Community Resilience Assessment Tool

Household and committee surveys for measuring overall community resilience and for tracking changes following Red Cross integrated interventions ("Ritaline")

Version History

Version No.	Change	Date	Input by:
1.0	Document Creation	Aug-2013	Q&L-Panama
2.0	Updated WatSan section	Sept-2013	Q&L-Panama
3.0	Changes originating from: Field testing Latin America Field testing Caribbean	Nov-2013	Project teams in Panama, Costa Rica, El Salvador, Nicaragua; Belize, Bahamas, Guyana; Regional Delegations Central America; South America; Caribbean Q&L-Panama
4.0	Changes originating from: Handheld device design and testing	Dec-2013	IT teams South America (SRID) and Washington (ODK / Formhub)

Content

Overview

The development of this resilience assessment tool arises from a short-term need identified in the context of the American Red Cross' *Resilience in the Americas* (RITA) program, based on ongoing discussions within the ARC on the meaning of resilience, and implications for programming[1]. It builds on the American Red Cross International Response and Programs' move towards integrated programming for resilience (conceptual framework forthcoming).

This document presents four complementary assessment surveys, based on a review of the academic literature and current best practices within the American Red Cross: a questionnaire focusing on critical components of community resilience; and sector-specific assessment tools, limited here to the two sectors most frequently prioritized by the communities in the RITA needs assessment process, namely Disaster Risk Reduction (DRR) and Water / Sanitation (including health components addressed in Water/Sanitation programming). However, it is expected that additional modules will be developed to address other critical needs for which the Red Cross has experience (shelter, livelihoods, violence prevention, etc.), as well as interventions around components of resilience (building community capacity and cohesion, engagement of external actors, advocacy, etc.). The assessment tools are:

Tool 1: Key informant interview – community leaders
Estimated time of completion: 30 minutes.
This Key Informant Interview is adapted from the World Bank's Social Capital Assessment Tool (SOCAT)[2], targeting 2-5 community leaders to collect critical data on the level of social capital in the community. The questionnaire includes 54 closed questions, adapted from the original 140-question SOCAT Community Questionnaire.

Tool 2: Household survey
This survey is composed of a series of modules:
-   **Module HH1: CART Household Resilience survey**
    Estimated time of completion per household: 20 minutes.
    This door-to-door survey includes 24 questions measuring resilience according to key parameters identified by the Terrorism and Disaster Center[3], based on "four interrelated, overlapping domains that both reflect and contribute to community resilience: connection

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[1] See Annex 1 for an overview of these discussions.
[2] The tool used here is adapted from "Annex 1B Community Questionnaire" in the SOCAT instruments, available at: http://siteresources.worldbank.org/INTSOCIALCAPITAL/Resources/Social-Capital-Assessment-Tool--SOCAT-/annex1.pdf
[3] Pfefferbaum RL, Pfefferbaum B, and Van Horn RL (2011). *Communities Advancing Resilience Toolkit (CART): The CART Integrated System*. Oklahoma City, OK: Terrorism and Disaster Center at the University of Oklahoma Health Sciences Center

and caring, resources, transformative potential and disaster management."[4] As this is a tool external to the Red Cross, no changes have been made to the questionnaire. Permission was granted by the questionnaire's lead author for use in IRP community work.

Note: This survey will be used both as an integral part of the multi-sector assessment (community level: resilience; DRR; water and sanitation) and as a standalone tool for measuring overall changes in resilience levels in the different countries where the ARC supports interventions (program outcome level).

- **Modules HH2-HH3: Household multi-sector survey (DRR and Water/Sanitation)**
  Estimated time of completion per household: 40 minutes.
  The 74 questions in this door-to-door survey aim to highlight changes in *knowledge, attitudes and practices* of families in relation to disaster risk, health and hygiene, while providing specific indicators on the overall improvement of community conditions *according to project interventions*. They include questions related to the direct observation of water / sanitation practices.

  Notes:
  - *As in previous DRR assessment tools, and particularly the ARC/JHSPH DRR baseline, the Priorities for Action of the Hyogo Framework for Action have been retained as the guiding framework for the DRR assessment tools[5].*
  - *For the water and sanitation component, the assessment tool is predominantly based on the PHAST baseline, but integrates changes to reflect the context of the RITA project, including an urban component, where more sophisticated water and sanitation systems are commonly found. However, the assessment tool was also reviewed to ensure it includes the necessary information to include the 8 key indicators from the Food and Nutrition Technical Assistance (FANTA) Project.[6]*

Tool 3: Key informant interview – Disaster Risk Reduction Committee
Estimated time of completion: 30 minutes.
This questionnaire combines two sections:
- 21 Key Informant Interview questions with the head of the Community Disaster Management Committee (or equivalent);
- 7 questions related to the direct observation of aspects of particular relevance to community disaster risk management, focusing particularly on measuring the change in practices among community leadership.

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[4] Pfefferbaum RL, Pfefferbaum B, Van Horn RL, Neas BR, Houston JB (2013). "Building community resilience to disasters through a community-based intervention: CART applications", *Journal of Emergency Management,* Vol. 11, No. 2, March/April 2013.
[5] See Annex 2 for detail.
[6] See Annex 3 for detail.

Tool 4: Key informant interview – Water & Sanitation Committee

Estimated time of completion: 30 minutes.

Following the same template as the DRR tool, this questionnaire combines two sections:

- 18 questions for a Key Informant Interview with the head of the Community WatSan committee, or other group responsible for water and sanitation;
- Direct observation of water supply and treatment (7 questions) and waste water treatment (6 questions).

Figure 1: What are we measuring?

Overall indicators of community resilience to shocks and stresses (not necessarily tied to Red Cross interventions)

SOCAT	CART
DRR and Wat/San Committee discussions	DRR and WatSan Household surveys

Community leadership and organizational capacity

Household awareness and behavior

Contribution of specific Red Cross interventions to sector needs
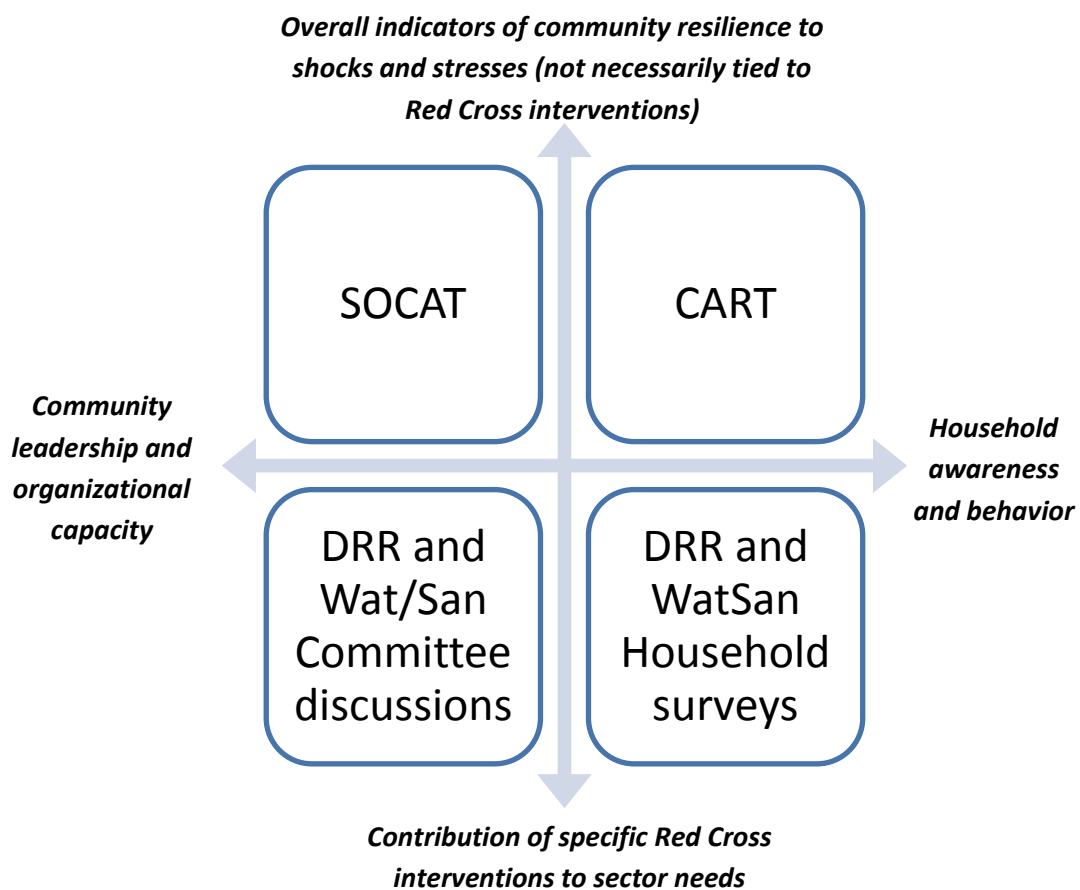
Assessment rollout:

1. **Sample size calculation:**

The RITA project also identified a harmonized approach to sample size calculation for the communities involved in the project:

- Step 1: Once the RITA project manager has the number of households in the community (usually from the detailed community map), he/she numbers them on the map (e.g. 1 through 500)
- Step 2: He/she then enters this number in the RITAline Excel sheet calculator and gets the sample size (e.g. 500 households means 201 household interviews).
- Step 3: Using the "random.exe" file, he/she then enters (1) the sample population (number of households: in this example 500) and (2) the sample size (from the Excel sheet – in this example 201), and it randomly identifies the 201 households to interview (e.g. the numbers 6, 11, 19, 20, etc. could show up).
- Step 4: the RITA project manager highlights on the map these houses for interview (e.g. household number 6, 11, 19, 20). – Individual enumerator supervisors then head out with their teams to their assigned sub-segment and go to the identified houses.

2. **Use of handheld devices for data collection**

The four assessment tools were designed to ensure their seamless implementation using handheld devices, particularly the household survey, which is more data intensive.

The compiling of the findings will take advantage of such technology, and the household survey was developed for the Android operating system.

The presentation of findings from these four tools is designed to be particularly user friendly for RITA project managers, and allow them to take closer looks at specific responses as needs arise.

Tool 1: Key Informant Interview – Community Leadership

Adapted from the Social Capital Assessment Tool (SOCAT), World Bank

__Guidance:__ **The survey should target the key leadership (2-5 persons) from the Community Development Committee or similar structure. If there is no such committee, the survey can take place with one or two leaders from 2 or 3 community committees, such as a Community Disaster Committee or the Community Water Committee or other representative bodies.**
If possible, try to use the same key informant(s) at each visit to ensure consistency in reporting and to facilitate the development of a strong relationship between community members and the Red Cross.

1. Community Characteristics

1.1 How many years has the community been in existence?

More than 20 years	[ ]	1
Between 10 and 20 years	[ ]	2
Fewer than 10 years	[ ]	3

1.2 Overall, the level of living of this community may be characterized as:

Wealthy	[ ]	1
Well-to-do	[ ]	2
Average	[ ]	3
Poor	[ ]	4
Very poor	[ ]	5

1.3 In the last three years, the number of people living in this community has

Increased	[ ]	1
Decreased	[ ]	2
Remained the same	[ ]	3

1.4 Do any of the following problems exist in this community?

	Yes	No
a. Burglaries	[ ] 1	[ ] 2
b. Robberies/assaults	[ ] 1	[ ] 2
c. Gangs	[ ] 1	[ ] 2
d. Vandalism	[ ] 1	[ ] 2
e. Violent disputes	[ ] 1	[ ] 2
f. Alcohol abuse	[ ] 1	[ ] 2
g. Substance (drug) abuse	[ ] 1	[ ] 2
h. Teen pregnancy	[ ] 1	[ ] 2
i. Domestic violence	[ ] 1	[ ] 2
j. Child abuse	[ ] 1	[ ] 2

k. Prostitution	[ ] 1	[ ] 2
l. Other problems	[ ] 1	[ ] 2

1.5 In the last three years, the overall quality of life of the people living in this community has: (consider job availability, safety and security, environment, housing, etc.)

Improved	[ ] 1
Worsened	[ ] 2
Remained the same	[ ] 3

2. Infrastructure and access to services

2A. Electricity

2A.1 What part of the community has household electrical services?

The entire community	[ ] 1
Most of the community	[ ] 2
About half the community	[ ] 3
Less than half/very few	[ ] 4
No one in the community	[ ] 5

2A.2 Currently, the quality of the electric service within the homes of this community is:

Very good	[ ] 1
Good	[ ] 2
Average	[ ] 3
Poor	[ ] 4
Very poor / no service	[ ] 5

2A.3 In the last three years, the electric service to this community has:

Improved	[ ] 1
Worsened	[ ] 2
Remained the same	[ ] 3

2B. Public lighting

2B.1 Currently, the quality of public lighting service is:

Very good	[ ] 1
Good	[ ] 2
Average	[ ] 3
Poor	[ ] 4
Very poor / no service	[ ] 5

2B.2 In the last three years, the public lighting service has:

Improved	[ ] 1
Worsened	[ ] 2
Remained the same	[ ] 3

2C. Drinking Water

2C.1 What part of the community has pipe-borne water?

