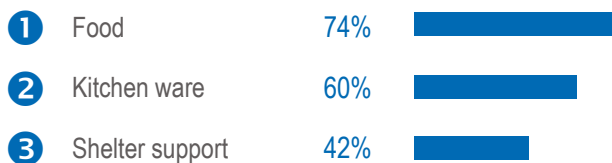


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

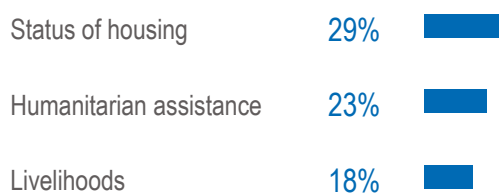
Top 3 most important priority needs as reported by households:<sup>20</sup>



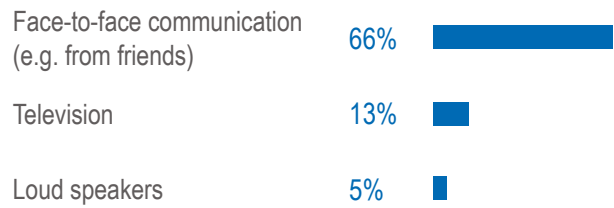
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



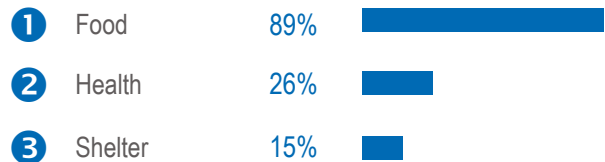
% of households by most preferred source from which they would like to receive new information:<sup>19</sup>



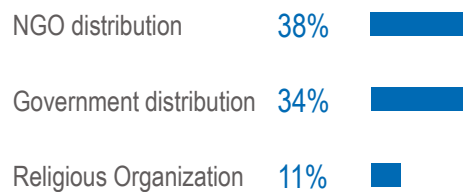
#### Humanitarian assistance

**48%** of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



**55%** of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

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19. Single-choice question; only the top three responses are shown.

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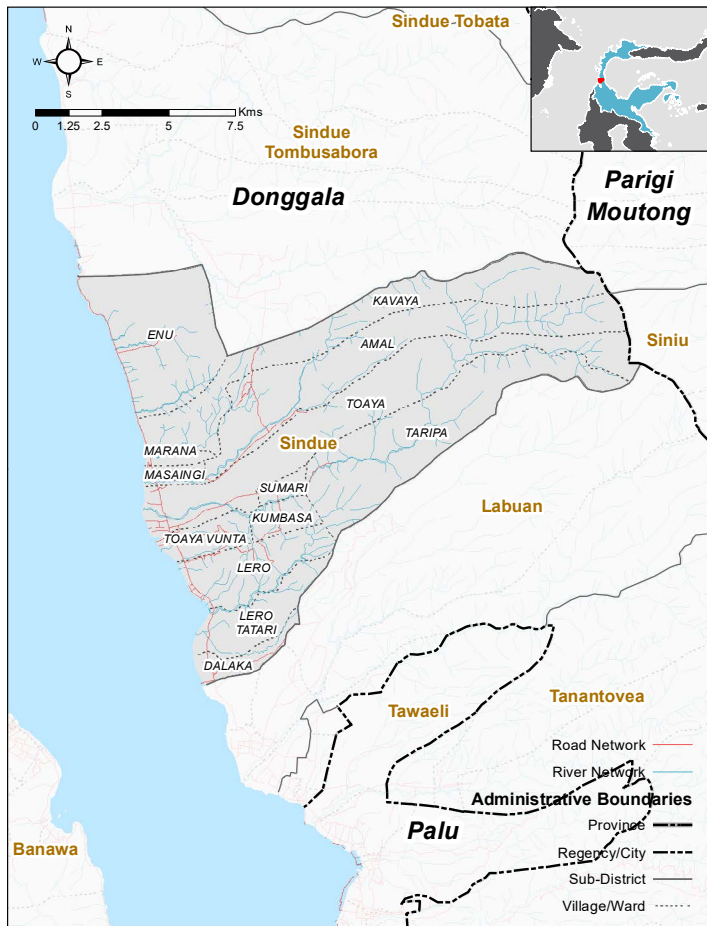


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A sample of 119 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.<sup>2</sup> Results were weighted by population and generalizable to the crisis level with 95% confidence level and 10% margin of error.



## Respondent metadata<sup>3</sup>

**119** Total households interviewed  
**41** Average age of respondent in years  
**60%** of respondents were female



## Demographics

### Household composition by gender and age



There was an average of **6** individuals reported per household

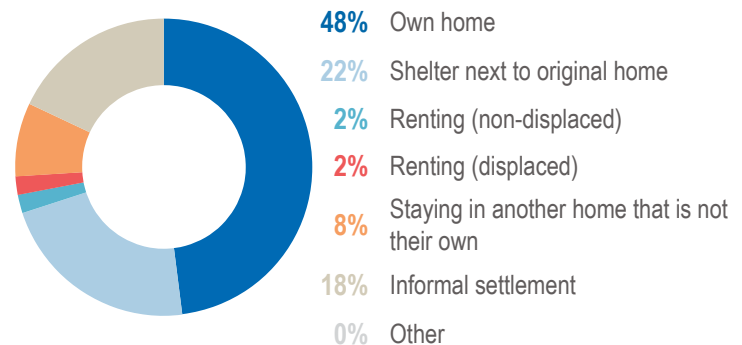
### Head of Household

**17%** of heads of households were female  
**12%** of heads of households were elderly  
**46** average age of the head of household in years

### Dependency ratio<sup>4</sup>

**0.8** average youth dependency ratio  
**0.2** average elderly dependency ratio  
**1** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



- Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
- The boundaries and names used on this map do not imply official endorsement or acceptance by REACH, UNICEF, HFI, or UNISUMU. Population data was extracted at desa-level from SIAK (Population Information Administration System) database, Ministry of Home Affairs (MoHA, 2017). Population of missing desas was imputed using data from the Indonesia Bureau of Statistics, 2010.
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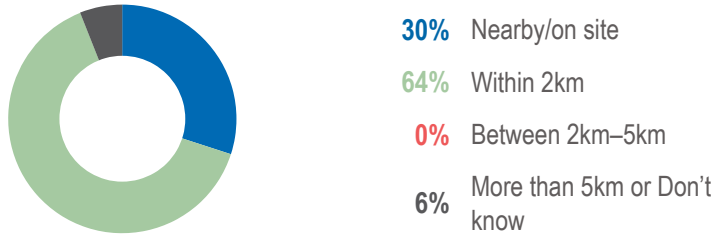


## Displacement and Protection

### Displaced population<sup>5</sup>

**50%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



### Non-displaced population<sup>5</sup>

**8%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **3** IDP individuals in each displaced household hosted by a non-displaced household

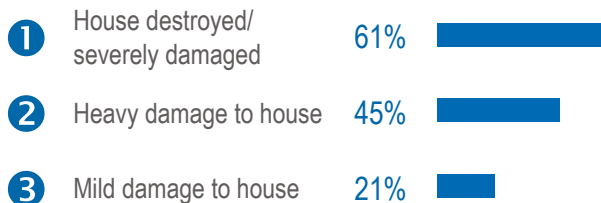
**0.4** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**20%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**1%** of households contained at least one member with a self-reported physical or mental disability

### Child Protection

**2%** of households contained at least one child that was separated from their usual caregiver

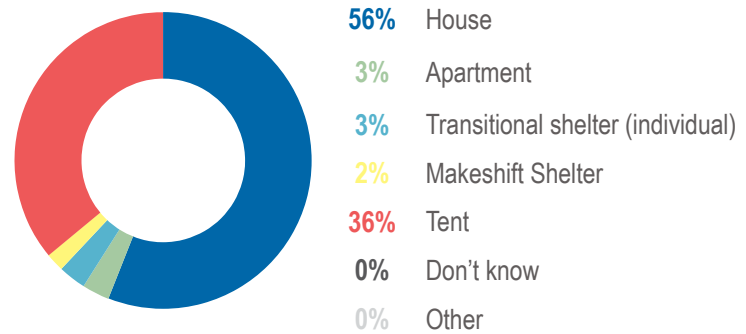
### Psychosocial Support

**56%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

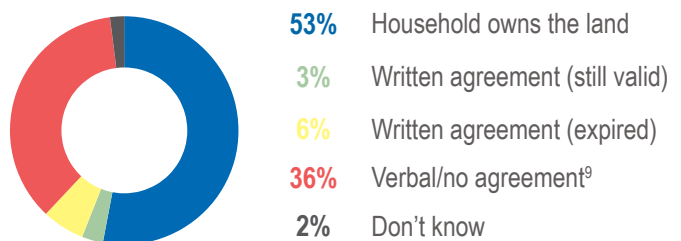
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**89%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**81%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

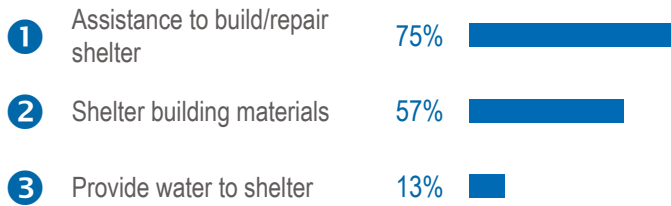
7. Single-choice question; only the top three responses are shown.

8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

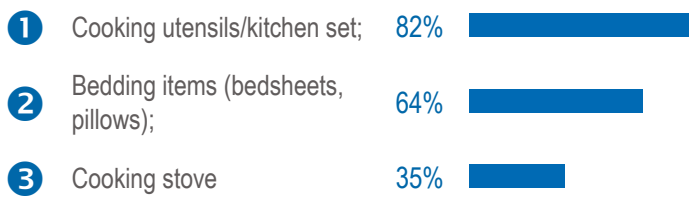
9. In many households in Central Sulawesi, there is a cultural practice in which one household owns many plots of land, and other households are permitted to live on it without any formal agreement.



Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



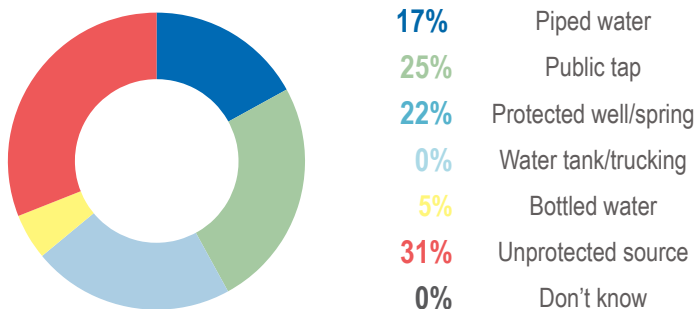
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

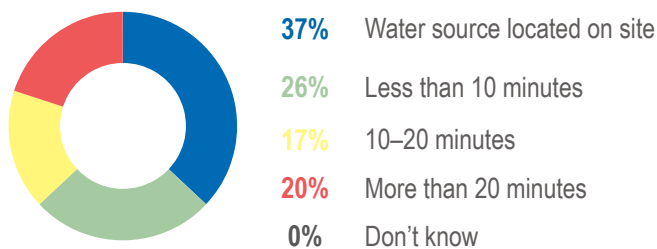
% of households acquired most of their drinking water from the following sources:



**92%** of households reported drinking water that had been treated and was safe to drink

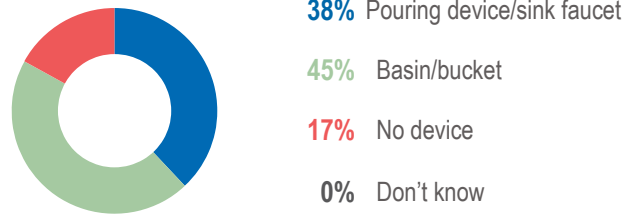
**61%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:

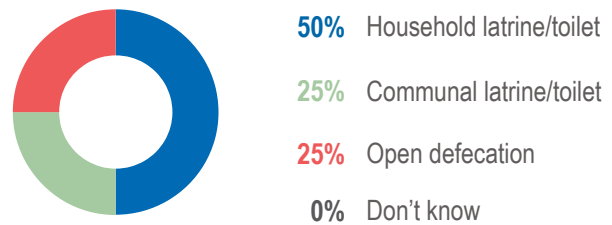


**89%** of households have water available for hand washing

**32%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



There is an average of **22** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**61%** of households with communal latrines reported their toilet had adequate lighting

**9%** of households with communal toilets reported that there are separate toilets for men and women

**81%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors



## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>

Before Disaster		January 2019	
43%	Agricultural	1	Agricultural 39%
12%	Small business owner	2	Unemployed 10%
8%	Service industry	3	Small business owner 10%

10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.





