

OVERVIEW

The following Flood Knowledge, Attitudes and Practices (KAP) survey aims to inform community engagement and communication about flood susceptibility and the associated hazards in Northwest Syria. Building on REACH's flood modeling and the [North Dana – Internally Displaced Person \(IDP\) Camps and Informal Sites Flood Susceptibility and Flood Hazard Assessment](#) from November 2020, this survey hopes to provide a more comprehensive understanding of the conditions in the proposed survey areas. In addition, it seeks to provide humanitarian actors critical information that could enable them to prepare for and respond to sudden bouts of rainfall that have already impacted and will most likely impact these areas in the future.

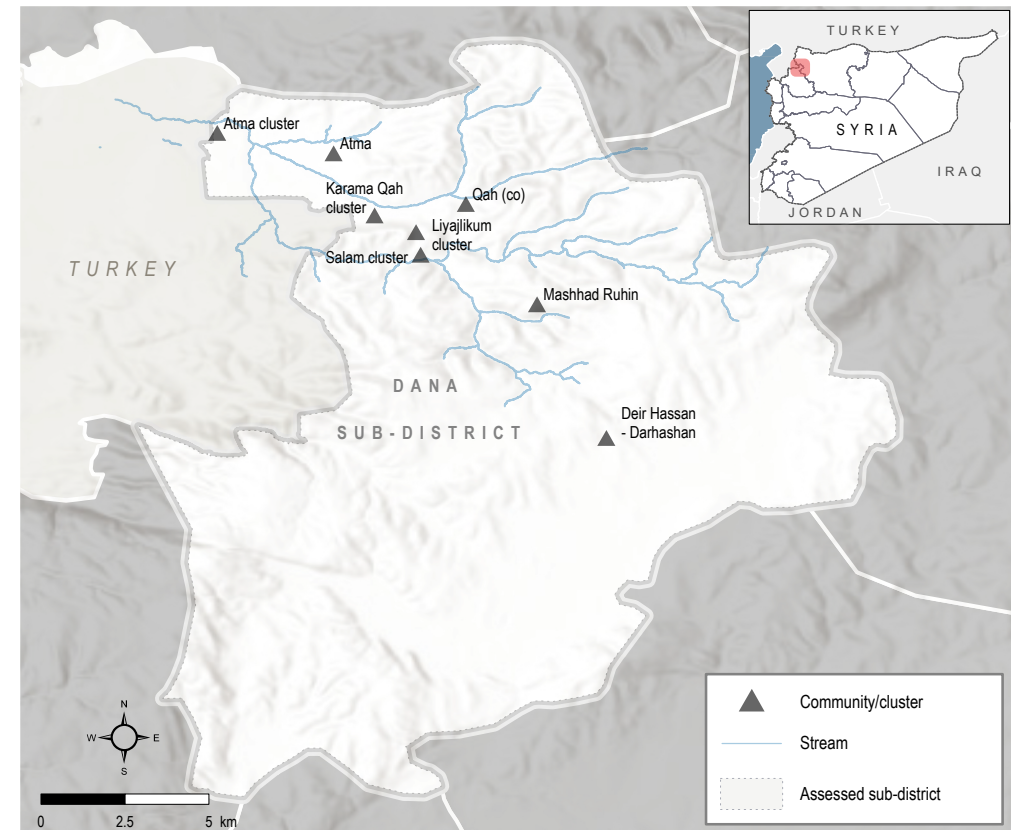
CONTEXT

Seasonal flash floods are a common occurrence in Syria. Flooding generated by sudden and heavy rainfalls has exacerbated vulnerabilities already intensified by winter conditions and the ongoing conflict.¹

According to Camp Coordination and Camp Management Cluster (CCCM) members, in March 2019, 7,292 tents were partially or likely severely damaged because of the seasonal floods in Northwest Syria.² The rainfall continued through April and resulted in the further displacement of more than 40,000 IDPs in camps along the Syria Turkey border. Furthermore, in December 2019, floods obstructed roads and damaged or destroyed tents and other structures in at least 28 IDP camps in northern Syria.² Flash flooding caused by sudden rainfall exceeding 30 centimeters has often caused displacement for thousands of households, and additional access challenges for humanitarian organisations.³ The REACH [North Dana – IDP Camps and Informal Sites Flood Susceptibility and Flood Hazard Assessment \(November 2020\)](#) predicted the following numbers of households as potentially exposed to flood hazards or flood depths exceeding 200mm:

Analysis Extent	Camp Cluster	# Shelters within modelled flood extents (>200mm depth)	# Shelters exposed to hazard (medium hazard or greater)
1	Atmeh Cluster	2,113	917
2	Karama/ Qah Cluster	1,169	420
3	Liyajlikum Cluster	543	426
4	Salam Cluster	292	254
5	Deir Hassan Cluster	1,410	359
6	Atma Community	61	42
7	Qah Community	53	21
8	Mashhad Ruhin East	34	28

ASSESSED AREAS AND COVERAGE

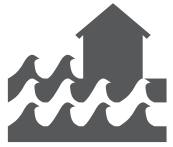


METHODOLOGY

A key informant (KI) methodology was employed for this survey. Data collection took place between 21 and 22 January 2021 in eight communities/sites in Dana sub-district in Northern Idlib. Enumerators were instructed to purposively select three KIs per community/site based on their knowledge of resident populations in the community or camp. KIs were then instructed to respond to the sections of the questionnaire that best fit their sector-specific expertise. Enumerators contacted KIs and potential KIs by phone. KI respondents included community leaders, teachers, local administrators, IDPs representatives, camp managers and social workers. Data from the survey has been analysed and reported on at the cluster level for Dana sub-district in the Key Findings section, and further broken down by each community/site. All analysis was conducted through R analytical software and findings should be considered indicative only and not generalizable to the wider population.

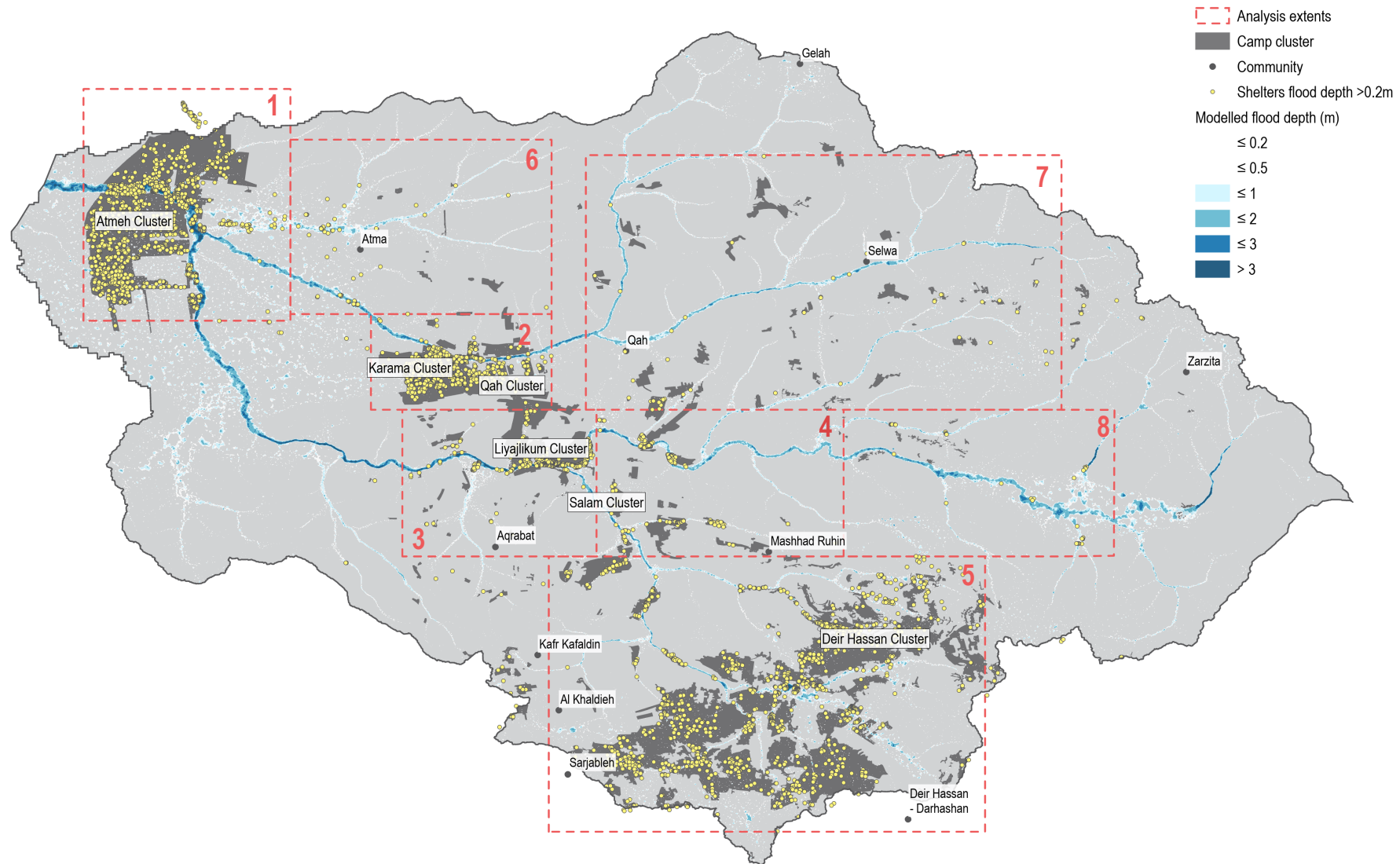
¹ OCHA, Syrian Arab Republic: Cross-Border Humanitarian Reach and Activities from Turkey (December – 2019). Published 24 March 2020

² Save the Children: Northern Syria Flooding: Thousands of Children at Risk of Further Displacement (20 December 2019).

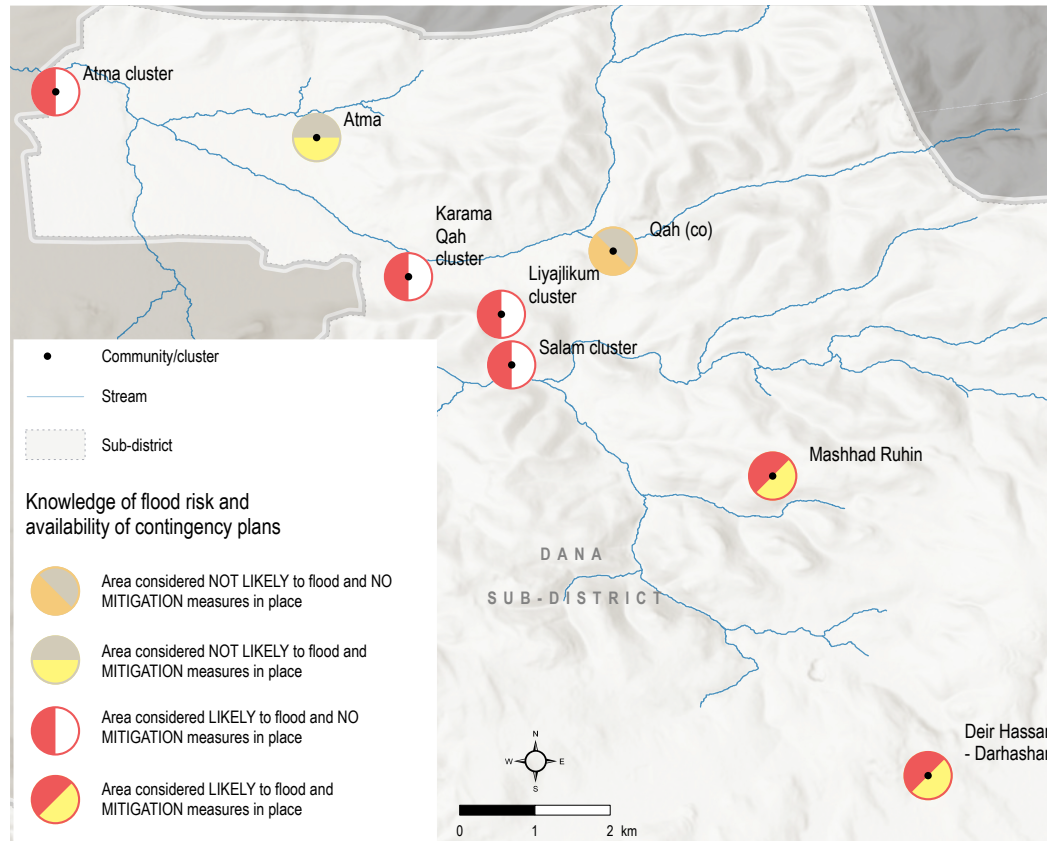


5,724 Estimated number of IDP shelters exposed to flash flooding with a modelled flood depth exceeding 200mm

