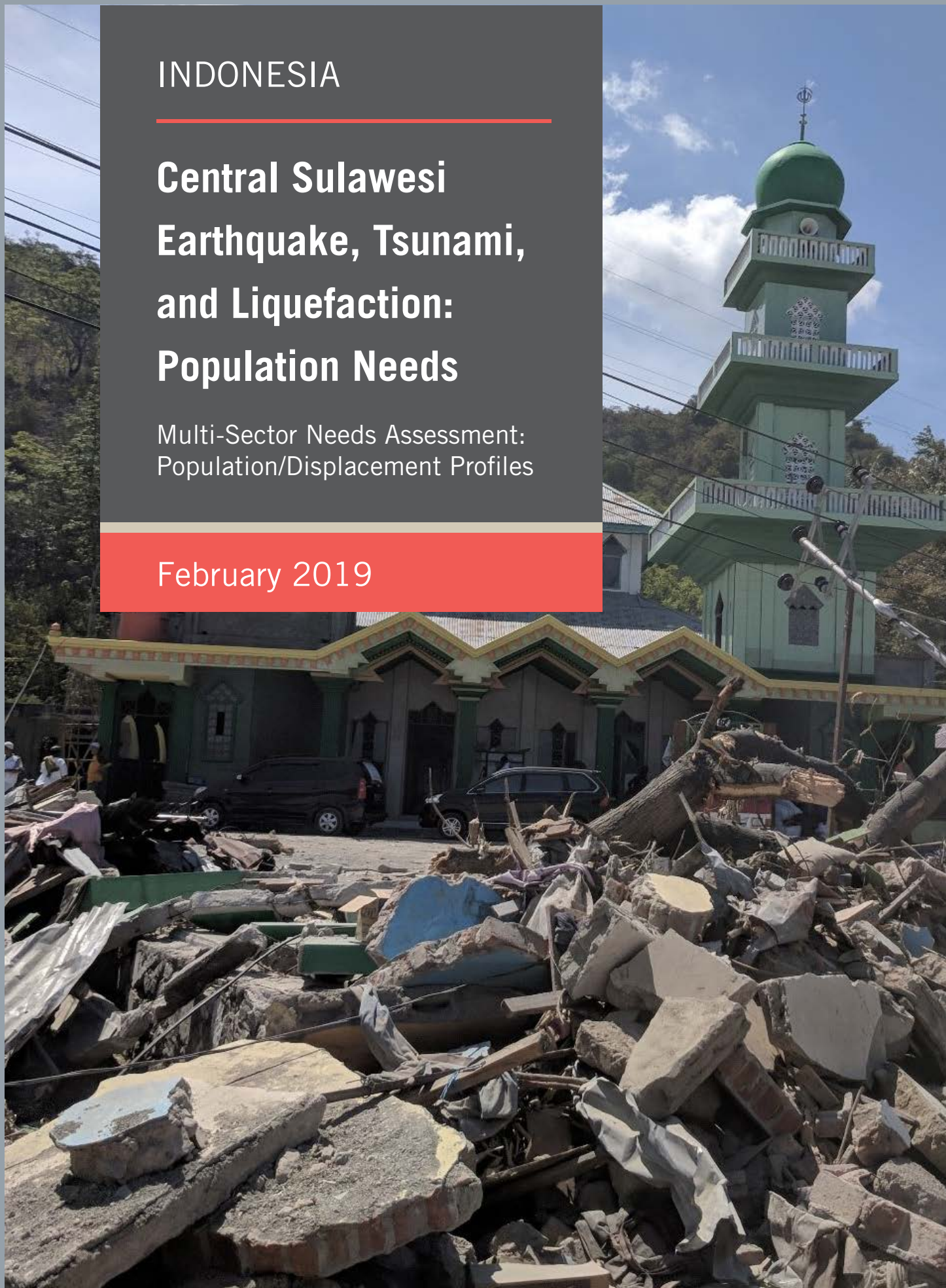


INDONESIA

Central Sulawesi Earthquake, Tsunami, and Liquefaction: Population Needs

Multi-Sector Needs Assessment:
Population/Displacement Profiles

February 2019



Funded by
European Union
Humanitarian Aid



KlasNas PP
KEMENTERIAN SOSIAL
REPUBLIK INDONESIA



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REACH Informing
more effective
humanitarian action

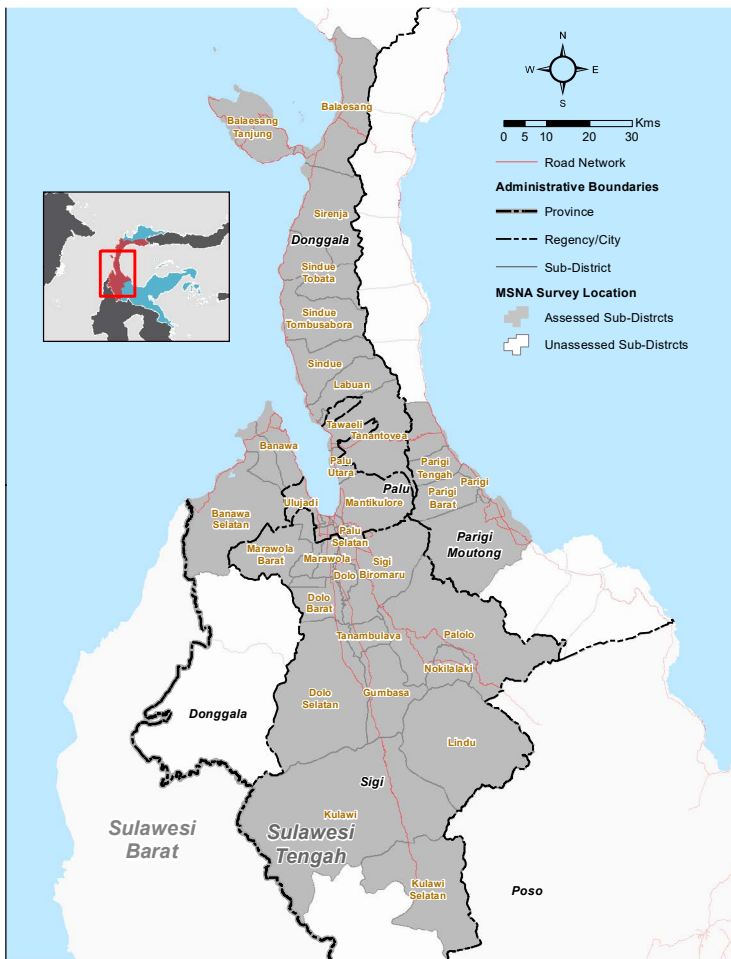


Background and methodology

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.¹ 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 3195 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.² Results were weighted by population and generalizable to the crisis level with 95% confidence level and 2% margin of error.



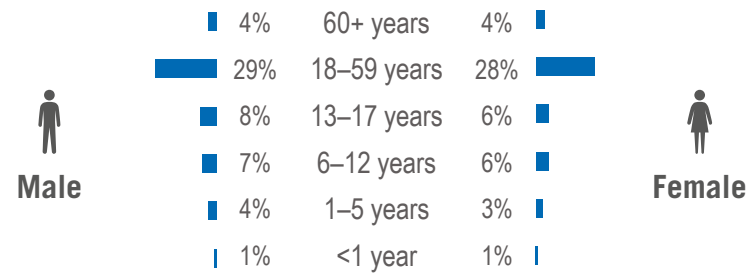
Respondent metadata³

- 3195** Total households interviewed
- 45** 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

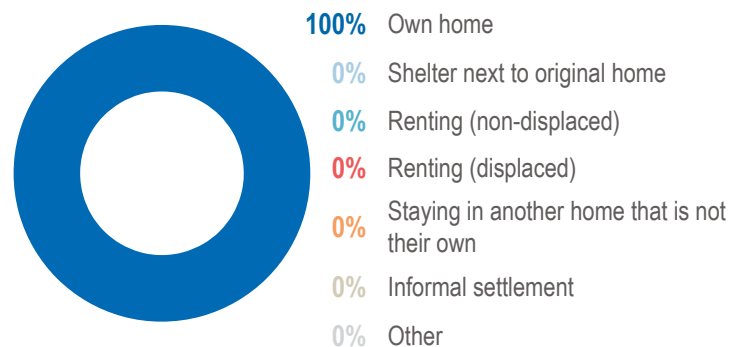
Head of Household

- 12%** of heads of households were female
- 15%** of heads of households were elderly
- 47** average age of the head of household in years

Dependency ratio⁴

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

% of households by current living location:⁵



- 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

Non-displaced population⁵

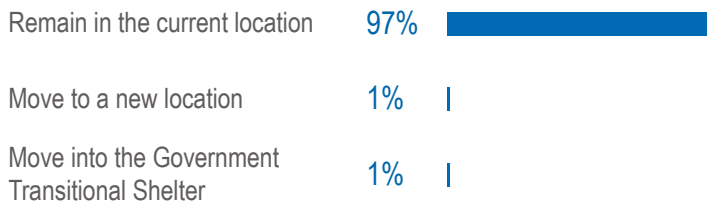
6% of non-displaced households were hosting at least one displaced household in a house that they own

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

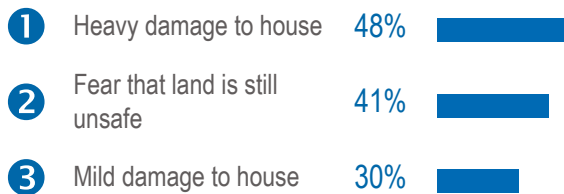
0.6 average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs⁶

Movement intentions in the next 6 months

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



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:⁸



Protection of Women's Needs

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

Disabilities, Elderly, Minorities

3% 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

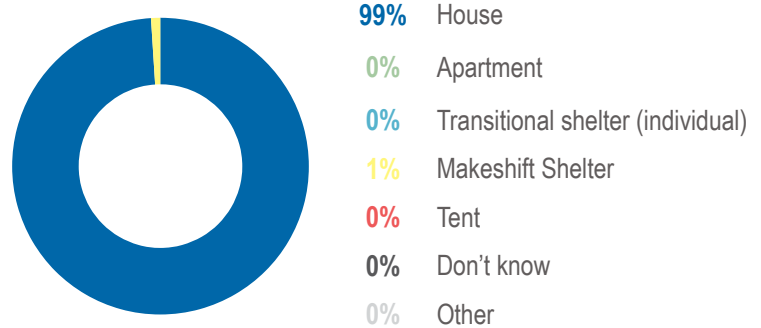
47% of households reported having at least one member experiencing emotional distress from the disaster

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.

Shelter

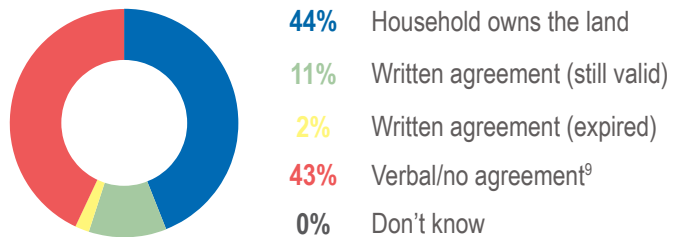
Shelter conditions

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



59% 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:



2% of households reported that they were at risk of being forced to leave where they were staying at the time of data collection

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.

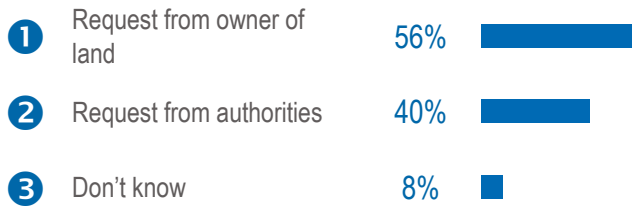
8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

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





Top 3 reported reasons households were at risk of being forced to leave their shelters at the time of data collection:¹⁰

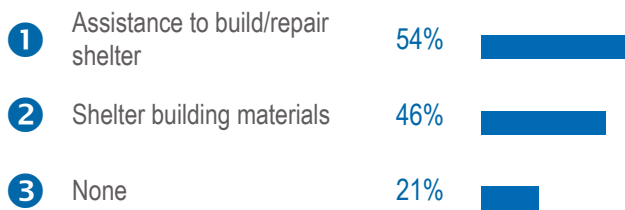


2% of households reported having lost the ownership documents for their original shelter before the disaster

Preferred Shelter Assistance

69% of households reported that they would prefer to rebuild or repair their original home in the next 6 months

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:¹¹



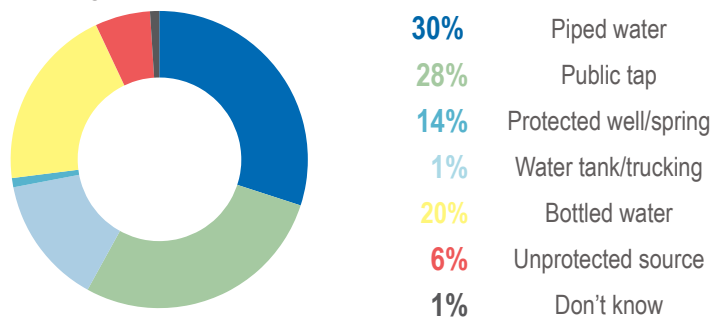
Top 3 most needed Non-Food Items (NFIs):¹¹



Water, Sanitation and Hygiene

Access to Water

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



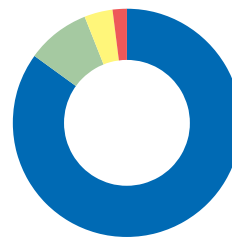
95%

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

90%

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

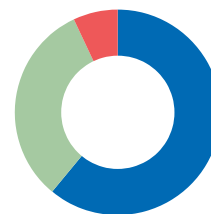
% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



85% Water source located on site
9% Less than 10 minutes
4% 10–20 minutes
2% More than 20 minutes
0% Don't know

Hygiene practices

% of households by location used for hand washing:



61% Pouring device/sink faucet
32% Basin/bucket
7% No device
0% Don't know

93%

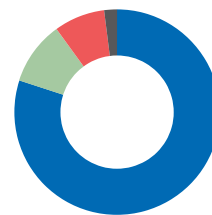
of households have water available for hand washing

65%

of households have soap available for hand washing

Sanitation conditions

% of households by most common defecation practice:



80% Household latrine/toilet
10% Communal latrine/toilet
8% Open defecation
2% Don't know

% of households using a household or communal latrine/toilet, by type of latrine/toilet:



100% Flush toilet¹²
0% Other

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

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

12. "Flush toilets" includes both toilets where a lever automatically makes the toilet flush and the practice of dumping water down the toilet to cause it to flush manually.