The entire community	[ ] 1
Most of the community	[ ] 2
About half the community	[ ] 3
Less than half/very few	[ ] 4
No one in the community	[ ] 5

2C.2 In the last three years, potable water service has:

Improved	[ ] 1
Worsened	[ ] 2
Remained the same	[ ] 3

2C.3 Currently, the potable water service is:

Very good	[ ] 1
Good	[ ] 2
Average	[ ] 3
Poor	[ ] 4
Very poor	[ ] 5

2D. Telephone service

2D.1 What part of the community has home telephone services (landline / cellphone)?

The entire community	[ ] 1
Most of the community	[ ] 2
About half the community	[ ] 3
Less than half/very few	[ ] 4
No one in the community	[ ] 5

2D.2 In the last three years, the telephone service to this community has:

Improved	[ ] 1
Worsened	[ ] 2
Remained the same	[ ] 3

2D.3 Currently, the quality of telephone service within the homes of this community is:

Very good	[ ] 1
Good	[ ] 2
Average	[ ] 3
Poor	[ ] 4
Very poor / no service	[ ] 5

2E. Internet

2E.1 What part of the community has access to public Internet services?

The entire community	[ ]	1
Most of the community	[ ]	2
About half the community	[ ]	3
Less than half/very few	[ ]	4
No one in the community	[ ]	5

2F. Sewage

2F.1 What fraction of the community is served by a public sewage system?

The entire community	[ ]	1
Most of the community	[ ]	2
About half the community	[ ]	3
Less than half/very few	[ ]	4
No one in the community	[ ]	5

2F.2 In the last three years, the quality of the public sewage system in this community has:

Improved	[ ]	1
Worsened	[ ]	2
Remained the same	[ ]	3

2F.3 Currently, the public sewage system is:

Very good	[ ]	1
Good	[ ]	2
Average	[ ]	3
Poor	[ ]	4
Very poor / no sewage	[ ]	5

2F.4 Do the streets of this community have sufficient sewers and drains to handle excess water and prevent flooding when it rains?

Yes	[ ]	1
No	[ ]	2

2G. Garbage Collection

2G.1 What fraction of the community is served by a garbage collection service?

The entire community	[ ]	1
Most of the community	[ ]	2
About half the community	[ ]	3
Less than half/very few	[ ]	4
No one in the community	[ ]	5

2G.2 In the last three years, the quality of the garbage disposal in this community has:

Improved	[ ]	1
Worsened	[ ]	2
Remained the same	[ ]	3

2H. Transportation

2H.1 What fraction of the community is accessible by car during a storm?

The entire community	[ ]	1
Most of the community	[ ]	2
About half the community	[ ]	3
Less than half/very few	[ ]	4
No one in the community	[ ]	5

2H.2 In the last three years, the roads leading to this community have:

Improved	[ ]	1
Worsened	[ ]	2
Remained the same	[ ]	3

2H.3 Public transportation is available:

Every day	[ ]	1
Some days of the week	[ ]	2
One day per week or less	[ ]	3
No public transportation	[ ]	4

2H.4 In the last three years, the quality and service of public transportation has:

Improved	[ ]	1
Worsened	[ ]	2
Remained the same	[ ]	3

2I. Housing

2I.1 The availability of housing in this community is:

Adequate	[ ]	1
Deficient	[ ]	2

2I.2 In the last three years, the quality of housing in this community has:

Improved	[ ]	1
Worsened	[ ]	2
Remained the same	[ ]	3

2J. Security

2J.1 Security or police service is provided by:

The police	[ ]	1
A private company	[ ]	2
The community	[ ]	3
No service	[ ]	4

2J.2 This security service is provided to:

The entire community	[ ]	1
Most of the community	[ ]	2
About half the community	[ ]	3
Less than half/very few	[ ]	4
No one / no service	[ ]	5

2J.3 In the last three years, security has:

Improved	[ ]	1
Worsened	[ ]	2
Remained the same	[ ]	3

3. Education

3A. Primary School

3A.1 Is the number of primary schools/classrooms in this community sufficient to serve the number of school-age children in the community?

Yes	[ ]	1
No / No school	[ ]	2

3A.2 Is the number of teachers in these schools sufficient for the number of students?

Yes	[ ]	1
No / No school	[ ]	2

3A.3 The physical condition of the primary school is:

Very good	[ ]	1
Good	[ ]	2
Average	[ ]	3
Poor	[ ]	4
Very poor / No school	[ ]	5

3A.4 What percentage of eligible school-age children attend public primary schools?

All children	[ ]	1
Most children	[ ]	2
About half of the children	[ ]	3
Less than half	[ ]	4
Very few/none	[ ]	5

3B. Secondary School

3B.1 Is the number of secondary schools in this community sufficient to accommodate the number of secondary-school-age students in the community?

Yes	[ ]	1
No / No secondary school	[ ]	2

3B.2 Is the number of teachers in the secondary schools sufficient for the number of students?

    Yes   [ ] 1

    No / No secondary school   [ ] 2

3B.3 The physical condition of the secondary school is:

    Very good   [ ] 1

    Good   [ ] 2

    Average   [ ] 3

    Poor   [ ] 4

    Very poor / No secondary school [ ] 5

3B.4 What percentage of secondary-school-age children attend public secondary schools?

    All children   [ ] 1

    Most children   [ ] 2

    About half of the children   [ ] 3

    Less than half   [ ] 4

    Very few/none   [ ] 5

3C. Adult Education

3C.1 Is there an adult literacy campaign or program for the community?

    Yes   [ ] 1

    No   [ ] 2

3C.2 Are there job training programs for this community?

    Yes   [ ] 1

    No   [ ] 2

4. Access to healthcare

4.1 Does this community have a health clinic or hospital?

    Yes   [ ] 1

    No   [ ] 2

4.2 Does the health clinic or hospital regularly have sufficient:

	Sufficient	Insufficient	None / No health facility
a. Basic medicines	[ ] 1	[ ] 2	[ ] 3
b. Equipment/instruments	[ ] 1	[ ] 2	[ ] 3
c. Patient beds	[ ] 1	[ ] 2	[ ] 3
d. Ambulances	[ ] 1	[ ] 2	[ ] 3
e. Physicians	[ ] 1	[ ] 2	[ ] 3
f. Nurses	[ ] 1	[ ] 2	[ ] 3
g. Other health staff	[ ] 1	[ ] 2	[ ] 3

5. Environmental issues

5.1 Does this community have:

	Yes	No
a. Garbage dumping that contaminates rivers or wells	[ ] 1	[ ] 2
b. Garbage dumping that contaminates the ocean	[ ] 1	[ ] 2
c. Junk yards or scrap heaps	[ ] 1	[ ] 2
d. Standing water or stagnant pools	[ ] 1	[ ] 2
e. Slaughterhouses that dump waste in public places	[ ] 1	[ ] 2
f. Mechanics who dump waste oil in soil or water	[ ] 1	[ ] 2
g. Polluting industries	[ ] 1	[ ] 2
h. Clear-cutting or forest burns	[ ] 1	[ ] 2
i. Mining	[ ] 1	[ ] 2
j. Other (specify)	[ ] 1	[ ] 2

5.2 Overall, the current environmental condition of the community is:

Very good	[ ] 1
Good	[ ] 2
Average	[ ] 3
Poor	[ ] 4
Very poor	[ ] 5

5.3 In the last three years, the environmental conditions in the community have:

Improved	[ ] 1
Worsened	[ ] 2
Remained the same	[ ] 3

6. Economic opportunities

6.1 In the last three years, availability of employment has:

Improved	[ ] 1
Worsened	[ ] 2
Remained the same	[ ] 3

6.2 Does your community have a committee(s) or organization(s) that addresses local economic development issues and/or priorities?

Yes	[ ] 1
No	[ ] 2

6.3 Does your community take advantage of technical and/or financial resources from outside of the community to support economic development? (e.g. state, federal or private foundation grants, technical assistance, etc.)

Yes	[ ] 1
No	[ ] 2

7. Community cohesion and connectedness

7.1 Compared to other communities, how much do people in this community trust each other in matters of lending and borrowing?

More trust than in other communities	[ ] 1
Less trust than in other communities	[ ] 2
Remained the same	[ ] 3

7.2 In the last three years, has the level of trust improved, worsened, or stayed the same?

Improved	[ ] 1
Worsened	[ ] 2
Remained the same	[ ] 3

7.3 Which of the following organizations exist in this community?

	Yes	No
a. Community development committee	[ ] 1	[ ] 2
b. Cooperative (fishing, agriculture, crafts)	[ ] 1	[ ] 2
c. Parent-teacher association	[ ] 1	[ ] 2
d. Health committee	[ ] 1	[ ] 2
e. Youth group	[ ] 1	[ ] 2
f. Sports group	[ ] 1	[ ] 2
g. Cultural group	[ ] 1	[ ] 2
h. Civic group	[ ] 1	[ ] 2
i. Water and sanitation committee	[ ] 1	[ ] 2
j. Disaster risk management committee	[ ] 1	[ ] 2
k. Community disaster response/emergency team	[ ] 1	[ ] 2
l. Other	[ ] 1	[ ] 2

7.4 Which persons or organizations help or support these community-based organizations?

	Yes	No
a. Local government	[ ] 1	[ ] 2
b. National government	[ ] 1	[ ] 2
c. Politicians	[ ] 1	[ ] 2
d. Religious organizations	[ ] 1	[ ] 2
e. School/teachers	[ ] 1	[ ] 2
f. Nongovernmental organizations	[ ] 1	[ ] 2
g. Business group	[ ] 1	[ ] 2
h. Service club	[ ] 1	[ ] 2
i. Prosperous citizens	[ ] 1	[ ] 2
j. The community as a whole	[ ] 1	[ ] 2

Tool 2: Household survey

INTRODUCTION: when you first establish contact with the person you will interview for the first time, avoid going straight to the questions. Take 3 minutes to ask some questions/share comments such as: How are you? It is really hot, isn´t it? I like your house, etc.

The purpose of this introduction is to break the ice and make the interviewee feel more comfortable.

After breaking the ice, provide a short introduction including:
   i.   *my name is…… I am a RC volunteer supporting the chapter of the region ….*
   ii.   *purpose of the interview,*
   iii. *time that it could takes then ask if he/she has time for the interview.*

If the interviewee does not have time at that moment, ask if you can get back later and at what time is more convenient for him/her (take note and try to get back at the agreed time)

Module A: CART Household Resilience survey

General household information:

    A.   Number of families (parents with children) living in house:

    B.   Household structure[7]:

	Male	Female
0-4 years old		
5-17 years old		
18-50 years old		
Over 50 years old		

    C.   Number of family members with special needs (physically or mentally challenged): _____

    D.   Number of pregnant woman:_____

    E.   Highest educational level completed in household:

o   None / Primary only

o   Secondary

o   Higher education

    F.   How many years has the household lived in the community / neighborhood: _____years

Does the household have:

    G.   Electricity: ◯ Yes ◯ No

    H.   Tap water: ◯ Yes ◯ No

    I.   Access to health services: ◯ Yes ◯ No

               If yes, how far: ___min (e.g.: 1h ½: 90 min; 3 hours: 180 min)

    J.   Access to school: ◯ Yes ◯ No

               If yes, how far: ___ min (e.g.: 1h ½: 90 min; 3 hours: 180 min)

    K.   Access to latrines or toilets: ◯ Yes ◯ No

    L.   Ownership of land where house is built: ◯ Yes ◯ No

    M. Rent the house / apartment: ◯ Yes ◯ No

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[7] Age groups 0-5; 6-17 and 18 onwards based on UNICEF categories (combining childhood and teenagehood indicators). Note: PHAST categorizes as adults persons over the age of 15 (CBHFA as over 14); CBHFA categorizes elders as persons over 50.

Community Advancing Resilience Toolkit (CART)

[Revised Core Community Resilience Items (CART II) survey]
Note: This door-to-door survey includes 24 questions measuring "four interrelated, overlapping domains that both reflect and contribute to community resilience: connection and caring, resources, transformative potential and disaster management."[8]
As this is a tool external to the Red Cross, no changes have been made to the questionnaire. Permission was granted by the questionnaire's lead author for use in IRP community work.