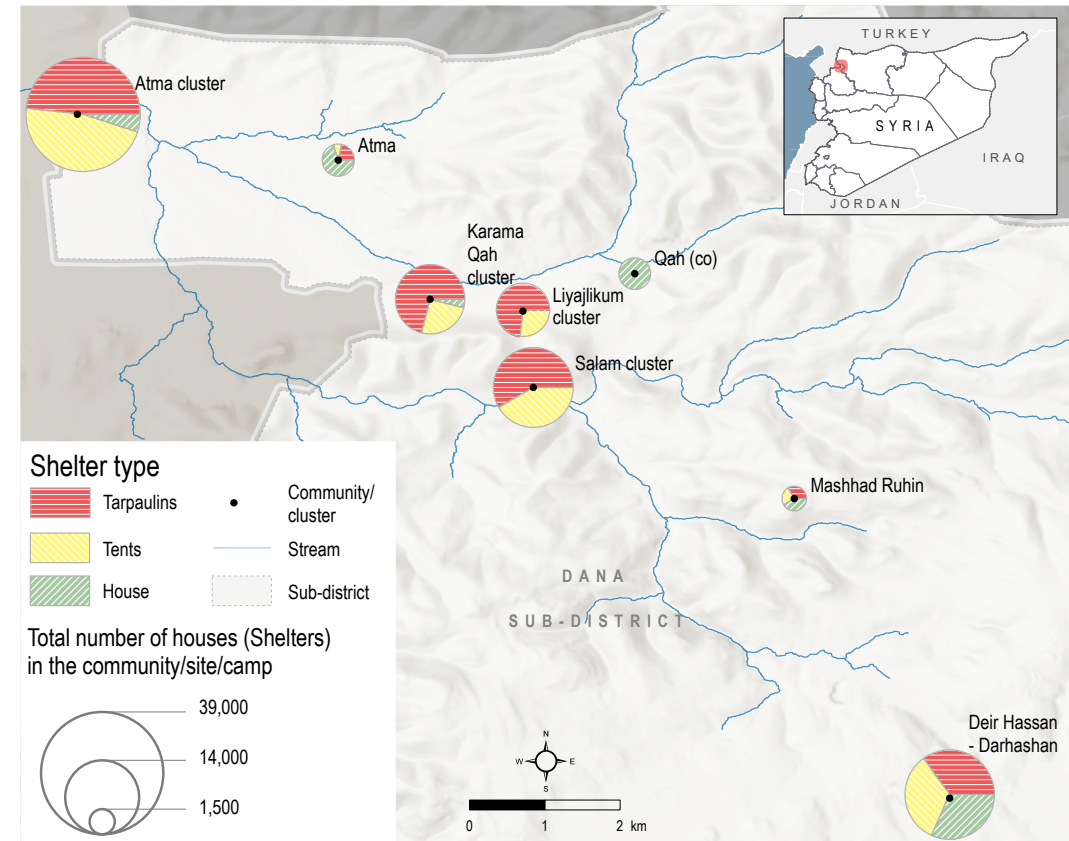
2,473 Estimated number of IDP shelters exposed to a flood hazard
(Modelled depth x velocity categorised as a medium hazard or higher)



COMMUNITIES/SITES AT RISK AND CONTINGENCY MEASURES



TOTAL HOUSES BY SHELTER TYPE



KIs in

- **Four** of the assessed communities/sites reported that **no contingency measures** were in place despite areas being **considered likely to flood**
- **Two** of the assessed communities/sites reported that they **did have contingency measures** in place in areas **considered likely to flood**
- **One** of the assessed communities/sites reported that they **did have contingency measures** in place in areas **not considered likely to flood**

1. KEY FINDINGS

HIGHLIGHTS



KIs in **five** of the assessed communities/sites reported **that there are no mitigation measures available in the event of a flash flood**

KIs in the remaining **three** assessed communities/sites reported that there are mitigation measures available in the event of a flash flood, **in the form of humanitarian assistance**



KIs in **all** of assessed communities/sites reported that the following **vulnerable groups** were most **at risk in the event of a flash flood**:

- Older persons (60+ years)
- Children with disability (under 18 years)
- Adults with disability (18+ years)
- Persons with chronic illness, injuries or mental health conditions
- Female headed- household
- Pregnant and lactating women



In the event of a flash flood, KIs in the subsequent proportions of assessed communities/sites reported that the following **infrastructure was likely to be partially or severely damaged**:⁴

- Roads/streets (**100%**), small drains (**100%**), bridge/culverts (**62%**), community dug wells (**12%**)



KIs in the subsequent proportions of assessed communities/sites reported that assessed communities/sites had previously taken **flood mitigation measures** such as:⁴

- Clearing drains of debris/unblocking drains (**88%**)
- Rehabilitation of roads and associated drainage systems in or near the site (**88%**)
- Migrating to another area/camp (**62%**)
- Prepping camp for flooding (elevating tents, adding tarps, etc.) (**62%**)
- Staying with family members in another location (**62%**)



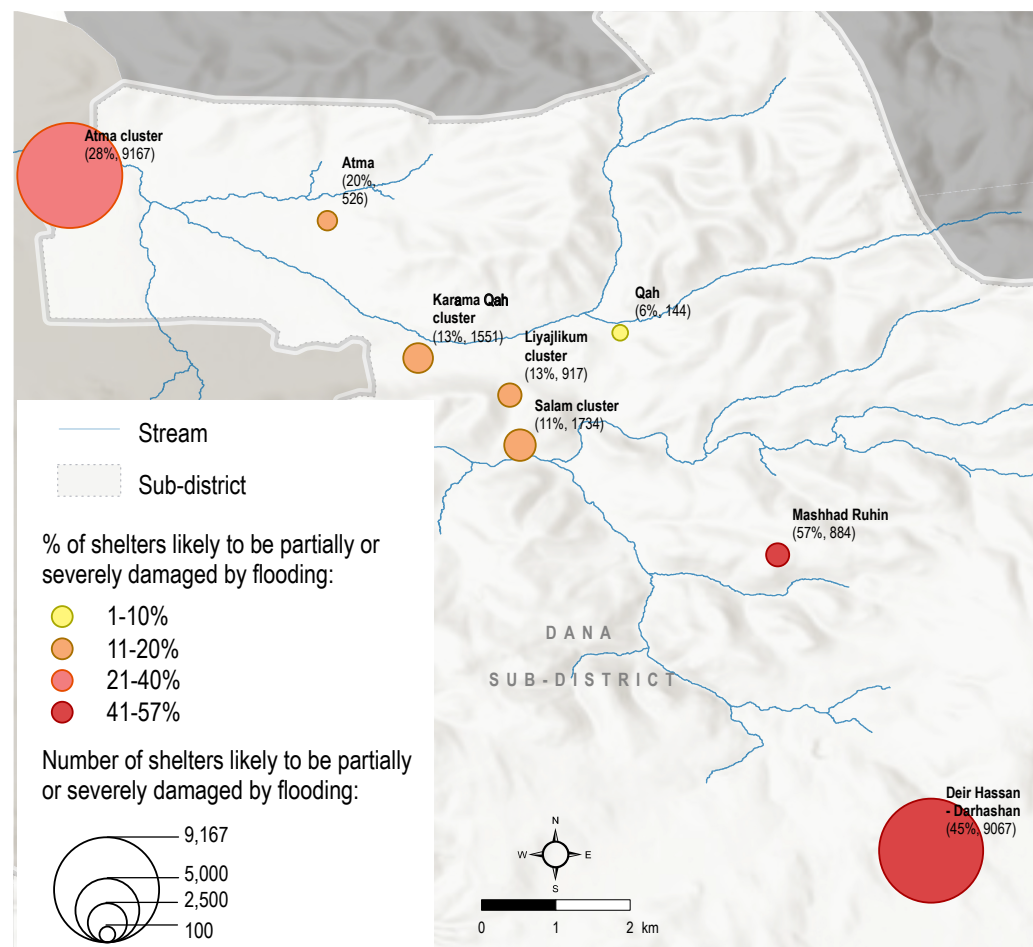
KIs in **25%** of assessed communities reported that they face **barriers to flood mitigation measures** such as⁴:

- Lack of money to take measures (**100%**)
- Lack of time to prepare for flooding (**100%**)
- Fearing loss of livelihoods as a result of relocation to another site/ location (**100%**)
- Lack of knowledge on flood prevention measures (**50%**)
- Lack of logistical support³ from community (**50%**)
- Lack of financial support from community (**50%**)



KIs in **seven** of the assessed communities/sites reported that it is **likely** that the **community/site will be affected by a flood in the next three to four months**. KIs in **12%** of the assessed communities/sites said it was **very likely**.

TOTAL NUMBER OF HOUSES AT RISK OF FLOODING



³ Logistical support refers to assistance with transportation, packing, coordination and communication.

⁴ By percent of assessed communities/sites

OVERVIEW



NUMBER OF HOUSES⁵

- Total number of houses: **33,100**
- Houses likely to be severely damaged (non-liveable): **4,500 (13.6%)**
- Houses likely to be partially damaged (liveable): **4,667 (14.1%)**



SHELTER TYPE⁶

- Shelters using tarpaulins: **48%**
- Tents: **47%**
- Houses: **5%**



MAIN WATER SOURCES⁶

- Water trucking: **90%**
- Piped network: **10%**



WATER STORAGE METHODS⁶

- Bottles: **33%**
- Shared big storage tanks: **100%**
- Jerry Cans (20Lt): **100%**
- Storage tanks: **100%**
- Barrels: **100%**

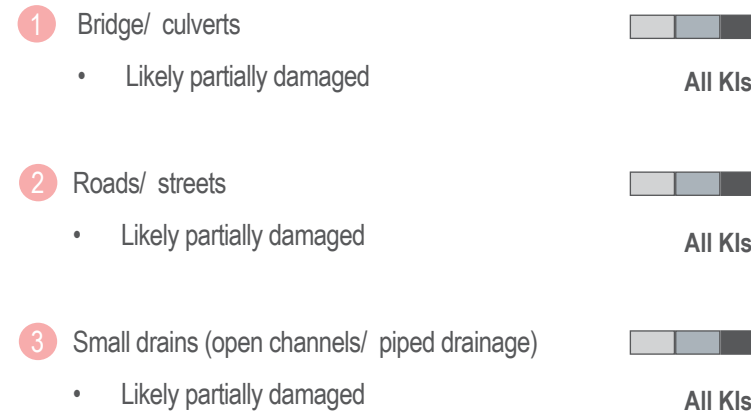
ASSESSING VULNERABILITY AND DAMAGE

Number of KIs reporting the following vulnerable groups at risk in the event of a flash flood:

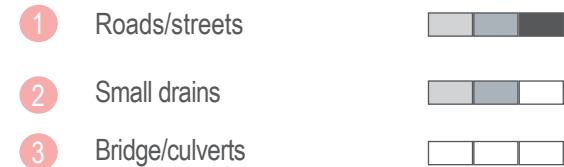


Number of KIs reporting the following community infrastructure most likely to be affected by flash flooding:

*Number of KIs who identified specific infrastructure reporting the extent of damage:



Number of KIs reporting the following as a high repair or rehabilitation priority:



100% of KIs reported that **water** would be available to **most** people in the event of a flash flood

100% of KIs reported that **electricity** would be available to **most** people in the event of a flash flood

⁵ As reported by KIs.

⁶ As reported by KIs, by percentage of shelters/ water sources/ water storage methods



KNOWLEDGE: FLOOD RISKS AND PREPARATION PRACTICES

100% of KIs reported that the community/site has **experienced flooding** in the past two years

Number of KIs reporting the following as mitigation measures that have been taken in the past to prevent the adverse effects of flooding:

- 1 Clearing drains of debris/unblocking drains
- 2 Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures
- 3 Rehabilitation of roads and associated drainage systems in/near the community/site
- 4 Prepping camp for flooding (elevating tents, adding tarps, etc.)
- 5 Staying with family members in another location
- 6 Prepping shelters for flooding, raising shelter, adding tarps, etc.

Number of KIs reporting the following as causes of flooding in this community/site:

- 1 Blocked drains
- 2 Poor surface water drainage
- 3 Poor quality of the surrounding roads and related drainage systems
- 4 This community is in a particularly flood prone region

100% of KIs reported that there are **no contingency plans in place** by to help mitigate the effects of a future flash flood.

Number of KIs reporting the following mitigation measures currently in place:

- ! Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures
- ! Rehabilitation of roads and associated drainage systems in/near the community/site
- ! Clearing drains of debris/unblocking drains

Number of KIs reporting the following as the most successful flood mitigation measures:

- ! Prepping camp for flooding (elevating tents, adding tarps, etc.)
- ! Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures
- ! Clearing drains of debris/unblocking drains
- ! Rehabilitation of roads and associated drainage systems in/near the community/site

Number of KIs reporting that the following community/site has/is:

- 1 Near a drainage channel
- 2 Near a localised low point or depression (ponding of water)
- 3 Near overland flow paths
- 4 Poor surface water drainage

100%

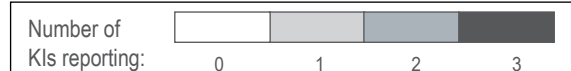
of KIs reported that there are **no barriers** in implementing mitigation measures to prevent flood hazards

100%

of KIs reported that the **community can call for emergency services** in the event of a flash flood

100%

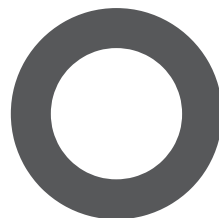
of KIs reported that the **community does not have any safe spaces, dignity kits, or case management services** in the event of a flash flood



FLOOR RISK PERCEPTION

Number of KIs considering this site at high risk of being affected by flooding:

Yes	100%
No	0%
Do not know	0%
No response	0%

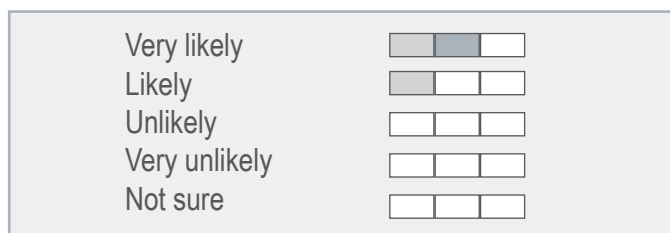


Number of KIs who think that inadequate road/drainage systems are a major contributing factor:

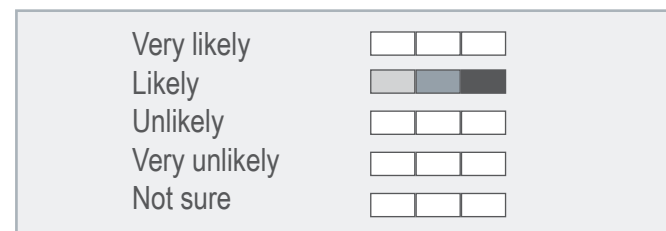
Yes	100%
No	0%
Do not know	0%
No response	0%