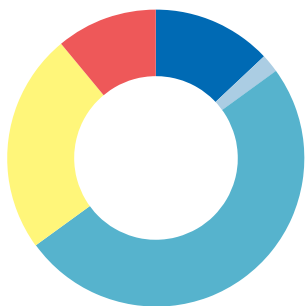
There is an average of **8** households reported to be sharing each communal latrine¹³

Communal latrine conditions

- 83%** 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
- 76%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors

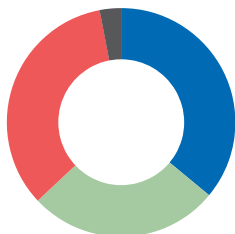
Waste disposal

% of households by reported main method of garbage disposal



- 13%** Bin in household / street
- 2%** Bury garbage
- 50%** Burn garbage
- 24%** Open area designated for waste
- 11%** Open area not designated for waste
- 0%** Other

% of households reporting how often garbage is collected from their area of residence:



- 36%** Daily
- 27%** Weekly
- 0%** More than 1x per week
- 34%** Service not available
- 3%** Don't know
- 0%** Other



Economy

Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:¹⁴

Before Disaster

January 2019

34%	Agricultural	1	Agricultural	32%
18%	Small business owner	2	Small business owner	18%
9%	Government job	3	Government job	9%

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

Before Disaster

January 2019

4% are unemployed **8%**

18% of households had at least one working-age household member that is not working

Main reported barriers to finding work:¹⁴

The recent disaster destroyed previous business/job opportunities	37%	
Underqualified for available jobs	15%	
Disaster destroyed cultivation land for planting	10%	

There is an average reported loss of **10%** of household income due to the disaster¹⁵

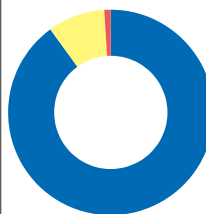


Food Security

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

Food Consumption Score¹⁶

average rCSI score¹⁷



- 90%** Acceptable
- 9%** Borderline
- 1%** Poor

2.8

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

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

15. 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.

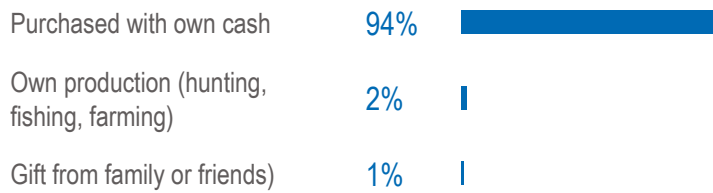
16. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household 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).

17. 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).





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



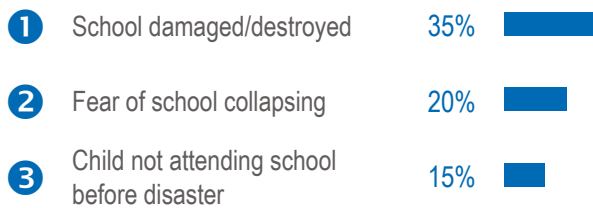
Education

Student attendance

3% of households with children reported having school-aged children who were not attending school following the disaster

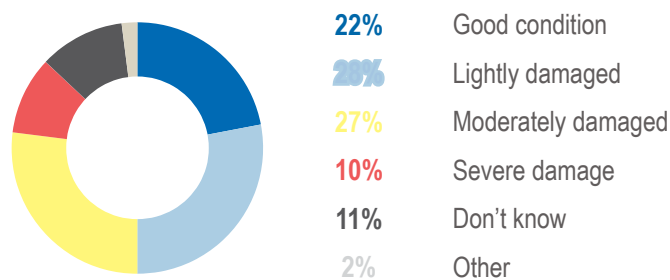
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

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



Condition of school facilities

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



Health

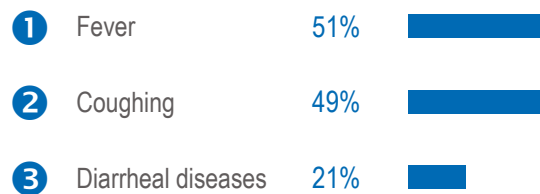
Immunization

16% of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

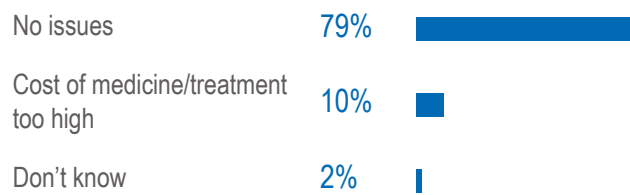
Illness and injury

37% 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

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:¹⁹



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

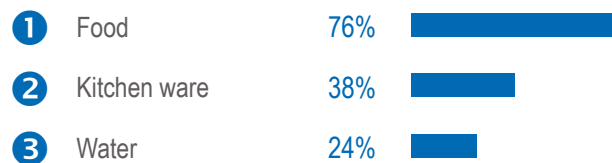


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:²⁰



1.2.3 Priority Needs

Top 3 most important priority needs as reported by households:²⁰



Communication with Communities

Information Needs

% of households by the type of information that the household reported needing the most:¹⁸



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

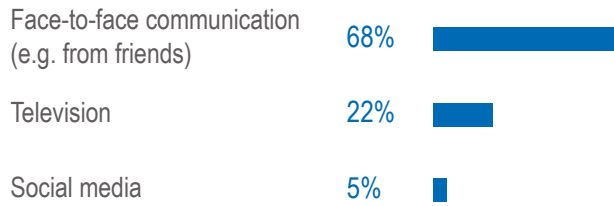
19. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.

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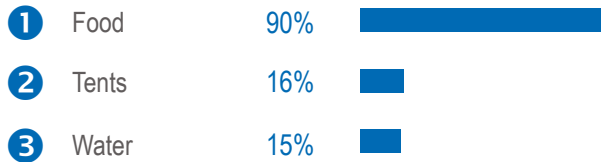
% of households by most preferred source from which they would like to receive new information:²¹



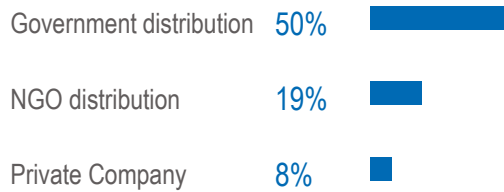
Humanitarian assistance

24% 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:²²

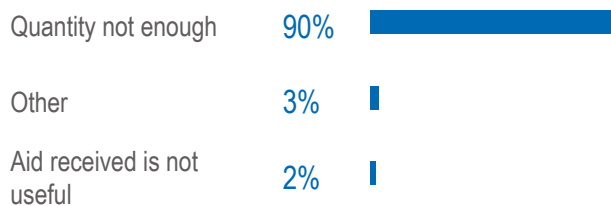


% of households by most common reported source of aid:²³



72% of households reported that they were happy with the aid that they had received in the 30 days prior to data collection

Main reported reasons households were not satisfied by the aid received in the last 30 days:²³



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

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

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



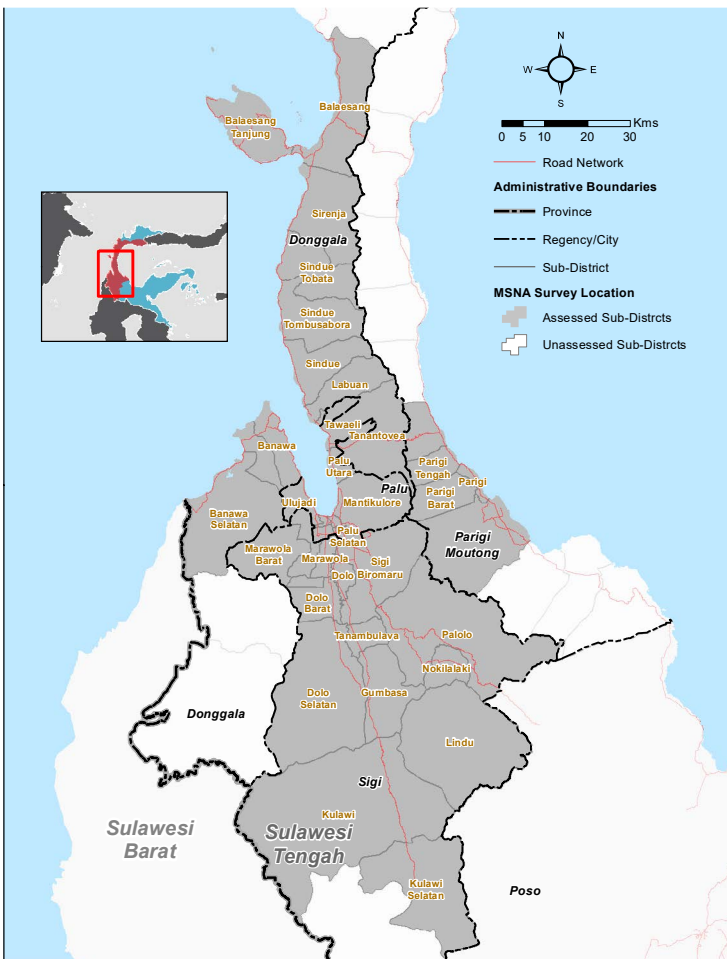


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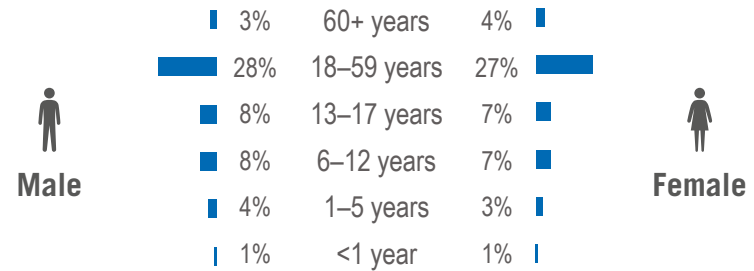
Respondent metadata³

- 233** Total households interviewed
- 46** Average age of respondent in years
- 46%** of respondents were female



Demographics

Household composition by gender and age



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

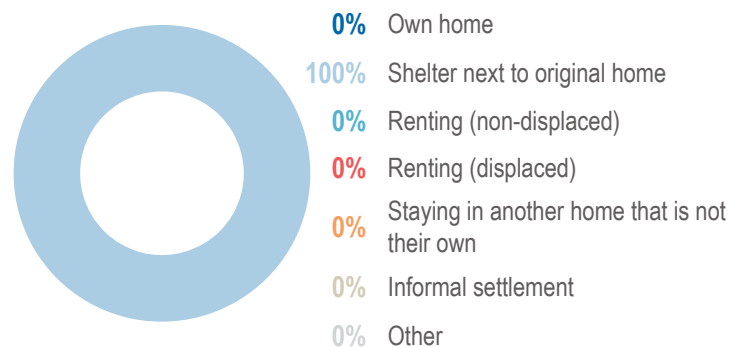
Head of Household

- 6%** of heads of households were female
- 12%** of heads of households were elderly
- 47** average age of the head of household in years

Dependency ratio⁴

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

% of households by current living location:⁵



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- 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

Non-displaced population⁵

9% 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

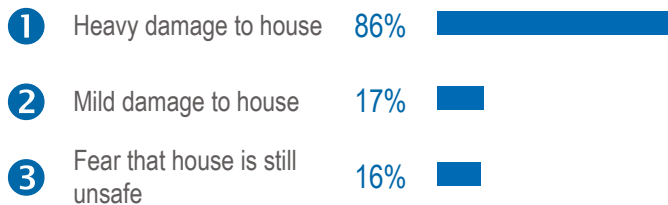
0.8 average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs⁶

Movement intentions in the next 6 months

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



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:⁸



Protection of Women's Needs

17% of households contained at least one pregnant or lactating woman



Disabilities, Elderly, Minorities

4% 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

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

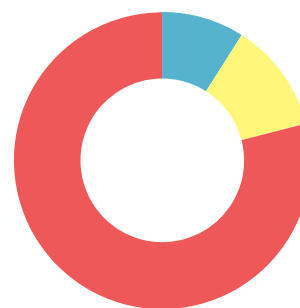
original home were living on their original land and considered to be non-displaced. Those living with friends or family, in an informal settlement, or renting after they were displaced from their homes were no longer living on their original land and had been displaced by the disaster. For households 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.



Shelter

Shelter conditions

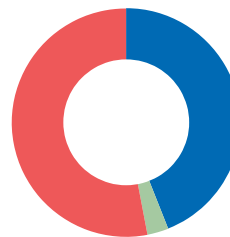
% of households by type of shelter they are currently living in at the time of data collection:



0%	House
0%	Apartment
9%	Transitional shelter (individual)
12%	Makeshift Shelter
79%	Tent
0%	Don't know
0%	Other

96% 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:



44%	Household owns the land
3%	Written agreement (still valid)
0%	Written agreement (expired)
53%	Verbal/no agreement ⁹
0%	Don't know

4% of households reported that they were at risk of being forced to leave where they were staying at the time of data collection

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 a specific household owns many plots of land, and other households are permitted to live on it without any formal agreement.