Do you agree or disagree with the following statement?
1. **People in this community feel like they belong to the community.**
⭕ Strongly disagree ⭕ disagree ⭕ Neither agree nor disagree ⭕ agree ⭕ Strongly agree ⭕ Don't know

Do you agree or disagree with the following statement?
2. **People in this community are committed to the well-being of the community.**
⭕ Strongly disagree ⭕ disagree ⭕ Neither agree nor disagree ⭕ agree ⭕ Strongly agree ⭕ Don't know

Do you agree or disagree with the following statement?
3. **People in this community have hope about the future.**
⭕ Strongly disagree ⭕ disagree ⭕ Neither agree nor disagree ⭕ agree ⭕ Strongly agree ⭕ Don't know

Do you agree or disagree with the following statement?
4. **People in this community help each other.**
⭕ Strongly disagree ⭕ disagree ⭕ Neither agree nor disagree ⭕ agree ⭕ Strongly agree ⭕ Don't know

Do you agree or disagree with the following statement?
5. **This community treats people fairly no matter what their background is.**
⭕ Strongly disagree ⭕ disagree ⭕ Neither agree nor disagree ⭕ agree ⭕ Strongly agree ⭕ Don't know

Do you agree or disagree with the following statement?
6. **People in this community support programs for children and families.**
⭕ Strongly disagree ⭕ disagree ⭕ Neither agree nor disagree ⭕ agree ⭕ Strongly agree ⭕ Don't know

Do you agree or disagree with the following statement?
7. **This community has the resources it needs to take care of community problems (resources include money, information, technology, tools, raw materials, and services).**
⭕ Strongly disagree ⭕ disagree ⭕ Neither agree nor disagree ⭕ agree ⭕ Strongly agree ⭕ Don't know

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[8] Pfefferbaum RL, Pfefferbaum B, Van Horn RL, Neas BR, Houston JB (2013). "Building community resilience to disasters through a community-based intervention: CART applications", *Journal of Emergency Management,* Vol. 11, No. 2, March/April 2013.

Do you agree or disagree with the following statement?

8. This community has effective leaders.

○ Strongly disagree ○ disagree ○ Neither agree nor disagree ○ agree ○ Strongly agree ○ Don't know

Do you agree or disagree with the following statement?

9. People in this community are able to get the services they need.

○ Strongly disagree ○ disagree ○ Neither agree nor disagree ○ agree ○ Strongly agree ○ Don't know

Do you agree or disagree with the following statement?

10. People in this community know where to go to get things done.

○ Strongly disagree ○ disagree ○ Neither agree nor disagree ○ agree ○ Strongly agree ○ Don't know

Do you agree or disagree with the following statement?

11. This community works with organizations and agencies outside the community to get things done.

○ Strongly disagree ○ disagree ○ Neither agree nor disagree ○ agree ○ Strongly agree ○ Don't know

Do you agree or disagree with the following statement?

12. People in this community communicate with leaders who can help improve the community.

○ Strongly disagree ○ disagree ○ Neither agree nor disagree ○ agree ○ Strongly agree ○ Don't know

Do you agree or disagree with the following statement?

13. People in this community work together to improve the community.

○ Strongly disagree ○ disagree ○ Neither agree nor disagree ○ agree ○ Strongly agree ○ Don't know

Do you agree or disagree with the following statement?

14. This community looks at its successes and failures so it can learn from the past.

○ Strongly disagree ○ disagree ○ Neither agree nor disagree ○ agree ○ Strongly agree ○ Don't know

Do you agree or disagree with the following statement?

15. This community develops skills and finds resources to solve its problems and reach its goals.

○ Strongly disagree ○ disagree ○ Neither agree nor disagree ○ agree ○ Strongly agree ○ Don't know

Do you agree or disagree with the following statement?

16. This community has priorities and sets goals for the future.

○ Strongly disagree ○ disagree ○ Neither agree nor disagree ○ agree ○ Strongly agree ○ Don't know

Do you agree or disagree with the following statement?

17. This community tries to prevent disasters.

❍ Strongly disagree ❍ disagree ❍ Neither agree nor disagree ❍ agree ❍ Strongly agree ❍ Don't know

Do you agree or disagree with the following statement?

18. This community actively prepares for future disasters.

❍ Strongly disagree ❍ disagree ❍ Neither agree nor disagree ❍ agree ❍ Strongly agree ❍ Don't know

Do you agree or disagree with the following statement?

19. This community can provide emergency services during a disaster.

❍ Strongly disagree ❍ disagree ❍ Neither agree nor disagree ❍ agree ❍ Strongly agree ❍ Don't know

Do you agree or disagree with the following statement?

20. This community has services and programs to help people after a disaster.

❍ Strongly disagree ❍ disagree ❍ Neither agree nor disagree ❍ agree ❍ Strongly agree ❍ Don't know

Do you agree or disagree with the following statement?

21. This community keeps people informed (for example, via television, radio, newspaper, Internet, phone, neighbors) about issues that are relevant to them.

❍ Strongly disagree ❍ disagree ❍ Neither agree nor disagree ❍ agree ❍ Strongly agree ❍ Don't know

Do you agree or disagree with the following statement?

22. If a disaster occurs, this community provides information about what to do.

❍ Strongly disagree ❍ disagree ❍ Neither agree nor disagree ❍ agree ❍ Strongly agree ❍ Don't know

Do you agree or disagree with the following statement?

23. I get information / communication through this community to help with my home and work life.

❍ Strongly disagree ❍ disagree ❍ Neither agree nor disagree ❍ agree ❍ Strongly agree ❍ Don't know

Do you agree or disagree with the following statement?

24. People in this community trust public officials.

❍ Strongly disagree ❍ disagree ❍ Neither agree nor disagree ❍ agree ❍ Strongly agree ❍ Don't know

"This is the end of the first part of the interview. I have some questions about reducing risk in your home. Is it ok if I continue?"

Module B: Disaster Risk Reduction

Disaster Risk Knowledge & Education

1. In the past 5 years, has your family been affected by a disaster?
   ❍ yes ❍ no
2. If yes, which types of disasters have affected you?
   Do not read responses / Check all that apply

❍ Earthquake ❍ high waves / Tsunami ❍ Volcanic eruption

❍ Floods ❍ Landslide ❍ Storms ❍ Hurricane/typhoon

❍ Fire ❍ drought ❍ heat wave ❍ cold wave

❍ Other

❍ don't know

        a. **If yes**: did you consider you were adequately prepared?
        ❍ yes ❍ no ❍ don't know

3. Who ***in the community*** has provided you with information about disasters in the last year?
   Do not read responses / Check all that apply

❍ Community leader

❍ Trained community member (e.g. CDRT, trained by Civil Protection)

❍ Red Cross volunteer

❍ Family member / Neighbor / friend

❍ Messages through schools

❍ other

❍ no one

4. Have you received any other information about disasters from outside the community over the last year? Where from?
   Do not read responses / Check all that apply

❍ Radio / television / internet

❍ Newspaper

❍ Flyers or educational messaging from Civil Protection / Government in the community

❍ NGOs and other institutions

❍ no one / no other information

5. In the past 12 months, has there been a change in your understanding of disasters?

❍ significant improvement ❍ some improvement ❍ little or no improvement ❍ don't know

Coverage and knowledge of disaster risk management activities

6. Does your community have any of the following:

    a. A system to alert you in the event of an emergency (siren, flags, whistles):

    ⭘ yes ⭘ no ⭘ don't know

    -   **If yes**: what do you do when it is activated? *(INTERVIEWER INDICATES RESPONSE)*

        ⭘ *Clear response*

        ⭘ *Unclear response (not sure what to do)*

    b. A disaster coordination committee: ⭘ yes ⭘ no ⭘ don't know

    -   **If yes**: what do they do? *(INTERVIEWER INDICATES RESPONSE)*

        ⭘ *Clear response*

        ⭘ *Unclear response (not sure what they do)*

    c. A response team for emergencies: ⭘ yes ⭘ no ⭘ don't know

    -   **If yes**: what does it do? *(INTERVIEWER INDICATES RESPONSE)*

        ⭘ *Clear response*

        ⭘ *Unclear response (not sure what they do)*

    d. Evacuation routes marked: ⭘ yes ⭘ no ⭘ don't know

    -   **If yes**: where is it? *(INTERVIEWER INDICATES RESPONSE)*

        ⭘ *Clear response*

        ⭘ *Unclear response (not sure where it is)*

    e. Meeting point / safe area identified as such: ⭘ yes ⭘ no ⭘ don't know

    -   **If yes**: where is it? *(INTERVIEWER INDICATES RESPONSE)*

        ⭘ *Clear response*

        ⭘ *Unclear response (not sure where it is)*

    f. A shelter for emergencies: ⭘ yes ⭘ no ⭘ don't know

    -   **If yes**: where is it? *(INTERVIEWER INDICATES RESPONSE)*

        ⭘ *Clear response*

        ⭘ *Unclear response (not sure where it is)*

    -   **If yes**: who has the key? *(INTERVIEWER INDICATES RESPONSE)*

        ⭘ *Clear response*

        ⭘ *Unclear response (not sure who has the key)*

7. In the past 12 months, has anyone from your household participated in any of the following activities:

    a. First Aid training: ⭘ yes ⭘ no ⭘ don't know

    b. Disaster simulation drill OR Evacuation exercise: ⭘ yes ⭘ no ⭘ don't know

    c. Disaster preparedness meeting: ⭘ yes ⭘ no ⭘ don't know

    d. Community event focused on disaster preparedness: ⭘ yes ⭘ no ⭘ don't know

    e. Household visit of a volunteer on disaster preparedness : ⭘ yes ⭘ no ⭘ don't know

8. How many households do you know in your community who are prepared for disasters?
❍ 0 (no one) / don't know
❍ 1-5 households
❍ 6-10 households
❍ more than 10 households

Disaster household preparedness

9. Do you have phone at home to call in the event of emergencies? (Landline / Cell Phone)
❍ yes ❍ no ❍ not applicable (no emergency services in the area)
If no, go to question 11.

9.1. **If yes:** in the event of an emergency while you are home alone, which number would you call for emergency services?
(INTERVIEWER INDICATES RESPONSE)

❍ *Knows number by heart*
❍ *Does not know number by heart*

9.2. Do your children (5-17 years old) know this number?
❍ yes ❍ no ❍ don't know ❍ not applicable (no children 5-17)

10. In the event of an emergency in your community, which family member or friend *living outside of the community* would you warn? (first person who comes to mind)
Do you know the number *(INTERVIEWER INDICATES RESPONSE)*

❍ *Knows number by heart*
❍ *Does not know number by heart*

11. In the event of an emergency evacuation to a shelter, what would you take with you from your home?
Do not read responses / Check all that apply
❍ *Packaged/canned food*
❍ *Bottled water*
❍ *Safe water kit*
❍ *Radio with batteries*
❍ *First aid kit*
❍ *Blankets and poncho*
❍ *Basic hygiene kit*
❍ *Flashlight with batteries*
❍ *Cash set aside for emergencies*
❍ *Medication set aside for emergencies*
❍ *Important documents readily available in the event of emergencies (in a plastic sheet)*
❍ *other*
❍ *nothing*

12. Do you have a family plan for emergencies?

    ❍ yes ❍ no ❍ do not know

- If yes:

12.1.   What does it include? (family plan for emergencies)

            Do not read responses / Check all that apply

            ❍ *Planned meeting place for family members (including place to stay or shelter)*

            ❍ *Who to call and which numbers to call*

            ❍ *Activities to strengthen the home or reduce damage to your property*

            ❍ *Emergency supplies or a planned list of items to take in case the family leaves home*

            ❍ *Evacuation plan / How to get out of the house*

            ❍ *Where to turn off gas, water and electricity*

            ❍ *None of the above / no response*

            ❍ *other*

12.2.   Who knows it? (family plan for emergencies)

            Do not read responses / Check all that apply

            ❍ *Neighbors and/or friends*

            ❍ *Everyone in the house*

            ❍ *Some members of household*

            ❍ *Head of household*

            ❍ *other*

12.3.   Where is it? (family plan for emergencies)

            Do not read responses

            ❍ *Easily available*

            ❍ *Kept out of sight, stored*

            ❍ *Do not know*

            ❍ *Not written*

13. Have you identified a safe location in the house in the event of an emergency?

    ❍ yes ❍ no ❍ do not know

13.1.   **If yes:** where is it? ***(INTERVIEWER ESTIMATES RESPONSE)***

            ❍ ***Clear response***

            ❍ ***Unclear response (not clear where it is)***

14. Have you identified how to get out of the house in the event of an emergency?

    ❍ yes ❍ no ❍ do not know

14.1.   **If yes**: have you tested this route?