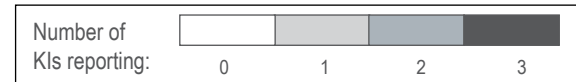
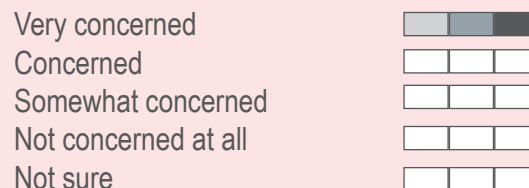
KIs' estimations that the site will be affected by a flood in the next three to four months:



KIs' view of the likelihood that community/site management and other response actors will take preventive measures against the effects of a flood:



KIs' view of the level of concern within the community/site about the potential for flooding:

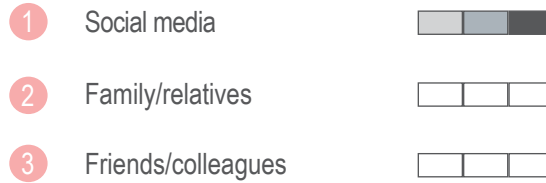


FLOOD ZONE KNOWLEDGE

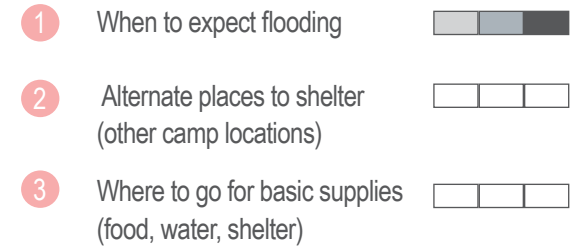
Number of KIs reporting the following sources from which people in the community get information on flood warnings and preparedness:



Number of KIs reporting the following as sources people in the community/site trust the most to give accurate information on flood preparedness:

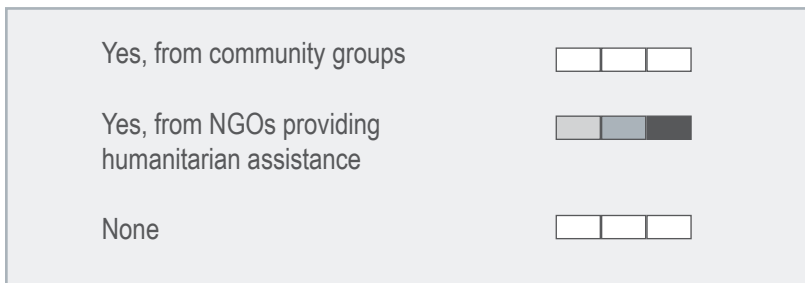


Type of information provided by these sources:

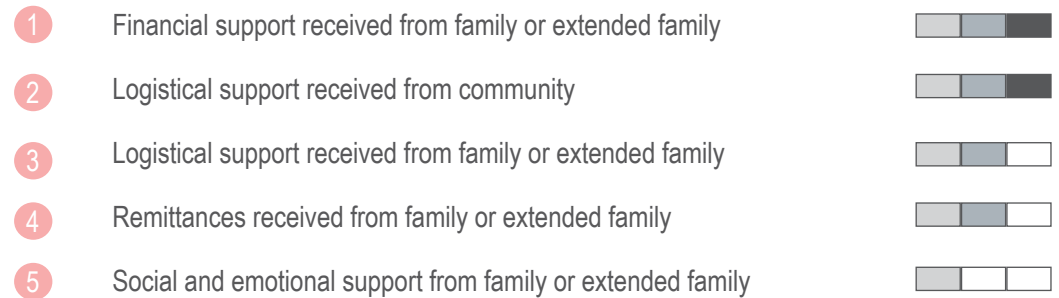


COMMUNICATION WITH AID PROVIDERS

Number of KIs reporting that this community receives aid from aid providers:



Number of KIs reporting that the following resources would be available to residents in the community/site in the event of a flash flood:

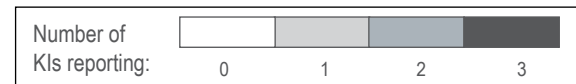


67%

of KIs reported that in the event of a flash flood, members of this community would be able to **communicate** with **both** aid providers and local authorities about their **immediate needs**

100%

of KIs reported that **WhatsApp** (or any other mobile phone-based platform) was the **preferred means of communicating** with aid providers about **services or information relating to flash flooding**



OVERVIEW



NUMBER OF HOUSES⁵

- Total number of houses: **12,217**
- Houses likely to be severely damaged (non-liveable): **517 (4.2%)**
- Houses likely to be partially damaged (liveable): **1,033 (8.5%)**



SHELTER TYPE⁶

- Shelters using tarpaulins: **71%**
- Tents: **25%**
- Houses: **4%**



MAIN WATER SOURCES⁶

- Water trucking: **0%**
- Piped network: **100%**

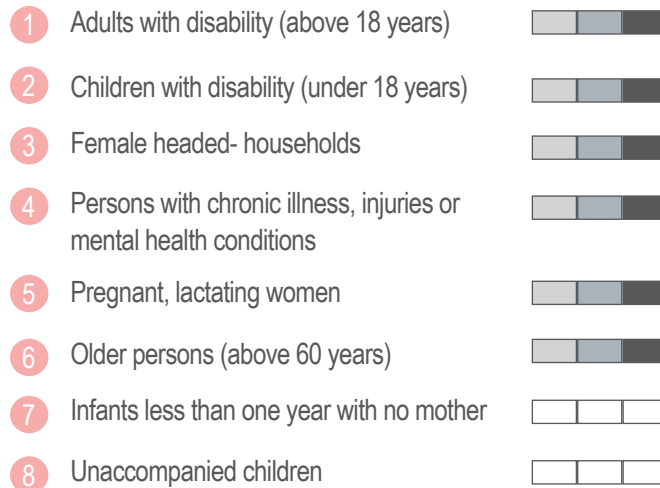


WATER STORAGE METHODS⁶

- Bottles: **33%**
- Shared big storage tanks: **67%**
- Jerry Cans (20Lt): **100%**
- Storage tanks: **100%**
- Barrels: **100%**

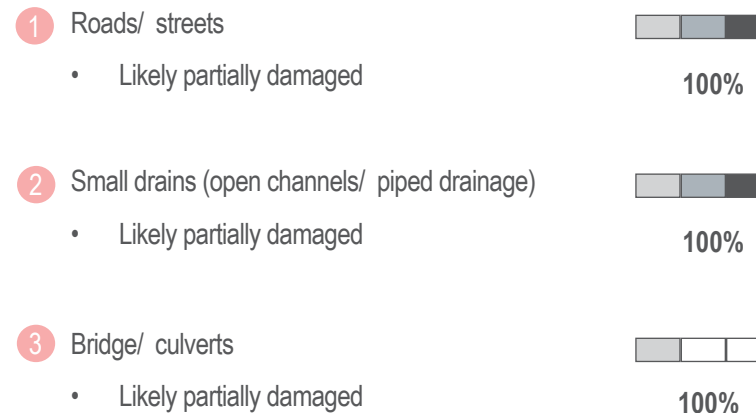
ASSESSING VULNERABILITY AND DAMAGE

Number of KIs reporting the following vulnerable groups at risk in the event of a flash flood:

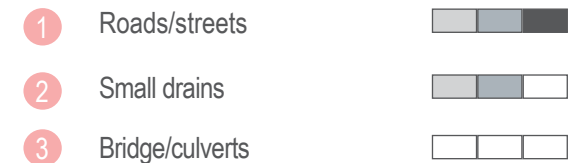


Number of KIs reporting the following community infrastructure most likely to be affected by flash flooding:

*Number of KIs who identified specific infrastructure reporting the extent of damage:



Number of KIs reporting the following as a high repair or rehabilitation priority:

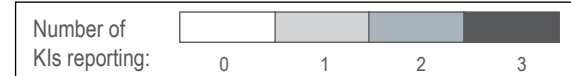


100% of KIs reported that **water** would be available to **most** people in the event of a flash flood

100% of KIs reported that **electricity** would be available to **most** people in the event of a flash flood

⁵ As reported by KIs.






⁶ As reported by KIs, by percentage of shelters/water sources/water storage methods







KNOWLEDGE: FLOOD RISKS AND PREPARATION PRACTICES

100% of KIs reported that the community has **experienced flooding** in the past two years

Number of KIs reporting the following as mitigation measures that have been taken in the past to prevent the adverse effects of flooding:




- 1 Migrating to another area/camp 
- 2 Prepping camp for flooding (elevating tents, adding tarps, etc.) 
- 3 Rehabilitation of roads and associated drainage systems in/near the community/site 
- 4 Staying with family members in another location 
- 5 Clearing drains of debris/unblocking drains 

Number of KIs reporting the following as causes of flooding in this community/site:





- 1 Blocked drains 
- 2 Poor quality of the surrounding roads and related drainage systems 
- 3 This community is in a particularly flood prone region 
- 4 Poor surface water drainage 

100% of KIs reported that there are **no contingency plans in place** by to help mitigate the effects of a future flash flood.





Number of KIs reporting the following mitigation measures currently in place:

- ! Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 
- ! Rehabilitation of roads and associated drainage systems in/near the community/site 
- ! Clearing drains of debris/unblocking drains 

Number of KIs reporting the following as the most successful flood mitigation measures:

- ! Prepping camp for flooding (elevating tents, adding tarps, etc.) 
- ! Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 
- ! Clearing drains of debris/unblocking drains 
- ! Rehabilitation of roads and associated drainage systems in/near the community/site 

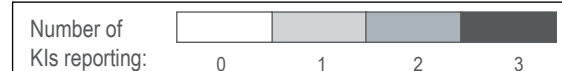
Number of KIs reporting that the following community/site has/is:

- 1 Near a drainage channel 
- 2 Near overland flow paths 
- 3 Near agriculture lands with canals for irrigation 
- 4 Poor surface water drainage 

100% of KIs reported that there are **no barriers** in implementing mitigation measures to prevent flood hazards

 **100%** of KIs reported that the **community can call for emergency services** in the event of a flash flood

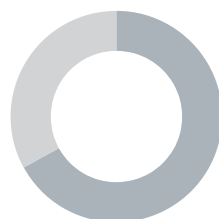
 **100%** of KIs reported that the **community does not have any safe spaces, dignity kits, or case management services** in the event of a flash flood



FLOOR RISK PERCEPTION

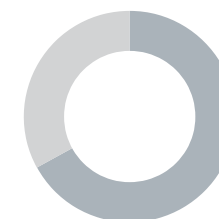
Number of KIs considering this site at high risk of being affected by flooding:

Yes	67%
No	33%
Do not know	0%
No response	0%

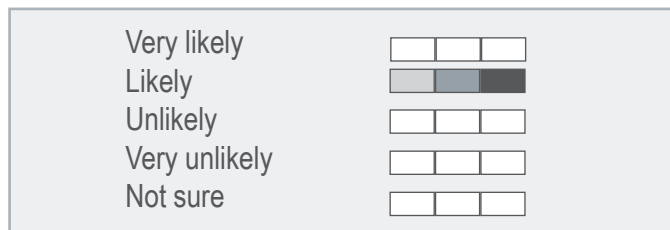


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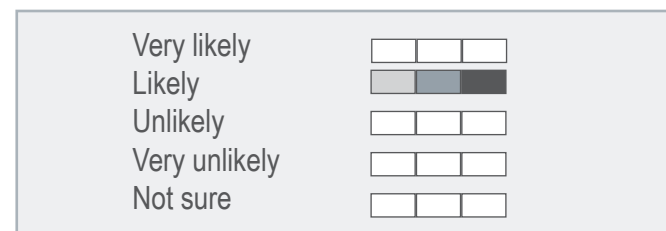
Yes	67%
No	0%
Do not know	0%
No response	33%



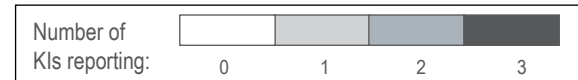
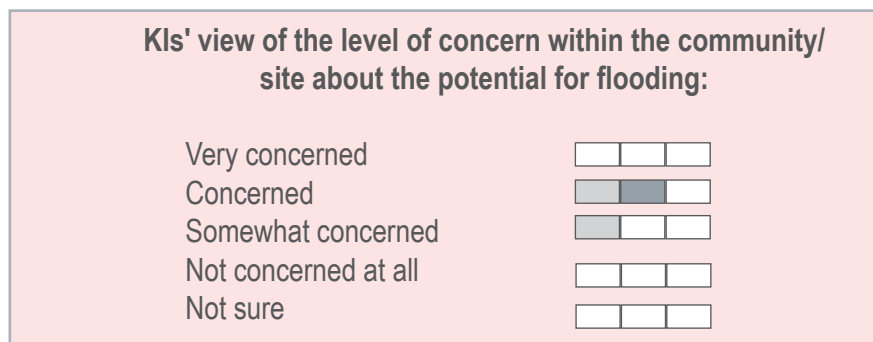
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KIs' view of the likelihood that community/site management and other response actors will take preventive measures against the effects of a flood:

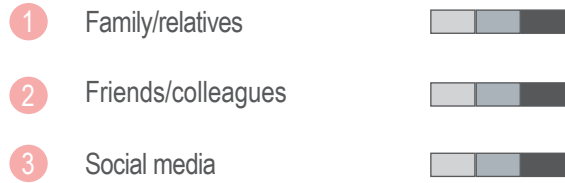


KIs' view of the level of concern within the community/site about the potential for flooding:

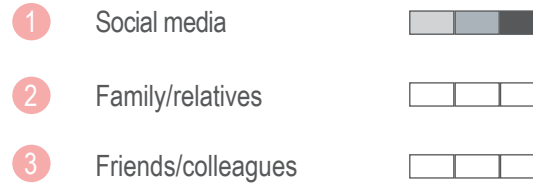


FLOOD ZONE KNOWLEDGE

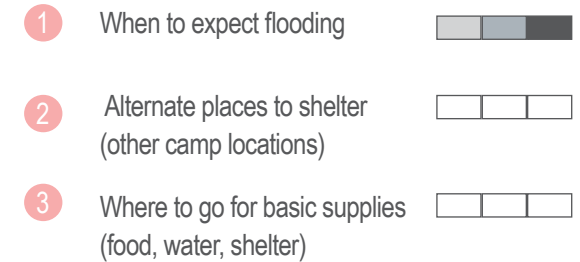
Number of KIs reporting the following sources from which people in the community get information on flood warnings and preparedness:



Number of KIs reporting the following as sources people in the community/site trust the most to give accurate information on flood preparedness:

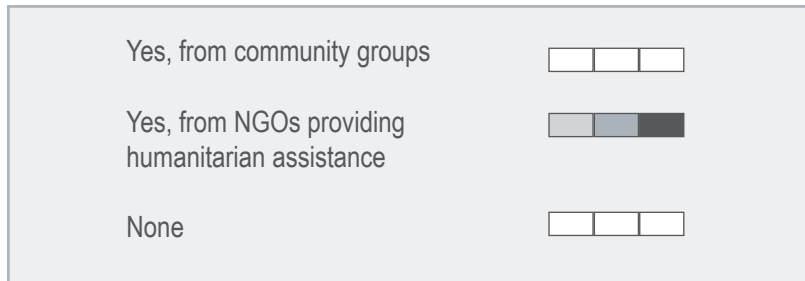


Type of information provided by these sources:



COMMUNICATION WITH AID PROVIDERS

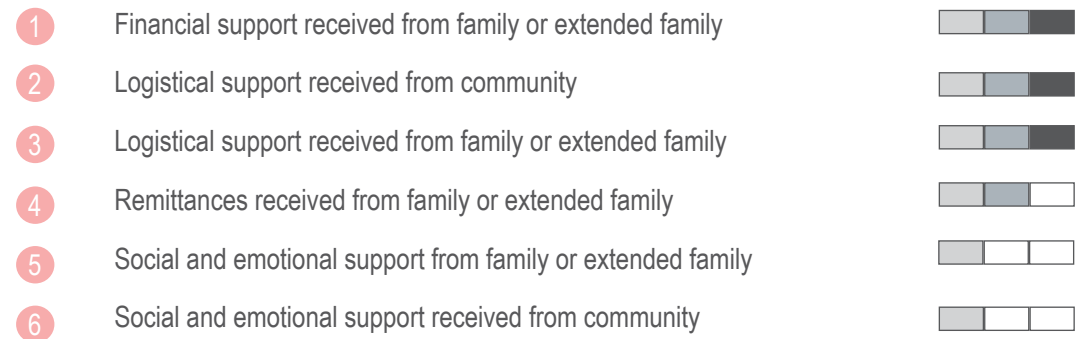
Number of KIs reporting that this community receives aid from aid providers:



100%

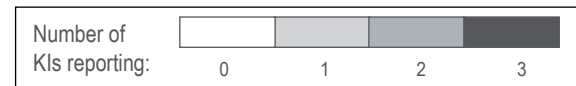
of KIs reported that in the event of a flash flood, members of this community would be able to **communicate** with **both** aid providers and local authorities about their **immediate needs**

Number of KIs reporting that that the following resources would be available to residents in the community/site in the event of a flash flood:



100%

of KIs reported that **WhatsApp** (or any other mobile phone-based platform) was the **preferred means of communicating** with aid providers about **services or information relating to flash flooding**



OVERVIEW



NUMBER OF HOUSES⁵

- Total number of houses: **7,200**
- Houses likely to be severely damaged (non-liveable): **350 (4.9%)**
- Houses likely to be partially damaged (liveable): **567 (7.9%)**



SHELTER TYPE⁶

- Shelters using tarpaulins: **73%**
- Tents: **27%**
- Houses: **0%**



MAIN WATER SOURCES⁶

- Water trucking: **20%**
- Piped network: **80%**



WATER STORAGE METHODS⁶

- Bottles: **33%**
- Shared big storage tanks: **0%**
- Jerry Cans (20Lt): **100%**
- Storage tanks: **100%**
- Barrels: **100%**

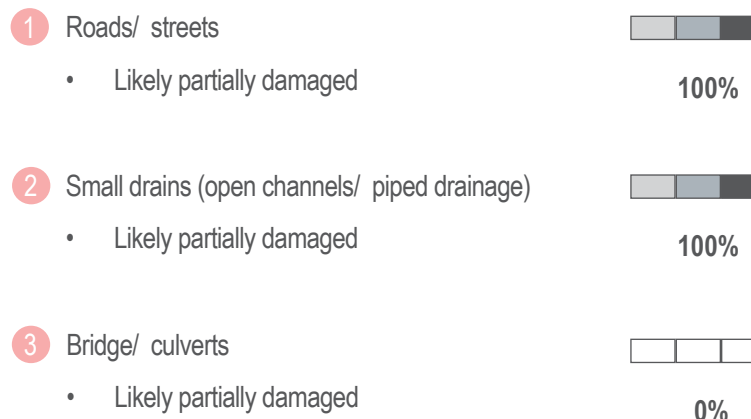
ASSESSING VULNERABILITY AND DAMAGE

Number of KIs reporting the following vulnerable groups at risk in the event of a flash flood:



Number of KIs reporting the following community infrastructure most likely to be affected by flash flooding:

*Number of KIs who identified specific infrastructure reporting the extent of damage:



Number of KIs reporting the following as a high repair or rehabilitation priority:

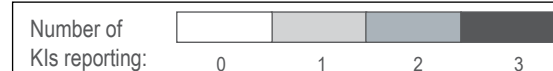


100% of KIs reported that **water** would be available to **most** people in the event of a flash flood

100% of KIs reported that **electricity** would be available to **most** people in the event of a flash flood

⁵ As reported by KIs.






⁶ As reported by KIs, by percentage of shelters/ water sources/ water storage methods







KNOWLEDGE: FLOOD RISKS AND PREPARATION PRACTICES

100% of KIs reported that the community has **experienced flooding** in the past two years

Number of KIs reporting the following as mitigation measures that have been taken in the past to prevent the adverse effects of flooding:




- 1 Rehabilitation of roads and associated drainage systems in/near the community/site 
- 2 Clearing drains of debris/unblocking drains 
- 3 Migrating to another area/camp 
- 4 Prepping camp for flooding (elevating tents, adding tarps, etc.) 
- 5 Staying with family members in another location 

Number of KIs reporting the following as causes of flooding in this community/site:





- 1 Poor quality of the surrounding roads and related drainage systems 
- 2 This community is in a particularly flood prone region 
- 3 Blocked drains 
- 4 Poor surface water drainage 

100% of KIs reported that there are **no contingency plans in place** to help mitigate the effects of a future flash flood





Number of KIs reporting the following mitigation measures currently in place:

- ! Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 
- ! Rehabilitation of roads and associated drainage systems in/near the community/site 
- ! Clearing drains of debris/unblocking drains 

Number of KIs reporting the following as the most successful flood mitigation measures:

- ! Prepping camp for flooding (elevating tents, adding tarps, etc.) 
- ! Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 
- ! Clearing drains of debris/unblocking drains 
- ! Rehabilitation of roads and associated drainage systems in/near the community/site 

Number of KIs reporting that the following community/site has/is:

- 1 Near overland flow paths 
- 2 Poor surface water drainage 
- 3 Near a drainage channel 
- 4 Near agriculture lands with canals for irrigation 

 **100%**

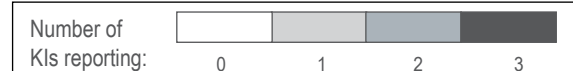
of KIs reported that there are **no barriers** in implementing mitigation measures to prevent flood hazards

 **100%**

of KIs reported that the **community can call for emergency services** in the event of a flash flood

 **100%**

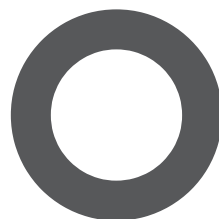
of KIs reported that the **community does not have any safe spaces, dignity kits, or case management services** in the event of a flash flood



FLOOR RISK PERCEPTION

Number of KIs considering this site at high risk of being affected by flooding:

Yes	100%
No	0%
Do not know	0%
No response	0%

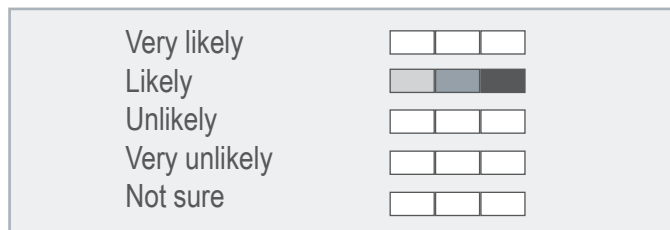


Number of KIs who think that inadequate road/drainage systems are a major contributing factor:

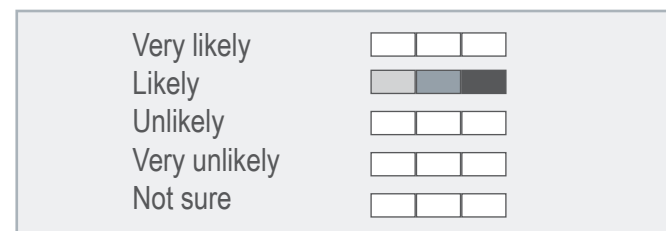
Yes	100%
No	0%
Do not know	0%
No response	0%



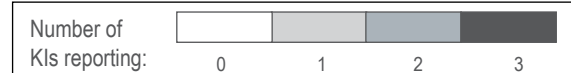
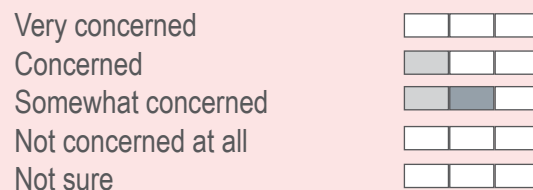
KIs' estimations that the site will be affected by a flood in the next three to four months:



KIs' view of the likelihood that community/site management and other response actors will take preventive measures against the effects of a flood:



KIs' view of the level of concern within the community/site about the potential for flooding:

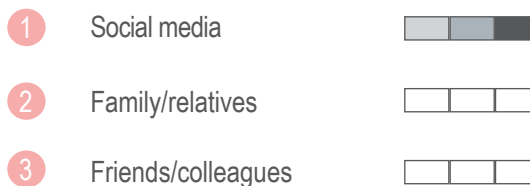


FLOOD ZONE KNOWLEDGE

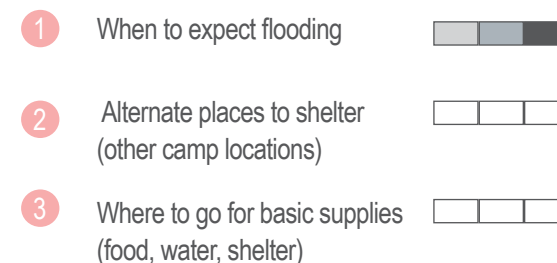
Number of KIs reporting the following sources from which people in the community get information on flood warnings and preparedness:



Number of KIs reporting the following as sources people in the community/site trust the most to give accurate information on flood preparedness:

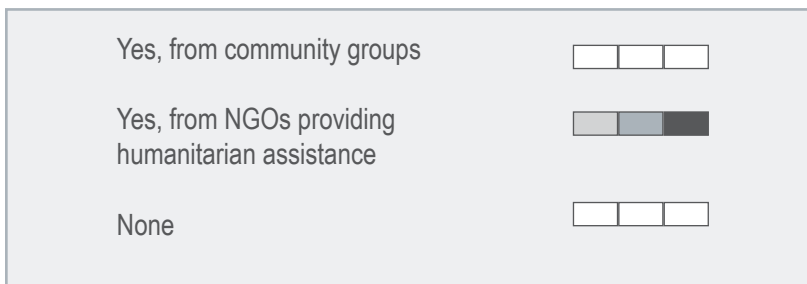


Type of information provided by these sources:

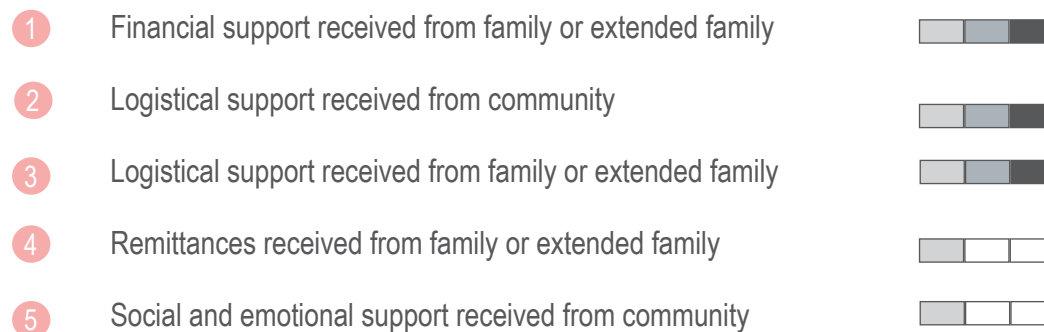


COMMUNICATION WITH AID PROVIDERS

Number of KIs reporting that this community receives aid from aid providers:



Number of KIs reporting that that the following resources would be available to residents in the community/site in the event of a flash flood:

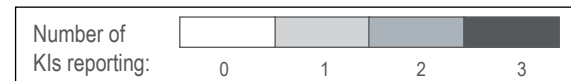


100%

of KIs reported that in the event of a flash flood, members of this community would be able to **communicate** with **both** aid providers and local authorities about their **immediate needs**

100%

of KIs reported that **WhatsApp** (or any other mobile phone-based platform) was the **preferred means of communicating** with aid providers about **services or information relating to flash flooding**



OVERVIEW



NUMBER OF HOUSES⁵

- Total number of houses: **16,133**
- Houses likely to be severely damaged (non-liveable): **467 (2.9%)**
- Houses likely to be partially damaged (liveable): **1,300 (8.1%)**



SHELTER TYPE⁶

- Shelters using tarpaulins: **58%**
- Tents: **42%**
- Houses: **0%**



MAIN WATER SOURCES⁶

- Water trucking: **28%**
- Piped network: **72%**

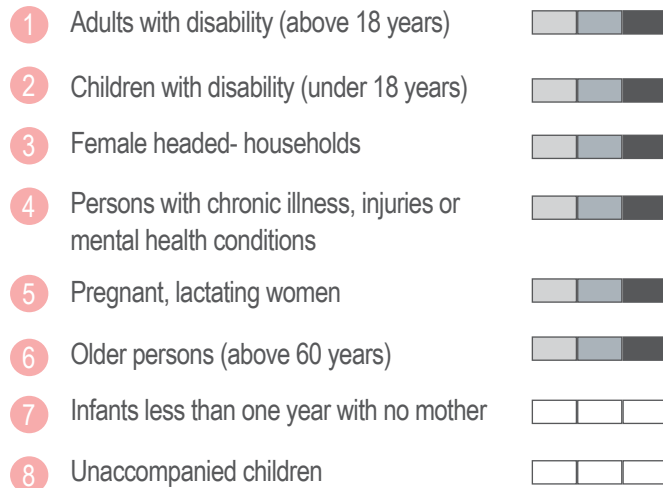


WATER STORAGE METHODS⁶

- Bottles: **67%**
- Shared big storage tanks: **33%**
- Jerry Cans (20Lt): **100%**
- Storage tanks: **100%**
- Barrels: **100%**

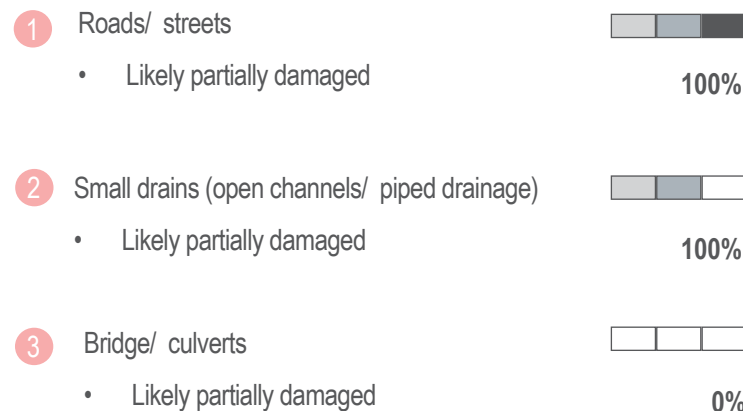
ASSESSING VULNERABILITY AND DAMAGE

Number of KIs reporting the following vulnerable groups at risk in the event of a flash flood:

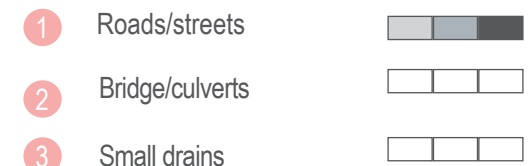


Number of KIs reporting the following community infrastructure most likely to be affected by flash flooding:

*Number of KIs who identified specific infrastructure reporting the extent of damage:



Number of KIs reporting the following as a high repair or rehabilitation priority:



100% of KIs reported that **water** would be available to **most** people in the event of a flash flood



100% of KIs reported that **electricity** would be available to **most** people in the event of a flash flood






⁵ As reported by KIs.

⁶ As reported by KIs, by percentage of shelters/ water sources/ water storage methods





KNOWLEDGE: FLOOD RISKS AND PREPARATION PRACTICES

100% of KIs reported that the community has **experienced flooding** in the past two years

Number of KIs reporting the following as mitigation measures that have been taken in the past to prevent the adverse effects of flooding:




- 1 Prepping camp for flooding (elevating tents, adding )
- 2 Staying with family members in another location 
- 3 Migrating to another area/camp 
- 4 Rehabilitation of roads and associated drainage systems in/near the community/site 
- 5 Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 

Number of KIs reporting the following as causes of flooding in this community/site:





- 1 Poor quality of the surrounding roads and related drainage systems 
- 2 Poor surface water drainage 
- 3 This community is in a particularly flood prone region 
- 4 Blocked drains 

100% of KIs reported that there are **no contingency plans in place** to help mitigate the effects of a future flash flood





Number of KIs reporting the following mitigation measures currently in place:

- ! Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 
- ! Rehabilitation of roads and associated drainage systems in/near the community/site 
- ! Clearing drains of debris/unblocking drains 

Number of KIs reporting the following as the most successful flood mitigation measures:

- ! Prepping camp for flooding (elevating tents, adding tarps, etc.) 
- ! Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 
- ! Clearing drains of debris/unblocking drains 
- ! Rehabilitation of roads and associated drainage systems in/near the community/site 

Number of KIs reporting that the following community/site has/is:

- 1 Near a drainage channel 
- 2 Near overland flow paths 
- 3 Near a localised low point or depression (ponding of water) 
- 4 Poor surface water drainage 

 **100%**

of KIs reported that there are **no barriers** in implementing mitigation measures to prevent flood hazards

 **100%**

of KIs reported that the **community can call for emergency services** in the event of a flash flood

 **100%**

of KIs reported that the **community does not have any safe spaces, dignity kits, or case management services** in the event of a flash flood



FLOOR RISK PERCEPTION

Number of KIs considering this site at high risk of being affected by flooding:

Yes	67%
No	33%
Do not know	0%
No response	0%

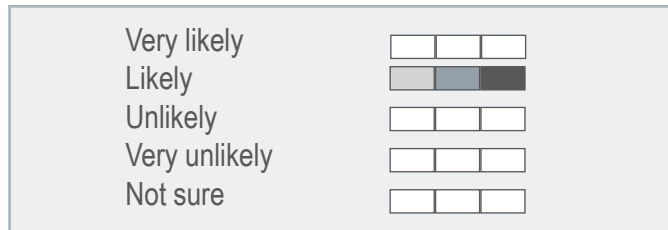


Number of KIs who think that inadequate road/drainage systems are a major contributing factor:

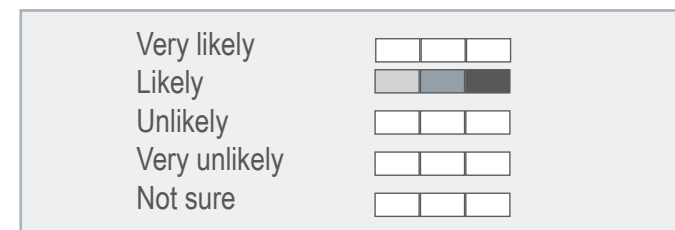
Yes	67%
No	0%
Do not know	0%
No response	33%



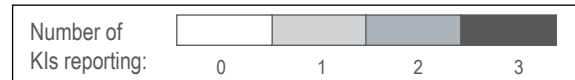
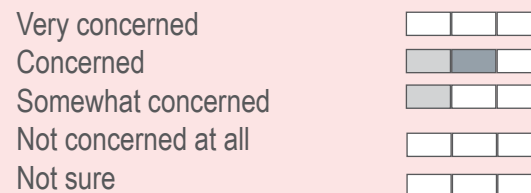
KIs' estimations that the site will be affected by a flood in the next three to four months:



KIs' view of the likelihood that community/site management and other response actors will take preventive measures against the effects of a flood:



KIs' view of the level of concern within the community/site about the potential for flooding:

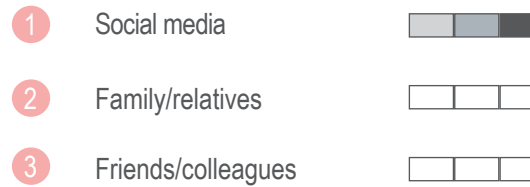


FLOOD ZONE KNOWLEDGE

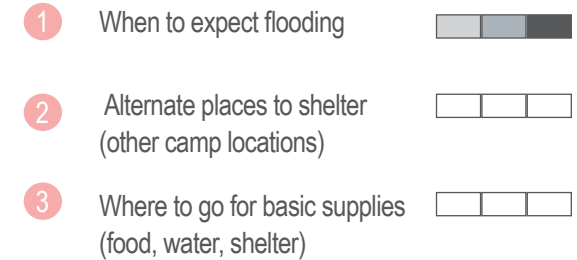
Number of KIs reporting the following sources from which people in the community get information on flood warnings and preparedness:



Number of KIs reporting the following as sources people in the community/site trust the most to give accurate information on flood preparedness:

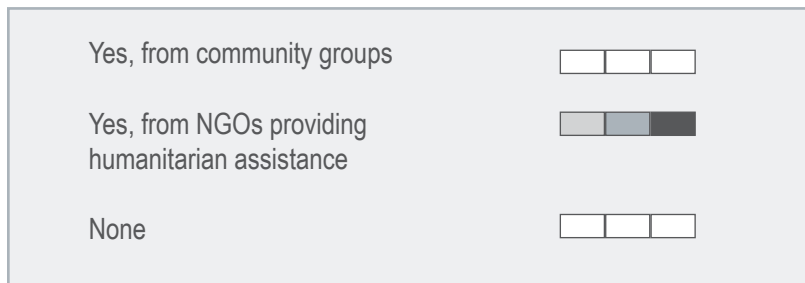


Type of information provided by these sources:



COMMUNICATION WITH AID PROVIDERS

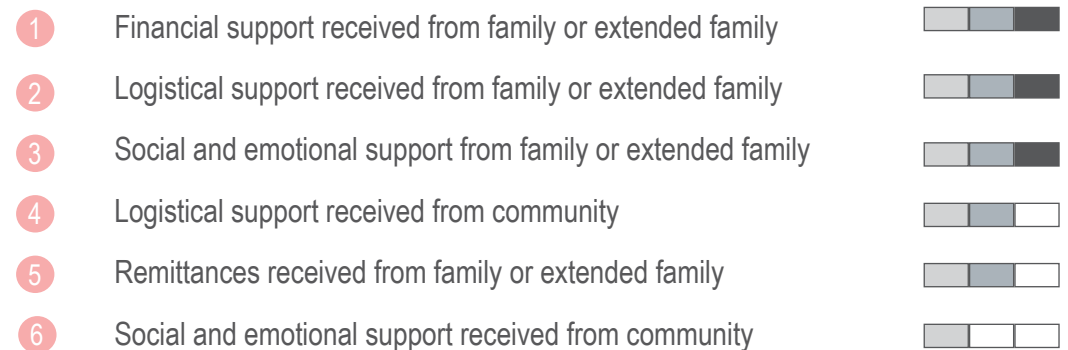
Number of KIs reporting that this community receives aid from aid providers:



67%

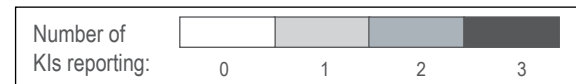
of KIs reported that in the event of a flash flood, members of this community would be able to **communicate** with **both** aid providers and local authorities about their **immediate needs**

Number of KIs reporting that the following resources would be available to residents in the community/site in the event of a flash flood:



100%

of KIs reported that **WhatsApp** (or any other mobile phone-based platform) was the **preferred means of communicating** with aid providers about **services or information relating to flash flooding**



OVERVIEW



NUMBER OF HOUSES⁵

- Total number of houses: **20,250**
- Houses likely to be severely damaged (non-liveable): **49,00 (24.2%)**
- Houses likely to be partially damaged (liveable): **4,167 (20.6%)**



SHELTER TYPE⁶

- Shelters using tarpaulins: **35%**
- Tents: **33%**
- Houses: **32%**



MAIN WATER SOURCES⁶

- Water trucking: **88%**
- Piped network: **12%**



WATER STORAGE METHODS⁶

- Bottles: **0%**
- Shared big storage tanks: **0%**
- Jerry Cans (20Lt): **100%**
- Storage tanks: **100%**
- Barrels: **100%**

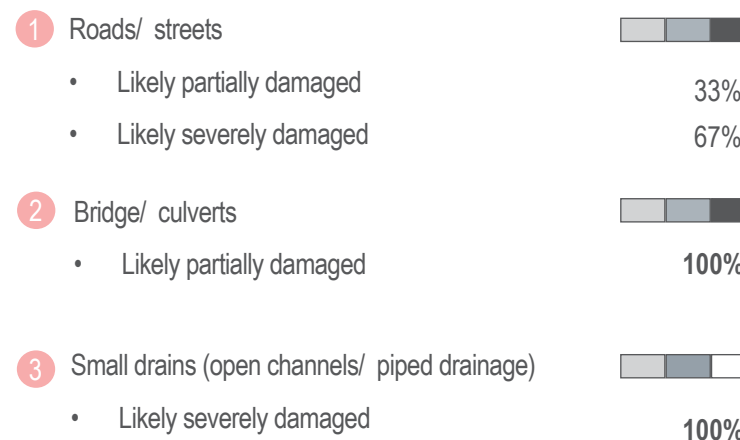
ASSESSING VULNERABILITY AND DAMAGE

Number of KIs reporting the following vulnerable groups at risk in the event of a flash flood:

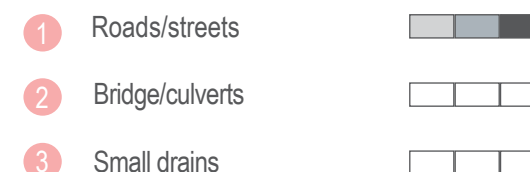


Number of KIs reporting the following community infrastructure most likely to be affected by flash flooding:

*Number of KIs who identified specific infrastructure reporting the extent of damage:



Number of KIs reporting the following as a high repair or rehabilitation priority:



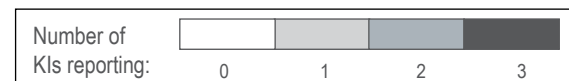
100% of KIs reported that **water** would be available to **most** people in the event of a flash flood



100% of KIs reported that **electricity** would be available to **most** people in the event of a flash flood

⁵ As reported by KIs.