% of households reporting that the household main income was unemployment, before and after the disaster:

**Before Disaster**

**January 2019**

**1%** are unemployed **10%**

**8%** of households had at least one working-age household member that is not working

Main reported barriers to finding work:<sup>13</sup>

The recent disaster destroyed previous business/job opportunities **50%**

disability **20%**

Underqualified for available jobs **20%**

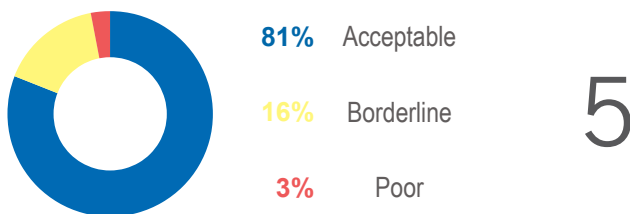
There is an average reported loss of **10%** of household income due to the disaster<sup>13</sup>



**Food Security**

**Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)**

Food Consumption Score<sup>14</sup> average rCSI score<sup>15</sup>



% of households per main reported source of food in week prior to data collection:<sup>18</sup>

Purchased with own cash **84%**

Food assistance (government) **8%**

Food assistance (charity, private company) **5%**



**Education**

**Student attendance**

**2%** of households with children reported having school-aged children who were not attending school following the disaster

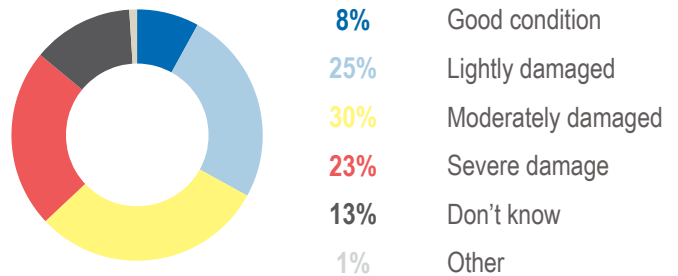
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>

- 1** Fear of school collapsing **50%**
- 2** School damaged/destroyed **50%**
- 3** Child needed to work for income **0%**

**Condition of school facilities**

% of households reported the condition of the nearby school to be the following:



**Health**

**Immunization**

**28%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

**Illness and injury**

**59%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.

14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).

15. rCSI is a measure of food security that looks at a set list of five coping strategies that households might be using to make food last longer in the absence of sufficient foods. It uses 5 commonly practiced coping strategies across the world. rCSI was calculated by asking respondents how many days per week their household adopted different coping strategies to make food last longer. The number of days was then multiplied by a coefficient based on the coping strategy and added up. There are no officially established thresholds, but generally, scores between 0 and 3 are considered to be good, 4 to 9 is worrisome, and scores greater than or equal to 10 are concerning (WFP VAM Unit, Afghanistan, Guidance note: calculation of household food security outcome indicators, December 2012).

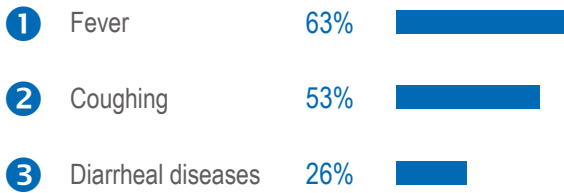
16. Single-choice question; only the top three responses are shown.

17. Respondents could select multiple responses; only the top three choices are shown.

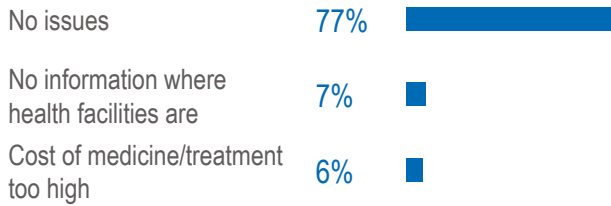




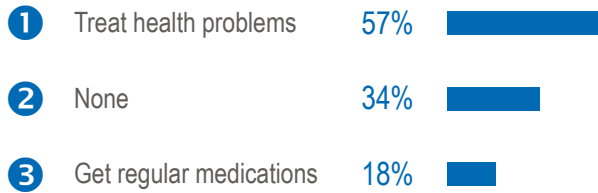
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

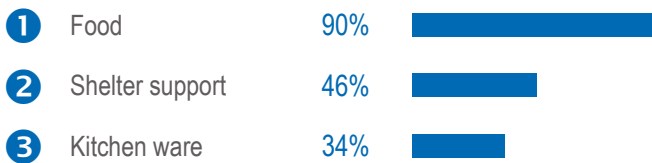


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

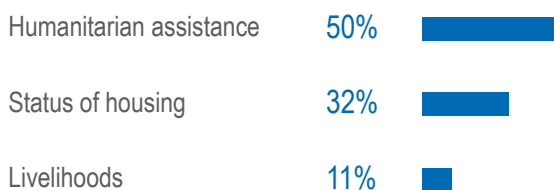
Top 3 most important priority needs as reported by households:<sup>20</sup>



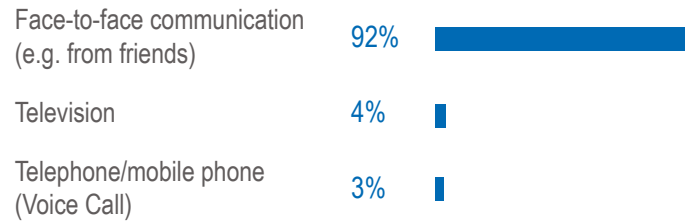
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



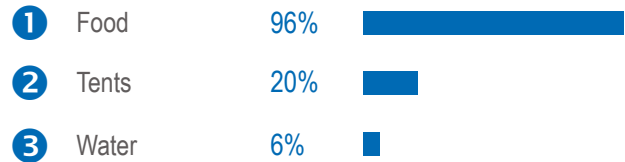
% of households by most preferred source from which they would like to receive new information:<sup>19</sup>



#### Humanitarian assistance

**58%** of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



**67%** of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

18. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.  
19. Single-choice question; only the top three responses are shown.  
20. Respondents could select up to three responses, therefore results may exceed 100%; only the top three choices are shown.





## Background and methodology

Following a 7.7 magnitude earthquake on 28 September, 2018, large parts of Palu, Donggala, Sigi, and Parigi Moutong regencies in Central Sulawesi province were destroyed by earthquake, tsunami, and liquefaction events. As of 10 December 2018, approximately 2,101 people have been killed, 1,373 are missing, and an estimated 133,631 individuals were displaced in informal settlements.<sup>1</sup> An estimated 15,000 houses have been destroyed and another 17,000 heavily damaged. However, four months after the initial disaster, there is still very little understanding of the needs and vulnerabilities of the affected population in Central Sulawesi Province.

To fill this gap, a Multi-Sector Needs Assessment (MSNA) was conducted by Humanitarian Forum Indonesia (HFI) and Universitas Muhammadiyah Palu (UNISMUH) with oversight from the Ministry of Social Affairs (Kemensos) and technical support from REACH, in 38 of 62 sub-districts in the four affected regencies of Central Sulawesi Province.

A sample of 122 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.<sup>2</sup> Results were weighted by population and generalizable to the crisis level with 95% confidence level and 10% margin of error.



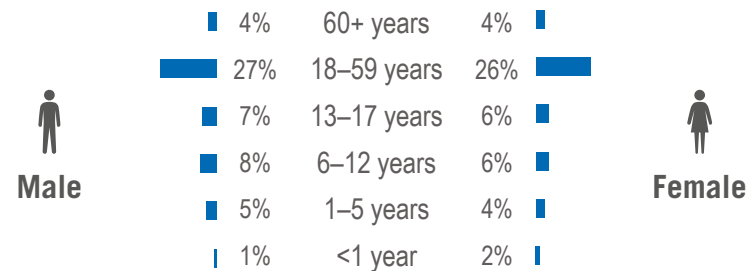
## Respondent metadata<sup>3</sup>

**122** Total households interviewed  
**42** Average age of respondent in years  
**68%** of respondents were female



## Demographics

### Household composition by gender and age



There was an average of **5** individuals reported per household

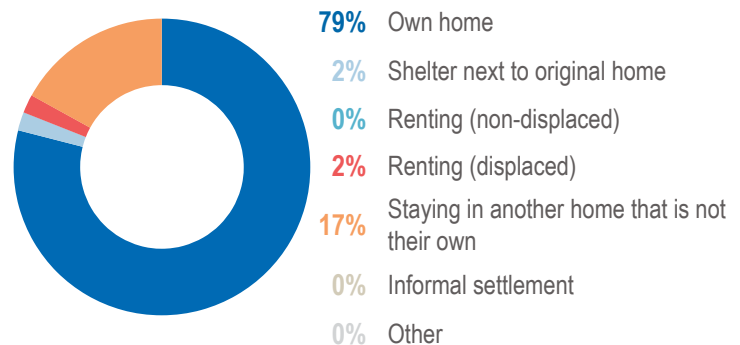
### Head of Household

**10%** of heads of households were female  
**16%** of heads of households were elderly  
**44** average age of the head of household in years

### Dependency ratio<sup>4</sup>

**0.8** average youth dependency ratio  
**0.2** average elderly dependency ratio  
**1** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



- Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
- The boundaries and names used on this map do not imply official endorsement or acceptance by REACH, UNICEF, HFI, or UNISMUH. Population data was extracted at desa-level from SIAK (Population Information Administration System) database, Ministry of Home Affairs (MoHA, 2017). Population of missing desas was imputed using data from the Indonesia Bureau of Statistics, 2010.
- Respondent metadata provides information on the respondents interviewed for the questionnaire. While the respondent was usually the head of household, if the head of household was not present at the time of interview, a member of the household knowledgeable about household affairs responded instead. This section only shows information on respondents, not the heads of household. Results in this section are not weighted by population, and should be considered as indicative.
- Age-dependency ratio was calculated by dividing the number of under-age and elderly (non-productive) individuals (0–17 years for youth and 60+ years for elderly) by the number of adult (productive) individuals in the population (18–59 years). Anything below 1 shows that the population is mostly adults of working-age who can provide for those who are not.
- Households were categorised based on whether they were still living on their original land, or if they were displaced by the disaster. Those living in their original home, renting (in the same location both before and after the disaster) or living in a tent/makeshift shelter next to their



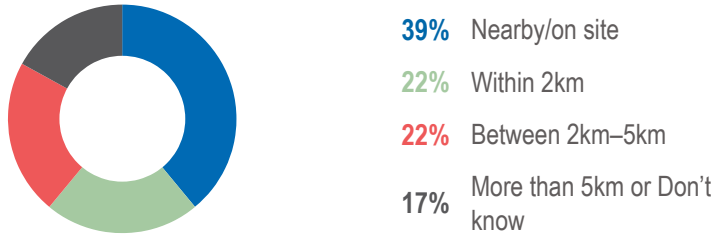


## Displacement and Protection

### Displaced population<sup>5</sup>

**21%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



### Non-displaced population<sup>5</sup>

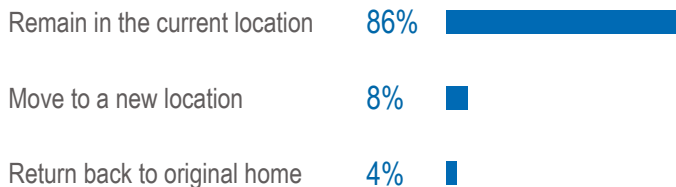
**7%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **4** IDP individuals in each displaced household hosted by a non-displaced household