            ❍ yes ❍ no

15. Have you identified a meeting point outside of your home in the event of an emergency?
   ❍ yes ❍ no ❍ do not know

15.1.　　　If yes, where is it?　　　　　　*(INTERVIEWER ESTIMATES RESPONSE)*
　　　　　　　　　　　　　　　❍ *Clear response*
　　　　　　　　　　　　　　　❍ *Unclear response (not clear where it is)*

16. Do you have any of the following in the house?
- a fire extinguisher:　　　❍ yes ❍ no
- a flashlight:　　　　　　❍ yes ❍ no
- smoke detectors:　　　　❍ yes ❍ no

17. If your home is damaged or destroyed in a disaster, where would you go to?
　　　　　　　　　　　　(INTERVIEWER ESTIMATES RESPONSE)
　　　　　　　　　　　　❍ *Clear response*
　　　　　　　　　　　　❍ *Unclear response / does not know*

18. If you find someone unconscious in front of your house as you are leaving, what would you do?
   Ask interviewee to act out response.
   Do not read responses (if other household members are present and wish to contribute a more detailed answer, reflect their contribution in the answer below)
   ❍ *Implement basic first aid steps properly and in right order:*
     ▪ *check the person's state of consciousness, pulse, breathing and bleeding;*
     ▪ *ask someone to call for help / call for help (if alone);*
     ▪ *put the person in the safety position until help arrives*
   ❍ *Implement part of standard basic first aid measures*
   ❍ *Other measures / nothing / no answer*

19. Who is most likely to provide you with assistance in the event of a disaster?
   Do not read responses / Check all that apply
   ❍ *Family / friends*　　　　❍ *Neighbors*
   ❍ *Community committee / community response team*
   ❍ *Government agencies*　　❍ *Private sector / businesses*
   ❍ *Religious groups*　　　　❍ *NGOs*
   ❍ *The Red Cross*
   ❍ *no one*

20. Is the house located in an area exposed to hurricane / severe storms?

    ○ yes ○ no ○ do not know

20.1.   **If yes**: have you taken measures to reduce the risk of being affected?

      (INTERVIEWER ASSESSES RESPONSE AND STATE OF THE HOME)

      ○ *no measures needed (well-built home)*

      ○ *Extensive preparedness* (hurricane straps on roof, hurricane shutters, neighboring trees trimmed, etc.)

      ○ *Partial preparedness / house still vulnerable*

      ○ *no measures taken / unsafe house in the event of this hazard*

      ○ *do not know*

21. Is the house located in an area exposed to flooding?

    ○ yes ○ no ○ do not know

21.1.   **If yes**: have you taken measures to reduce the risk of being affected?

      (INTERVIEWER ASSESSES RESPONSE AND STATE OF THE HOME)

      ○ *no measures needed (well-built home)*

      ○ *Extensive preparedness* (entrance doors raised, vulnerable household items away from floodable area, etc.)

      ○ *Partial preparedness / house still vulnerable*

      ○ *no measures taken / unsafe house in the event of this hazard*

      ○ *do not know*

22. Is the house located in an area exposed to earthquakes?

    ○ yes ○ no ○ do not know

    22.1 If yes: have you taken measures to reduce the risk of being affected?

      (INTERVIEWER ASSESSES RESPONSE AND STATE OF THE HOME)

      ○ *no measures needed (well-built home)*

      ○ *Extensive preparedness* (furniture and household items nailed to walls using straps, clear exit path in the event of an emergency, etc.)

      ○ *Partial preparedness / house still vulnerable*

      ○ *no measures taken / unsafe house in the event of this hazard*

      ○ *do not know*

END OF SECTION: "WITH THESE QUESTIONS WE HAVE COMPLETED THE DISASTER RISK SECTION. CAN WE ADDRESS SOME QUESTIONS AROUND WATER AND SANITATION?"

Module C: Water & Sanitation

Water

1. Where do you obtain the water you <u>drink</u> daily?

❍ household tap

❍ hand pump

❍ communal tap / stand tap

❍ well-shallow

❍ river / stream

❍ rainwater harvesting

❍ small dams/ponds

❍ purchased

❍ other

Guidance:

Rainwater harvesting

Hand pump

Well shallow

2. What else do you use water from this source for?

❍ *house hygiene (washing body / clothes / dishes)*

❍ *watering garden* ❍ *washing nappies* ❍ *livestock* ❍ *irrigation* ❍ *other*

3. Does your source of <u>drinking water</u> change according to different seasons?

❍ yes ❍ no

    3.1. if yes, during which seasons?

       ❍ *dry season* ❍ *rainy season*

       ❍ *cold season* ❍ *hot season*

       ❍ *other*

    3.2. if yes, what then becomes your main source of <u>drinking water</u>?

       ❍ *household tap*

       ❍ *hand pump*

       ❍ *communal tap/stand tap*

       ❍ *well-shallow*

       ❍ *river / stream*

       ❍ *rainwater harvesting*

       ❍ *small dams/ponds*

       ❍ *purchased*

       ❍ *protected spring source*

       ❍ *gravity schemes*

       ❍ *other*

4. How long does it take you to collect drinking water?

❍ in house / less than 20 meters ❍ Less than 5 min ❍ 5 min to 1 hour

❍ 1 hour to 2 hours ❍ more than 2 hours

5. If water is not in house: Who is the main person to collect water for the family?

Sex ❍ *female* ❍ *male* ❍ *both* ❍ *not applicable (water in house)*

    5.1. Main person responsible for water collection

❍ *children 6-11* ❍ *children 12-17*

❍ *adult (s) (18 and over)* ❍ *all*

6. Do you treat or filter your drinking water?

❍ yes ❍ no / sometimes

    6.1. If yes how? ***Do not read responses / Check all that apply***

       ❍ *boil* ❍ *chlorinate* ❍ *sand filtration / household filter* ❍ *ceramic filter*

       ❍ *solar disinfection* ❍ *other*

    6.2. If no, why not? ***Do not read responses / Check all that apply***

       ❍ *it is expensive* ❍ *no need*

       ❍ *it is not safe for health* ❍ *changes the taste of water* ❍ *other*

7. Are there any problems with your water supply?

❍ yes ❍ no

   7.1. If yes, what are they?

   Do not read responses / Check all that apply

   ❍ *water leaks / plumbing*

   ❍ *it is dirty / unhealthy* ❍ *it is irregular* ❍ *it is a long way*

   ❍ *it is expensive* ❍ *periods when it dries up*

   ❍ *management issues*

   ❍ *caretaker* ❍ *water treatment does not work* ❍ *turbid / looks or tastes bad*

   ❍ *breakdown of hand pump*

   ❍ *other*

8. Are there any specific <u>health problems</u> caused by your water supply?

❍ yes ❍ no

   8.1. If yes, what are they?

   Do not read responses / Check all that apply

   ❍ *vomiting*

   ❍ *stomach pains*

   ❍ *diarrhea*

   ❍ *skin diseases (scabies, etc.)*

   ❍ *eye infections*

   ❍ *parasites (e.g. guinea worm)*

   ❍ *other*

9. Do you consider your water supply is sufficient for your needs?

   ❍ yes ❍ no ❍ don't know

   9.1. How many of liters of water does each household member use per day?
   Note: estimate capacity of each container (liters) and number of trips per day, divide by number of household members
   ❍ 6-9 ❍ 10-19 ❍ 20-39
   ❍ 40-59 ❍ 60-79 ❍ 80 and over ❍ don't know

   Note: In some cases the families purchase water in 54-gallon barrels (204 liters). If that is the case, ask how many barrels are purchased and how often, to calculate the water consumption per person. The formula to calculate the total amount of water consumed will be:

   Consumption per person = #of barrels_____ x ____204 liters_____ .
   # of days between purchases x # of household members

10. Do you store water separately for drinking and washing or cleaning?

◯ yes ◯ no ◯ don't know

11. What do you clean your drinking water container with?

Do not read responses / Check all that apply

◯ *not applicable (does not use water container)*

◯ *chlorine* ◯ *soap and water* ◯ *water* ◯ *ash*

◯ *sand* ◯ *don't clean* ◯ *don't know* ◯ *other*

12. How much do you pay per month on average for using water from the installed water point?

◯ *enter amount: _____ (in USD)*

◯ *not applicable*

13. How much did you contribute towards the initial cost of the water point?

◯ *enter amount: _____(in USD)*

◯ *not applicable*

Sanitation and waste

14. Where do women from the family go to the toilet?

◯ Toilet (flush toilet / latrines) in the home

◯ Toilet at other location (neighbor, public latrine)

◯ In the bush / open air

◯ helicopter method

◯ not applicable

15. Where do men from the family go to the toilet?

◯ Toilet (flush toilet / latrines) in the home

◯ Toilet at other location (neighbor, public latrine)

◯ In the bush / open air

◯ helicopter method

◯ not applicable

16. Where do children from the family go to the toilet?

◯ Toilet (flush toilet / latrines) in the home

◯ Toilet at other location (neighbor, public latrine)

◯ In the bush / open air

◯ helicopter method

◯ not applicable

17. What do you do with the excreta of toddler (less than 5 years old)?
❍ Not applicable (no toddler)
❍ Flush in toilet / put in latrine in the home
❍ Put in trash
❍ Throw in open air / garden / patio
❍ Other

18. Does your toilet fit your needs?
❍ yes ❍ no ❍ not applicable

19. Is waste disposal a problem in your community?
❍ yes ❍ no
19.1.   if yes, why?
Do not read responses / Check all that apply
❍ *There is no dumping site in the community*
❍ *There is no garbage collection truck / system*
❍ *The garbage collection service is expensive*
❍ *It is an environmental and / or health problem (rats, dogs, insects, etc.)*
❍ *Neighbors complain when we burn the garbage*
❍ *Other*

20. Where do you dispose of your household waste?
❍ refuse pit ❍ bush ❍ trash can with garbage truck collection
❍ burning ❍ burying ❍ Compost ❍ recycle ❍ other
20.1.   If garbage collection service, how many times a month? _____

Prevention of waterborne diseases

21. Has anyone in your family been ill in the last 12 months? If so, which illnesses?
(Please tick)
Do not read responses / Check all that apply
❍ *colds*
❍ *stomach ache / vomiting*
❍ *diarrhea*
❍ *malaria*
❍ *dengue*
❍ *yellow fever*
❍ *respiratory infection*
❍ *other*
❍ *none*

22. Interviewer please note:

22.1.   Is the person answering a caregiver for a baby child (under 5 years old)?
          ◯ *yes* ◯ *no*

23. When was the last time a member of your family got diarrhea?
◯ within the last 2 weeks ◯ 2-4 weeks ago
◯ 1-3 months ago ◯ 3-12 months ago ◯ other / can't remember

24. what causes diarrhea?
Do not read responses / Check all that apply
◯ *drinking dirty water* ◯ *touching dirty objects*
◯ *eating dirty food* ◯ *dirty fingers*
◯ *germs / contaminated water* ◯ *flies*
◯ *open defecation*
◯ *don't know* ◯ *other*

25. What is the best way to prevent diarrhea?
Do not read responses / Check all that apply
◯ *washing hands* ◯ *use of latrines / toilet* ◯ *use of safe drinking water*
◯ *don't know* ◯ *other*

26. How many children under 5 (0-4 years old) do you have in this house? _____
27. How many children under 5 (0-4 years old) got diarrhea (more than three loose stools in one day) in the last two weeks? _____

28. Of the following three, which is the most common in your community:
◯ dengue
◯ malaria
◯ yellow fever
◯ none of the above (go to 32)

29. What causes malaria/dengue/yellow fever [choose disease according to previous answer]?
Do not read responses / Check all that apply
◯ *mosquitoes* ◯ *germs*
◯ *don't know* ◯ *other*

30. What can you do to prevent malaria/dengue/yellow fever?

Do not read responses / Check all that apply

○ *cover up body* ○ *spraying* ○ *destroying mosquito breeding places (tires, recipients, vases)*
○ *clearing grass/scrub* ○ *clearing stagnant water*
○ *use mosquito repellent* ○ *use mosquito coil* ○ *take prophylaxis* ○ *mosquito nets*
○ *don't know* ○ *other*

31. Do you have treated mosquito nets in your household?
○ yes ○ no ○ not applicable (no malaria / dengue / yellow fever prevalence)
31.1.   If yes, who slept under net over the last 24 hours?
○ children (0-4)
○ children (5-17)
○ pregnant woman
○ other adults
○ no one

32. What do you use for vector (mosquito) control in your community / neighborhood?

Do not read responses / Check all that apply

○ *get rid of stagnant water / clean water recipients*
○ *remove mosquito breeding grounds* ○ *cut the lawn / trim the vegetation*
○ *indoor residual spraying* ○ *larviciding (use of products to kill larva in water)*
○ *nothing* ○ *door screens and window screens*
○ *other*

33. Has anyone visited your home to provide health information <u>related to water and sanitation</u>?
○ yes ○ no
33.1.   If, yes: Who from?

   Do not read responses / Check all that apply

   ○ Health worker (Health Ministry, local doctor or nurse, Government Health Worker)
   ○ Community leader (religious leader, politician, etc.)
   ○ Trained community member (e.g. Community Health Brigade)
   ○ Red Cross volunteer / project team
   ○ other

33.2.   If, yes: What was it about?

Do not read responses / Check all that apply

❍ Hand washing

❍ Waste water management

❍ Solid waste management

❍ Diarrhea

❍ Malaria / dengue / yellow fever

❍ Use of latrines

❍ any other

Hand washing

34. On any given day, when do you usually wash your hands?

Do not read responses / Check all that apply

❍ *before eating*

❍ *before cooking*

❍ *after defecation*

❍ *other*

Only for mothers with babies:

❍ *before breastfeeding the baby*

❍ *After cleaning baby/changing diaper*

35. Why do you wash your hands?

Do not read responses / Check all that apply

❍ *to be clean*

❍ *keep free of germs*

❍ *don't know*

❍ *other*

"Thank you for taking the time to answer these questions. Do you mind if I go through a checklist of your home's exposure to risk? If you do not mind please take me around the house."