⁶ As reported by KIs, by percentage of shelters/ water sources/ water storage methods







KNOWLEDGE: FLOOD RISKS AND PREPARATION PRACTICES

100% of KIs reported that the community has **experienced flooding** in the past two years

Number of KIs reporting the following as mitigation measures that have been taken in the past to prevent the adverse effects of flooding:








- 1 Clearing drains of debris/unblocking drains 
- 2 Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 
- 3 Graveling/paving vehicle/pedestrian accessways to ensure they remain accessible during heavy rain 
- 4 Migrating to another area/camp 
- 5 Prepping shelters for flooding, raising shelter, adding tarps, etc. 
- 6 Rehabilitation of roads and associated drainage systems in/near the community/site 
- 7 Prepping camp for flooding (elevating tents, adding tarps, etc.) 

Number of KIs reporting the following as causes of flooding in this community/site:








- 1 Blocked drains 
- 2 Poor quality of the surrounding roads and related drainage systems 
- 3 Poor surface water drainage 
- 4 This community is in a particularly flood prone region 

100% of KIs reported that there are **contingency plans in place** by humanitarian actors, and individuals to help mitigate the effects of a future flash flood. **Sixty-seven percent (67%)** said there are measures by the community and camp management




Number of KIs reporting the following mitigation measures currently in place:

- 1 Staying with family members in another location 
- 2 Clearing drains of debris/unblocking drains 
- 3 Graveling/paving vehicle/pedestrian accessways to ensure they remain accessible during heavy rain 
- 4 Migrating to another area/camp 
- 5 Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 
- 6 Prepping shelters for flooding (raising shelter, adding tarps, etc.) 
- 7 Rehabilitation of roads and associated drainage systems in/near the community/site 

Number of KIs reporting the following as the most successful flood mitigation measures:

- 1 Clearing drains of debris/unblocking drains 
- 2 Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 
- 3 Graveling/paving vehicle/pedestrian accessways to ensure they remain accessible during heavy rain 
- 4 Prepping shelters for flooding (raising shelter, adding tarps, etc.) 
- 5 Rehabilitation of roads and associated drainage systems in/near the community/site 
- 6 Migrating to another area/camp 
- 7 Prepping camp for flooding (elevating tents, adding tarps, etc.) 

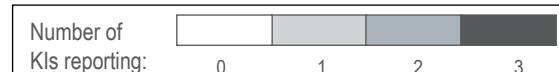
Number of KIs reporting that the following community/site has/is:

- 1 Near a localised low point or depression (ponding of water) 
- 2 Near overland flow paths 
- 3 Poor surface water drainage 

! 100%
of KIs reported that there are **barriers** in implementing mitigation measures to prevent flood hazards

📶 100%
of KIs reported that the **community can call for emergency services** in the event of a flash flood

🙋 100%
of KIs reported that the **community does not have any safe spaces, dignity kits, or case management services** in the event of a flash flood



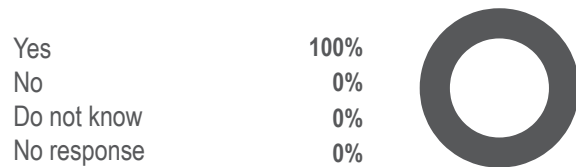
KNOWLEDGE: FLOOD RISKS AND PREPARATION PRACTICES

Number of KIs reporting the following as barriers to implementing mitigation measures:

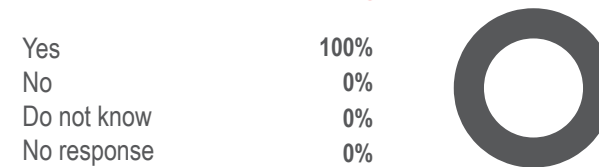


FLOOR RISK PERCEPTION

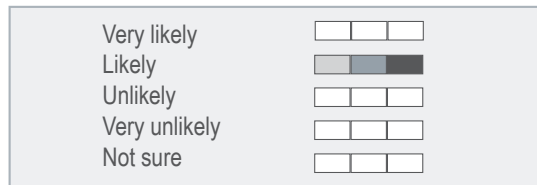
Number of KIs considering this site at high risk of being affected by flooding:



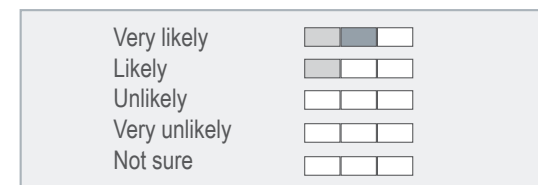
Number of KIs who think that inadequate road/drainage systems are a major contributing factor:



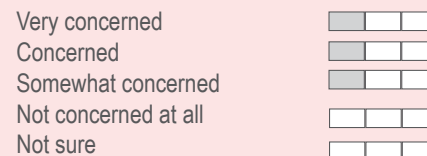
KIs' estimations that the site will be affected by a flood in the next three to four months:



KIs' view of the likelihood that community/site management and other response actors will take preventive measures against the effects of a flood:



KIs' view of the level of concern within the community/site about the potential for flooding:

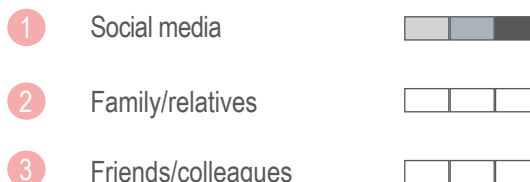


FLOOD ZONE KNOWLEDGE

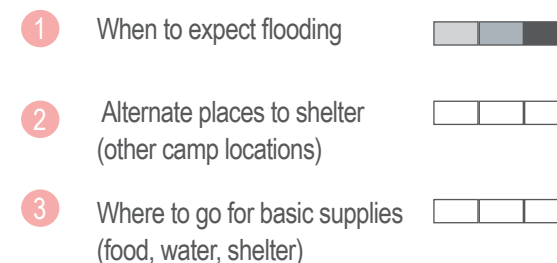
Number of KIs reporting the following sources from which people in the community get information on flood warnings and preparedness:



Number of KIs reporting the following as sources people in the community/site trust the most to give accurate information on flood preparedness:

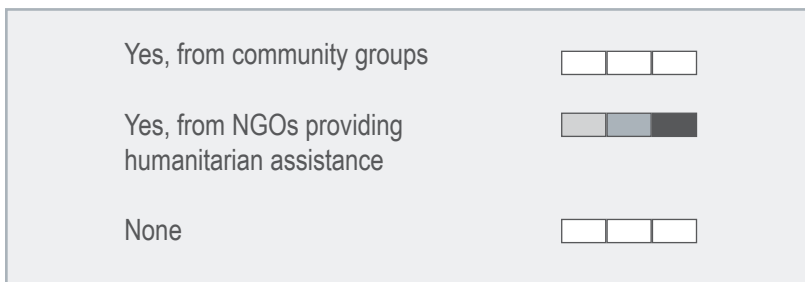


Type of information provided by these sources:

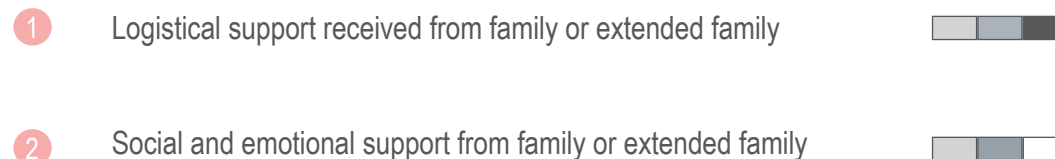


COMMUNICATION WITH AID PROVIDERS

Number of KIs reporting that this community receives aid from aid providers:



Number of KIs reporting that the following resources would be available to residents in the community/site in the event of a flash flood:

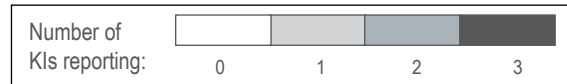


67%

of KIs reported that in the event of a flash flood, members of this community would be able to **communicate** with **both** aid providers and local authorities about their **immediate needs**

100%

of KIs reported that **WhatsApp** (or any other mobile phone-based platform) was the **preferred means of communicating** with aid providers about **services or information relating to flash flooding**



OVERVIEW



NUMBER OF HOUSES⁵

- Total number of houses: **2,617**
- Houses likely to be severely damaged (non-liveable): **192 (7.3%)**
- Houses likely to be partially damaged (liveable): **333 (12.7%)**



SHELTER TYPE⁶

- Shelters using tarpaulins: **22%**
- Tents: **8%**
- Houses: **70%**



MAIN WATER SOURCES⁶

- Water trucking: **25%**
- Piped network: **75%**

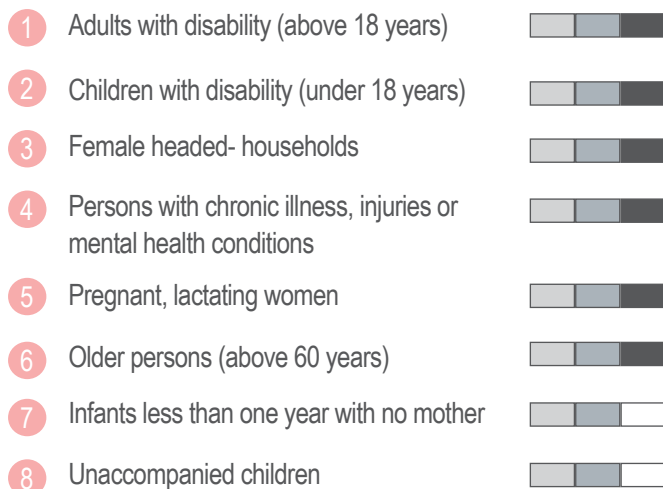


WATER STORAGE METHODS⁶

- Bottles: **33%**
- Shared big storage tanks: **0%**
- Jerry Cans (20Lt): **100%**
- Storage tanks: **100%**
- Barrels: **100%**

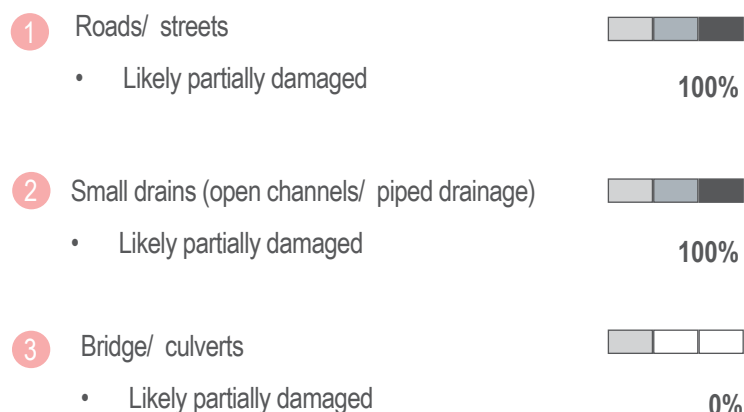
ASSESSING VULNERABILITY AND DAMAGE

Number of KIs reporting the following vulnerable groups at risk in the event of a flash flood:

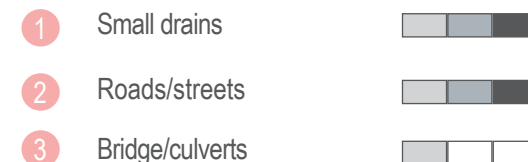


Number of KIs reporting the following community infrastructure most likely to be affected by flash flooding:

*Number of KIs who identified specific infrastructure reporting the extent of damage:



Number of KIs reporting the following as a high repair or rehabilitation priority:



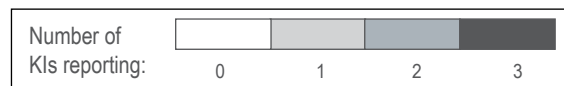
100% of KIs reported that **water** would be available to **most** people in the event of a flash flood



100% of KIs reported that **electricity** would be available to **most** people in the event of a flash flood

⁵ As reported by KIs.