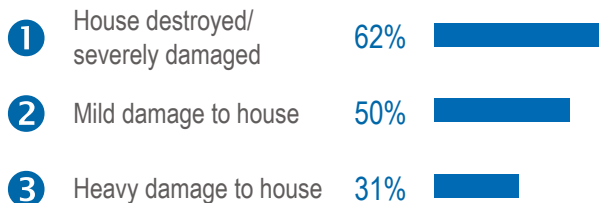
**0.9** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**24%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**3%** of households contained at least one member with a self-reported physical or mental disability

### Child Protection

**2%** of households contained at least one child that was separated from their usual caregiver

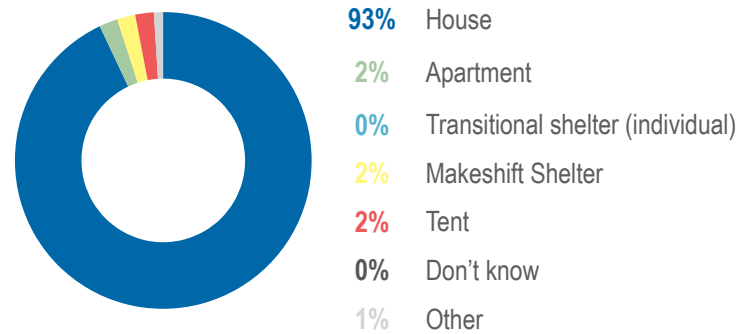
### Psychosocial Support

**69%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

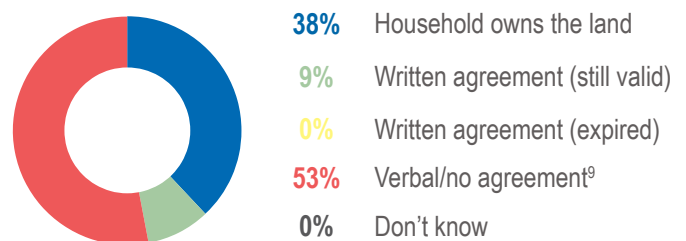
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**91%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**86%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

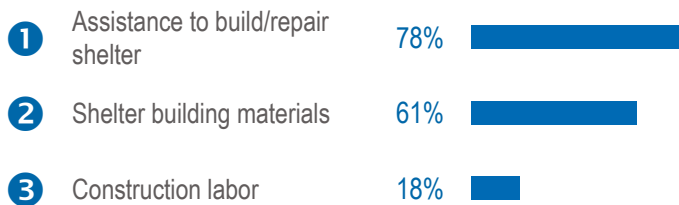
7. Single-choice question; only the top three responses are shown.

8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

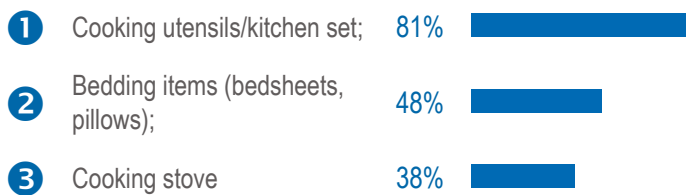
9. In many households in Central Sulawesi, there is a cultural practice in which one household owns many plots of land, and other households are permitted to live on it without any formal agreement.



Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



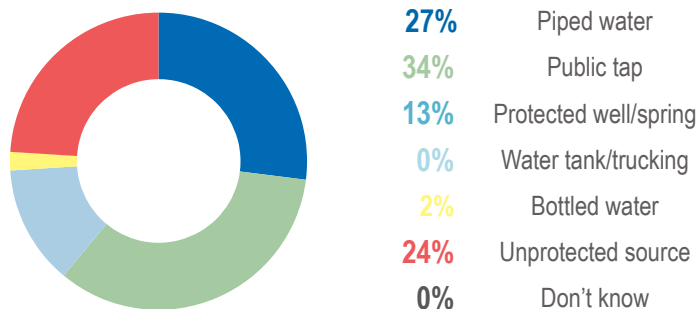
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

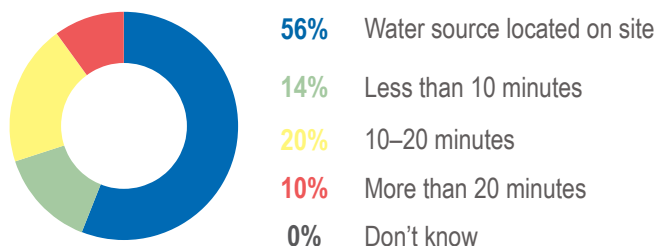
% of households acquired most of their drinking water from the following sources:



**92%** of households reported drinking water that had been treated and was safe to drink

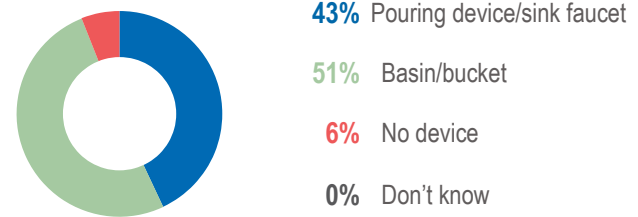
**66%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:

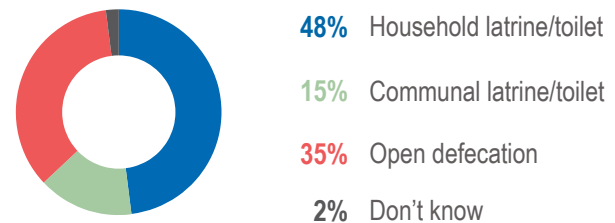


**95%** of households have water available for hand washing

**59%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



There is an average of **5** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**58%** of households with communal latrines reported their toilet had adequate lighting

**1%** of households with communal toilets reported that there are separate toilets for men and women

**57%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors



## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>



10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.





% of households reporting that the household main income was unemployment, before and after the disaster:

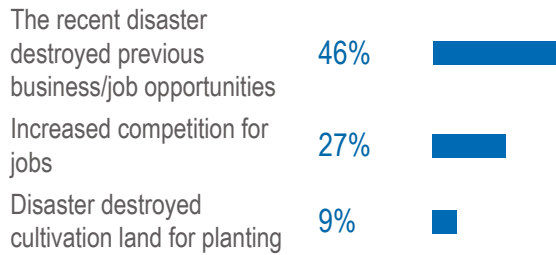
**Before Disaster**

**January 2019**

**2%** are unemployed **4%**

**9%** of households had at least one working-age household member that is not working

Main reported barriers to finding work:<sup>13</sup>



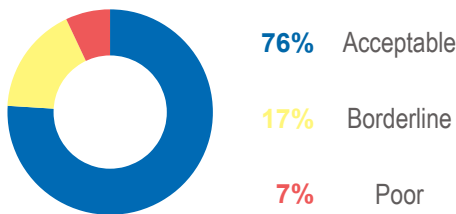
There is an average reported loss of **10%** of household income due to the disaster<sup>13</sup>



**Food Security**

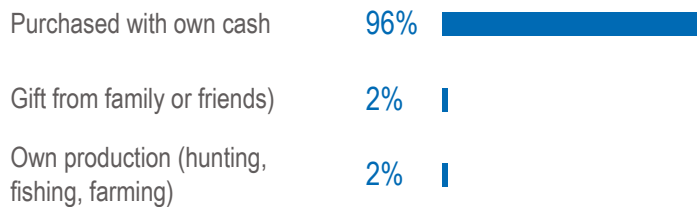
**Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)**

Food Consumption Score<sup>14</sup> average rCSI score<sup>15</sup>



**8.5**

% of households per main reported source of food in week prior to data collection:<sup>18</sup>



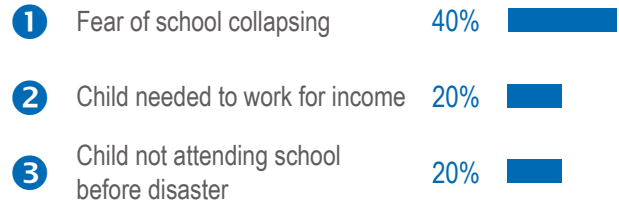
**Education**

**Student attendance**

**6%** of households with children reported having school-aged children who were not attending school following the disaster

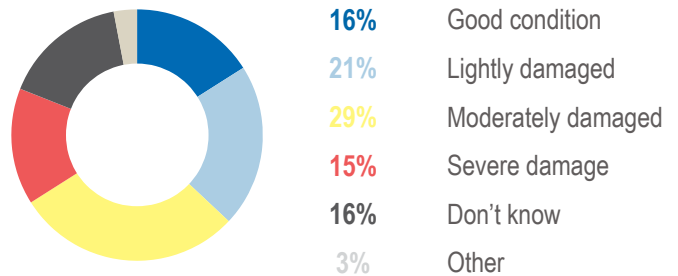
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>



**Condition of school facilities**

% of households reported the condition of the nearby school to be the following:



**Health**

**Immunization**

**23%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

**Illness and injury**

**73%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.

14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).

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16. Single-choice question; only the top three responses are shown.

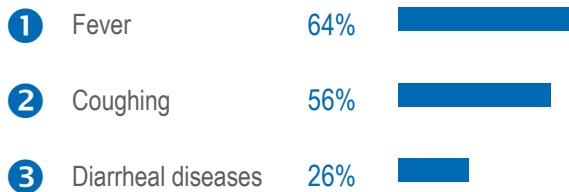
17. Respondents could select multiple responses; only the top three choices are shown.



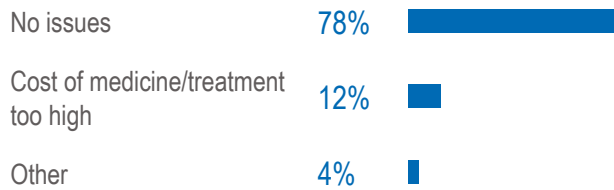




Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

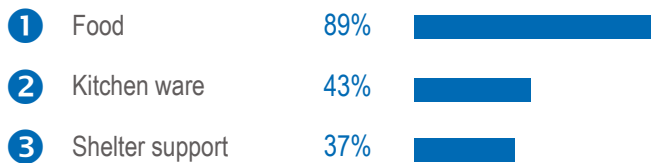


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

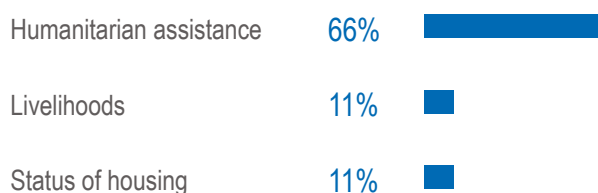
Top 3 most important priority needs as reported by households:<sup>20</sup>



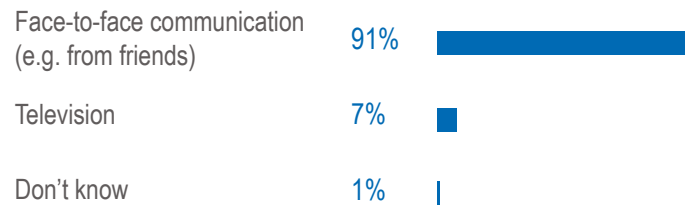
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



% of households by most preferred source from which they would like to receive new information:<sup>19</sup>

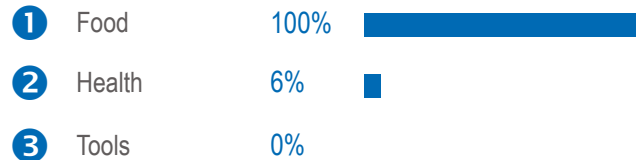


#### Humanitarian assistance

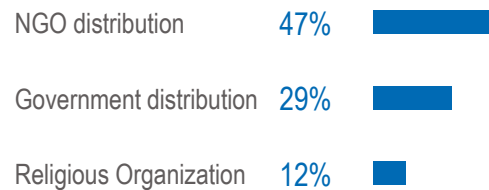
**14%**

of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



**53%**

of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

18. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.

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20. Respondents could select up to three responses, therefore results may exceed 100%; only the top three choices are shown.