❍ *Agrees to show around house (go to next question)*

❍ *Does not agree to show around house (end of interview)*

Direct observation / tour of the house:

Kitchen

Ask interviewee: "Please show me where you store your drinking water":

36. DIRECT OBSERVATION: Is drinking water stored separately from water for other purposes?
   ○ yes ○ no ○ cannot be observed

37. DIRECT OBSERVATION: Is the drinking water container covered?
   ○ yes ○ no ○ cannot be observed

38. DIRECT OBSERVATION: Does the drinking water container have a tap?
   ○ yes ○ no ○ cannot be observed

39. DIRECT OBSERVATION: Is there a dish rack?
   ○ yes ○ no ○ cannot be observed / do not know

40. DIRECT OBSERVATION: Does the trash can have a lid?
   ○ Yes ○ no ○ no trashcan ○ cannot be observed

Hand washing

Ask interviewee: "Please show me how you wash your hands":

If not possible to go to handwashing facility, ask alternative question: "Would you explain and show me what you do when you wash your hands?"

Tick according to observation:

41. DIRECT OBSERVATION: Is there a hand washing facility or location in the house?
   ○ yes ○ no
42. DIRECT OBSERVATION: Does the respondent use a cleaning agent (soap or ash):
   ○ yes ○ no
43. DIRECT OBSERVATION: Does the respondent wash hands with running water (tap, out of water recipient):
   ○ yes ○ no
44. DIRECT OBSERVATION: Does the interviewee rub hands three times and at least twenty seconds?
   ○ yes ○ no
45. DIRECT OBSERVATION: Does the interviewee dry hands hygienically (by air drying or using clean cloth?
   ○ yes ○ no

Latrine / toilet

Ask interviewee: "Please show me what kind of latrine / toilet you have":

46. *DIRECT OBSERVATION:* What kind of toilet does the house have?

❍ Pit latrine

❍ Ventilated Improved Pit latrine

❍ Compost latrine

❍ Pour latrine connected to cesspit

❍ Flush toilet / pour latrine connected to septic tank (waterproof)

❍ Flush toilet / pour latrine connected to sewer

❍ None

Please use the following guidance to determine the type of latrine or toilet:

Flush toilet
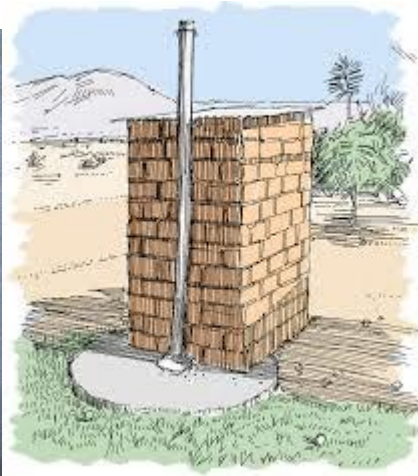
Ventilated Improved Pit Latrine

Pit latrine (not ventilated)

Compost latrine

47. *DIRECT OBSERVATION:* If house has latrine / toilet: Is the latrine / toilet clean (no fecal matter/urine on the floor)?

❍ very clean ❍ clean ❍ so-so ❍ dirty

48. *DIRECT OBSERVATION:* If latrine: Does the latrine have a concrete/fiberglass slab?

❍ yes ❍ no ❍ not applicable (no latrine)

49. *DIRECT OBSERVATION:* How far is the latrine / toilet from the house?

❍ inside the house ❍ directly behind the house
❍ far behind the house (> 15 meters) ❍ no latrine/toilet

50. *DIRECT OBSERVATION:* Is there any sign of animal or human defecation in the courtyard?

❍ yes ❍ no

Courtyard / garden

Ask interviewee: "Please show me where you dispose of your trash":

51. *DIRECT OBSERVATION:* Does the house have a refuse pit?

❍ yes ❍no ❍ cannot be observed

52. *DIRECT OBSERVATION:* Is the surrounding areas (courtyard, front of house) clean?

❍ yes ❍ no ❍ cannot be observed

Tool 3: Key Informant Interview – Disaster Management Committee

Note: This section is adapted from the JHU/SPH survey. However, disaster Preparedness closed questions related to existing documentation and systems (EWS, evacuation routes, emergency plan, etc.) have been removed, as that information is already collected in more detail in the direct observation section and in the Household survey questionnaire.

Guidance: The key informant should be the head of the Community Disaster Risk Reduction committee. If there is no such committee, it should be the head of the Community Disaster or Emergency Response Team. If there is none of the aforementioned committees exist, the interview should take place with the representative of the local authority in the community. Ideally, the key informant should be involved in implementation or coordination of the Red Cross project. If possible, try to use the same key informant(s) at each visit to ensure consistency in reporting and to facilitate the development of a strong relationship between community members and the Red Cross.

1. Is there a Disaster management committee (or equivalent) in your community?
   ❍ Yes ❍ No

   If not, go to question 6.

2. Does the Disaster Management Committee manage a budget?
   ❍ Yes ❍ No
   If yes:
   - 2.1. How much money has this group spent over the last year on disaster related activities (committee budget)? USD _____
   - 2.2. How many community mobilization days has this group organized over the last year on disaster related activities (e.g. volunteer clean-up of drains)? _____ days

3. Does the committee have a plan for undertaking small mitigation projects that will reduce the risk of future disasters?
   ❍ Yes ❍ No
   If yes, what disaster risk reduction mitigation projects are currently planned, ongoing or that have been completed over the last year:
   3.1. Number of DRR mitigation projects planned: ____
   3.2. Number of DRR mitigation projects ongoing: ____
   3.3. Number of DRR mitigation projects completed: ____
   3.4. Overall budget spent on mitigation projects in last year (estimate): USD__
   3.5. Of which: amount of budget mobilized from the community (estimate): USD__

4. Does the community have a group specially dedicated to disaster response?
   ◯ Yes ◯ No

   If yes:
4.1. What is the population covered by the response team? _____
4.2. How many members are there in this response team? _____
4.3. How often do they meet? _____ / year
4.4. How many have received First Aid training in the last three years? _____
4.5. How many have received formal disaster response training? _____
4.6. How is the response team alerted?
   ◯ Radio ◯ Telephone ◯ audible notification devices (horn, bell, siren, megaphone, etc.)
   ◯ SMS messages ◯ Others ◯ none

4.7. Where do they meet in an emergency? _____
4.8. How do the Response Team members replace disaster items after an intervention (First Aid kit; disaster response kit)?
4.9. Over the last 12 months, how many times have they met with members from the national disaster response mechanism?

[TO BE READ ALOUD]. *Thank you for taking the time to talk with me today. We have finished the questions related to disasters and your community. Is there anything else that you would like to add or that you think it is important for me to know?*

****THANK INTERVIEWEE FOR HIS/HER TIME****

Direct Observation: Community Disaster Risk Reduction Checklist

Guidance: **The community checklist should be completed with a key informant from the community that is aware of current disaster risk reduction activities. The community observation checklist is designed to record your observations of disaster preparedness and mitigation activities. It is not meant to be a key informant interview, which means that you must visually verify any information reported by the key informant. If you cannot visually verify information that is reported by the key informant, mark the 'unable to verify' response category. It is recommended that the community observation checklist be completed immediately before or after the key informant interview. The facilitator should plan to go with the key informant to several locations within the community to view documents, supplies, mitigation projects, and shelters. In most cases, it should be possible to complete the community checklist within one hour.**

5. Are there minutes from Community Disaster Management Committee (CDMC) meetings or from Community Development Committee related to disaster management?
    ❍ Yes ❍ No ❍ Unable to verify ❍ Not applicable (no CDMC)

6. Is the following information physically present in the community?
-   Community Emergency Plan
    ❍ Yes ❍ No ❍ Unable to verify
-   Copy of local or national government disaster plan(s)
    ❍ Yes ❍ No ❍ Unable to verify
-   Contact information for local or national authorities involved in disaster response
    ❍ Yes ❍ No ❍ Unable to verify
-   Community risk map(s)
    ❍ Yes ❍ No ❍ Unable to verify
    a. If yes, does it include at least 5 of the following:
        i.   Clearly states purpose of map
        ii.   Includes name of the community
        iii. Good size (at least 1.5m x 1.5m)
        iv.   Easy to read and interpret, use of colors
        v.   Includes representation of basic infrastructure
        vi.   Represents neighborhoods, buildings and streets
        vii. Indicates North
        viii. Includes legend
        ix.   Clearly visible by the community
    ❍ Yes ❍ No ❍ Unable to verify

7. Is the following information physically present in the community?
- Names of First Aid trainees
  - ○ Yes ○ No ○ No First Aid trainees ○ Unable to verify
    a. Do First aid trainees have First Aid Kits?
       ○ Yes ○ No ○ Not applicable (No First Aid trainees) ○ Unable to verify
- Names of members of the Community Disaster Response Team (CDRT) or Community Emergency Response Teams
  - ○ Yes ○ No ○ No CDRTs/CERTs ○ Unable to verify
    a. Do Response Team members have Community Disaster Response Kits?
       ○ Yes ○ No ○ Not applicable (No CDRTs/CERTs) ○ Unable to verify

8. Are the evacuation routes visible and well-marked in the community?
   ○ Yes ○ No ○ Unable to verify ○ Not applicable (no need)

9. Do the shelters comply with the following requirements?
   ○ Safe location with regard to main hazards
   ○ Strong structure
   ○ Easily accessible / centrally located
   ○ Appropriately equipped to welcome groups (kitchens; sleeping mats / camping bed; blankets / sheets)
   ○ Unable to verify
   ○ No shelter
   ○ Not applicable (no need for shelter for the hazards in the community)

10. Is there in the community a warehouse with relief items?
    ○ Yes ○ No ○ Unable to verify

11. Is the Early Warning System functional and effective?
    ○ Yes ○ No ○ Unable to verify
    ○ No Early Warning System

Tool 4: Key Informant Interview – Water & Sanitation Committee

Guidance: The key informant should be the head of the WatSan committee. If there is not WatSan committee, it should be the head of the development committee. If there is none of the aforementioned committees exist, the interview should take place with the representative of the local authority in the community.

WatSan Focus Group Background Information:

Country: _____   District: _____

State/Province/Region: _____   Community: _____

Name of Facilitator: _____   Date: _____

Name and function of person being interviewed: _____

1. How many houses are there in the community? _____
2. How many households are currently connected to the water supply system? _____
3. How many have access to a latrine or toilet?[9] _____

4. Committee responsible for water and sanitation management:
❍ Community Water / Sanitation committee
❍ Community Development Committee
❍ Local plumber / local company
❍ None – managed by municipality or Water Authority
❍ None – not managed

Questions if managed by community (if not, go to direct observation):

5. Gender composition of committee: a) Men   _____

                                              b) Women _____

6. How often is the committee meeting?
❍ At least once per quarter (every three months or more)
❍ Every three to six months
❍ Less often than every six months

7.   Does the committee have a legal status / registered with government?
❍ Yes ❍ No

8. Does the committee have a book with minutes from past meetings?
❍ Yes ❍ No

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[9] "Access" should be understood to mean as persons using a latrine or toilet on a daily basis.

9. Are there any WatSan regulations in place (government or community rules on use of water and sanitation facilities)?
❍ Yes ❍ No

10. On average, what percentage of the population attend assemblies or other activities called by the committee? _____

11. What is the average total amount collected from the community each month?
USD_____ /month (convert to USD from local currency)
    11.1.   Is that money enough to cover the administration, operation and maintenance costs?
    ❍ Yes ❍ No

12. How much are the average water fees per household?
USD_____ /month (convert to USD from local currency)
(FANTA question)
13. How much subsidy does the committee receive from the municipality or government?
USD_____ / month (convert to USD from local currency)
(FANTA question)
14. What is the current balance according to accounting books?
USD_____ (convert to USD from local currency)

Related to the service
15. Does the community have an operations and maintenance plan?
    ❍ Yes ❍ No ❍ Not applicable

16. Does the community have a trained plumber to carry out operations and maintenance plan or other Wat/San tasks?
    ❍ Yes ❍ No ❍ Not applicable

17. Is the water system currently being chlorinated? (may be centralized or at HH level)
❍ Yes ❍ No ❍ Don't know

18. If yes, does the community have a color comparator to measure residual chlorine?
    ❍ Yes ❍ No ❍ Don't know ❍ Not applicable (verification carried out by government)
    18.1.   If yes, is there a control sheet (tracking chlorine levels)?
        ❍ Yes ❍ No ❍ Don't know

18.1.1. If yes, when was the chlorine checked last time?

◯ Less than a month ago

◯ 1-6 months ago

◯ More than 6 months ago

◯ No control

◯ Don't know

[TO BE READ ALOUD]. Thank you for taking the time to talk with me today. We have finished the questions related to disasters and your community. Is there anything else that you would like to add or that you think it is important for me to know?