⁶ As reported by KIs, by percentage of shelters/ water sources/ water storage methods







KNOWLEDGE: FLOOD RISKS AND PREPARATION PRACTICES

100% of KIs reported that the community has **experienced flooding** in the past two years

Number of KIs reporting the following as mitigation measures that have been taken in the past to prevent the adverse effects of flooding:




- 1 Clearing drains of debris/unblocking drains 
- 2 Rehabilitation of roads and associated drainage systems in/near the community/site 
- 3 Graveling/paving vehicle/pedestrian accessways to ensure they remain accessible during heavy rain 

Number of KIs reporting the following as causes of flooding in this community/site:





- 1 Poor surface water drainage 
- 2 Poor quality of the surrounding roads and related drainage systems 
- 3 This community is in a particularly flood prone region 
- 4 Blocked drains 

100% of KIs reported that there are **contingency plans in place, taken by humanitarian actors** to help mitigate the effects of a future flash flood





Number of KIs reporting the following mitigation measures currently in place:

- 1 Clearing drains of debris/unblocking drains 
- 2 Rehabilitation of roads and associated drainage systems in/near the community/site 
- 3 Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 

Number of KIs reporting the following as the most successful flood mitigation measures:

- 1 Clearing drains of debris/unblocking drains 
- 2 Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures 
- 3 Rehabilitation of roads and associated drainage systems in/near the community/site 
- 4 Prepping camp for flooding (elevating tents, adding 

Number of KIs reporting that the following community/site has/is:

- 1 Near a drainage channel 
- 2 Near overland flow paths 
- 3 Poor surface water drainage 
- 4 Near a localised low point or depression (ponding of water) 

 **100%**

of KIs reported that there are **no barriers** in implementing mitigation measures to prevent flood hazards

 **100%**

of KIs reported that the **community can call for emergency services** in the event of a flash flood

 **100%**

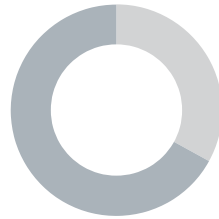
of KIs reported that the **community does not have any safe spaces, dignity kits, or case management services** in the event of a flash flood



FLOOR RISK PERCEPTION

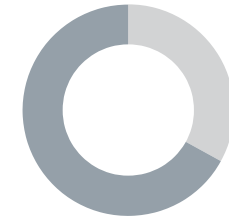
Number of KIs considering this site at high risk of being affected by flooding:

Yes	33%
No	67%
Do not know	0%
No response	0%

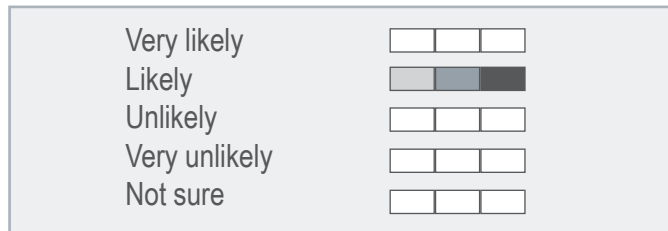


Number of KIs who think that inadequate road/drainage systems are a major contributing factor:

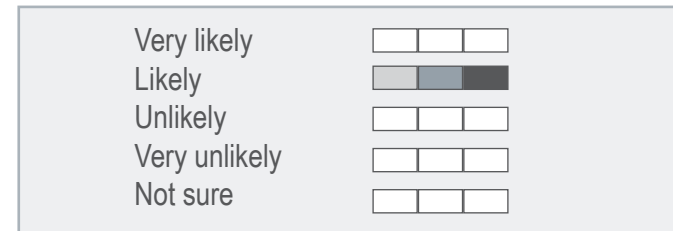
Yes	33%
No	0%
Do not know	0%
No response	67%



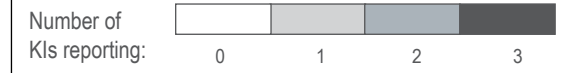
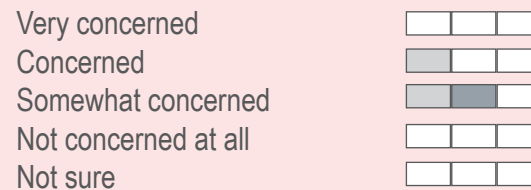
KIs' estimations that the site will be affected by a flood in the next three to four months:



KIs' view of the likelihood that community/site management and other response actors will take preventive measures against the effects of a flood:

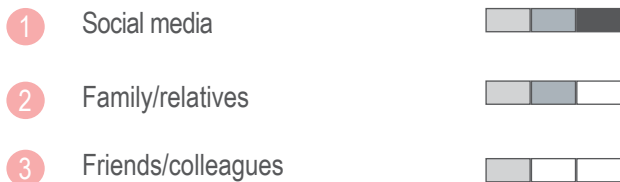


KIs' view of the level of concern within the community/site about the potential for flooding:

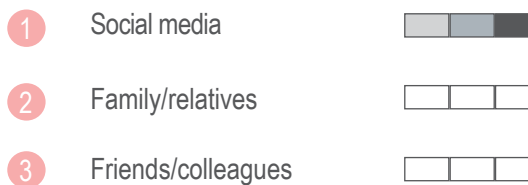


FLOOD ZONE KNOWLEDGE

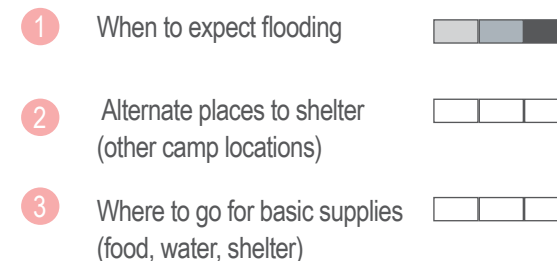
Number of KIs reporting the following sources from which people in the community get information on flood warnings and preparedness:



Number of KIs reporting the following as sources people in the community/site trust the most to give accurate information on flood preparedness:

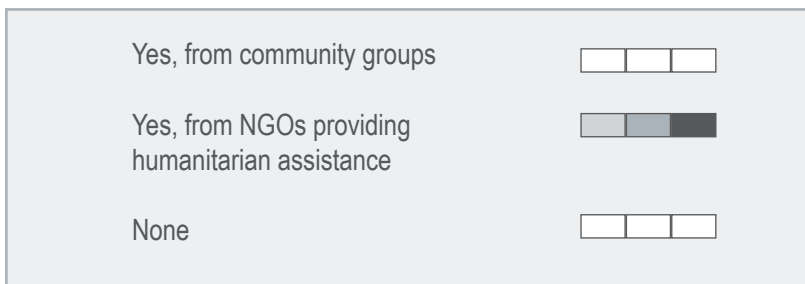


Type of information provided by these sources:

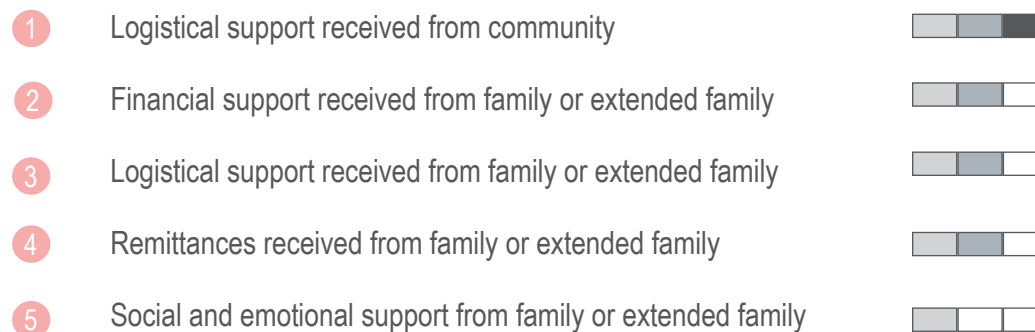


COMMUNICATION WITH AID PROVIDERS

Number of KIs reporting that this community receives aid from aid providers:



Number of KIs reporting that the following resources would be available to residents in the community/site in the event of a flash flood:



100%

of KIs reported that in the event of a flash flood, members of this community would be able to **communicate** with **both** aid providers and local authorities about their **immediate needs**

100%

of KIs reported that **WhatsApp** (or any other mobile phone-based platform) was the **preferred means of communicating** with aid providers about **services or information relating to flash flooding**



OVERVIEW



NUMBER OF HOUSES⁵

- Total number of houses: **2,550**
- Houses likely to be severely damaged (non-liveable): **27 (1.2%)**
- Houses likely to be partially damaged (liveable): **117 (4.6%)**



SHELTER TYPE⁶

- Shelters using tarpaulins: **0%**
- Tents: **0%**
- Houses: **100%**



MAIN WATER SOURCES⁶

- Water trucking: **30%**
- Piped network: **70%**



WATER STORAGE METHODS⁶

- Bottles: **0%**
- Shared big storage tanks: **0%**
- Jerry Cans (20Lt): **67%**
- Storage tanks: **100%**
- Barrels: **100%**

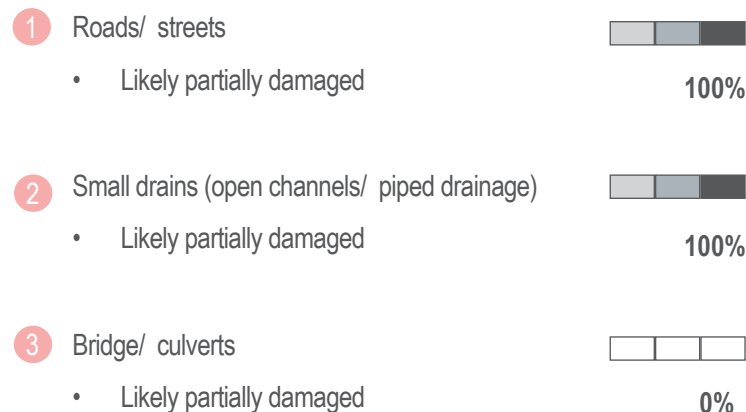
ASSESSING VULNERABILITY AND DAMAGE

Number of KIs reporting the following vulnerable groups at risk in the event of a flash flood:



Number of KIs reporting the following community infrastructure most likely to be affected by flash flooding:

*Number of KIs who identified specific infrastructure reporting the extent of damage:



Number of KIs reporting the following as a high repair or rehabilitation priority:



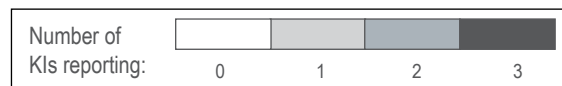
100% of KIs reported that **water** would be available to **most** people in the event of a flash flood



100% of KIs reported that **electricity** would be available to **most** people in the event of a flash flood

⁵ As reported by KIs.

⁶ As reported by KIs, by percentage of shelters/ water sources/ water storage methods



KNOWLEDGE: FLOOD RISKS AND PREPARATION PRACTICES

100% of KIs reported that the community has **experienced flooding** in the past two years

Number of KIs reporting the following as mitigation measures that have been taken in the past to prevent the adverse effects of flooding:

- 1 Clearing drains of debris/unblocking drains
- 2 Rehabilitation of roads and associated drainage systems in/near the community/site
- 3 Graveling/paving vehicle/pedestrian accessways to ensure they remain accessible during heavy rain

Number of KIs reporting the following as causes of flooding in this community/site:

- 1 Blocked drains
- 2 Poor quality of the surrounding roads and related drainage systems
- 3 This community is in a particularly flood prone region
- 4 Poor surface water drainage

100% of KIs reported that there are **no contingency plans in place** to help mitigate the effects of a future flash flood

Number of KIs reporting the following mitigation measures currently in place:

- ! Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures
- ! Rehabilitation of roads and associated drainage systems in/near the community/site

- ! Clearing drains of debris/unblocking drains

Number of KIs reporting the following as the most successful flood mitigation measures:

- ! Prepping camp for flooding (elevating tents, adding tarps, etc.)
- ! Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures
- ! Clearing drains of debris/unblocking drains
- ! Rehabilitation of roads and associated drainage systems in/near the community/site

Number of KIs reporting that the following community/site has/is:

- 1 Near overland flow paths
- 2 Near a localised low point or depression (ponding of water)
- 3 Poor surface water drainage

100%

of KIs reported that there are **no barriers** in implementing mitigation measures to prevent flood hazards

 **100%**

of KIs reported that the **community can call for emergency services** in the event of a flash flood

 **100%**

of KIs reported that the **community does not have any safe spaces, dignity kits, or case management services** in the event of a flash flood

Number of KIs reporting:



FLOOR RISK PERCEPTION

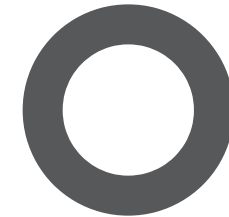
Number of KIs considering this site at high risk of being affected by flooding:

Yes	0%
No	100%
Do not know	0%
No response	0%

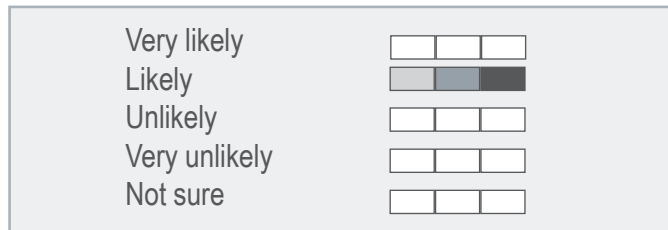


Number of KIs who think that inadequate road/drainage systems are a major contributing factor:

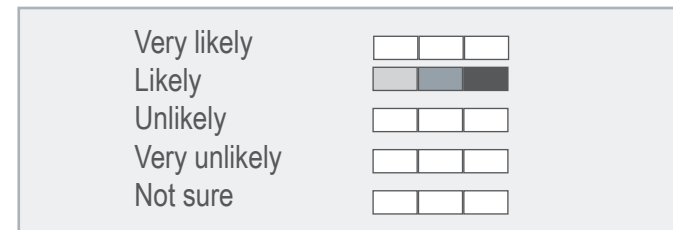
Yes	0%
No	0%
Do not know	0%
No response	100%



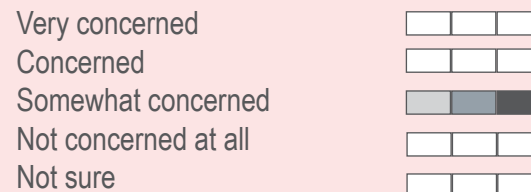
KIs' estimations that the site will be affected by a flood in the next three to four months:



KIs' view of the likelihood that community/site management and other response actors will take preventive measures against the effects of a flood:



KIs' view of the level of concern within the community/site about the potential for flooding:

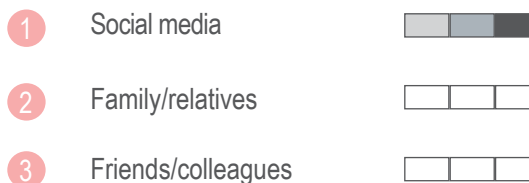


FLOOD ZONE KNOWLEDGE

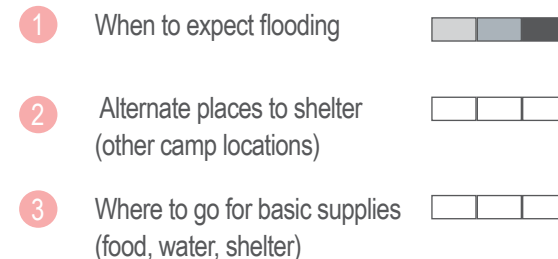
Number of KIs reporting the following sources from which people in the community get information on flood warnings and preparedness:



Number of KIs reporting the following as sources people in the community/site trust the most to give accurate information on flood preparedness:

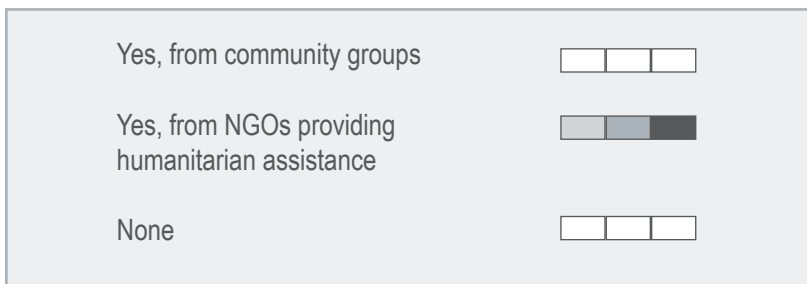


Type of information provided by these sources:

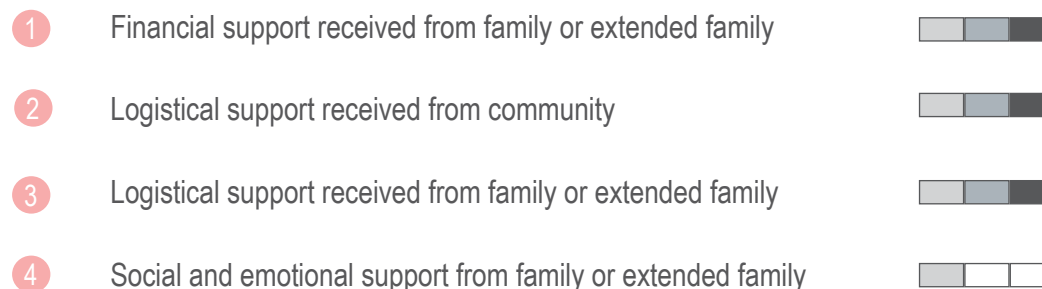


COMMUNICATION WITH AID PROVIDERS

Number of KIs reporting that this community receives aid from aid providers:



Number of KIs reporting that the following resources would be available to residents in the community/site in the event of a flash flood:

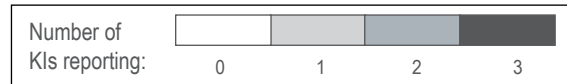


67%

of KIs reported that in the event of a flash flood, members of this community would be able to **communicate** with **both** aid providers and local authorities about their **immediate needs**

100%

of KIs reported that **WhatsApp** (or any other mobile phone-based platform) was the **preferred means of communicating** with aid providers about **services or information relating to flash flooding**



OVERVIEW



NUMBER OF HOUSES⁵

- Total number of houses: **1,542**
- Houses likely to be severely damaged (non-liveable): **500 (32.4%)**
- Houses likely to be partially damaged (liveable): **383 (24.8%)**



SHELTER TYPE⁶

- Shelters using tarpaulins: **33%**
- Tents: **25%**
- Houses: **42%**



MAIN WATER SOURCES⁶

- Water trucking: **87%**
- Piped network: **13%**



WATER STORAGE METHODS⁶

- Bottles: **0%**
- Shared big storage tanks: **33%**
- Jerry Cans (20Lt): **100%**
- Storage tanks: **100%**
- Barrels: **100%**

ASSESSING VULNERABILITY AND DAMAGE

Number of KIs reporting the following vulnerable groups at risk in the event of a flash flood:

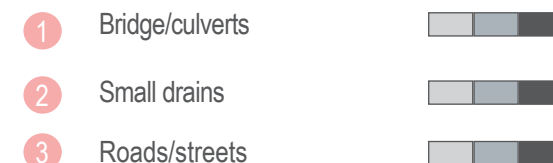


Number of KIs reporting the following community infrastructure most likely to be affected by flash flooding:

*Number of KIs who identified specific infrastructure reporting the extent of damage:



Number of KIs reporting the following as a high repair or rehabilitation priority:



33% of KIs reported that **water** would be available to **most** people in the event of a flash flood

67% of KIs reported that **electricity** would be available to **most** people in the event of a flash flood

⁵ As reported by KIs.

⁶ As reported by KIs, by percentage of shelters/ water sources/ water storage methods



KNOWLEDGE: FLOOD RISKS AND PREPARATION PRACTICES

100% of KIs reported that the community has **experienced flooding** in the past two years

Number of KIs reporting the following as mitigation measures that have been taken in the past to prevent the adverse effects of flooding:

- 1 Clearing drains of debris/unblocking drains
- 2 Migrating to another area/camp
- 3 Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures
- 4 Graveling/paving vehicle/pedestrian accessways to ensure they remain accessible during heavy rain
- 5 Prepping shelters for flooding, raising shelter, adding tarps, etc.
- 6 Staying with family members in another location

Number of KIs reporting the following as causes of flooding in this community/site:

- 1 Poor quality of the surrounding roads and related drainage systems
- 2 This community is in a particularly flood prone region
- 3 Blocked drains
- 4 Poor quality of the surrounding roads and related drainage systems

67% of KIs reported that there are **contingency plans in place, taken by humanitarian actors, individuals, and camp management to help mitigate the effects of a future flash flood**

Number of KIs reporting the following mitigation measures currently in place:

- 1 Prepping shelters for flooding (raising shelter, adding tarps, etc.)
- 2 Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures
- 3 Graveling/paving vehicle/pedestrian accessways to ensure they remain accessible during heavy rain
- 4 Migrating to another area/camp
- 5 None – did not feel the need to take mitigation measures

Number of KIs reporting the following as the most successful flood mitigation measures:

- 1 Prepping shelters for flooding (raising shelter, adding tarps, etc.)
- 2 Digging drainage channels/constructing flood diversion bunds to direct water away from shelters/structures
- 3 Graveling/paving vehicle/pedestrian accessways to ensure they remain accessible during heavy rain
- 4 Clearing drains of debris/unblocking drains
- 5 Migrating to another area/camp

Number of KIs reporting that the following community/site has/is:

- 1 Near a localised low point or depression (ponding of water)
- 2 Poor surface water drainage
- 3 Near overland flow paths

100%

of KIs reported that there are **barriers** in implementing mitigation measures to prevent flood hazards



100%

of KIs reported that the **community can call for emergency services** in the event of a flash flood



100%

of KIs reported that the **community does not have any safe spaces, dignity kits, or case management services** in the event of a flash flood

Number of KIs reporting:



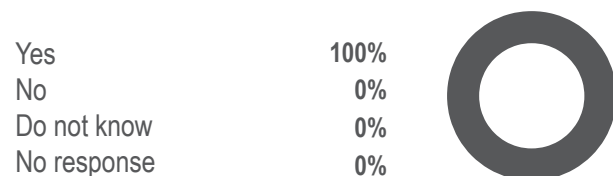
KNOWLEDGE: FLOOD RISKS AND PREPARATION PRACTICES

Number of KIs reporting the following as barriers to implementing mitigation measures

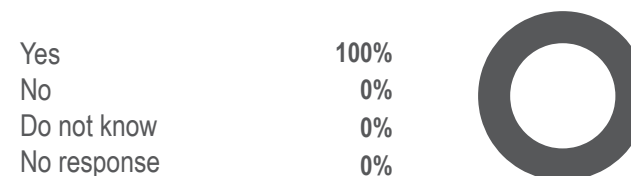


FLOOR RISK PERCEPTION

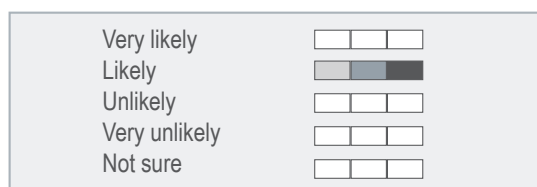
Number of KIs considering this site at high risk of being affected by flooding:



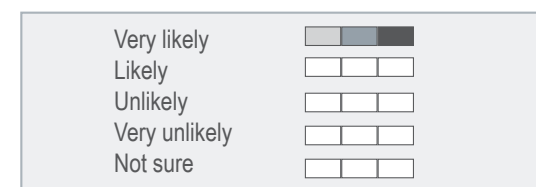
Number of KIs who think that inadequate road/drainage systems are a major contributing factor:



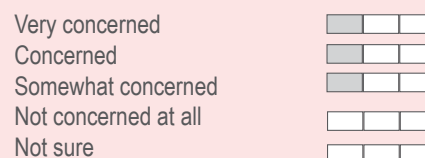
KIs' estimations that the site will be affected by a flood in the next three to four months:



KIs' view of the likelihood that community/site management and other response actors will take preventive measures against the effects of a flood:

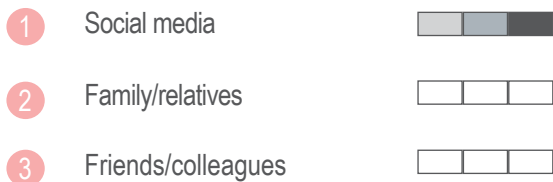


KIs' view of the level of concern within the community/site about the potential for flooding:

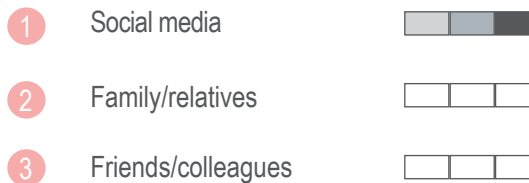


FLOOD ZONE KNOWLEDGE

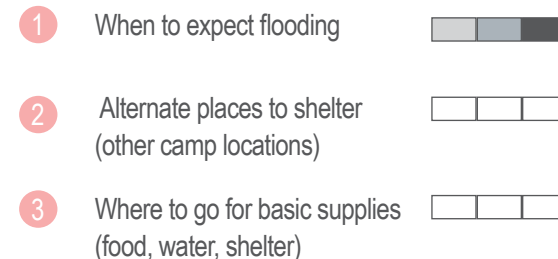
Number of KIs reporting the following sources from which people in the community get information on flood warnings and preparedness:



Number of KIs reporting the following as sources people in the community/site trust the most to give accurate information on flood preparedness:

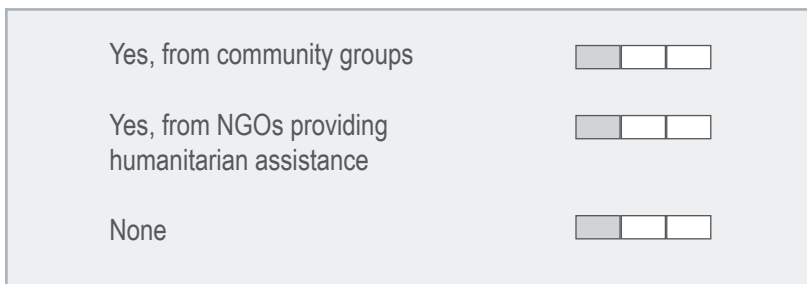


Type of information provided by these sources:

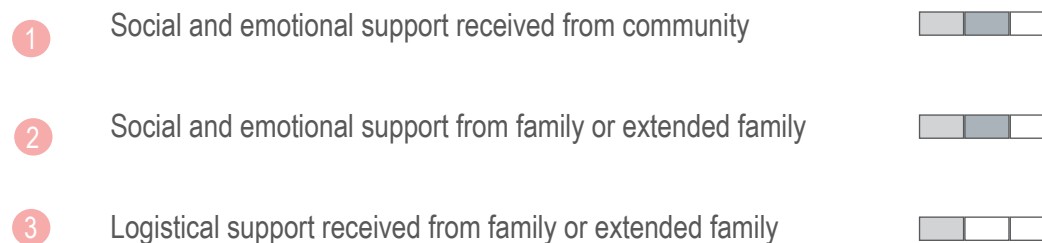


COMMUNICATION WITH AID PROVIDERS

Number of KIs reporting that this community receives aid from aid providers:



Number of KIs reporting that the following resources would be available to residents in the community/site in the event of a flash flood:



 **100%**

of KIs reported that in the event of a flash flood, members of this community would be able to **communicate** with **only** aid providers about their **immediate needs**

 **100%**

of KIs reported that **SMS** was the **preferred means of communicating** with aid providers about **services or information relating to flash flooding**



ABOUT REACH

REACH facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT). For more information please visit our website: www.reach-initiative.org. You can contact us directly at: geneva@reach-initiative.org and follow us on Twitter [@REACH_info](https://twitter.com/REACH_info).

Endnotes

The complete Flooding Susceptibility and Preparedness Survey dataset is available [here](#).

1. OCHA, Syrian Arab Republic: Cross-Border Humanitarian Reach and Activities from Turkey (December – 2019).
Published 24 March 2020
2. Save the Children: Northern Syria Flooding: Thousands of Children at Risk of Further Displacement (20 December 2019).
3. Logistical support refers to assistance with transportation, packing, coordination and communication.
4. By percent of assessed communities/sites
5. As reported by KIs
6. As reported by KIs, by percentage of shelters/water sources/water storage methods

CONTACT

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REACH Syria Emergency Team
Email: jimmie.braley@reach-initiative.org