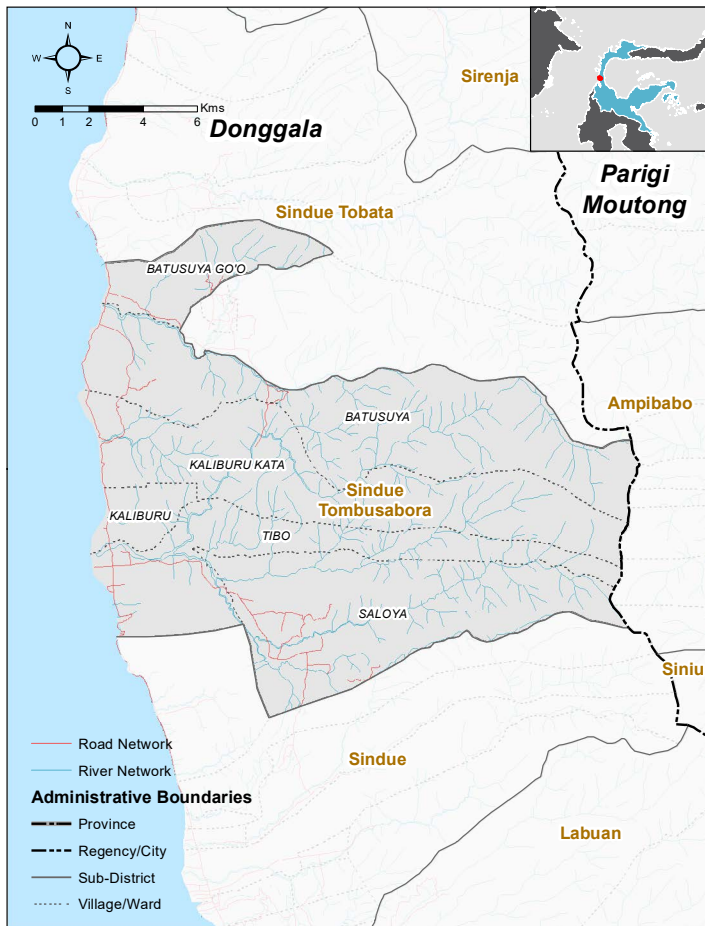


## Background and methodology

Following a 7.7 magnitude earthquake on 28 September, 2018, large parts of Palu, Donggala, Sigi, and Parigi Moutong regencies in Central Sulawesi province were destroyed by earthquake, tsunami, and liquefaction events. As of 10 December 2018, approximately 2,101 people have been killed, 1,373 are missing, and an estimated 133,631 individuals were displaced in informal settlements.<sup>1</sup> An estimated 15,000 houses have been destroyed and another 17,000 heavily damaged. However, four months after the initial disaster, there is still very little understanding of the needs and vulnerabilities of the affected population in Central Sulawesi Province.

To fill this gap, a Multi-Sector Needs Assessment (MSNA) was conducted by Humanitarian Forum Indonesia (HFI) and Universitas Muhammadiyah Palu (UNISUMH) with oversight from the Ministry of Social Affairs (Kemensos) and technical support from REACH, in 38 of 62 sub-districts in the four affected regencies of Central Sulawesi Province.

A sample of 125 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.<sup>2</sup> Results were weighted by population and generalizable to the crisis level with 95% confidence level and 10% margin of error.



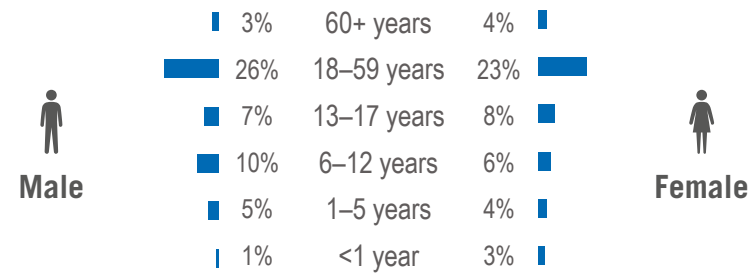
## Respondent metadata<sup>3</sup>

**125** Total households interviewed  
**46** Average age of respondent in years  
**60%** of respondents were female



## Demographics

### Household composition by gender and age



There was an average of **6** individuals reported per household

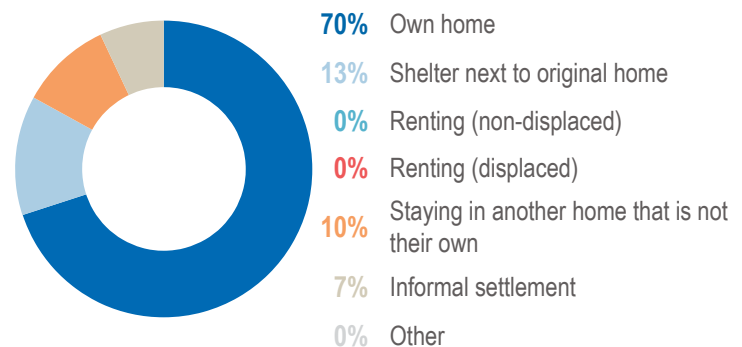
### Head of Household

**14%** of heads of households were female  
**21%** of heads of households were elderly  
**49** average age of the head of household in years

### Dependency ratio<sup>4</sup>

**1** average youth dependency ratio  
**0.3** average elderly dependency ratio  
**1.2** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



- Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
- The boundaries and names used on this map do not imply official endorsement or acceptance by REACH, UNICEF, HFI, or UNISUMH. Population data was extracted at desa-level from SIAK (Population Information Administration System) database, Ministry of Home Affairs (MoHA, 2017). Population of missing desas was imputed using data from the Indonesia Bureau of Statistics, 2010.
- Respondent metadata provides information on the respondents interviewed for the questionnaire. While the respondent was usually the head of household, if the head of household was not present at the time of interview, a member of the household knowledgeable about household affairs responded instead. This section only shows information on respondents, not the heads of household. Results in this section are not weighted by population, and should be considered as indicative.
- Age-dependency ratio was calculated by dividing the number of under-age and elderly (non-productive) individuals (0–17 years for youth and 60+ years for elderly) by the number of adult (productive) individuals in the population (18–59 years). Anything below 1 shows that the population is mostly adults of working-age who can provide for those who are not.
- Households were categorised based on whether they were still living on their original land, or if they were displaced by the disaster. Those living in their original home, renting (in the same location both before and after the disaster) or living in a tent/makeshift shelter next to their



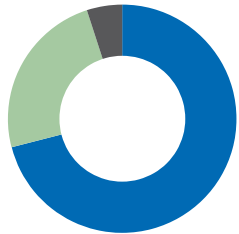


## Displacement and Protection

### Displaced population<sup>5</sup>

**30%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



**71%** Nearby/on site  
**24%** Within 2km  
**0%** Between 2km–5km  
**5%** More than 5km or Don't know

### Non-displaced population<sup>5</sup>

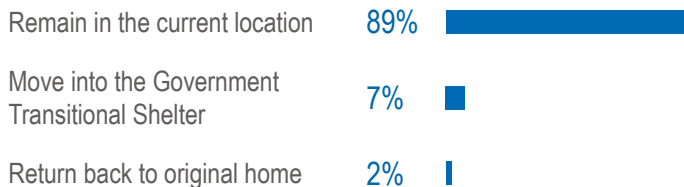
**5%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **4** IDP individuals in each displaced household hosted by a non-displaced household

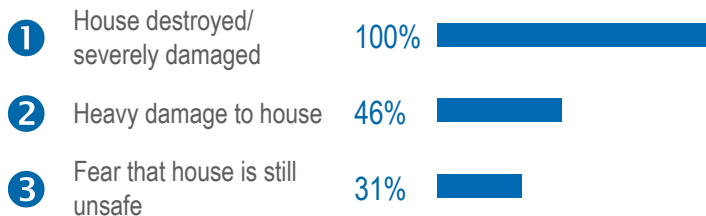
**0.4** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**23%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**4%** of households contained at least one member with a self-reported physical or mental disability

### Child Protection

**2%** of households contained at least one child that was separated from their usual caregiver

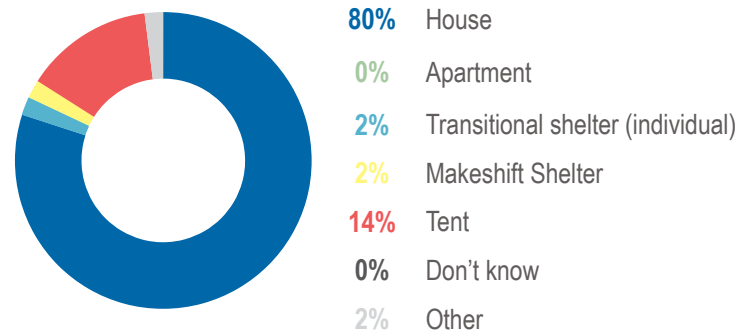
### Psychosocial Support

**73%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

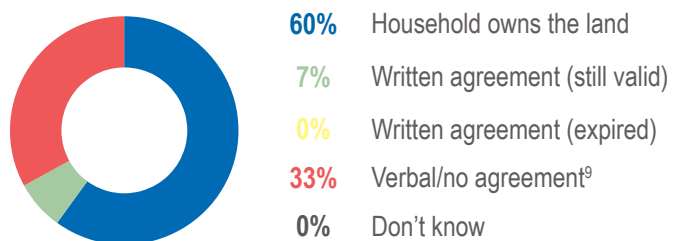
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**92%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**87%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

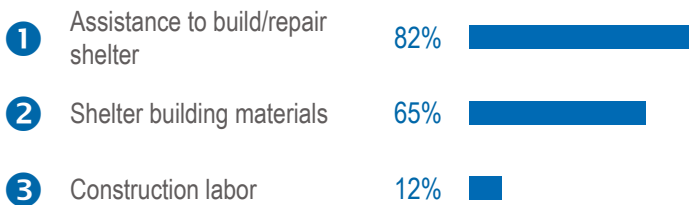
7. Single-choice question; only the top three responses are shown.

8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

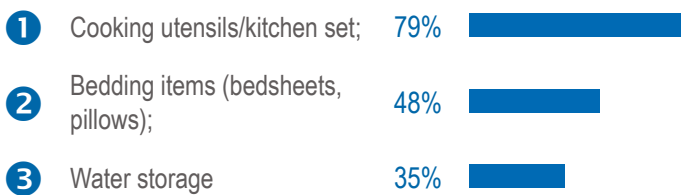
9. In many households in Central Sulawesi, there is a cultural practice in which one household owns many plots of land, and other households are permitted to live on it without any formal agreement.



Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



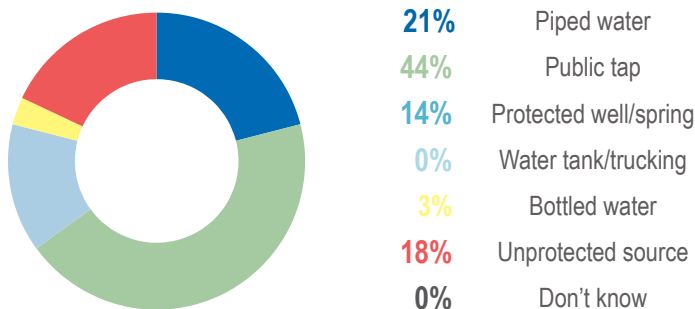
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

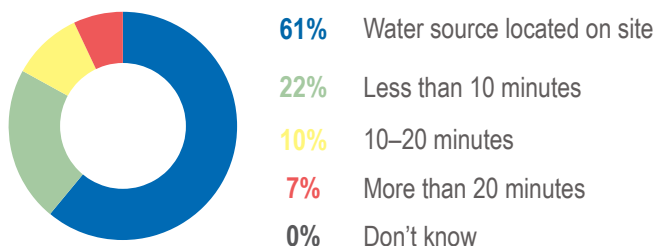
% of households acquired most of their drinking water from the following sources:



**88%** of households reported drinking water that had been treated and was safe to drink

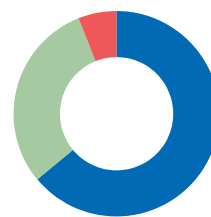
**72%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:



**64%** Pouring device/sink faucet

**30%** Basin/bucket

**6%** No device

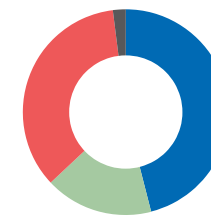
**0%** Don't know

**98%** of households have water available for hand washing

**59%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



**46%** Household latrine/toilet

**17%** Communal latrine/toilet

**35%** Open defecation

**2%** Don't know

There is an average of **8** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**68%** of households with communal latrines reported their toilet had adequate lighting

**3%** of households with communal toilets reported that there are separate toilets for men and women

**50%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors



## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>

Before Disaster		January 2019	
<b>71%</b>	Agricultural	<b>1</b>	Agricultural <b>68%</b>
<b>6%</b>	Small business owner	<b>2</b>	Unemployed <b>9%</b>
<b>6%</b>	Vocational profession	<b>3</b>	Vocational profession <b>6%</b>

10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.