****THANK INTERVIEWEE FOR HIS/HER TIME****

Direct Observation: Water supply system maintenance

**Guidance:** _**To conduct this direct observation, the main parts of the system should be visited and checked with the WatSan Committee. Water samples will be taken from the containers from 4 households in each community. The necessary equipment to test the water samples is delAgua kit or equivalent.**_
**The person responsible to conduct the survey will be trained specifically on the criteria to define the answers to this part of the questionnaire whose documentation will be provided separately during the training of interviewers.**

19. Is there a piped water system in the community?   ◯ Yes ◯ No
    **If no, skip this section.**
20. Currently, are the following parts of the system functional?

Water catchment (including wells)	◯ Yes ◯ No ◯ Don't know ◯ Not applicable
Main pipeline	◯ Yes ◯ No ◯ Don't know ◯ Not applicable
Water treatment	◯ Yes ◯ No ◯ Don't know ◯ Not applicable
Distribution network	◯ Yes ◯ No ◯ Don't know ◯ Not applicable

21. Residual chlorine concentration in the distribution network (any tap): (Mg/Lt) _____

22. There are leaks in the distribution tank?   ◯ Yes ◯ No ◯ Don't know ◯ Not applicable

23. Is the interior of the tank clean (without algae)? ◯ Yes ◯ No ◯ Don't know ◯ Not applicable

24. Do the manholes have caps and padlocks?   ◯ Yes ◯ No ◯ Don't know ◯ Not applicable

25. There are leaking taps?   ◯ Yes ◯ No ◯ Don't know ◯ Not applicable

Direct Observation: Waste water disposal network / treatment

Guidance: **To conduct this direct observation, the main parts of the system should be visited and checked with the WatSan Committee.**

The person responsible to conduct the survey will be trained specifically on the criteria to define the answers to this part of the questionnaire whose documentation will be provided separately during the training of interviewers.

26. Is there a waste water disposal network? ◯ Yes ◯ No

If no, skip this section.

27. Currently, are the following parts of the system functional?

Sewerage network	◯ Yes ◯ No ◯ Don't know ◯ Not applicable
Waste water treatment plant	◯ Yes ◯ No ◯ Don't know ◯ Not applicable
Manholes (not clogged)	◯ Yes ◯ No ◯ Don't know ◯ Not applicable

28. There are visible signs of clogged pipes in the sewerage network?

◯ Yes ◯ No ◯ Don't know ◯ Not applicable

29. Do all manholes have covers? ◯ Yes ◯ No ◯ Don't know ◯ Not applicable

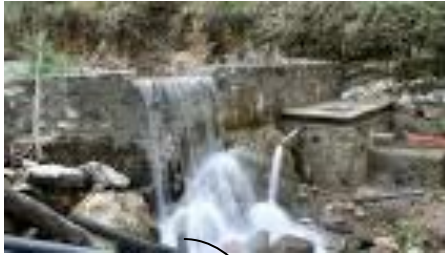30. Does the waste treatment have leaks in the different works?

◯ Yes ◯ No ◯ Don't know ◯ Not applicable

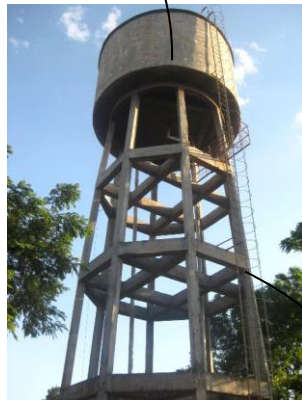31. Is the waste treatment sludge disposed of adequately?

◯ Yes ◯ No ◯ Don't know ◯ Not applicable

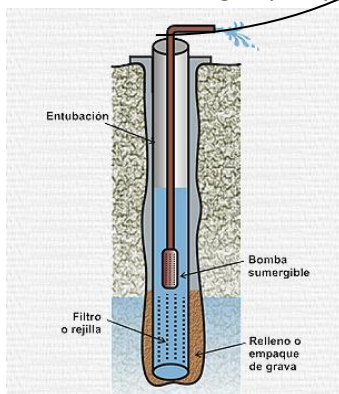# Water distribution system

Water catchment (source):
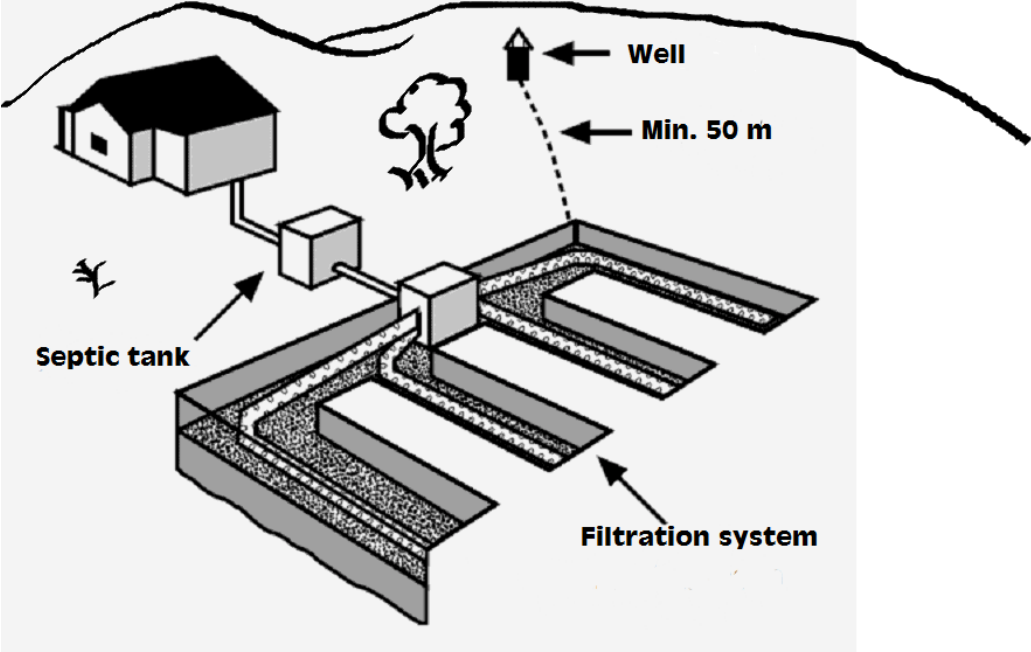
Main pipeline:

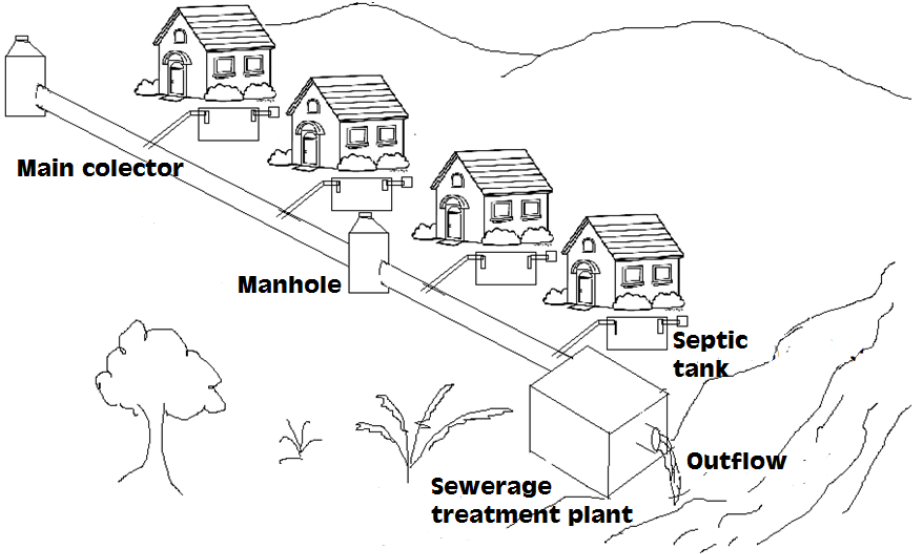Water distribution network

Pumping pipeline:

Well with submerged pump:

Drainage system with infiltration trenches (Individual home)

Collective sewerage system with treatment plant

Annex 1: Operationalizing "resilience"
(adapted from CLIPR Community Resilience introduction)

Over the past decade, in response to these new challenges, the humanitarian sector has slowly begun moving away from a mostly response, delivery service system to a more software, process-based approach which focuses on social cohesion and systems-building as core components of societal resilience.

> *Resilience is the ability of individuals, communities, organizations, or countries exposed to disasters and crises and underlying vulnerabilities to anticipate, reduce the impact of, cope with, and recover from the effects of adversity without compromising their long-term prospects.*[10]

The American Red Cross primarily works through Red Cross and Red Crescent National Society partners in at-risk communities or those which experience **shocks** and **stresses** to better prepare, respond and recover.

> ***Shocks*** *are sudden events that impact on the vulnerability of the system and its components. There are many different types of disaster-related shocks that can strike at different levels. These include disease outbreaks, weather-related and geophysical events including floods, high winds, landslides, droughts or earthquakes. There can also be conflict-related shocks such as outbreaks of fighting or violence, or shocks related to economic volatility*
>
> ***Stresses*** *are long-term trends that undermine the potential of a given system or process and increase the vulnerability of actors within it. These can include natural resource degradation, loss of agricultural production, urbanization, demographic changes, climate change, political instability and economic decline. Of course, countries will often face multiple, interconnected shocks and stresses.*

A strategic priority for the International Services Department (ISD) of the American Red Cross is building *stronger, more resilient communities*. ISD recognizes the need to develop a coherent and effective approach to achieving its strategic goal of building safer more resilient communities. This *white paper* lays out a framework to further discuss what "resilience" programs mean to ISD and how to better operationalize strategies, interventions, and best practices to achieve a more effective and meaningful impact in ARC target communities.

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[10] The Program Integration team in International Services of the American Red Cross looked through various resilience definitions for reference. It was noted that though there is not one consistent definition of 'resilience', most definitions seem to mirror the disaster management cycle using various descriptive words for each part of the cycle – before an event (prepare, prevent, predict, withstand, resist); during the event (response); and after the event (recover, adapt, transform, cope with). The various definitions also sometimes distinguish between household, community, country, as well as resilience in general or specific "disaster resilience". For the purposes of community-lead integrated programming for resilience, the definition for resilience that will be used is the one provided by the International Federation of Red Cross and Red Crescent Resilience Definition (IFRC).

What is a resilient community?

A resilient community is one that possesses the physical, psychological, social, and economic capacity to withstand, quickly adapt to, and successfully recover from a shock or be able to respond effectively to stressors.

The current trend of designing community-based disaster preparedness (CBDP) or health programs using a prescriptive, standard package of activities often overlooks underlying community needs and indigenous coping strategies as the basis for project design. Despite good intentions, the nature of sector-specific interventions often results in programming that is neither relevant nor effective in all contexts and environments. Moreover, the tendency to focus efforts solely on disaster preparedness, disaster risk reduction, and community-based health initiatives may overlook or entirely discount a greater need in another area, such as water and sanitation, shelter/housing, or asset protection (e.g. livelihoods).
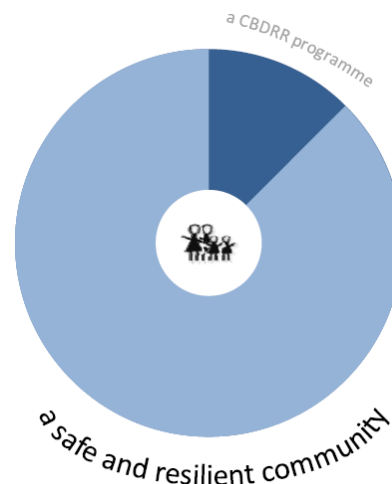
The American Red Cross recognizes that building community resilience is a **process**, not an outcome – no community can be free of risk. Additionally, the ability to manage community risks requires the understanding and the reduction of the impact of disasters and crises where possible, and where these cannot be prevented, a transition through the difficult period to rebuild or recover from the event. By definition, building resilience is a long-term commitment, and cannot be addressed through one- or two-year projects.

Characteristics of a Resilient Community:

The International Federation of Red Cross and Red Crescent Societies contracted Arup International to help it better understand what constituted a resilient community. Arup's research, drawn from both primary and secondary data sources, identified six main *characteristics* of a safe and resilient community. These characteristics are intended to inform the design, implementation, monitoring and evaluation of community-based disaster risk reduction programs at scale. They describe 'what success looks like' and provide a clear goal for any program intending to build community resilience.

These *characteristics* highlight the fundamental importance of knowledge and health as the foundation of resilience at the individual level. Resilient communities are made up of resilient individuals, who are well organized, have access to infrastructure and services, economic opportunities, and can manage their natural assets. A resilient community may be self-sufficient, either partially or entirely, but the resilience of a community will be greatly increased by strong connections with external actors, who provide a wider supportive environment, and supply goods and services when needed.