Top 3 reported reasons households were at risk of being forced to leave their shelters at the time of data collection:¹⁰

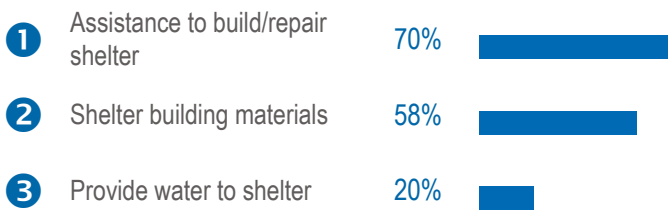


19% of households reported having lost the ownership documents for their original shelter before the disaster

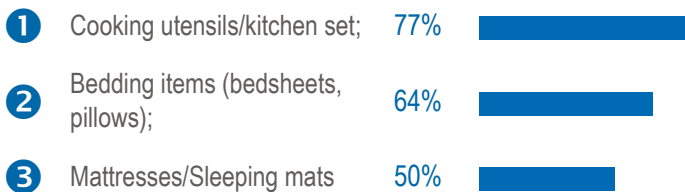
Preferred Shelter Assistance

85% of households reported that they would prefer to rebuild or repair their original home in the next 6 months

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:¹¹



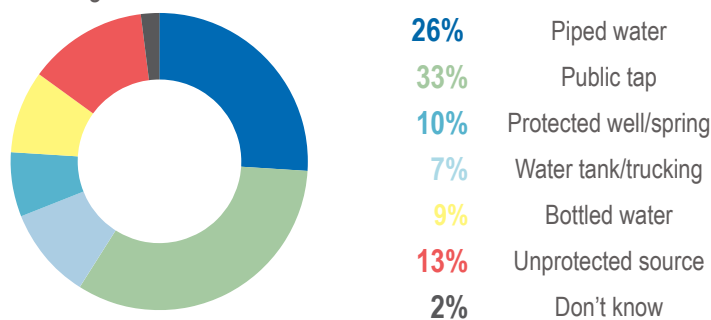
Top 3 most needed Non-Food Items (NFIs):¹¹



Water, Sanitation and Hygiene

Access to Water

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



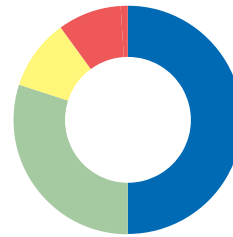
90%

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

73%

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):



50% Water source located on site
30% Less than 10 minutes
10% 10–20 minutes
9% More than 20 minutes
1% Don't know

Hygiene practices

% of households by location used for hand washing:



45% Pouring device/sink faucet
39% Basin/bucket
16% No device
0% Don't know

87%

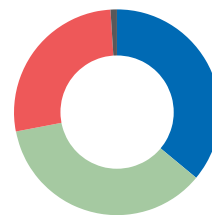
of households have water available for hand washing

57%

of households have soap available for hand washing

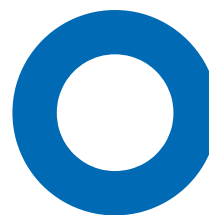
Sanitation conditions

% of households by most common defecation practice:



36% Household latrine/toilet
36% Communal latrine/toilet
27% Open defecation
1% Don't know

% of households using a household or communal latrine/toilet, by type of latrine/toilet:



100% Flush toilet¹²
0% Other

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

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

12. "Flush toilets" includes both toilets where a lever automatically makes the toilet flush and the practice of dumping water down the toilet to cause it to flush manually.





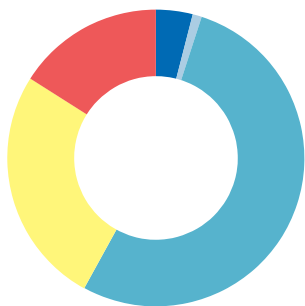
There is an average of **9** households reported to be sharing each communal latrine¹³

Communal latrine conditions

- 76%** of households with communal latrines reported their toilet had adequate lighting
- 8%** of households with communal toilets reported that there are separate toilets for men and women
- 76%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors

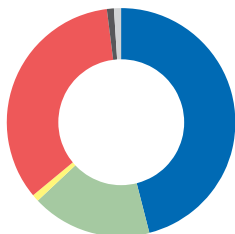
Waste disposal

% of households by reported main method of garbage disposal



- 4%** Bin in household / street
- 1%** Bury garbage
- 53%** Burn garbage
- 26%** Open area designated for waste
- 16%** Open area not designated for waste
- 0%** Other

% of households reporting how often garbage is collected from their area of residence:



- 46%** Daily
- 17%** Weekly
- 1%** More than 1x per week
- 34%** Service not available
- 1%** Don't know
- 1%** Other



Economy

Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:¹⁴

Before Disaster

January 2019

49%	Agricultural	1	Agricultural	41%
9%	Service industry	2	Unemployed	17%
8%	Fishing	3	Small business owner	10%

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

5%	Before Disaster	are unemployed	17%
23%	January 2019		

23% of households had at least one working-age household member that is not working

Main reported barriers to finding work:¹⁴

The recent disaster destroyed previous business/job opportunities	41%	
Disaster destroyed cultivation land for planting	30%	
Underqualified for available jobs	13%	

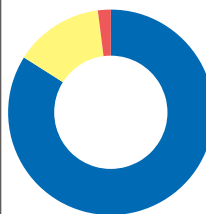
There is an average reported loss of **20%** of household income due to the disaster¹⁵



Food Security

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

Food Consumption Score¹⁶ average rCSI score¹⁷



- 84%** Acceptable
- 14%** Borderline
- 2%** Poor

4.3

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

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

15. 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.

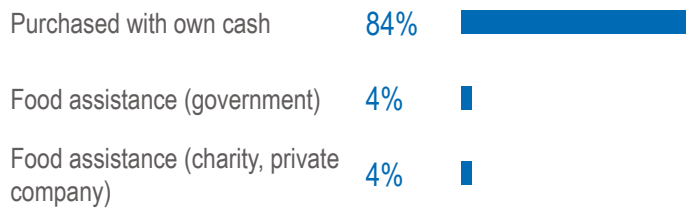
16. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household 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).

17. 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).





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



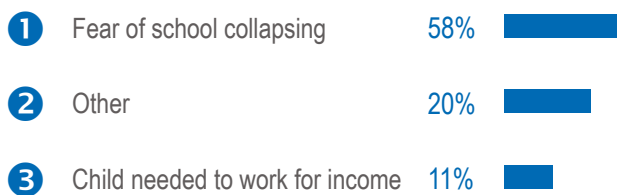
Education

Student attendance

7% of households with children reported having school-aged children who were not attending school following the disaster

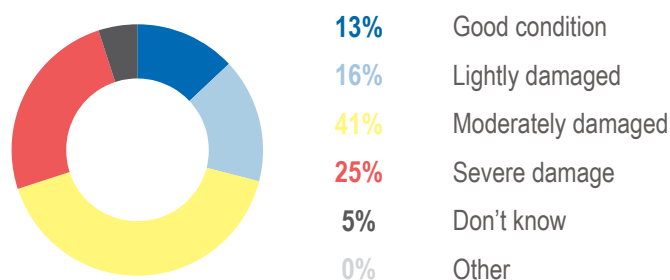
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

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



Condition of school facilities

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



Health

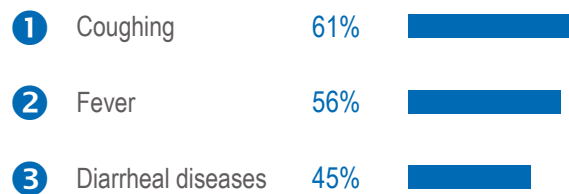
Immunization

19% of households reported having children in the household that were not immunized for measles, mumps, and rubeola (MMR).

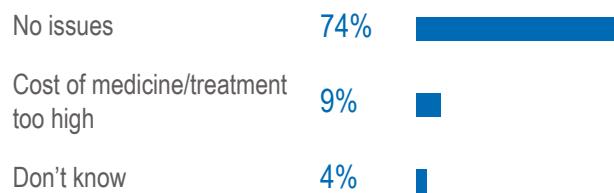
Illness and injury

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

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:¹⁹



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

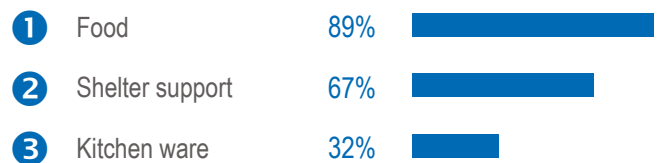


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:²⁰



1.2.3 Priority Needs

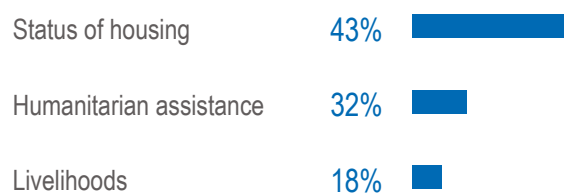
Top 3 most important priority needs as reported by households:²⁰



Communication with Communities

Information Needs

% of households by the type of information that the household reported needing the most:¹⁸



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

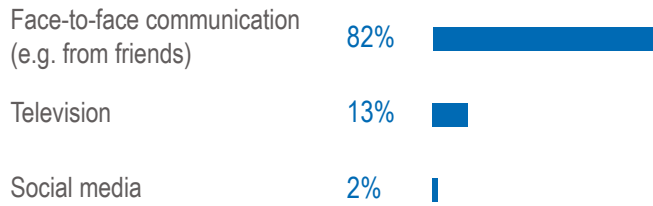
19. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.

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





% of households by most preferred source from which they would like to receive new information:²¹

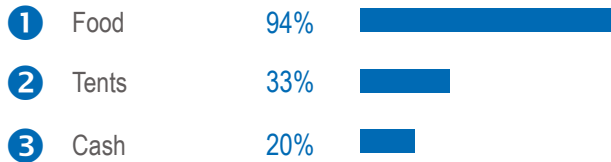


Humanitarian assistance

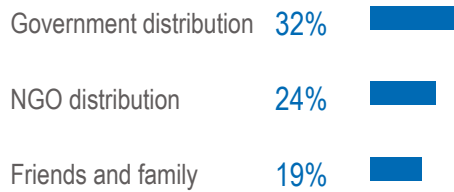
53%

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:²²



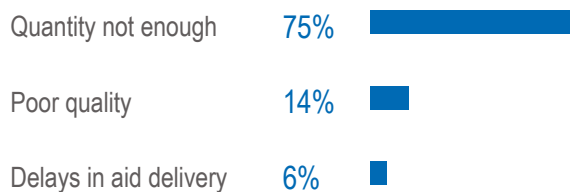
% of households by most common reported source of aid:²³



61%

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

Main reported reasons households were not satisfied by the aid received in the last 30 days:²³



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

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

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



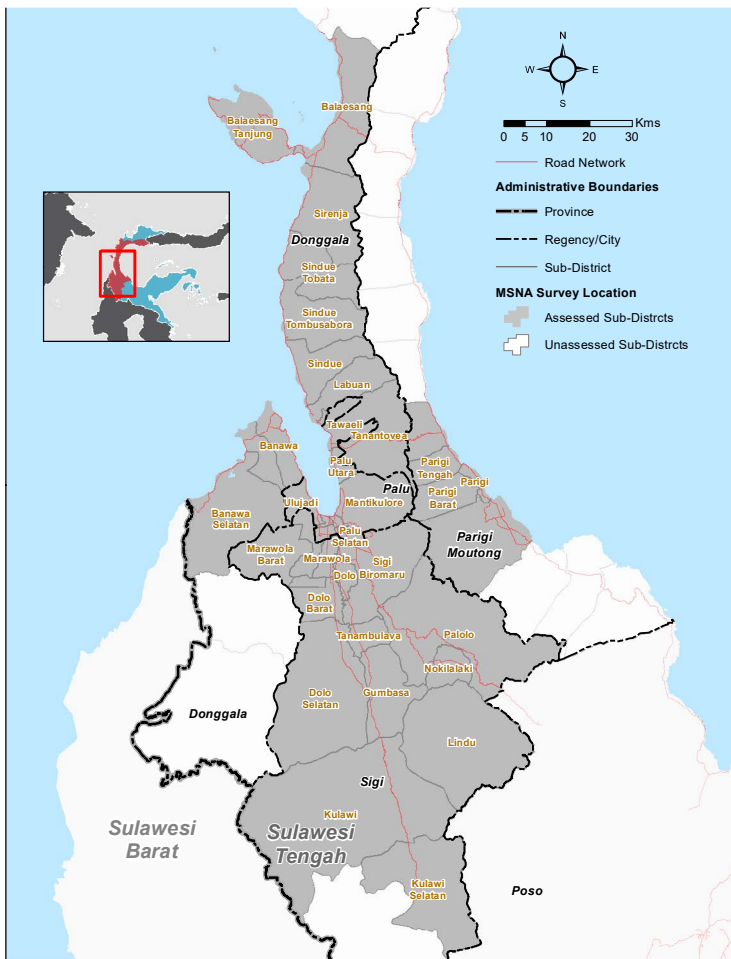


Background and methodology

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.¹ 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 74 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.² Results were weighted by population and generalizable to the crisis level with 95% confidence level and 13% margin of error.