% of households reporting that the household main income was unemployment, before and after the disaster:

**Before Disaster**

**January 2019**

**2%** are unemployed **9%**

**5%** of households had at least one working-age household member that is not working

Main reported barriers to finding work:<sup>13</sup>

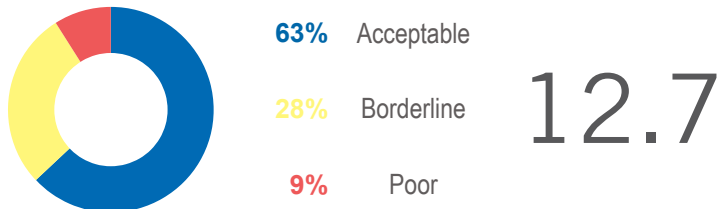


There is an average reported loss of **10%** of household income due to the disaster<sup>13</sup>

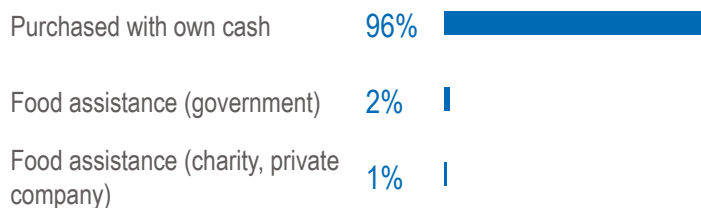
**Food Security**

**Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)**

Food Consumption Score<sup>14</sup> average rCSI score<sup>15</sup>



% of households per main reported source of food in week prior to data collection:<sup>18</sup>



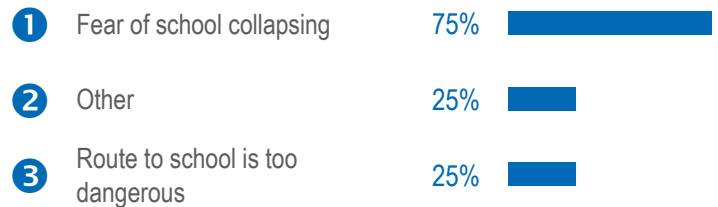
**Education**

**Student attendance**

**4%** of households with children reported having school-aged children who were not attending school following the disaster

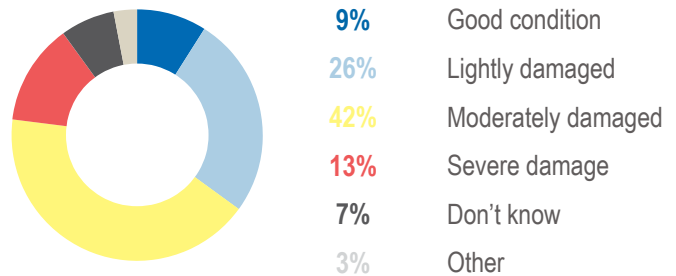
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>



**Condition of school facilities**

% of households reported the condition of the nearby school to be the following:



**Health**

**Immunization**

**21%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

**Illness and injury**

**65%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.

14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).

15. rCSI is a measure of food security that looks at a set list of five coping strategies that households might be using to make food last longer in the absence of sufficient foods. It uses 5 commonly practiced coping strategies across the world. rCSI was calculated by asking respondents how many days per week their household adopted different coping strategies to make food last longer. The number of days was then multiplied by a coefficient based on the coping strategy and added up. There are no officially established thresholds, but generally, scores between 0 and 3 are considered to be good, 4 to 9 is worrisome, and scores greater than or equal to 10 are concerning (WFP VAM Unit, Afghanistan, Guidance note: calculation of household food security outcome indicators, December 2012).

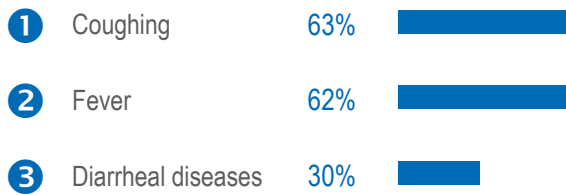
16. Single-choice question; only the top three responses are shown.

17. Respondents could select multiple responses; only the top three choices are shown.

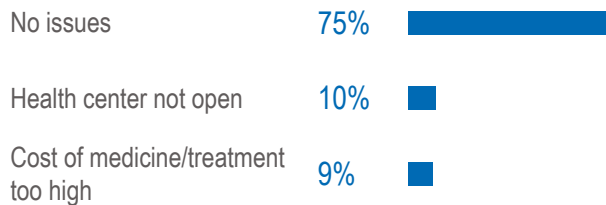




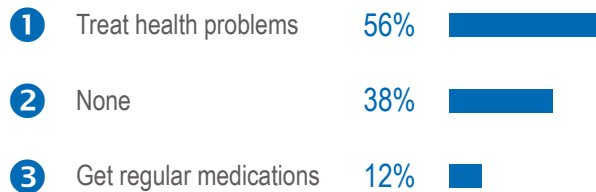
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

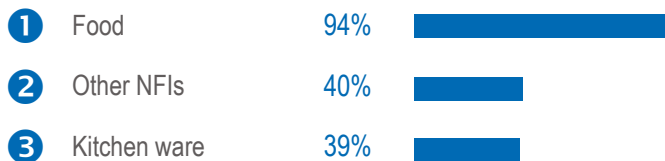


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

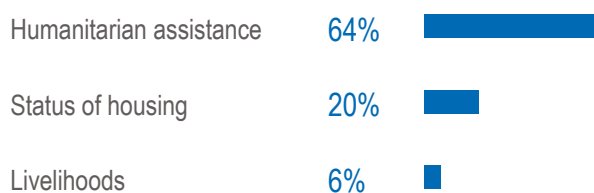
Top 3 most important priority needs as reported by households:<sup>20</sup>



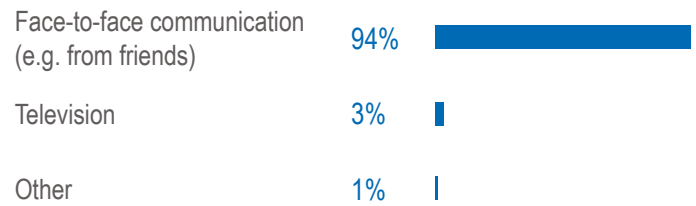
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



% of households by most preferred source from which they would like to receive new information:<sup>19</sup>

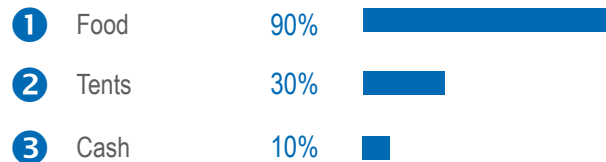


#### Humanitarian assistance

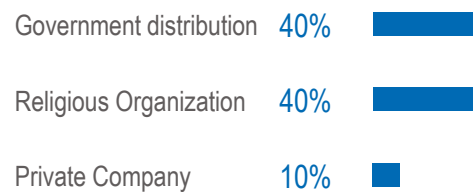
**8%**

of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



**70%**

of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

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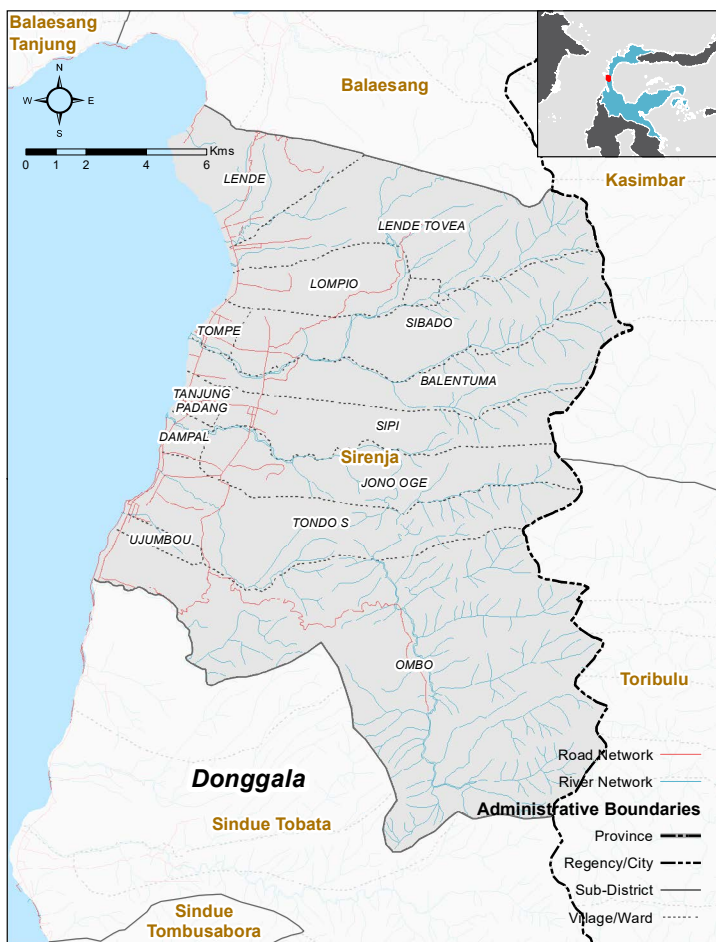


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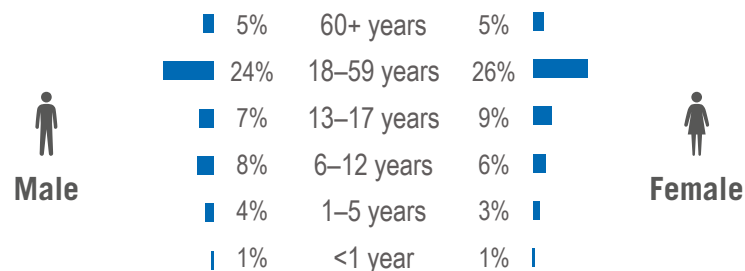
## Respondent metadata<sup>3</sup>

**108** Total households interviewed  
**49** Average age of respondent in years  
**48%** of respondents were female



## Demographics

### Household composition by gender and age



There was an average of **5** individuals reported per household

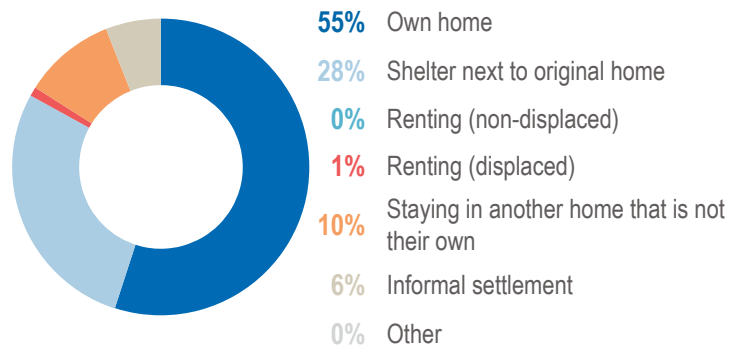
### Head of Household

**16%** of heads of households were female  
**20%** of heads of households were elderly  
**50** average age of the head of household in years

### Dependency ratio<sup>4</sup>

**0.8** average youth dependency ratio  
**0.3** average elderly dependency ratio  
**1.1** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



1. Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
2. The boundaries and names used on this map do not imply official endorsement or acceptance by REACH, UNICEF, HFI, or UNISMUH. Population data was extracted at desa-level from SIAK (Population Information Administration System) database, Ministry of Home Affairs (MoHA, 2017). Population of missing desas was imputed using data from the Indonesia Bureau of Statistics, 2010.
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4. Age-dependency ratio was calculated by dividing the number of under-age and elderly (non-productive) individuals (0–17 years for youth and 60+ years for elderly) by the number of adult (productive) individuals in the population (18–59 years). Anything below 1 shows that the population is mostly adults of working-age who can provide for those who are not.
5. Households were categorised based on whether they were still living on their original land, or if they were displaced by the disaster. Those living in their original home, renting (in the same location both before and after the disaster) or living in a tent/makeshift shelter next to their



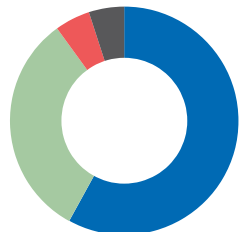


## Displacement and Protection

### Displaced population<sup>5</sup>

**45%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



**58%** Nearby/on site  
**32%** Within 2km  
**5%** Between 2km–5km  
**5%** More than 5km or Don't know

### Non-displaced population<sup>5</sup>

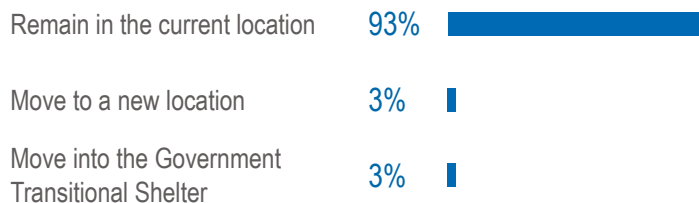
**7%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **3** IDP individuals in each displaced household hosted by a non-displaced household

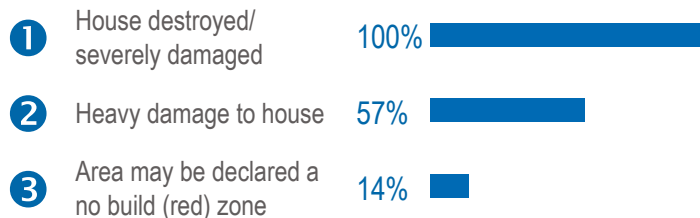
**1** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**12%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**3%** of households contained at least one member with a self-reported physical or mental disability

### Child Protection

**1%** of households contained at least one child that was separated from their usual caregiver

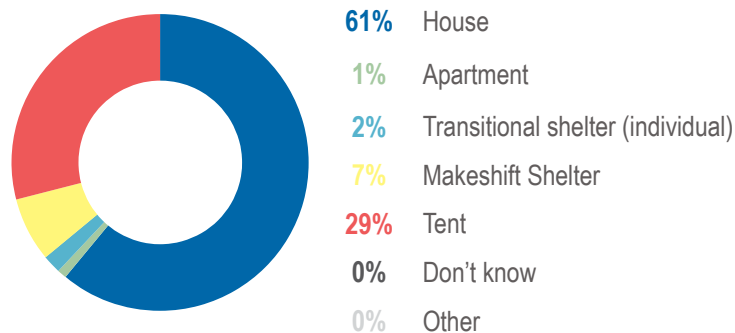
### Psychosocial Support

**68%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

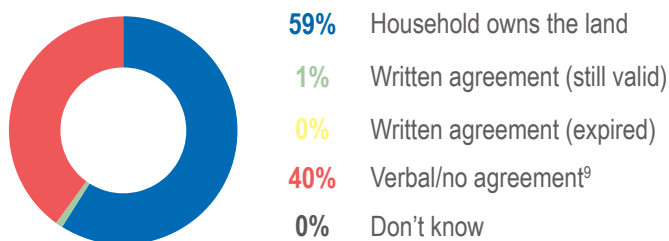
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**81%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**96%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

7. Single-choice question; only the top three responses are shown.

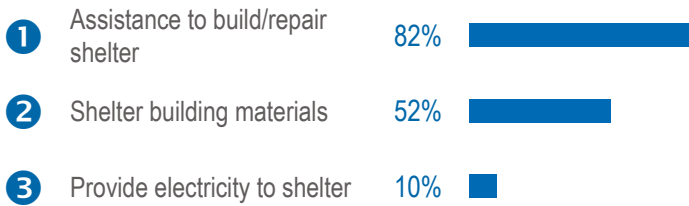
8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

9. In many households in Central Sulawesi, there is a cultural practice in which one household owns many plots of land, and other households are permitted to live on it without any formal agreement.

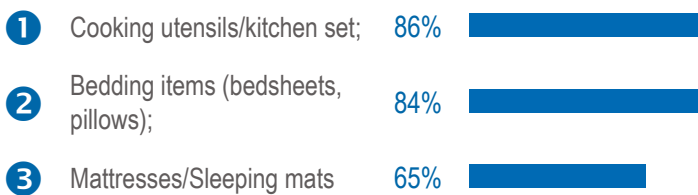




Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



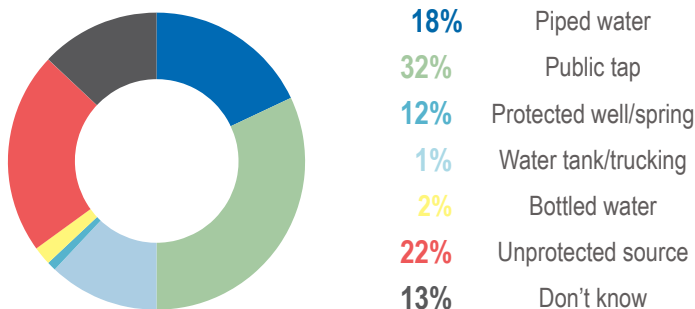
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

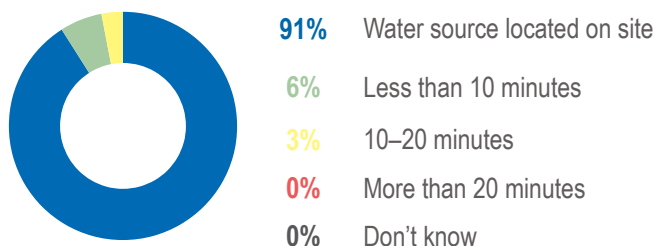
% of households acquired most of their drinking water from the following sources:



**95%** of households reported drinking water that had been treated and was safe to drink

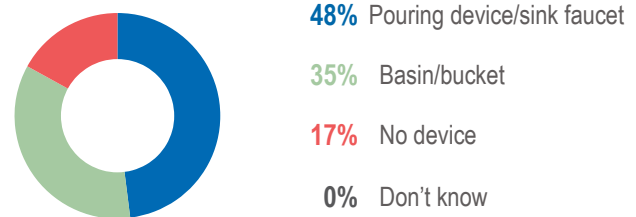
**94%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:

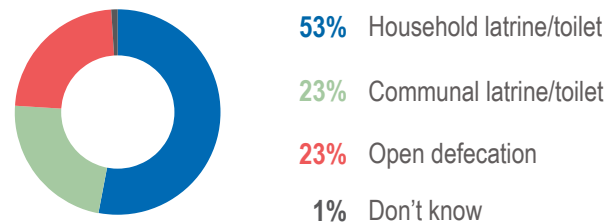


**73%** of households have water available for hand washing

**51%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



There is an average of **12** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**73%** of households with communal latrines reported their toilet had adequate lighting

**6%** of households with communal toilets reported that there are separate toilets for men and women

**90%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors



## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>

Before Disaster		January 2019	
60%	Agricultural	1	Agricultural 55%
10%	Unemployed	2	Unemployed 18%
8%	Small business owner	3	Small business owner 9%

10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

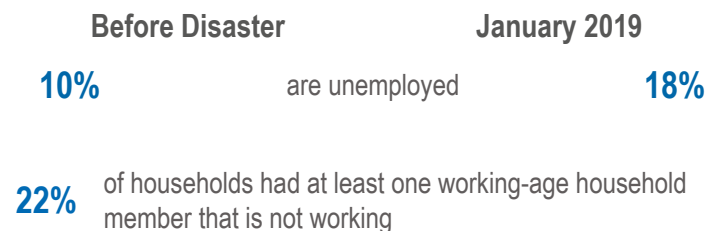
11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.





% of households reporting that the household main income was unemployment, before and after the disaster:

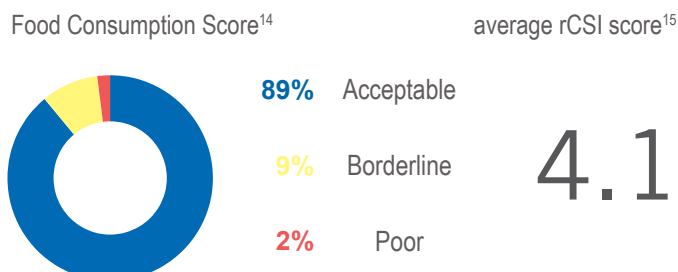


Main reported barriers to finding work:<sup>13</sup>

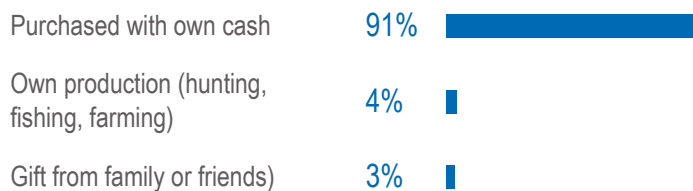


## Food Security

### Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)



% of households per main reported source of food in week prior to data collection:<sup>18</sup>



## Education

### Student attendance

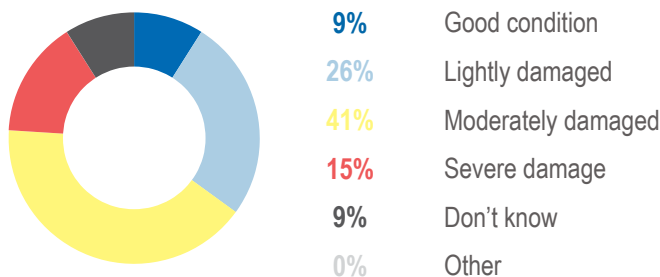
**0%** of households with children reported having school-aged children who were not attending school following the disaster

Among households where children were not attending school, there was an average of **0** child(ren) reported to not be attending school. Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>

- 1** NA **0%**
- 2** NA **0%**
- 3** NA **0%**

### Condition of school facilities

% of households reported the condition of the nearby school to be the following:



## Health

### Immunization

**12%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

### Illness and injury

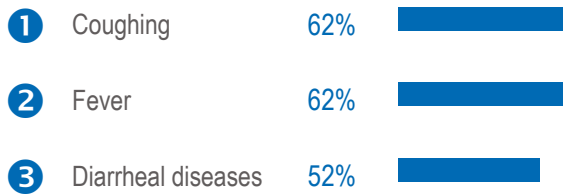
**46%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.  
 14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).  
 15. rCSI is a measure of food security that looks at a set list of five coping strategies that households might be using to make food last longer in the absence of sufficient foods. It uses 5 commonly practiced coping strategies across the world. rCSI was calculated by asking respondents how many days per week their household adopted different coping strategies to make food last longer. The number of days was then multiplied by a coefficient based on the coping strategies and added up. There are no officially established thresholds, but generally, scores between 0 and 3 are considered to be good, 4 to 9 is worrisome, and scores greater than or equal to 10 are concerning (WFP VAM Unit, Afghanistan, Guidance note: calculation of household food security outcome indicators, December 2012).  
 16. Single-choice question; only the top three responses are shown.  
 17. Respondents could select multiple responses; only the top three choices are shown.