The characteristics of a safe and resilient community:

A safe and resilient community…

…is **knowledgeable and healthy**. It has the ability to understand, assess, manage and monitor their resources, risks and behavior especially as they apply within the disaster cycle of prepare, respond, recover and mitigate.
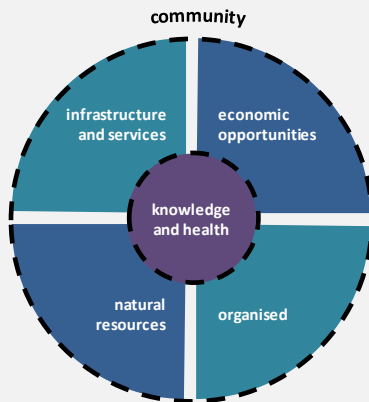
…is **organized**. Communities believe in themselves as effective agents of change—that they have the overall ability to act effectively when allocating, coordinating and integrating their resources in a successful concerted response to specific situational needs.

…has **infrastructure and services**. It has strong housing, transport, power, water, and sanitation systems. It has the ability to maintain, repair, and renovate them

…has **economic opportunities**. It has a diverse range of employment opportunities, income, and financial services. It is flexible, resourceful, and has the capacity to accept uncertainty and respond (proactively) to change

…can manage its **natural assets**. It recognizes their value and has the ability to protect, enhance, and maintain them
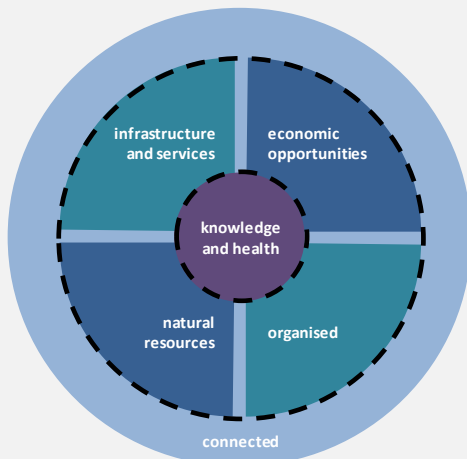
…is **connected**. It will have greater community cohesion as well as linkages with external actors who provide support and supply services when needed.

... and is therefore better able prepare for, prevent, respond to and recover from shocks and stresses.

Key principles for operationalizing resilience

### 1. Changing minds: Red Cross interventions must be integrated

Building community resilience is a process that addresses community needs independently of the sector under which they fall. Integration occurs when you are 'incorporating aspects of two or more types of services as a single, coordinated and combined service' across a number of sectors (disaster preparedness, health, shelter, water and sanitation). The community is a system of interrelated sectors, including the housing sector, health care sector, transportation sector, that are composed of groups sharing similar interests, activities or functions. Under this systemic perspective, healthy communities have well-integrated, interdependent sectors with collective responsibility to resolve problems and enhance the well-being of the community.[11] Hence, "to successfully address a community's complex problems and quality of life issues, it is necessary to promote better integration, collaboration, and coordination of resources from…multiple community sectors".[12]

Accordingly, poverty, vulnerability, and disasters are closely related and cannot be viewed in isolation from one another. Multiple factors such as lack of and access to resources; fragile and weak livelihoods; exposure to hazards and regularly occurring shocks and stresses; emerging trends such as climate change, urbanization, and conflict; and weak institutional support mechanisms must be better understood in a more integrated manner to develop effective resilience strategies.
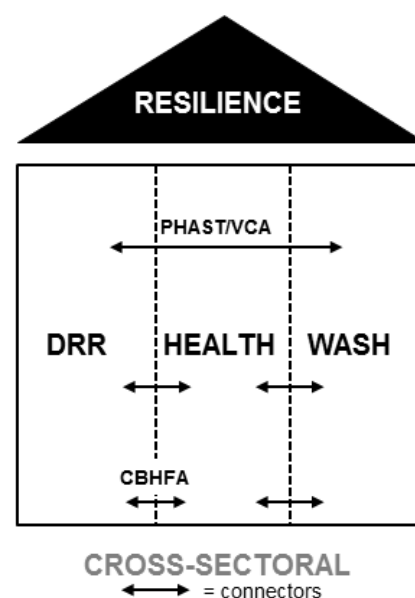
Implications for programming

Program integration is promoted as a way to create synergies and maximize program impact. The main principles of integrated programming include:
1. holistic analysis of the environment;
2. strategic program design based on the synthesis of such analysis; and
3. a single coherent and strategic framework to guide resilience programming across sectors (water/sanitation, health, shelter, livelihoods, disaster preparedness), across thematic areas (disaster risk reduction, climate change adaptation, environment, and socio-economic) and protect development investments.

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[11] Manitoba Family Services and Housing. (2008). *Community Engagement Framework.* Retrieved from www.gov.mb.ca/fs/ce/pubs/community_engagement_framework_May08.pdf.
[12] Centers for Disease Control and Prevention. (1997). *Principles of Community Engagement.* Atlanta, GA. Retrieved from http://www.cdc.gov/phppo/pce/.
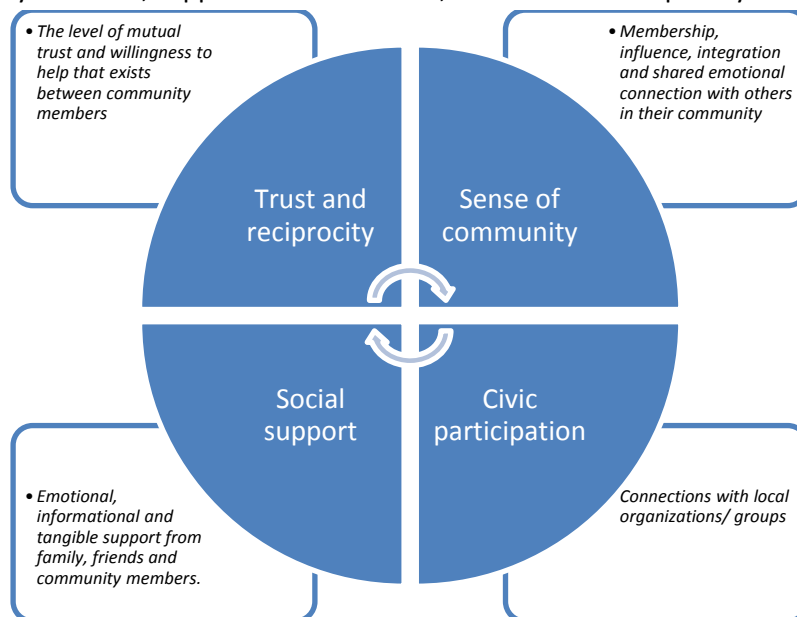
2. Organizational capacity: All interventions must build community engagement

Community engagement and participation is at the center of a resilient community. Community members whose lives and livelihoods are directly at stake set the agenda for, and are empowered to participate in, comprehensive analysis of their own situations in order to decide which causes of vulnerability to address and how. Their insights and perspectives will deepen the understanding of the conditions, problems, and opportunities that can and should be pursued, and their capacity to directly tackle these challenges.

When designing interventions focused on resilience, two components of community engagement need to be considered:[13]

i. **Increase connection and caring (social cohesiveness)** among community members, to ensure the inhabitants are able to work together in emergencies. Social cohesiveness includes shared values, identity and sense of community, active participation in community activities, support and nurturance, and trust and reciprocity.

- *The level of mutual trust and willingness to help that exists between community members*

- *Membership, influence, integration and shared emotional connection with others in their community*

Trust and reciprocity

Sense of community

Social support

Civic participation

- *Emotional, informational and tangible support from family, friends and community members.*

Connections with local organizations/ groups

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[13] "Building community resilience to disasters through a community-based intervention: CART applications" in *Journal of Emergency Management Vol. 11, No. 2, March / April 2013*, and Rogers, B. & Robinson, E. (2004). *The Benefits of Community Engagement, A review of the evidence.* London: Active Citizenship Centre, Home Office.

ii. **Build community organizational capacity (collective efficacy)** through which group members demonstrate the overall ability of the collective to act effectively when allocating, coordinating and integrating their resources in a successful concerted response to specific situational needs. It includes the ability to learn from the past and build community skills.

Implications for programming

When Red Cross interventions emphasize community connectedness and capacity, communities will increasingly see themselves as effective agents of change—believing that they have the collective ability to respond together to specific situational needs.

This approach requires special facilitation skills by Red Cross facilitators, to ensure that all interventions are led by community representatives and are based on local skills and resources, to ensure the same community members feel confident they can replicate such interventions in the future. The levels of engagement within the community will evolve over time, and should translate in increased participation, empowerment and community capacity.[14]

3. **Coordination: Interventions must strengthen external networks and advocacy**

Community resilience envisions shocks and stresses as complex problems demanding a collective response from different disciplinary and institutional groups -- in other words, partnerships. It requires involving multiple actors, as different actors each provide specific expertise in each sector, at times overlapping but often complementary. Communities must have a clear understanding of the available resources from different organizations, to better be able to address the complexity of problems posed by natural and manmade hazards, as well as foreseeable and unforeseeable stressors. For instance, in responding to an emergency, it is critical that the community understand that it may not have all the resources it needs, but as long as it mobilize those resources from other partners, it can mount an effective response.

Once the community has completed a thorough stakeholder mapping exercise, the level of engagement with different external organizations will depend on community goals:

- **Network management:** at the most basic level, the community must be able to know who its potential partners are, understanding the mandates and spheres of influence of different governmental and non-governmental organizations and share information with them regarding areas of common interest (informing the Ministry of Health of community health concerns; sharing Community Disaster Plans with the National Disaster Management Agency, etc.)

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[14] Wilcox, D. (1994). *The Guide to Effective Participation.* Brighton: Partnership Books. Retrieved from http://www.partnerships.org.uk/guide/.

-   **Partnership development:** When the community identifies challenges for which it has neither the capacity nor the resources, building partnerships with organizations sharing common goals or priorities is often the most efficient and effective solution (e.g. sharing security concerns with the police; discussing domestic violence with the corresponding non-governmental organizations, etc.). Red Cross interventions should aim to build the community's ability to connect with external actors who are able to provide support and/or services when needed.

-   **Advocacy campaigns:** At times, sharing information is not sufficient, due to other priorities or limited resources. The community can then resort to an advocacy campaign on a topic of particular importance, for instance approaching local or national political leaders with a formal request to address the need for an improved access road to the community.

    > *Advocacy is a series of planned activities (not a unique event), based on the construction of relations with allies (actual or potential) and decision makers, focusing on a very specific issue and limited goal. It is a fluid process, evolving according to the reaction of the target audience, **and does not need to be confrontational**.*[15]

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[15] "Advocacy" refers here to a series of activities by a group of persons to change a given situation, focusing on targeted decision-makers. "Lobbying" refers to the part of advocacy that aims to change or vote a law, corresponding to a very specific type of advocacy effort beyond the scope of this Guide. See *Advocacy 101: An introduction to designing advocacy strategies*, Interaction, 2009, for more information.

Annex 2: Measuring the impact of Disaster risk reduction programs

Community-Based Disaster Risk Reduction[16] activities seek to strengthen the resilience of the community to disasters, through the mapping of risks, training in first aid, early warning systems and simulation exercises. DRR projects means (activities implemented at community level) toward a common end (contributing to a safer and better prepared community), so assessments should not evaluate the implementation of individual activities, but rather the impact on people's understanding and behavior in relation to risks.

PLAN-NING

Community disaster strategy

(or Community Action Plan)

IMPLEMENTATION

Mitigating risks:

⇨ Contingency planning exercises
⇨ Identification and marking of risk areas and havens (shelters)
⇨ Micro-mitigation projects (cleaning of drains; marking of evacuation routes, etc.)
⇨ Coordination with local authorities.

Preparing families:
Organization of disaster preparedness training sessions for family members:

⇨ First Aid courses;
⇨ School risk assessment;
⇨ Household risk management strategy.

Preparing for response:

⇨ Forming and training community response teams (CDRT);
⇨ Identification of vulnerable households and organizing support;
⇨ Implementing an Early Warning System;
⇨ Testing evacuation routes and Early Warning Systems;
⇨ Preparing disaster kits.