Respondent metadata³

74 Total households interviewed
39 Average age of respondent in years
61% of respondents were female

Demographics

Household composition by gender and age



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

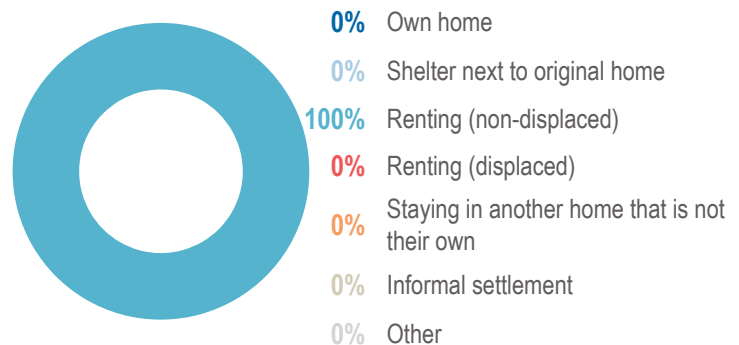
Head of Household

8% of heads of households were female
7% of heads of households were elderly
41 average age of the head of household in years

Dependency ratio⁴

0.8 average youth dependency ratio
0.1 average elderly dependency ratio
0.9 average age-dependency ratio

% of households by current living location:⁵



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

Non-displaced population⁵

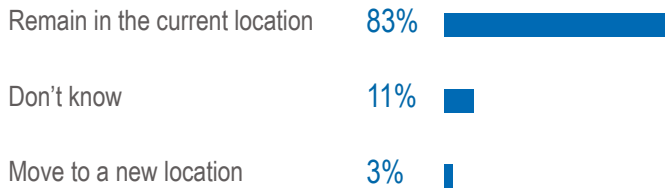
2% of non-displaced households were hosting at least one displaced household to stay in a house that they own

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

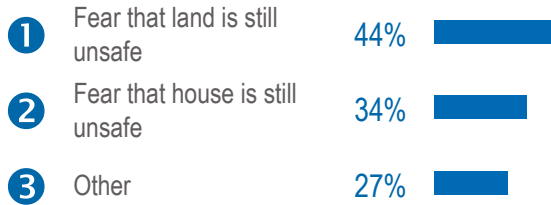
0.5 average dependency ratio of displaced household size to hosting household size for non-displaced households hosting IDPs⁶

Movement intentions in the next 6 months

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



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:⁸



Protection of Women's Needs

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

Disabilities, Elderly, Minorities

0% 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

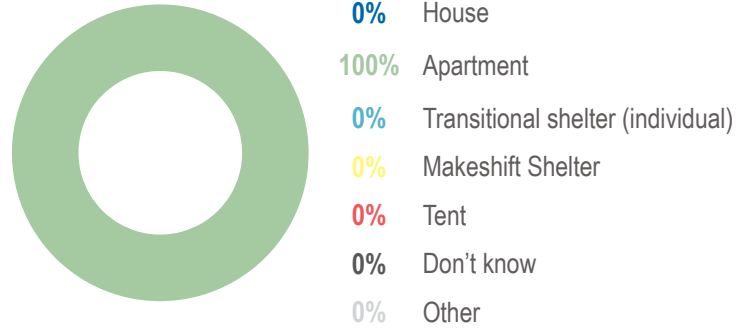
39% of households reported having at least one member experiencing emotional distress from the disaster

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.

Shelter

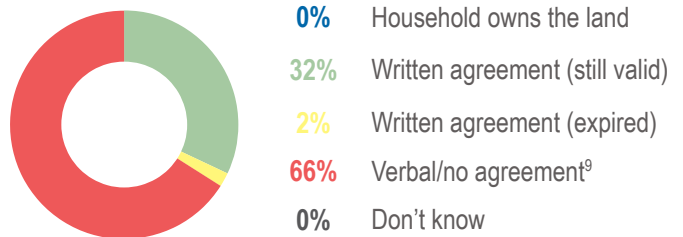
Shelter conditions

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



37% 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:



4% of households reported that they were at risk of being forced to leave shelter where they were staying at the time of data collection

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.

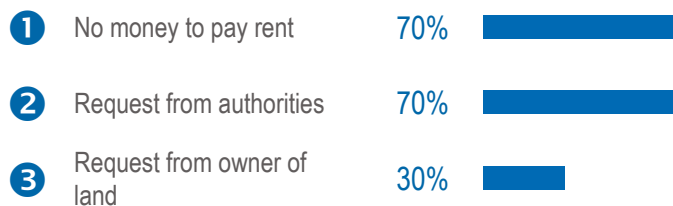
8. Respondents could select multiple responses; therefore results may exceed 100%; only the top three choices are shown.

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





Top 3 reported reasons households were at risk of being forced to leave their shelters at the time of data collection:¹⁰



0% of households reported having lost the ownership documents for their original shelter before the disaster

Preferred Shelter Assistance

22% of households reported that they would prefer to rebuild or repair their original home in the next 6 months

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:¹¹



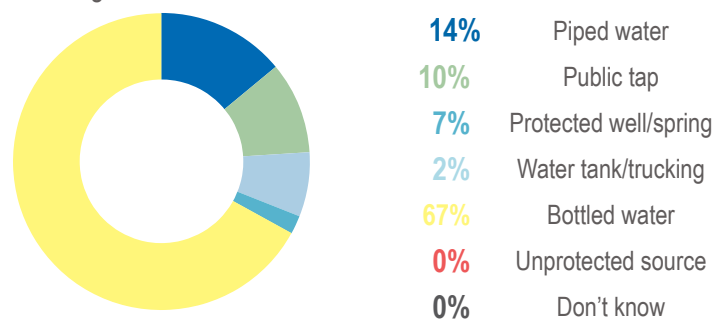
Top 3 most needed Non-Food Items (NFIs):¹¹



Water, Sanitation and Hygiene

Access to Water

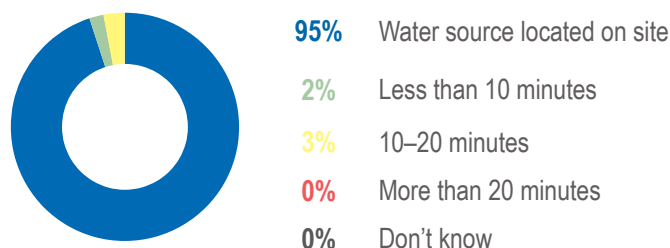
% of households acquired most of their drinking water from the following sources:



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

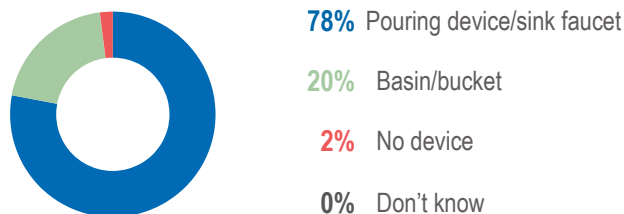
92% of households reported having enough water to meet their total needs for drinking, cooking, bathing, and washing

% 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:

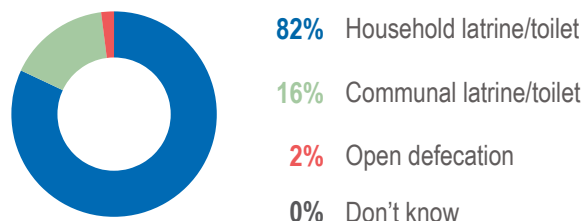


93% of households have water available for hand washing

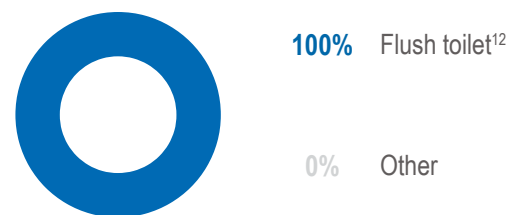
64% of households have soap available for hand washing

Sanitation conditions

% of households by most common defecation practice:



% of households using a household or communal latrine/toilet, by type of latrine/toilet:



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

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

12. "Flush toilets" includes both toilets where a lever automatically makes the toilet flush and the practice of dumping water down the toilet to cause it to flush manually.





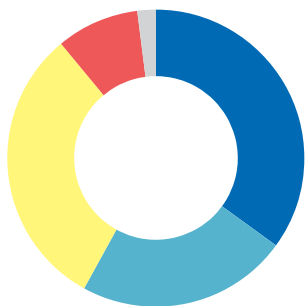
There is an average of **6** households reported to be sharing each communal latrine¹³

Communal latrine conditions

- 83%** of households with communal latrines reported their toilet had adequate lighting
- 8%** of households with communal toilets reported that there are separate toilets for men and women
- 74%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors

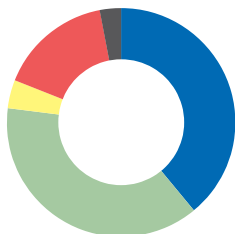
Waste disposal

% of households by reported main method of garbage disposal



- 35%** Bin in household / street
- 0%** Bury garbage
- 23%** Burn garbage
- 31%** Open area designated for waste
- 9%** Open area not designated for waste
- 2%** Other

% of households reporting how often garbage is collected from their area of residence:



- 39%** Daily
- 38%** Weekly
- 4%** More than 1x per week
- 16%** Service not available
- 3%** Don't know
- 0%** Other



Economy

Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:¹⁴

Before Disaster

January 2019

33%	Small business owner	1	Small business owner	34%
11%	Service industry	2	Vocational profession	10%
10%	Vocational profession	3	Service industry	9%

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

Before Disaster

January 2019

4% are unemployed **8%**

13% of households had at least one working-age household member that is not working

Main reported barriers to finding work:¹⁴

The recent disaster destroyed previous business/job opportunities	24%	
Other	20%	
Only dangerous or low-paid jobs are available	20%	

There is an average reported loss of **10%** of household income due to the disaster¹⁵

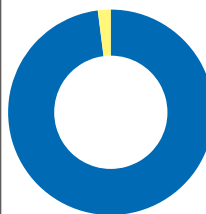


Food Security

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

Food Consumption Score¹⁶

average rCSI score¹⁷



- 98%** Acceptable
- 2%** Borderline
- 0%** Poor

3.9

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

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

15. 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.

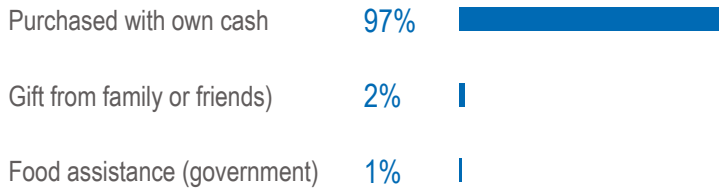
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17. rCSI is a measure of food security that looks at a set list of five coping strategies that households might be using to make food last longer in the absence of sufficient foods. It uses 5 commonly practiced coping strategies across the world. rCSI 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).





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



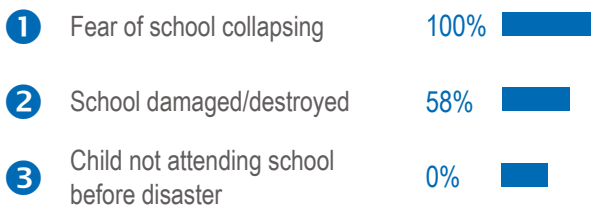
Education

Student attendance

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

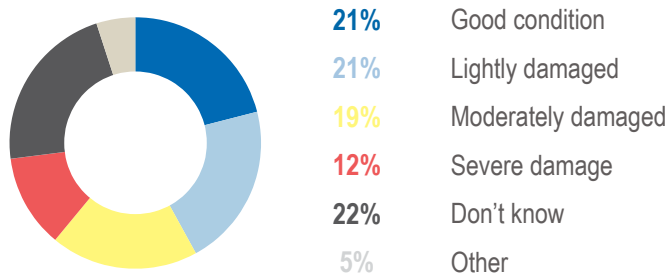
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

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



Condition of school facilities

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



Health

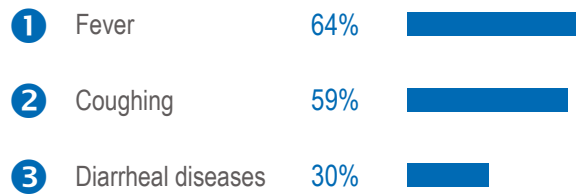
Immunization

26% of households reported having children in the household that were not immunized for measles, mumps, and rhabella (MMR).

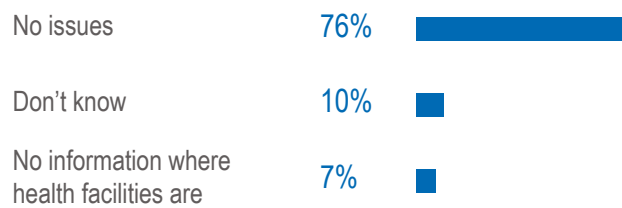
Illness and injury

31% 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

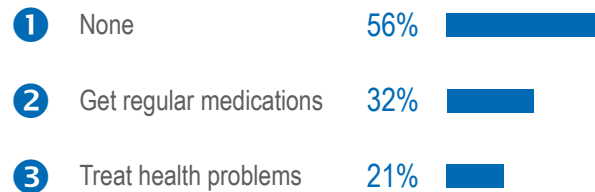
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:¹⁹



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

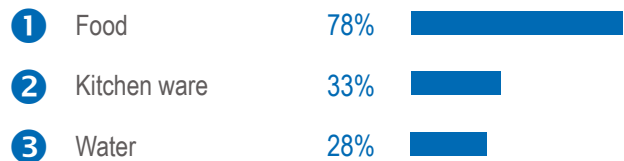


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:²⁰



1.2.3 Priority Needs

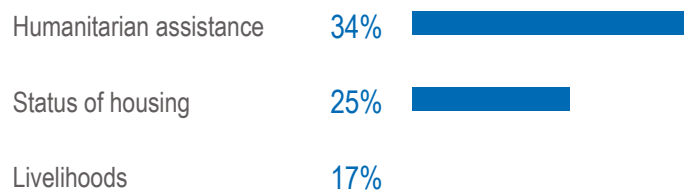
Top 3 most important priority needs as reported by households:²⁰



Communication with Communities

Information Needs

% of households by the type of information that the household reported needing the most:¹⁸



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

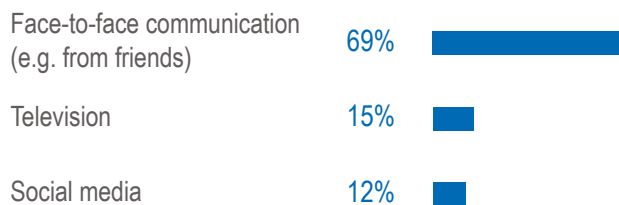
19. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.

