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WaSH: Integrated Social Empowerment (W:ISE)



The *W:ISE* Toolkit Handbook  
for Community WaSH and Wellbeing

THE W:ISE TOOLKIT HANDBOOK

# *WaSH: Integrated Social Empowerment Toolkit for Community WaSH and Wellbeing*

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CORINNE SCHUSTER-WALLACE, KATE CAVE, HALEY MCCORMICK, SUSAN WATT, AND SARAH DICKSON



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## THE W:ISE TOOLKIT

### *A Mixed Methods Toolkit for Community WaSH and Wellbeing*

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The world has made tremendous gains in improving access to sanitation and drinking water, especially with the advent of the Millennium Development Goals. The most recent statistics indicate that 68% of the world's population have access to improved sanitation and 91% are using improved drinking water sources.<sup>1</sup> This is important because clean drinking water is essential to public health and community<sup>2</sup> wellbeing, with sanitation as the first line of defence in protecting water quality for drinking. Technologies can, and do, provide greater access to potable water and sanitation services, but community health and wellbeing can only be sustained if sanitary and hygienic practices accompany innovation. People's interactions with water and the environment can determine the health of their entire community, which makes drinking water, sanitation, and hygiene (WaSH) crucial components of community development. Communities must have the knowledge, capacity, and desire to implement and practice sustainable WaSH in order to ensure public health and wellbeing.

For development projects to be sustainable they must be socially, culturally, politically, and financially compatible with, and supported by, the community in which they are being implemented. Projects must also educate and support communities to recognise and change unhealthy behavior through learning about linkages between water and health. The United Nations University Institute for Water, Environment, and Health (UNU-INWEH), in association with its partners, has developed a toolkit that applies a mixed methods approach to understanding community WaSH as a first step in evidence informed decision-making and building capacity for change. We believe that together, these can begin a sustainable transition towards improved health and wellbeing, **changing conversations**, **changing mindsets**, and **changing lives**.

The purpose of this handbook is to describe tools and methods that a community, NGO, or local government can use to understand the relationship that community members have with each other and with water and their environment; to understand how these relationships impact health; how and why water is used in the community; how sanitation and hygiene practices are viewed; and how changes could be made. The toolkit described in this handbook can be used to provide insight into community water and health challenges as a first step to identifying and prioritising ways to improve WaSH and wellbeing within a framework of community values, traditions, and culture.

The tools and methods described are participatory in nature; community members learn about healthy behaviours and practices while they assess their water, their environment, their social development, their health status, and the interactions among these factors. These tools will be easier to use if you read through this handbook carefully. You may need to learn more about the causes of water-based health problems, particularly within the local context. The toolkit is based in semi-structured interview, focus group, and household survey methods. If you are not familiar with these methods, you and your team may need further training. Key references describing these methods can be found in Appendices Part A (I-VI).

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1 UNICEF and WHO. 2015. Progress on Sanitation and Drinking Water – 2015 update and MDG assessment. [http://apps.who.int/iris/bitstream/10665/177752/1/9789241509145\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/177752/1/9789241509145_eng.pdf?ua=1)

2 While community usually refers to a group of people living within a geographic area, the W:ISE Toolkit can be applied to a variety of communities, defined as a group of people with common characteristics or attitudes. Communities can vary in scale, from the community in a healthcare facility or school, to a region.

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As you become more familiar with these methods, you will be able to modify the surveys provided to fit the local context and specific WaSH opportunities and challenges that you face. You will see that we have already modified and applied the basic toolkit to maternal and child health, post-disaster recovery transitioning, technology acceptance, and willingness to pay. A web knowledge portal for WaSH — HydroSanitas — is also under development. It can be used to find suitable solutions once the community context is well understood and articulated (see Section 2). Further, it provides other community experiences, which may be helpful in avoiding failures already dealt with by others in similar situations, and a space for collaboration and communication.

When engaging community members in any interview, focus group, or survey, it is important to be ethical and respectful and to ensure that participants are not being coerced into participating. The research projects that used the schedules provided in this handbook have been approved by research ethics boards at McMaster University, University of Waterloo, and Kenya Medical Research Institute.

It is our hope that you find this handbook to be both informative and motivating. For further information or feedback about these tools or methods do not hesitate to contact UNU-INWEH<sup>3</sup>.