Community disaster plans implemented by the community

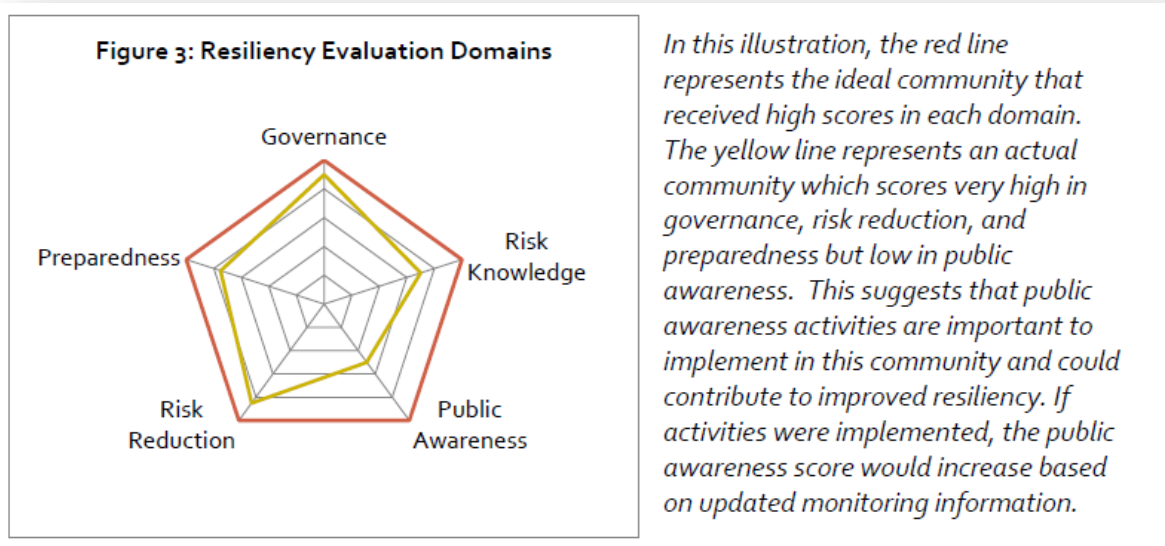**and shared with local authorities**

Community disaster simulation exercise

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[16] For all Disaster Risk Reduction terminology, refer to the "2009 UNISDR terminology on disaster risk reduction", available at http://www.unisdr.org/we/inform/publications/7817.

How do we measure DRR?

The American Red Cross has considerably progressed in its use of assessment tools for Disaster Risk Reduction programs over the last 5 years. The assessment tool currently in use was developed in 2009-2011 jointly with Johns Hopkins University, has been widely used in different countries and has been shared with partner organizations. It has provided a common approach to measuring risk reduction projects across different parts of the world, based on a common understanding of the way in which the Red Cross supports Community-based disaster preparedness and a common set of tools (a household survey, a focus group discussion and a checklist). It also offers for the first time a single representation of community resilience to disaster according to the five Hyogo Priorities for Action:

Example of the JHU Community Resiliency web (*source:* Community-Based Disaster Risk Reduction Monitoring Guide*, American Red Cross / Johns Hopkins School of Public Health, 2013, p.6)*

Figure 3: Resiliency Evaluation Domains

In this illustration, the red line represents the ideal community that received high scores in each domain. The yellow line represents an actual community which scores very high in governance, risk reduction, and preparedness but low in public awareness. This suggests that public awareness activities are important to implement in this community and could contribute to improved resiliency. If activities were implemented, the public awareness score would increase based on updated monitoring information.

Some of the recognized good practices from the use of the JHU assessment tool include:
- the use of three tools for data collection (household survey, focus group discussions and checklists), and system to quantify and report out more accurate data and results and to triangulate the data to ensure that the project is on track;
- the use of rigorous survey techniques;
- the use of diagrams to represent large amounts of information in a simple manner (for global program impact and for communication with external audiences);
- the regular review of the process to determine how the assessment tool can be improved, which questions need to be clarified and whether the results are valid.

At the same time, several challenges have arisen in the use of this assessment tool, including:
- The difficulty of National Societies to analyze data on their own and to interpret the data for their own learning process;
- The perceived disconnect between the contribution of DRR programs to global indicators and the need to tackle specific issues at community level, such as effectiveness of training, quality of water or longer term effect of interventions on community behavior;
- The redundancy of certain questions (repeated in Focus Group Discussions, Checklists and Household Surveys), leading to some aspects receiving too much weight (unequal attribution of impact for certain domains);
- The question whether community-based disaster risk reduction should aim to contribute to all Hyogo Priorities for Action equally.

Therefore, as part of the development of a multi-sector assessment tool, the current JHU DRR Baseline survey questions were reviewed, to discuss *what we aim to achieve* in Disaster Risk Reduction, and determine *how the findings from each survey question can be presented* in a format easy to analyze for National Society project staff, taking advantage of the considerable opportunities made available by IT and the use of hand-held devices for data collection and tallying.

Who do DRR assessment tools target?
The American Red Cross DRR (and WatSan) assessment tools focus on measuring two main audiences to ensure its programming is on track:

- **Community committees**, acting on behalf of the broader community on issues related to disasters, such as Community Disaster Committees (e.g. vulnerability and capacity mapping, contingency planning, micro-mitigation) and Community Disaster Response Teams (e.g. simulation exercises, evacuation plans, prepositioning of disaster response kits). These committees are crucial to the successful completion of DRR activities, and are therefore particularly targeted in assessment tools.

- **Households**, as they are the main beneficiaries of community level training (such as family disaster plan development and first aid), house strengthening and messaging. The Household assessments focus on the following 3 measures and corresponding activities:
  - **Measure increases in knowledge:** Ensure that households have access and are exposed to the right information about disaster risk, and acquire that information so that they can use it to mitigate a hazard or respond to an emergency. Knowledge acquisition is the rationale for the high number of Red Cross courses and sensitization campaigns carried out in communities.
  - **Measure changes in attitudes:** Assess whether households have understood what causes their problems and have integrated the right mindset and willingness to carry out the proper steps in emergencies or daily situations (which may or may

not translate in practice), e.g.determine whether people know the first aid steps they would take in the event of an emergency.

- o **Observe improvements in practices:** Observe what people are actually doing, e.g. installing hurricane roofing straps or earthquake furniture straps, changing daily routines to avoid dangerous paths, bandaging a wound using bandaging good practices, etc.

[Note: schools are often included in DRR projects, but have not been included in this discussion[17].]

Linking a Disaster Risk Reduction assessment tool to Hyogo Global Priorities for Action

In 2005, the international community adopted the Hyogo Framework for Action 2005-2015 and identified five Priorities for Action towards "Building the resilience of Nations and Communities to disasters". Though many of the key activities detailed in the Hyogo Framework for Action relate to Government-level actions, the resilience to disasters will require considerable investment at community level.

Since 2009, the American Red Cross has been aiming to measure how its DRR programs contribute to the global Hyogo Framework under each of the Priorities for Action (HFA PA). In developing an assessment tool, it is important to recognize that not all Priorities for Action have equal weight or importance at community level, though the general Priorities should be reflected in programming at community level. Therefore, the Hyogo Priorities for Action offer a relevant framework to organize DRR interventions at community level, and consequently provide a systematic approach to the organization of DRR assessment tool categories[18].

What follows is the proposed structure for the DRR assessment tools, following the five global Priorities for Action from Hyogo and the corresponding ARC expected outcomes for DRR programs:

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[17] For community projects working with and through schools (example: joint community brigades and schools brigades), the general measure of change in knowledge, attitude and practice should be reflected in the existing assessment tool. In the case of projects focusing exclusively on schools, an additional school DRR baseline could be developed. The Direct observation section of such a module could include whether a local school has a School RRD Plan or completed simulations.

[18] We need to be aware of potential changes with HFA2, although it is probable that the priority areas will end up staying the same and changes will be more in the details of each priority.

HFA PA1: Ensure that DRR is a local priority with a strong institutional basis for implementation[19]

DRR project outcomes at committee level:
- Existence of structures dedicated to disaster risk analysis, reduction and response;
- Allocation of funds from the community to disaster risk reduction activities, and skills to advocate the government for DRR resources;
- Interaction with external stakeholders in disaster risk reduction (e.g. civil defense);
- Ability of the community to function as a cohesive body and reach consensus on the activities to be carried out[20]. (FGD[21])

DRR project outcomes at household level: **Not applicable**

HFA PA2: Identify, assess and monitor disaster risks

DRR project outcomes at committee level:
- Community has hazard / risks maps representing the main hazards in the community.
- Comprehensive analysis tool of risks and actions are used in the community (e.g. VCA).

DRR project outcomes at household level: **Not applicable**
[Although community representatives from different households participate in VCAs and other risk mapping exercises in the community, it is felt that the household survey would not provide the best way to measure the quality of the analysis. Indicators measuring the dissemination of the VCA findings would be measured under the Knowledge section.]

HFA PA3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels

DRR project outcomes at committee level: **Not applicable**
[Although there are important activities led by community committees related to knowledge acquisition, innovation and education, it is felt that the actual impact of the educational component of the DRR training provided can be better measured at household level (focusing on: did the participants acquire the knowledge transmitted?) and at community level under the response capacity – HPA 5 (has training provide around community response mechanisms led to change in practices?).]

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[19] * "DFID Outcomes" boxes (in blue) are taken from the analysis carried out by John Twigg, DFID Disaster Risk Reduction Interagency Coordination Group, *Characteristics of a disaster-resilient community, A Guidance note*; see Annex 1 for more detail on the analysis process.

[20] Based on additional research by Christine Fu, questions measuring *community connectedness* (internal cohesiveness of the community around DRR issues; relationships with external actors in emergencies) have been included under the "strong institutional basis" section.

[21] "FGD": DRR Focus Group Discussion (FGD) tool; "DO": DRR Direct Observation (DO) section.

DRR project outcomes at household level:
- Households have an increased awareness of risks;
- Households know where to find information on disaster risks;
- Households receive community-specific information;
- Households sense an increased acceptance of disaster preparedness in their surroundings[22].

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[22] This assessment focuses on the situation before an event, and does not include response and recovery in a disaster.

HFA PA4: Reduce the underlying risk factors

DRR project outcomes at committee level:
- Community undertakes small risk mitigating infrastructure projects, including a demonstrated fundraising and project management capacity (FGD).

DRR project outcomes at household level:
- Households have taken basic safety measures to protect their homes against disasters (Practice: HHS)[23]

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[23] This assessment does not include "assets" or "productive assets" (livestock, crops, tools, etc.). This could be included in a future livelihoods module.

HFA PA5: Strengthen disaster preparedness for effective response at all levels

DRR project outcomes at committee level:
- The community can self-organize through trained first aiders and an active disaster response team (e.g. CDRT), with required training, resources and standard operating procedures (FGD; DO);
- The community has access to shelters in the event of an evacuation, or has approached corresponding authorities to ensure the population can be adequately covered (FGD).

DRR project outcomes at household level:
- Households have knowledge of critical information in emergencies, including emergency numbers; (Knowledge: HHQ14-15);
- Households determined the right steps in the event of an emergency (HHQ16-22);
- Households know the proper first aid steps in the event of an emergency (Practice: HHQ23)

Annex 3: Basis for the Water / Sanitation assessment tool

The IRP resilience programming contributes to the strengthening of National Society expertise, such as in the area of Water / Sanitation (WatSan, including health components covered in Watsan programming). This sector has known significant growth in some National Societies, particularly in Central America since the passage of Hurricane Mitch (1998). This growth has not been uniform or consistent, but there have been two methodologies which have strongly contributed to the dissemination of Water / Sanitation in the Americas region:

- Community Based Health and First Aid (CBHFA) is an approach around sustainable longer-term community-based health and WatSan activities under a coherent and coordinated framework;
- Participatory Hygiene and Sanitation Transformation (PHAST) is the standard software methodology to articulate WatSan interventions in the Red Cross Red Crescent Movement;[24]

Both methodologies offer tried-and-tested household survey questionnaires, based on international Water / Sanitation standards. This process makes the inclusion of Water / Sanitation questions (including questions around household waste management and diseases related to water and sanitation) quite straightforward.

Comparative review of number of questions related to different Water, Sanitation and Health aspects in CBHFA, PHAST and the RITA assessment tool:

	CBHFA baseline	PHAST baseline	RITA WatSan Household assessment tool
Water	16	17	17
Sanitation		15	10
Waste		4	4
Vector control		4	
Hand-washing		6	4
Public education on WatSan		8	13
Diarrhea	13	6	
Dengue	9		
Total number of questions	38	60	48

The resulting assessment tool is predominantly based on the PHAST baseline, but integrates changes to reflect the context of the RITA project, including adjustments to reflect the urban reality, where more sophisticated water and sanitation systems are commonly found.

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[24]   For more detail see *CBHFA and PHAST Integration, discussion paper*, Netherlands Red Cross / IFRC, January 2012.

In addition, the proposed Water / Sanitation assessment tool integrates the necessary information to include the 8 indicators from the Food and Nutrition Technical Assistance (FANTA) Project of the Academy for Educational Development (1999):

- Percentage of children <5 years of age[25] in the sample with diarrhea in the last two weeks
- Quantity of water used per day;
- Percentage of households with year-round access to improved water source;
- Percentage of child caregivers and food preparers with appropriate handwashing behavior;
- Percentage of households with access to a sanitation facility;
- Percentage of households using hygienic sanitation facilities;
- Percentage of recurrent costs for water supply services provided by the community served;
- Percentage of constructed water supply systems adequately operated and maintained by the community they serve.

The household survey and the key informant interview results will allow tracking these 8 indicators separately, as they are considered critical for measuring the overall success of Water / Sanitation programming.

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[25] The original FANTA indicator focuses on children under 3 years (36 months) of age, but the current baseline focuses on collecting data for children aged 0-4 years old, in line with international standards on data for children under 5 years of age.