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





% of households by most preferred source from which they would like to receive new information:²¹

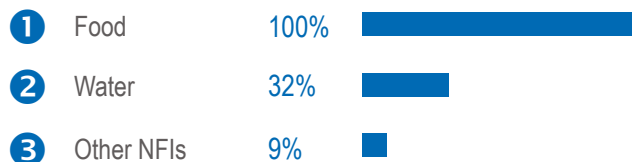


Humanitarian assistance

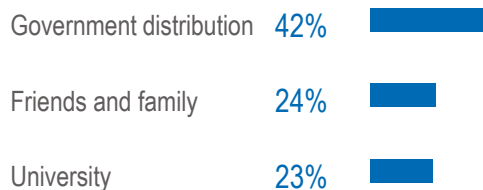
16%

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:²²



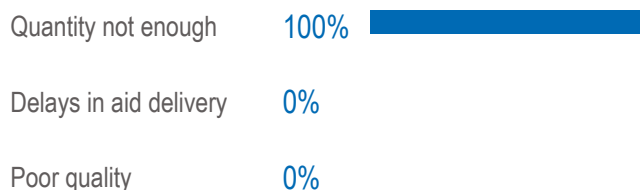
% of households by most common reported source of aid:²³



69%

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

Main reported reasons households were not satisfied by the aid received in the last 30 days:²³



21. Single-choice question; only the top three responses are shown.
 22. Respondents could select multiple responses; only the top three choices are shown.
 23. Single-choice question; only the top three responses are shown.



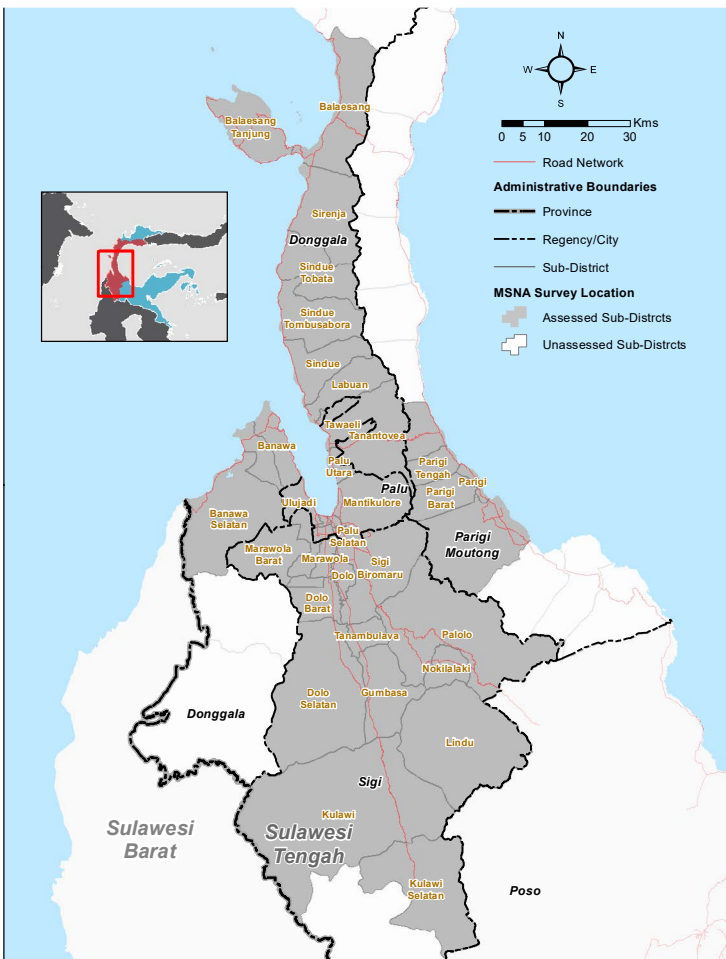


Background and methodology

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.¹ 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 53 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.² Results were weighted by population and generalizable to the crisis level with 95% confidence level and 13% margin of error.



Respondent metadata³

- 53** Total households interviewed
- 40** Average age of respondent in years
- 44%** of respondents were female



Demographics

Household composition by gender and age



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

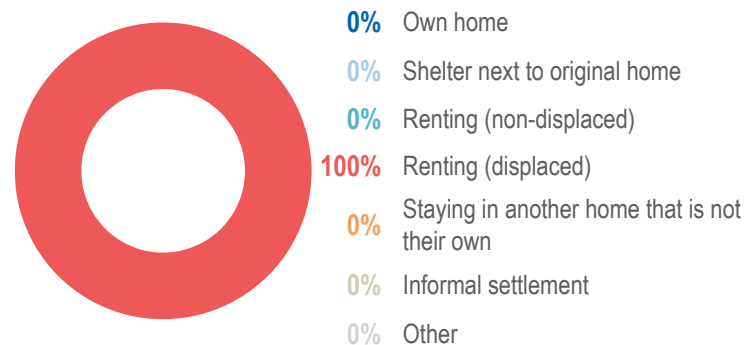
Head of Household

- 15%** of heads of households were female
- 6%** of heads of households were elderly
- 41** average age of the head of household in years

Dependency ratio⁴

- 0.8** average youth dependency ratio
- 0** average elderly dependency ratio
- 0.8** average age-dependency ratio

% of households by current living location:⁵



- 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



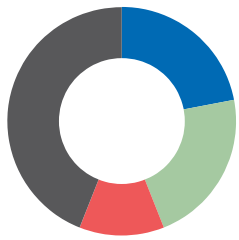


Displacement and Protection

Displaced population⁵

100% of households were no longer living in their original house due to the disaster

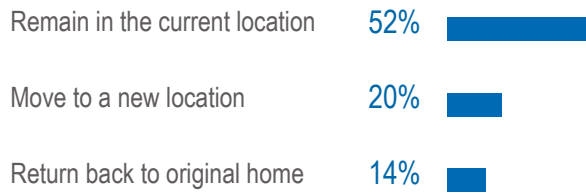
% of households no longer living on land they own by distance from their current living location to their original house:



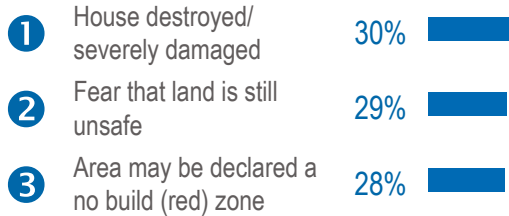
22% Nearby/on site
22% Within 2km
12% Between 2km-5km
44% More than 5km or Don't know

Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:⁶



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:⁷



Protection of Women's Needs

18% of households contained at least one pregnant or lactating woman

Disabilities, Elderly, Minorities

2% 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

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.

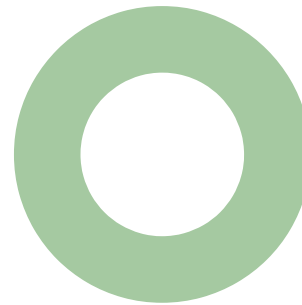
Psychosocial Support

61% of households reported having at least one member experiencing emotional distress from the disaster

Shelter

Shelter conditions

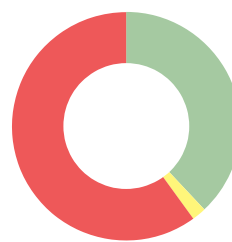
% of households by type of shelter they are currently living in at the time of data collection:



0% House
100% Apartment
0% Transitional shelter (individual)
0% Makeshift Shelter
0% Tent
0% Don't know
0% Other

78% 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:



0% Household owns the land
38% Written agreement (still valid)
2% Written agreement (expired)
60% Verbal/no agreement⁸
0% Don't know

0% of households reported that they were at risk of being forced to leave where they were staying at the time of data collection

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

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

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



Top 3 reported reasons households were at risk of being forced to leave their shelters at the time of data collection:⁹

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

32% of households reported having lost the ownership documents for their original shelter before the disaster

Preferred Shelter Assistance

42% of households reported that they would prefer to rebuild or repair their original home in the next 6 months

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:¹⁰

- 1 Assistance to build/repair shelter 44%
- 2 Shelter building materials 41%
- 3 Tools for construction 18%

Top 3 most needed Non-Food Items (NFIs):¹⁰

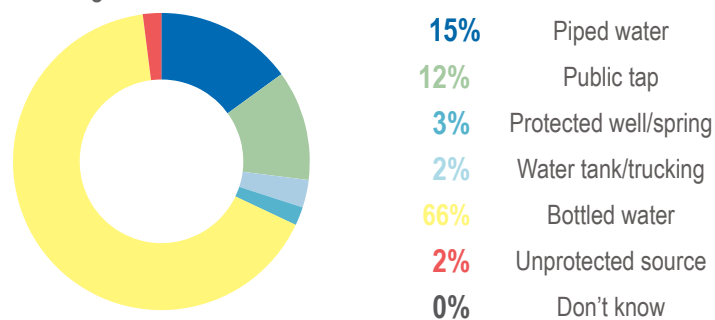
- 1 Cooking utensils/kitchen set; 72%
- 2 Bedding items (bedsheets, pillows); 62%
- 3 Mattresses/Sleeping mats 36%



Water, Sanitation and Hygiene

Access to Water

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



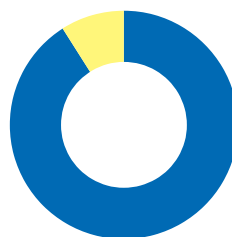
100%

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

90%

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

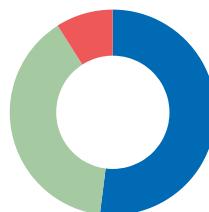
% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



- 91% Water source located on site
- 0% Less than 10 minutes
- 9% 10–20 minutes
- 0% More than 20 minutes
- 0% Don't know

Hygiene practices

% of households by location used for hand washing:



- 52% Pouring device/sink faucet
- 39% Basin/bucket
- 9% No device
- 0% Don't know

97%

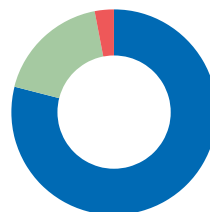
of households have water available for hand washing

82%

of households have soap available for hand washing

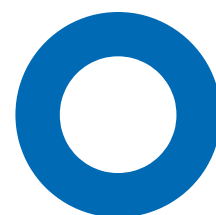
Sanitation conditions

% of households by most common defecation practice:



- 79% Household latrine/toilet
- 18% Communal latrine/toilet
- 3% Open defecation
- 0% Don't know

% of households using a household or communal latrine/toilet, by type of latrine/toilet:



- 100% Flush toilet¹¹
- 0% Other

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

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

11. "Flush toilets" includes both toilets where a lever automatically makes the toilet flush and the practice of dumping water down the toilet to cause it to flush manually.





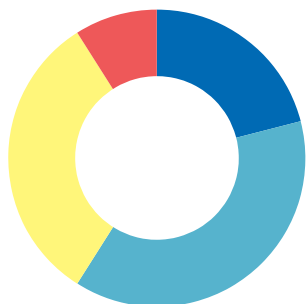
There is an average of **3** households reported to be sharing each communal latrine¹²

Communal latrine conditions

- 91%** 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
- 82%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors

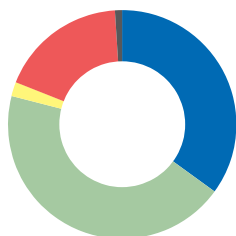
Waste disposal

% of households by reported main method of garbage disposal



- 21%** Bin in household / street
- 0%** Bury garbage
- 38%** Burn garbage
- 32%** Open area designated for waste
- 9%** Open area not designated for waste
- 0%** Other

% of households reporting how often garbage is collected from their area of residence:



- 35%** Daily
- 44%** Weekly
- 2%** More than 1x per week
- 18%** Service not available
- 1%** Don't know
- 0%** Other



Economy

Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:¹³

Before Disaster

January 2019

37%	Small business owner	1	Small business owner	32%
10%	Government job	2	Unemployed	15%
9%	Service industry	3	Service industry	9%

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

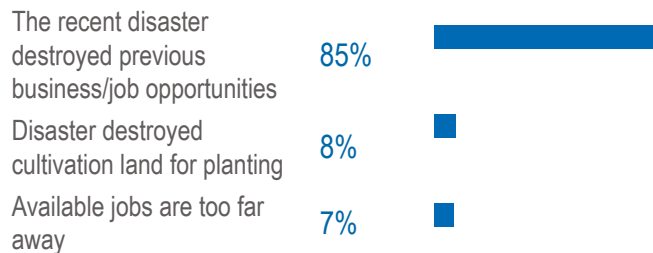
Before Disaster

January 2019

5% are unemployed **15%**

18% of households had at least one working-age household member that is not working

Main reported barriers to finding work:¹³



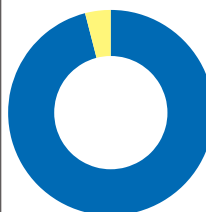
There is an average reported loss of **20%** of household income due to the disaster¹⁴



Food Security

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

Food Consumption Score¹⁵ average rCSI score¹⁶



- 96%** Acceptable
- 4%** Borderline
- 0%** Poor

1.4

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

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

14. 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.

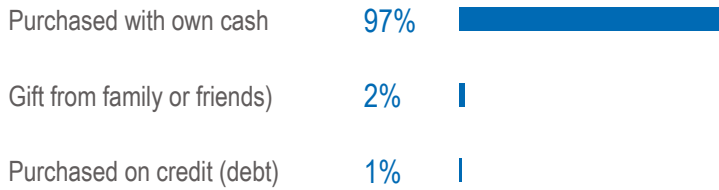
15. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household 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).