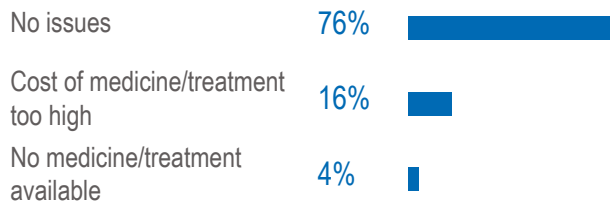




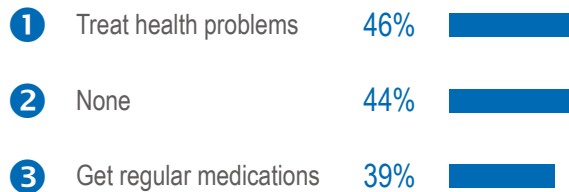
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

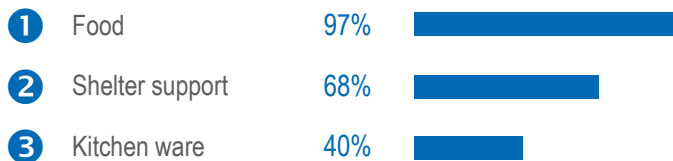


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

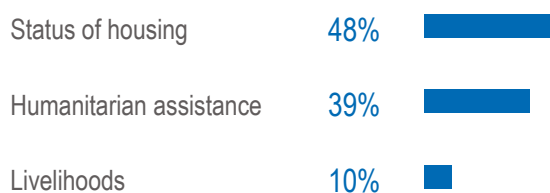
Top 3 most important priority needs as reported by households:<sup>20</sup>



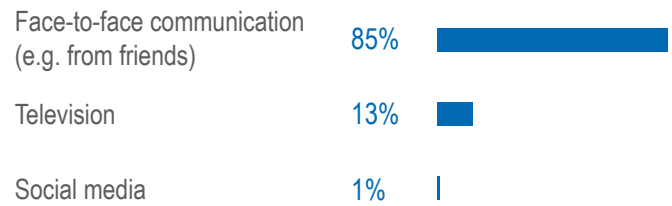
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



% of households by most preferred source from which they would like to receive new information:<sup>19</sup>

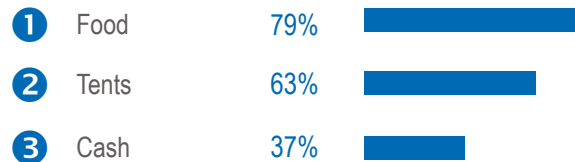


#### Humanitarian assistance

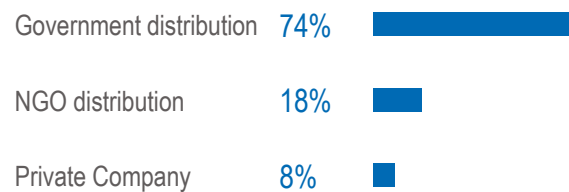
**57%**

of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



**31%**

of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

18. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.

19. Single-choice question; only the top three responses are shown.

20. Respondents could select up to three responses, therefore results may exceed 100%; only the top three choices are shown.





## Background and methodology

Following a 7.7 magnitude earthquake on 28 September, 2018, large parts of Palu, Donggala, Sigi, and Parigi Moutong regencies in Central Sulawesi province were destroyed by earthquake, tsunami, and liquefaction events. As of 10 December 2018, approximately 2,101 people have been killed, 1,373 are missing, and an estimated 133,631 individuals were displaced in informal settlements.<sup>1</sup> An estimated 15,000 houses have been destroyed and another 17,000 heavily damaged. However, four months after the initial disaster, there is still very little understanding of the needs and vulnerabilities of the affected population in Central Sulawesi Province.

To fill this gap, a Multi-Sector Needs Assessment (MSNA) was conducted by Humanitarian Forum Indonesia (HFI) and Universitas Muhammadiyah Palu (UNISMUH) with oversight from the Ministry of Social Affairs (Kemensos) and technical support from REACH, in 38 of 62 sub-districts in the four affected regencies of Central Sulawesi Province.

A sample of 99 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.<sup>2</sup> Results were weighted by population and generalizable to the crisis level with 95% confidence level and 10% margin of error.

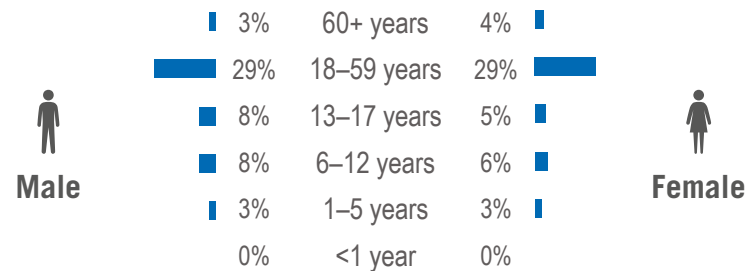


## Respondent metadata<sup>3</sup>

**99** Total households interviewed  
**44** Average age of respondent in years  
**67%** of respondents were female

## Demographics

### Household composition by gender and age



There was an average of **5** individuals reported per household

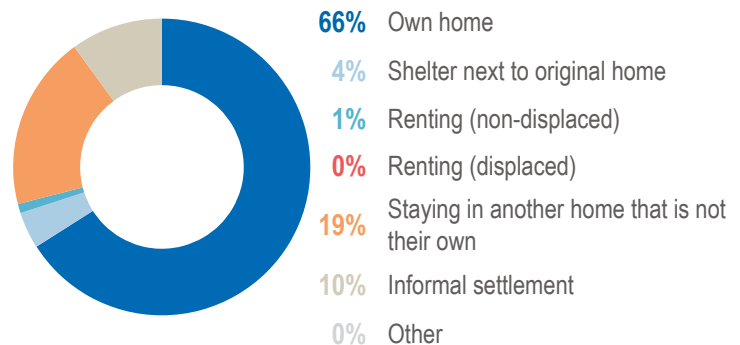
### Head of Household

**13%** of heads of households were female  
**14%** of heads of households were elderly  
**48** average age of the head of household in years

### Dependency ratio<sup>4</sup>

**0.7** average youth dependency ratio  
**0.2** average elderly dependency ratio  
**0.9** average age-dependency ratio

### % of households by current living location:<sup>5</sup>



- Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
- The boundaries and names used on this map do not imply official endorsement or acceptance by REACH, UNICEF, HFI, or UNISMUH. Population data was extracted at desa-level from SIAK (Population Information Administration System) database, Ministry of Home Affairs (MoHA, 2017). Population of missing desas was imputed using data from the Indonesia Bureau of Statistics, 2010.
- Respondent metadata provides information on the respondents interviewed for the questionnaire. While the respondent was usually the head of household, if the head of household was not present at the time of interview, a member of the household knowledgeable about household affairs responded instead. This section only shows information on respondents, not the heads of household. Results in this section are not weighted by population, and should be considered as indicative.
- Age-dependency ratio was calculated by dividing the number of under-age and elderly (non-productive) individuals (0–17 years for youth and 60+ years for elderly) by the number of adult (productive) individuals in the population (18–59 years). Anything below 1 shows that the population is mostly adults of working-age who can provide for those who are not.
- Households were categorised based on whether they were still living on their original land, or if they were displaced by the disaster. Those living in their original home, renting (in the same location both before and after the disaster) or living in a tent/makeshift shelter next to their



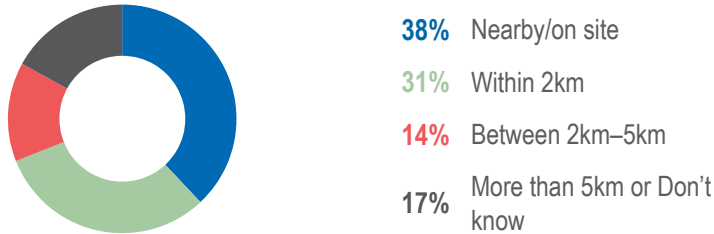


## Displacement and Protection

### Displaced population<sup>5</sup>

**33%** of households were no longer living in their original house due to the disaster

% of households no longer living on land they own by distance from their current living location to their original house:



### Non-displaced population<sup>5</sup>

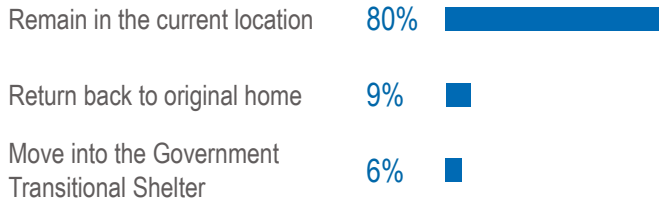
**16%** of non-displaced households were hosting at least one displaced household in a house that they own

There is an average of **4** IDP individuals in each displaced household hosted by a non-displaced household

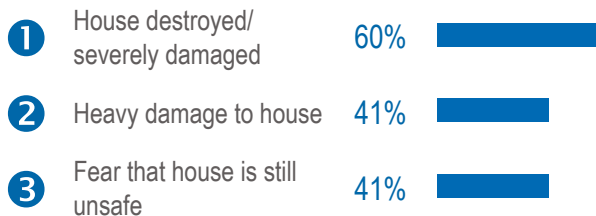
**0.9** average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs<sup>6</sup>

### Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:<sup>7</sup>



Top 3 most reported reasons as to why households chose to move or to stay in their preferred living location for the next 6 months:<sup>8</sup>



## Protection of Women's Needs

**21%** of households contained at least one pregnant or lactating woman

original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households living in their original home, categorization of displacement was the same, except that those staying in tents next to their original home were considered to be displaced.

## Disabilities, Elderly, Minorities

**1%** of households contained at least one member with a self-reported physical or mental disability

### Child Protection

**3%** of households contained at least one child that was separated from their usual caregiver

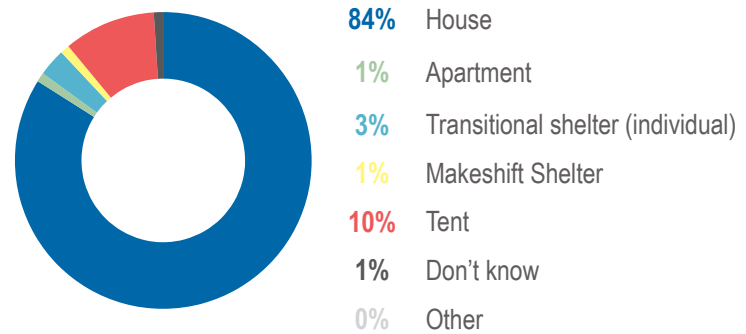
### Psychosocial Support

**79%** of households reported having at least one member experiencing emotional distress from the disaster

## Shelter

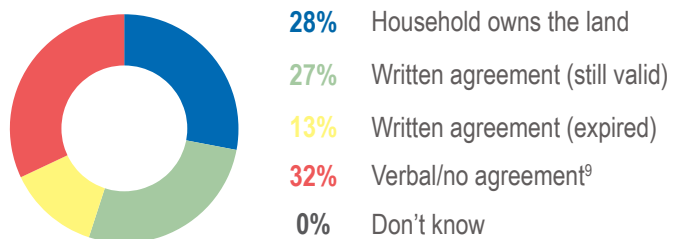
### Shelter conditions

% of households by type of shelter they are currently living in at the time of data collection:



**86%** of households reported that their original shelter was either destroyed or damaged by the disaster

% of households by state of tenure for house at the time of data collection:



### Preferred Shelter Assistance

**74%** of households reported that they would prefer to rebuild or repair their original home in the next 6 months

6. Dependency ratio is calculated by dividing the number of IDP individuals being hosted by the total size of the host household. The number shows the relative burden that hosting households have to support IDP households.

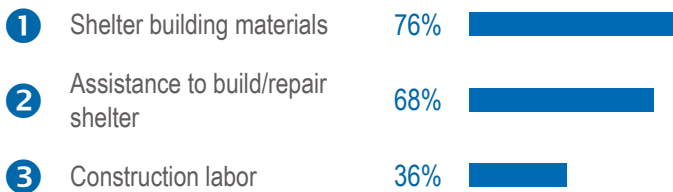
7. Single-choice question; only the top three responses are shown.