16. 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).





% of households per main reported source of food in week prior to data collection:¹⁷



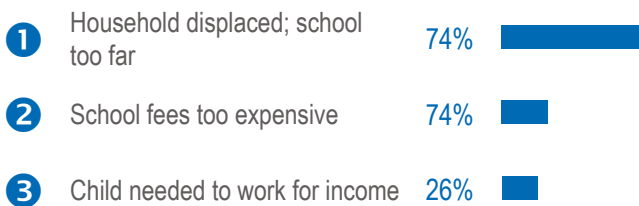
Education

Student attendance

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

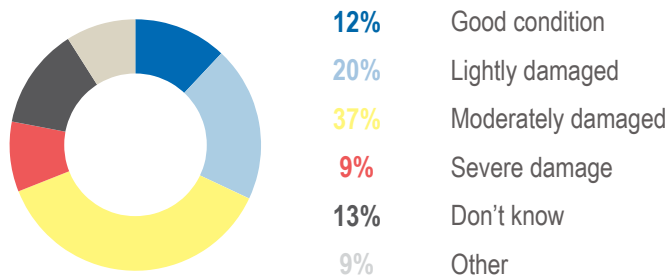
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:¹⁸



Condition of school facilities

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



Health

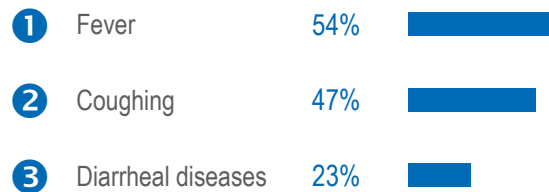
Immunization

26% of households reported having children in the household that were not immunized for measles, mumps, and rubeola (MMR).

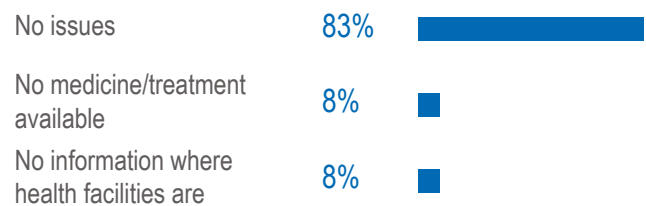
Illness and injury

26% 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

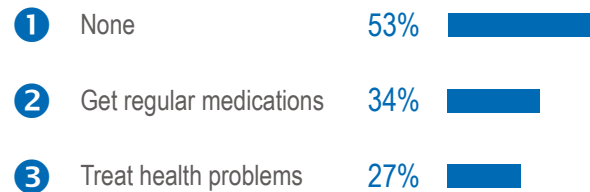
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:¹⁸



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:¹⁸

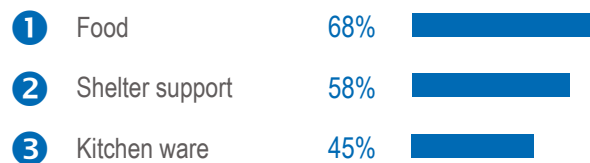


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:¹⁹



1.2.3 Priority Needs

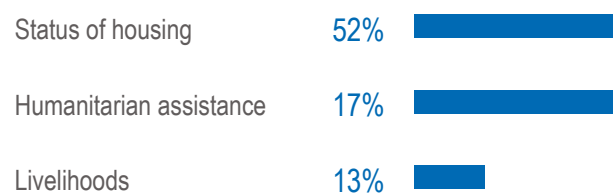
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Communication with Communities

Information Needs

% of households by the type of information that the household reported needing the most:¹⁷



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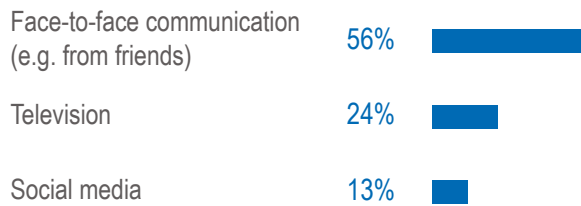
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% of households by most preferred source from which they would like to receive new information:²⁰

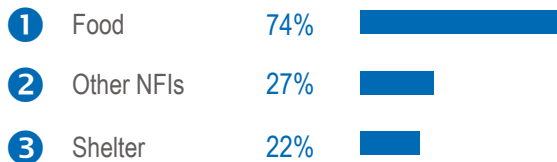


Humanitarian assistance

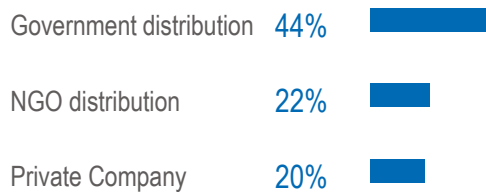
18%

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:²¹



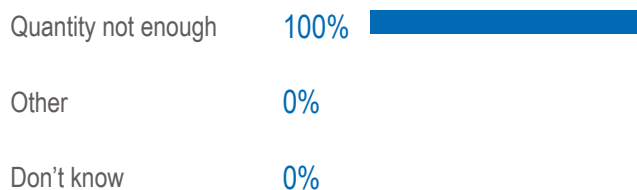
% of households by most common reported source of aid:²²



95%

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

Main reported reasons households were not satisfied by the aid received in the last 30 days:²²



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

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

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



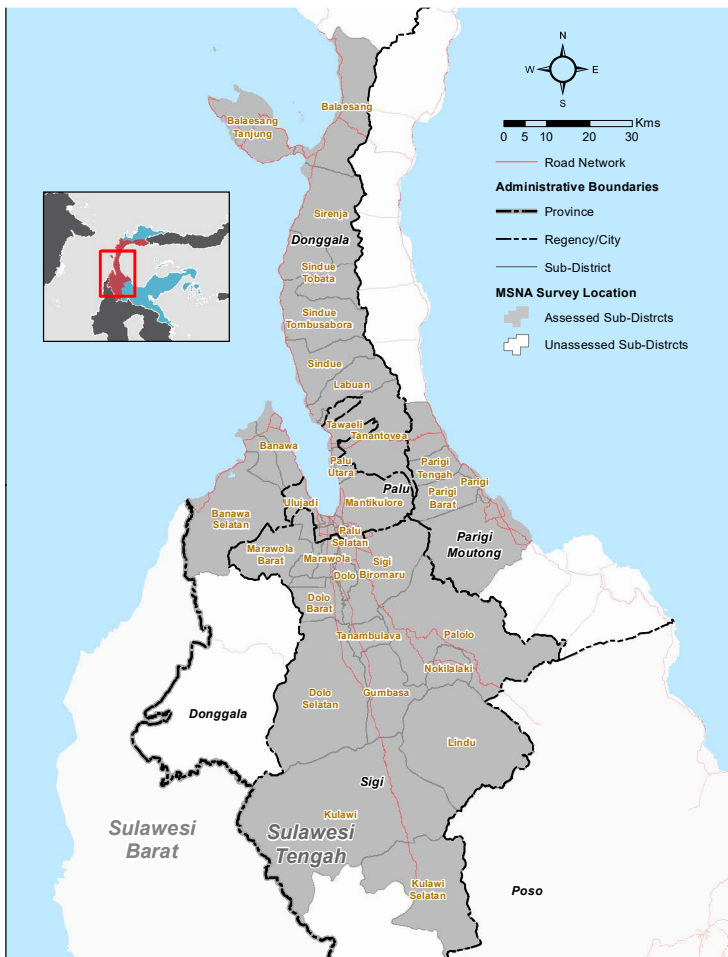


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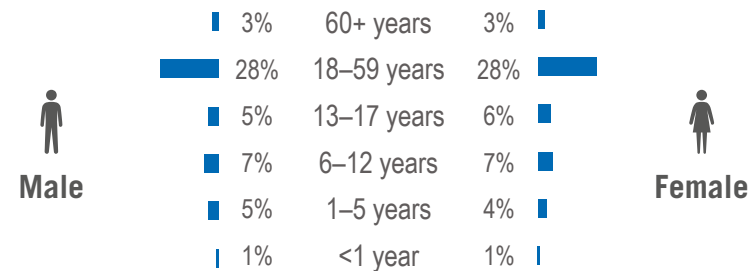
Respondent metadata³

375 Total households interviewed
41 Average age of respondent in years
49% of respondents were female



Demographics

Household composition by gender and age



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

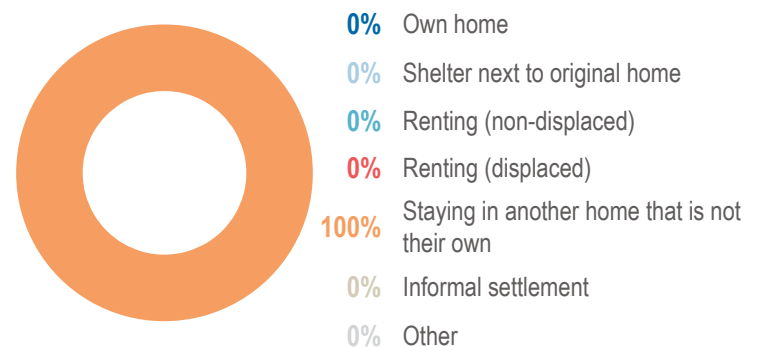
Head of Household

14% of heads of households were female
8% of heads of households were elderly
43 average age of the head of household in years

Dependency ratio⁴

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

% of households by current living location:⁵



- Central Sulawesi Earthquake & Tsunami, Humanitarian Country Team Situation Report #10, 10 December 2018.
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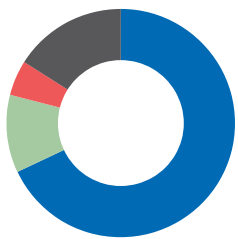


Displacement and Protection

Displaced population⁵

100% 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:



68% Nearby/on site
11% Within 2km
5% Between 2km-5km
16% More than 5km or Don't know

Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:⁶

Remain in the current location **76%**

Return back to original home **13%**

Move into the Government Transitional Shelter **6%**

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:⁷

1 House destroyed/severely damaged **53%**

2 Heavy damage to house **27%**

3 Mild damage to house **21%**

Protection of Women's Needs

22% of households contained at least one pregnant or lactating woman

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

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.

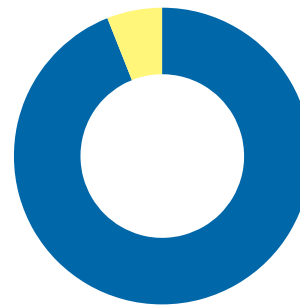
Psychosocial Support

57% of households reported having at least one member experiencing emotional distress from the disaster

Shelter

Shelter conditions

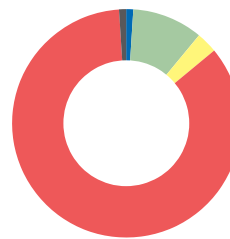
% of households by type of shelter they are currently living in at the time of data collection:



94% House
0% Apartment
0% Transitional shelter (individual)
6% Makeshift Shelter
0% Tent
0% Don't know
0% Other

88% 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:



1% Household owns the land
10% Written agreement (still valid)
3% Written agreement (expired)
85% Verbal/no agreement⁸
1% Don't know

4% of households reported that they were at risk of being forced to leave where they were staying at the time of data collection

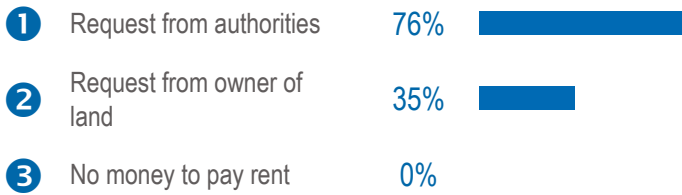
6. Single-choice question; only the top three responses are shown.

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

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



Top 3 reported reasons households were at risk of being forced to leave their shelters at the time of data collection:⁹

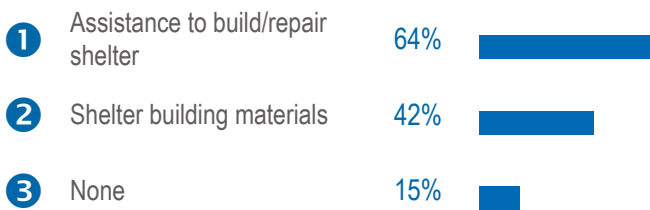


10% of households reported having lost the ownership documents for their original shelter before the disaster

Preferred Shelter Assistance

79% of households reported that they would prefer to rebuild or repair their original home in the next 6 months

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:¹⁰



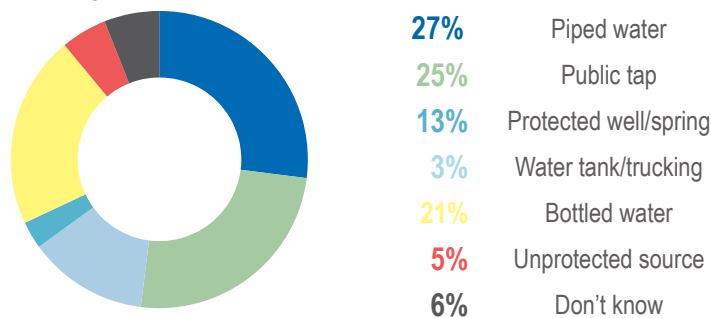
Top 3 most needed Non-Food Items (NFIs):¹⁰



Water, Sanitation and Hygiene

Access to Water

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



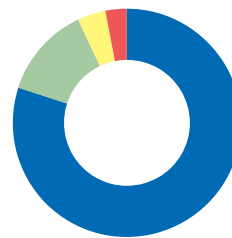
95%

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

87%

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

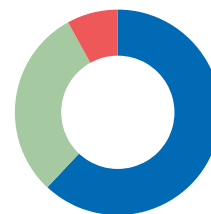
% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



80% Water source located on site
13% Less than 10 minutes
4% 10–20 minutes
3% More than 20 minutes
0% Don't know

Hygiene practices

% of households by location used for hand washing:



62% Pouring device/sink faucet
30% Basin/bucket
8% No device
0% Don't know

88%

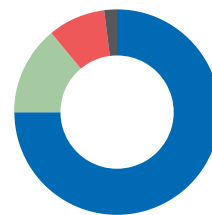
of households have water available for hand washing

62%

of households have soap available for hand washing

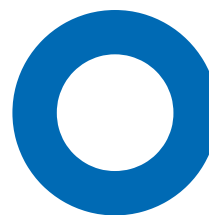
Sanitation conditions

% of households by most common defecation practice:



75% Household latrine/toilet
14% Communal latrine/toilet
9% Open defecation
2% Don't know

% of households using a household or communal latrine/toilet, by type of latrine/toilet:



100% Flush toilet¹¹
0% Other

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

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

11. "Flush toilets" includes both toilets where a lever automatically makes the toilet flush and the practice of dumping water down the toilet to cause it to flush manually.





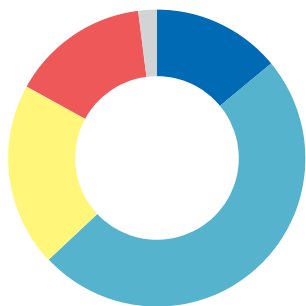
There is an average of **7** households reported to be sharing each communal latrine¹²

Communal latrine conditions

- 79%** 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
- 73%** of households with communal toilets reported their toilet is not inside the household and has locks on the doors

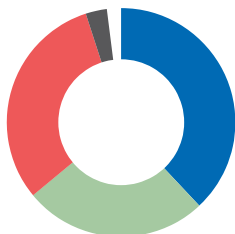
Waste disposal

% of households by reported main method of garbage disposal



- 14%** Bin in household / street
- 0%** Bury garbage
- 49%** Burn garbage
- 20%** Open area designated for waste
- 15%** Open area not designated for waste
- 2%** Other

% of households reporting how often garbage is collected from their area of residence:



- 38%** Daily
- 26%** Weekly
- 0%** More than 1x per week
- 31%** Service not available
- 3%** Don't know
- 2%** Other



Economy

Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:¹³

Before Disaster

January 2019

26%	Agricultural	1	Agricultural	25%
18%	Small business owner	2	Small business owner	16%
10%	Service industry	3	Unemployed	11%

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

Before Disaster

January 2019

4% are unemployed **11%**

27% of households had at least one working-age household member that is not working

Main reported barriers to finding work:¹³



There is an average reported loss of **10%** of household income due to the disaster¹⁵

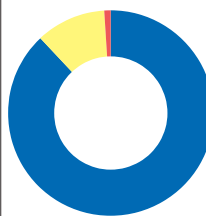


Food Security

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

Food Consumption Score¹⁵

average rCSI score¹⁶



- 88%** Acceptable
- 11%** Borderline
- 1%** Poor

4.1

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

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

14. 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.

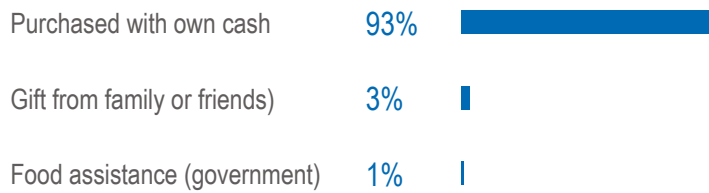
15. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household 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).

16. 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).





% of households per main reported source of food in week prior to data collection:¹⁷



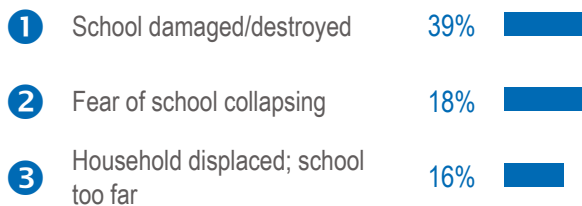
Education

Student attendance

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

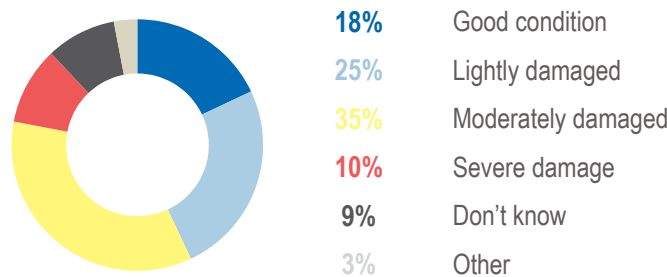
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:¹⁸



Condition of school facilities

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



Health

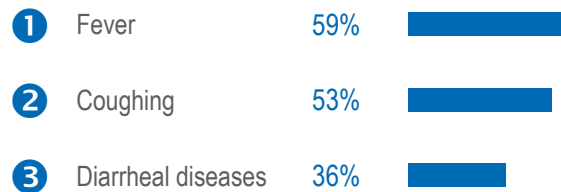
Immunization

22% of households reported having children in the household that were not immunized for measles, mumps, and rubeola (MMR).

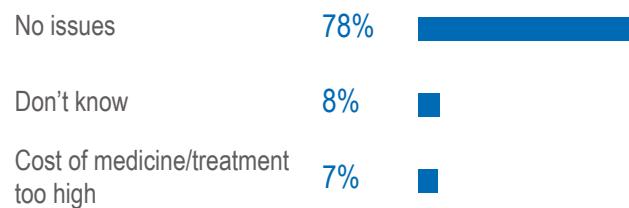
Illness and injury

51% 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

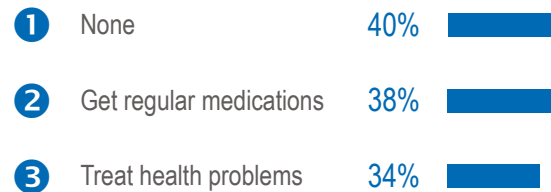
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:¹⁸



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:¹⁸

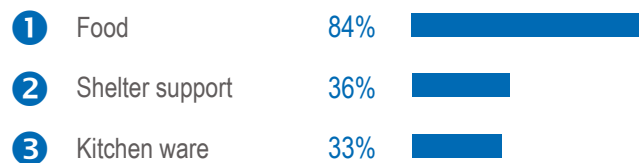


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:¹⁹



1.2.3 Priority Needs

Top 3 most important priority needs as reported by households:¹⁹



Communication with Communities

Information Needs

% of households by the type of information that the household reported needing the most:¹⁷



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

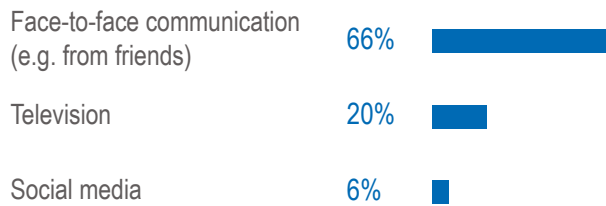
18. Respondents could select multiple responses, therefore results may exceed 100%; only the top three choices are shown.

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





% of households by most preferred source from which they would like to receive new information:²⁰

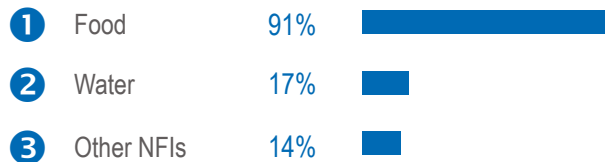


Humanitarian assistance

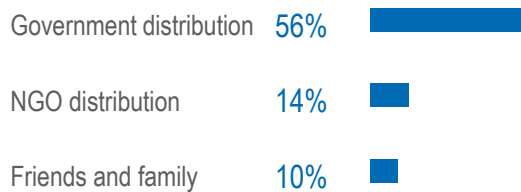
33%

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:²¹



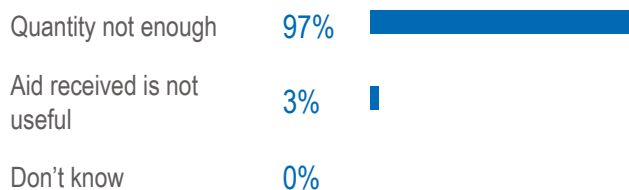
% of households by most common reported source of aid:²²



58%

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

Main reported reasons households were not satisfied by the aid received in the last 30 days:²²



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

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

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



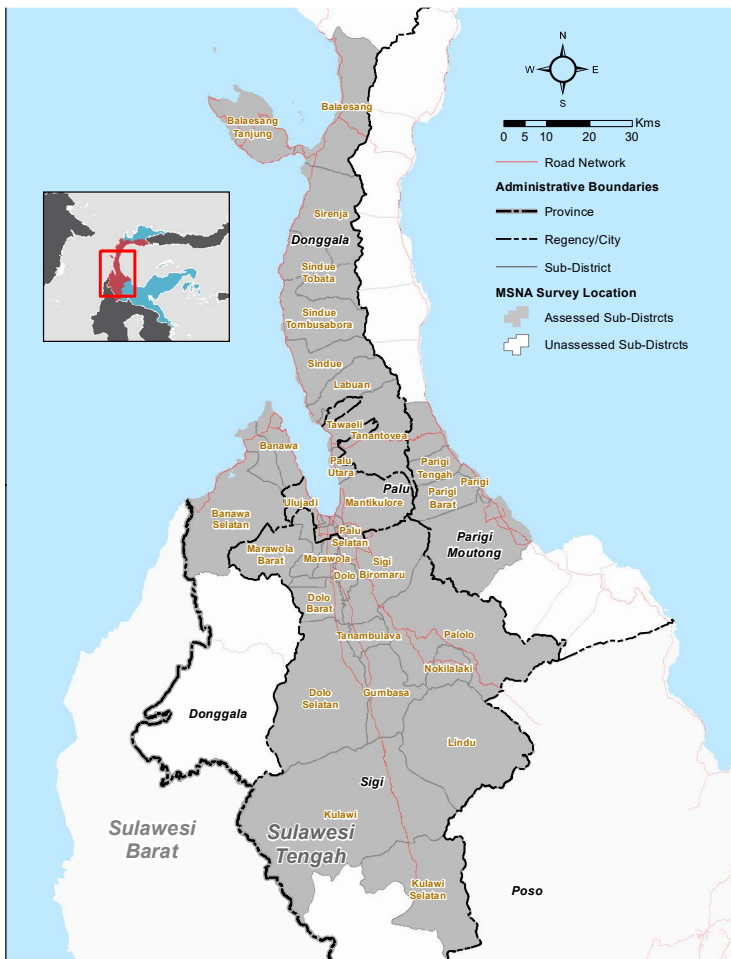


Background and methodology

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.¹ 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 331 out of a total population of 253,926 households were surveyed across the four affected regencies between 22 January and 6 February 2019.² Results were weighted by population and generalizable to the crisis level with 95% confidence level and 6% margin of error.



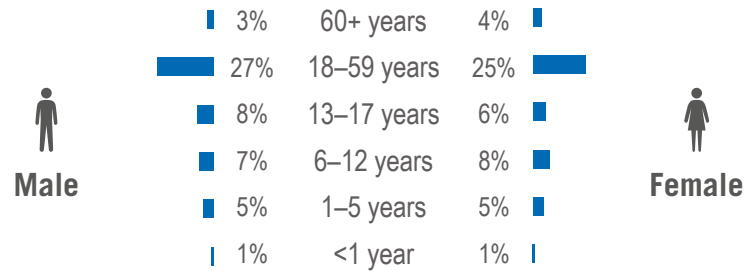
Respondent metadata³

- 331** Total households interviewed
- 42** Average age of respondent in years
- 58%** of respondents were female



Demographics

Household composition by gender and age



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

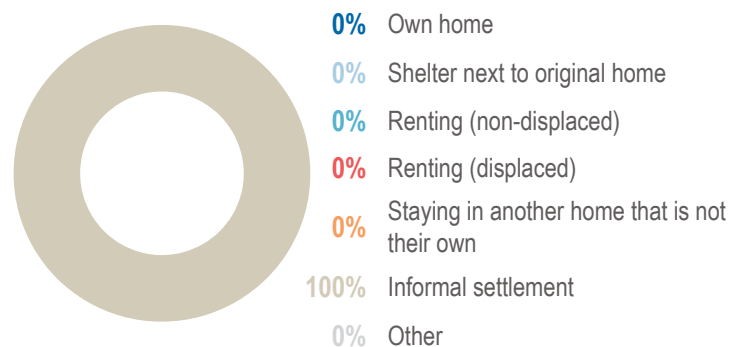
Head of Household

- 10%** of heads of households were female
- 12%** of heads of households were elderly
- 44** average age of the head of household in years

Dependency ratio⁴

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

% of households by current living location:⁵



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



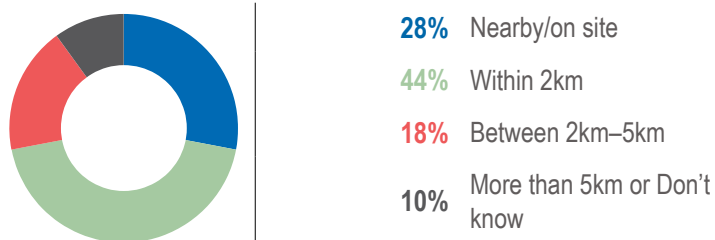


Displacement and Protection

Displaced population⁵

100% 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:

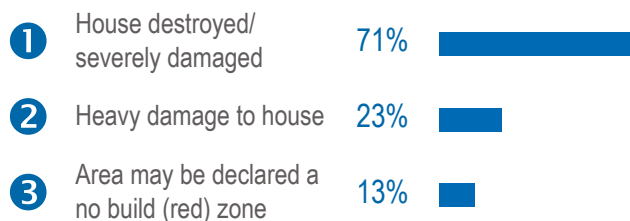


Movement intentions in the next 6 months

% of households by where they most want to move to within the next six months:⁶



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:⁷



Protection of Women's Needs

21% of households contained at least one pregnant or lactating woman

Disabilities, Elderly, Minorities

3% 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

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.