8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

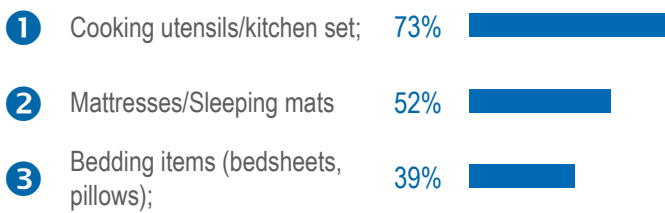
9. In many households in Central Sulawesi, there is a cultural practice in which one household owns many plots of land, and other households are permitted to live on it without any formal agreement.



Top 3 preferred types of assistance that households wanted to receive in order to rebuild/repair their homes in the 6 months after data collection:<sup>10</sup>



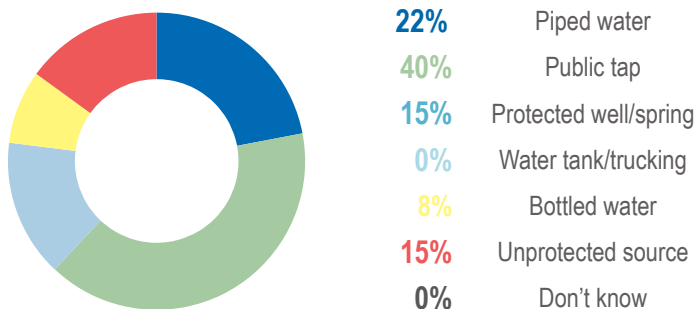
Top 3 most needed Non-Food Items (NFIs):<sup>10</sup>



## Water, Sanitation and Hygiene

### Access to Water

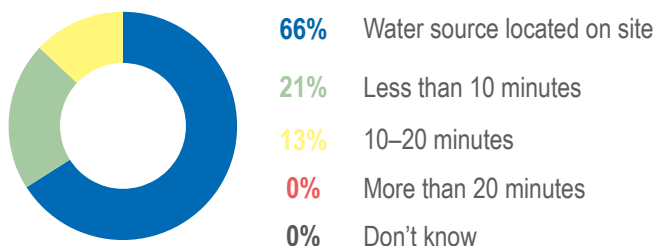
% of households acquired most of their drinking water from the following sources:



**95%** of households reported drinking water that had been treated and was safe to drink

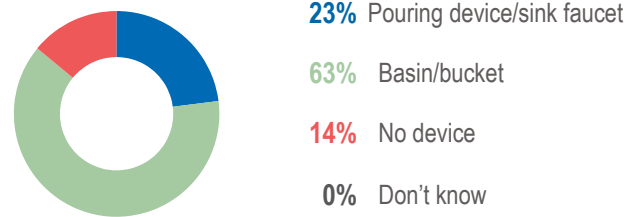
**91%** of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



### Hygiene practices

% of households by location used for hand washing:

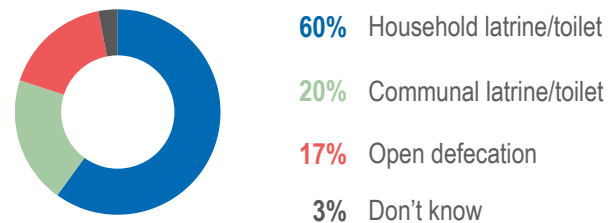


**93%** of households have water available for hand washing

**68%** of households have soap available for hand washing

### Sanitation conditions

% of households by most common defecation practice:



There is an average of **9** households reported to be sharing each communal latrine<sup>11</sup>

### Household and communal latrine conditions

**80%** of households with communal latrines reported their toilet had adequate lighting

**5%** of households with communal toilets reported that there are separate toilets for men and women

**75%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors



## Economy

### Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:<sup>12</sup>

Before Disaster		January 2019	
<b>33%</b>	Agricultural	<b>1</b>	Agricultural <b>31%</b>
<b>18%</b>	Small business owner	<b>2</b>	Small business owner <b>19%</b>
<b>15%</b>	Construction	<b>3</b>	Unemployed <b>13%</b>

10. Respondents could select up to three responses; therefore results may exceed 100%; only the top three choices are shown.

11. Average taken from households reporting the use of communal latrines.

12. Single-choice question; only the top three responses are shown.



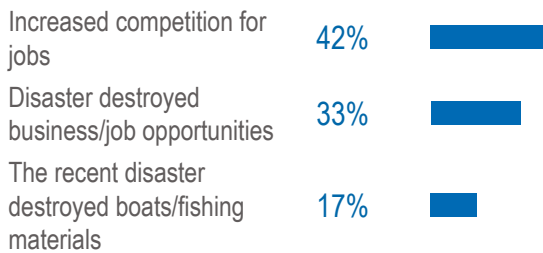


% of households reporting that the household main income was unemployment, before and after the disaster:



**12%** of households had at least one working-age household member that is not working

Main reported barriers to finding work:<sup>13</sup>



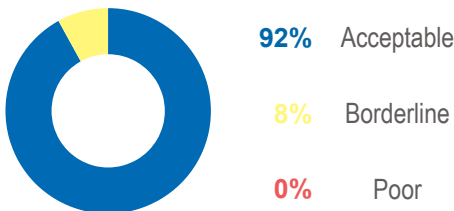
There is an average reported loss of **20%** of household income due to the disaster<sup>13</sup>



## Food Security

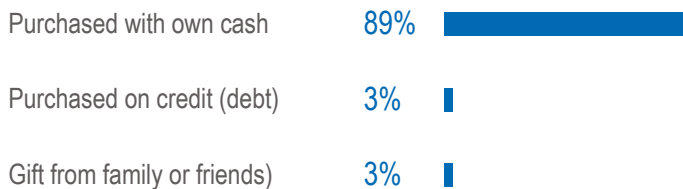
### Reported Food Consumption Score (FCS) and reduced Coping Strategy Index (rCSI)

Food Consumption Score<sup>14</sup> average rCSI score<sup>15</sup>



**4**

% of households per main reported source of food in week prior to data collection:<sup>18</sup>



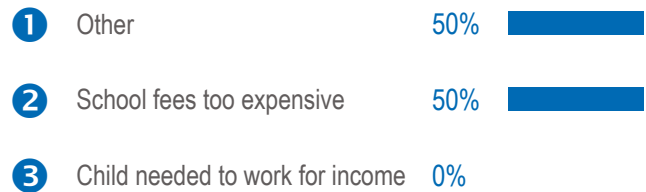
## Education

### Student attendance

**3%** of households with children reported having school-aged children who were not attending school following the disaster

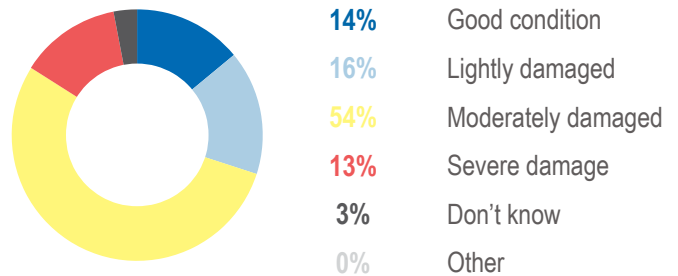
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:<sup>19</sup>



### Condition of school facilities

% of households reported the condition of the nearby school to be the following:



## Health

### Immunization

**38%** of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

### Illness and injury

**56%** of households reported that a member of the household had suffered from a health issue (illness or injury) in the 30 days prior to data collection

13. Due to the sensitivity over asking about monthly income, respondents were asked what range their monthly income fell within. The upper bound of the range was used, and current income was divided by previous income before being averaged.

14. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household consumed different groups of food, which are then multiplied by a coefficient based on the food group, added up, and ascribed a ranking (acceptable, borderline, or poor) based on the number (WFP, Consolidated Approach for Reporting Indicators of Food Security (CARI), 2014).

15. rCSI is a measure of food security that looks at a set list of five coping strategies that households might be using to make food last longer in the absence of sufficient foods. It uses 5 commonly practiced coping strategies across the world. rCSI was calculated by asking respondents how many days per week their household adopted different coping strategies to make food last longer. The number of days was then multiplied by a coefficient based on the coping strategies and added up. There are no officially established thresholds, but generally, scores between 0 and 3 are considered to be good, 4 to 9 is worrisome, and scores greater than or equal to 10 are concerning (WFP VAM Unit, Afghanistan, Guidance note: calculation of household food security outcome indicators, December 2012).

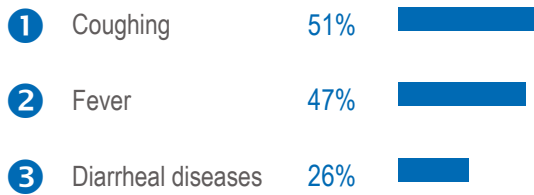
16. Single-choice question; only the top three responses are shown.

17. Respondents could select multiple responses; only the top three choices are shown.

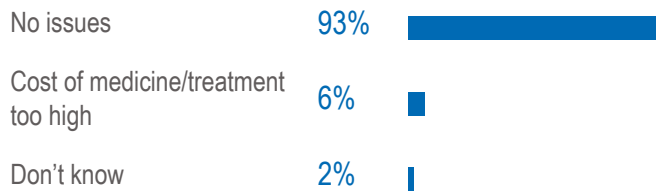




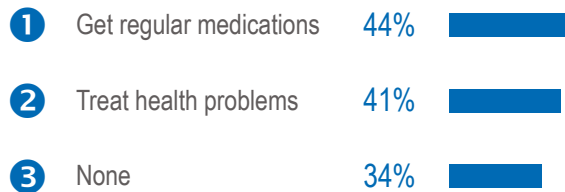
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:<sup>18</sup>



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:<sup>19</sup>

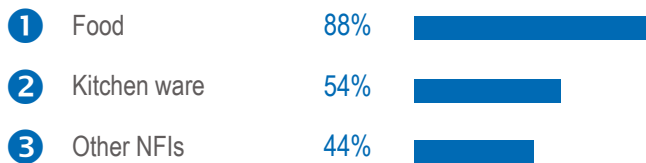


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:<sup>20</sup>



### 1.2.3 Priority Needs

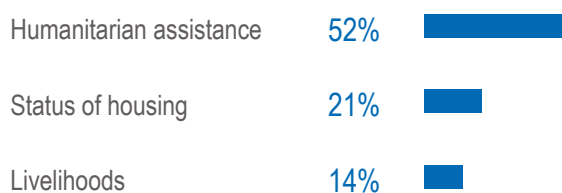
Top 3 most important priority needs as reported by households:<sup>20</sup>



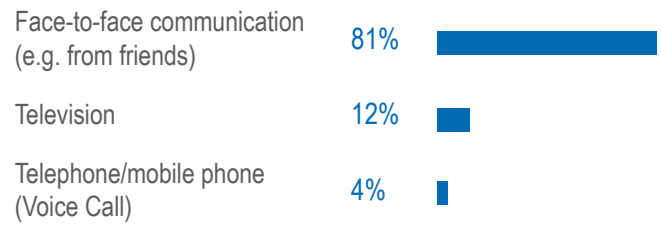
### Communication with Communities

#### Information Needs

% of households by the type of information that the household reported needing the most:<sup>19</sup>



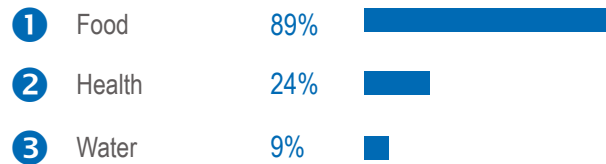
% of households by most preferred source from which they would like to receive new information:<sup>19</sup>



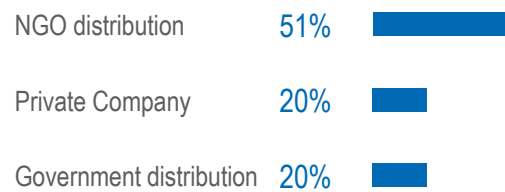
#### Humanitarian assistance

**46%** of households reported that they had received humanitarian aid in the 30 days prior to data collection

Top 3 most common types of aid that households reported having received:<sup>18</sup>



% of households by most common reported source of aid:<sup>18</sup>



**64%** of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

18. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.

19. Single-choice question; only the top three responses are shown.

20. Respondents could select up to three responses, therefore results may exceed 100%; only the top three choices are shown.