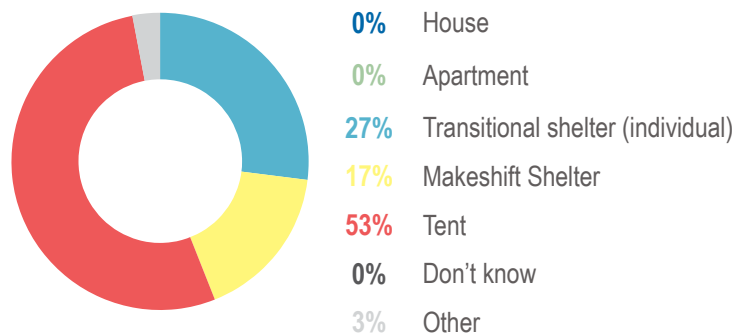
Psychosocial Support

71% of households reported having at least one member experiencing emotional distress from the disaster

Shelter

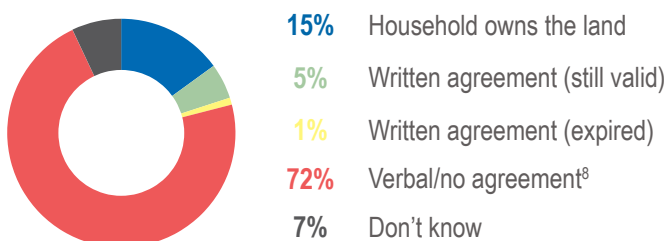
Shelter conditions

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



95% 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:



8% of households reported that they were at risk of being forced to leave where they were staying at the time of data collection

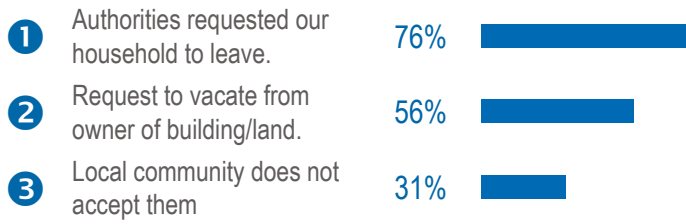
7. Single-choice question; only the top three responses are shown.

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 a specific household owns many plots of land, and other households are permitted to live on it without any formal agreement.



Top 3 reported reasons households were at risk of being forced to leave their shelters at the time of data collection:⁹



29% of households reported having lost the ownership documents for their original shelter before the disaster

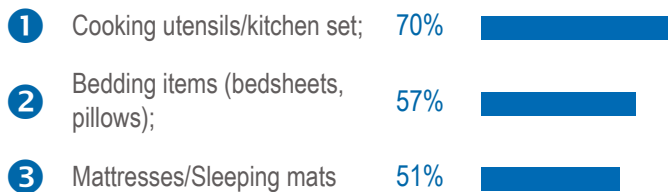
Preferred Shelter Assistance

61% of households reported that they would prefer to rebuild or repair their original home in the next 6 months

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:¹⁰



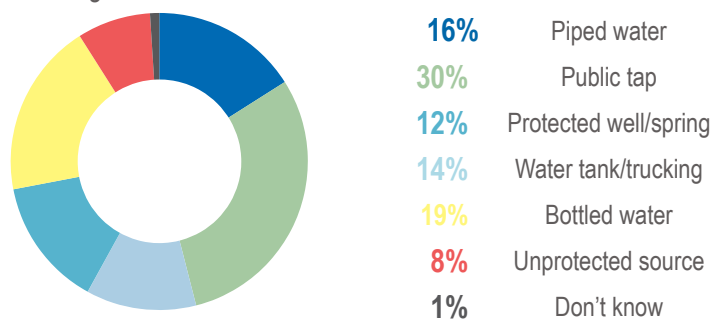
Top 3 most needed Non-Food Items (NFIs):¹⁰



Water, Sanitation and Hygiene

Access to Water

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



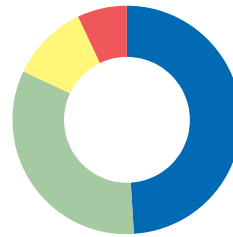
92%

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

72%

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

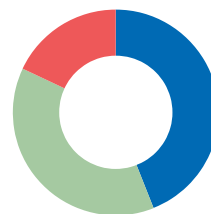
% of households by reported amount of time it takes to walk to main water source, fetch water, and return (including queuing at the water source):



49% Water source located on site
33% Less than 10 minutes
11% 10–20 minutes
7% More than 20 minutes
0% Don't know

Hygiene practices

% of households by location used for hand washing:



44% Pouring device/sink faucet
38% Basin/bucket
18% No device
0% Don't know

90%

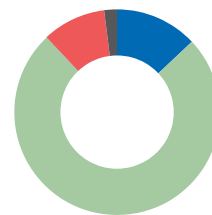
of households have water available for hand washing

59%

of households have soap available for hand washing

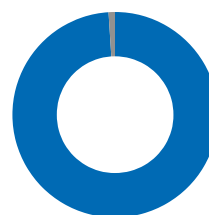
Sanitation conditions

% of households by most common defecation practice:



13% Household latrine/toilet
75% Communal latrine/toilet
10% Open defecation
2% Don't know

% of households using a household or communal latrine/toilet, by type of latrine/toilet:



99% Flush toilet¹¹
1% Other

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

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

12. "Flush toilets" includes both toilets where a lever automatically makes the toilet flush and the practice of dumping water down the toilet to cause it to flush manually.





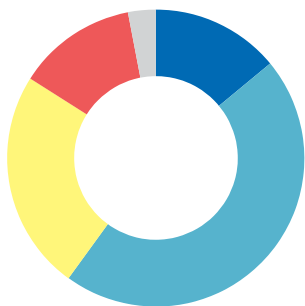
There is an average of **26** households reported to be sharing each communal latrine¹²

Communal latrine conditions

- 70%** of households with communal latrines reported their toilet had adequate lighting
- 15%** 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

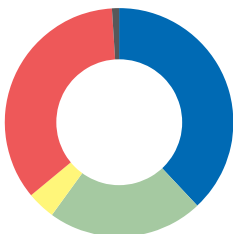
Waste disposal

% of households by reported main method of garbage disposal



- 14%** Bin in household / street
- 0%** Bury garbage
- 46%** Burn garbage
- 24%** Open area designated for waste
- 13%** Open area not designated for waste
- 3%** Other

% of households reporting how often garbage is collected from their area of residence:



- 38%** Daily
- 22%** Weekly
- 4%** More than 1x per week
- 35%** Service not available
- 1%** Don't know
- 0%** Other



Economy

Occupation and employment

Main occupation of the household reported by households before the disaster and in the last month:¹³

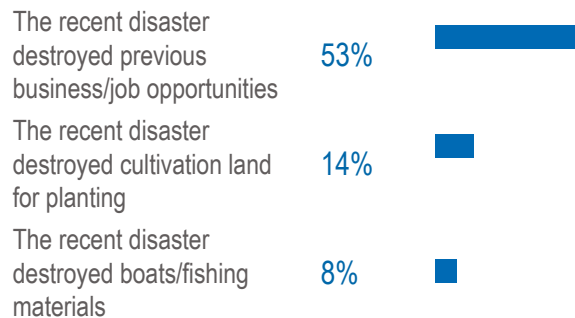
Before Disaster		January 2019	
29%	Agricultural	1	Unemployed 24%
13%	Small business owner	2	Agricultural 22%
13%	Service industry	3	Small business owner 11%

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

Before Disaster	January 2019
4%	24%

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

Main reported barriers to finding work:¹³



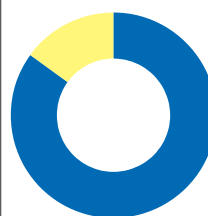
There is an average reported loss of **20%** of household income due to the disaster¹⁵



Food Security

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

Food Consumption Score¹⁵ average rCSI score¹⁶



- 85%** Acceptable
- 15%** Borderline
- 0%** Poor

6.6

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

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

14. 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.

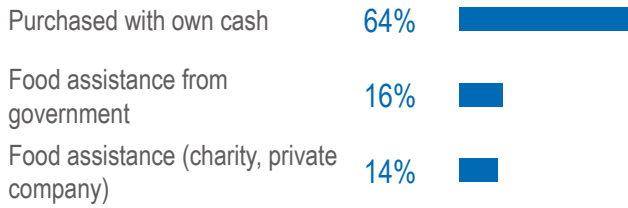
15. FCS is a measure of food security that looks at how often foods are consumed over a 1 week period, in order to give an indication if the household is eating a sufficient amount of food. FCS was calculated using the WFP CARI methodology, by asking respondents how many days per week their household 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).

16. 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).





% of households per main reported source of food in week prior to data collection:¹⁷



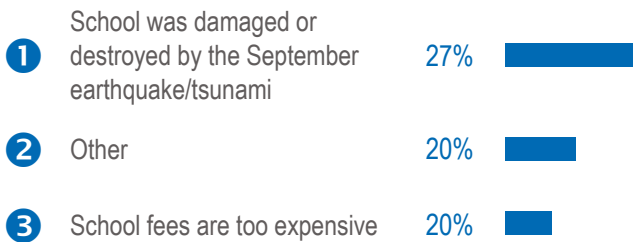
Education

Student attendance

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

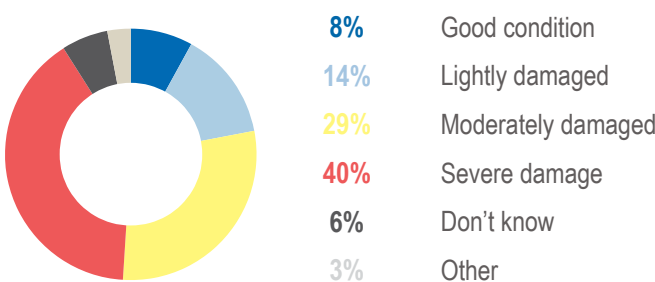
Among households where children were not attending school, there was an average of **1** child(ren) reported to not be attending school

Top 3 reported reasons why school-aged children were not attending school by households with children not attending school:¹⁸



Condition of school facilities

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



Health

Immunization

22% of households reported having children in the household that were not immunized for measles, mumps, and rubella (MMR).

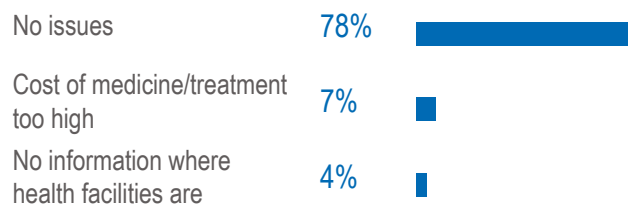
Illness and injury

51% 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

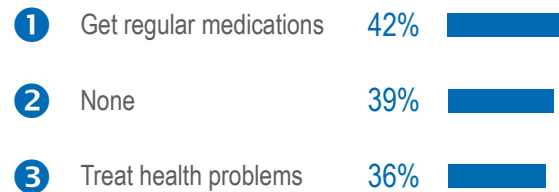
Top 3 types of health concerns reported by households with a member who had suffered from health issues in the 30 days prior to data collection:¹⁸



Main barriers to accessing healthcare reported by households who had needed to access medical treatment the 30 days prior to data collection:¹⁸

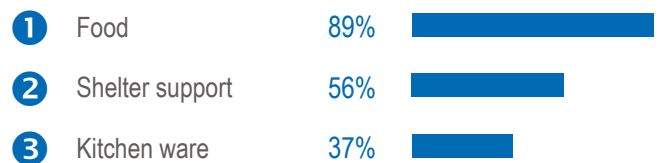


Main reasons (if any) that households have had to access health services in the 30 days prior to data collection:¹⁹



1.2.3 Priority Needs

Top 3 most important priority needs as reported by households:¹⁹



Communication with Communities

Information Needs

% of households by the type of information that the household reported needing the most:¹⁷



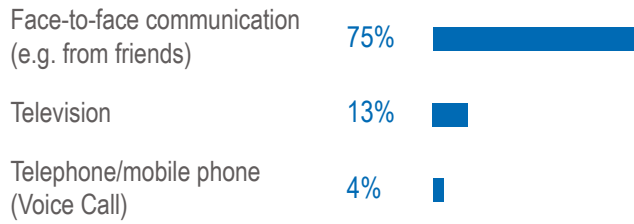
17. Single-choice question; only the top three responses are shown.

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

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



% of households by most preferred source from which they would like to receive new information:²⁰

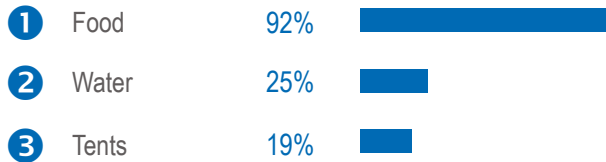


Humanitarian assistance

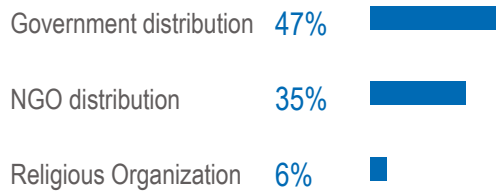
66%

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:²¹



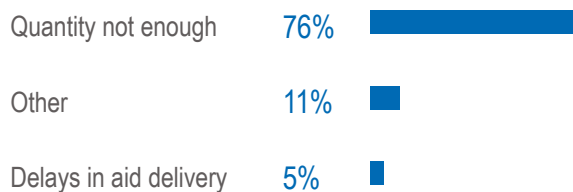
% of households by most common reported source of aid:²²



67%

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

Main reported reasons households were not satisfied by the aid received in the last 30 days:²²



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

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

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