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3 [contact.inweh@unu.edu](mailto:contact.inweh@unu.edu) OR [www.inweh.unu.edu](http://www.inweh.unu.edu)

## LIST OF ACRONYMS & ABBREVIATIONS

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<b>DWSC</b>	Drinking Water Supply Chain
<b>GPS</b>	Global Positioning System
<b>IFAD</b>	International Fund for Agricultural Development
<b>KAP</b>	Knowledge, Attitudes, Practices
<b>WaSH</b>	Water, Sanitation, and Hygiene
<b>WHO</b>	World Health Organisation
<b>UNICEF</b>	United Nations Children's Fund



A photograph of two people washing laundry in a river. The water is brown and turbulent, with white foam from the rapids. Large, smooth rocks are scattered throughout the riverbed. The background is filled with dense, tangled branches and foliage. The text 'Part One' is overlaid in a large, white, serif font.

# Part One



# Introduction

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## WHO COULD USE THIS HANDBOOK?

This handbook has been designed for general use so that many different people can employ it in a variety of settings. More specifically, it is aimed at NGO or government field staff and/or community leaders who are concerned with a community's wellbeing in relation to water and health. This handbook provides a general overview of tools and methods in the W:ISE toolkit that facilitate the assessment of community knowledge, attitudes, and practices (KAP) around water and the environment with the intention of understanding community challenges, capacity, and readiness for empowered, sustainable change. The tools presented here have been very useful to our projects across many countries, including the Dominican Republic, Kenya, the Philippines, Sierra Leone, and Uganda. While we cannot be held accountable for any misuse or misunderstanding arising from the use of these tools, we hope that they will be as useful for you as they continue to be for us.

## WHY THE W:ISE TOOLKIT?

For a project to be successful and sustainable, an understanding of community water-health knowledge, attitudes, and practices are fundamental to identifying the right solutions, whether technology, policy, or capacity and behaviour change. The knowledge, capacity, and desire to practice proper water handling, sanitation, and hygiene must be present for community members to realise WaSH benefits for improved individual and community wellbeing. The W:ISE toolkit is designed to help strengthen communities by identifying barriers that may slow or prevent the success of WaSH projects and build upon opportunities through empowerment and capacity building.

### Things to remember:

- » The toolkit presented here addresses broad political, social, economic, cultural, and environmental factors.
- » You must adapt the toolkit to your specific location, context, and problem focus.
- » These tools will provide you with information to assist in implementing customised WaSH projects.
- » This manual does not replace basic training in research methods and techniques but rather builds on these foundational approaches for evidence-informed sustainable community WaSH policy and practice.



Photo Credit: Dr. Corinne Schuster-Wallace

#### BOX 1. BARRIERS TO WaSH PROJECTS

- » Lack of social and institutional capacity;
- » Exclusion of women and social conflict;
- » Poor knowledge of water, environment, and health relationships;
- » Socio-culturally irrelevant project designs;
- » Lack of sustained funding;
- » Installation of inappropriate technologies.

## CONCEPTUALISING THE WASH AND WELLBEING APPROACH

The W:ISE toolkit has been designed to fill a challenge identified in current WaSH projects — that of sustainability. It has been estimated that only 2 out of 3 hand pumps are working at any one time<sup>4</sup>, and despite many local sanitation successes, the MDG target will fall short. UNU-INWEH and its partners believe that uptake is the key to improving sustainability and scale up/out of proven solutions and, to this end, understanding community context, knowledge, perceptions, attitudes, and practices can improve project design and outcomes through the WaSH and wellbeing approach. This builds on what we see as the three essential pillars of sustainable behaviour change — engagement, empowerment, and enlightenment. The emphasis on wellbeing is critical to moving beyond simply a technical and/or medical focus on WaSH interventions. The W:ISE toolkit addresses the first two pillars by providing a platform to hear the different voices of a community and giving this knowledge and insight back to the community to engage and empower it in creating solutions. As demonstrated in the participatory development literature, because these solutions are generated through an internal-external partnership, they are more likely to be appropriate for the community, acceptable to the community, and therefore sustainable.<sup>5</sup> The W:ISE toolkit facilitates the final pillar — enlightenment — which is the motivation to create change and the incentive for action. The W:ISE toolkit underpins the WaSH and Wellbeing<sup>6</sup> approach to community development (Figure 1).

Interventions should facilitate the learning and capacity building of communities by educating members about water, sanitation, and health interactions so that they can develop a vision of wellbeing and work together to achieve it. The W:ISE toolkit has been developed in response to:

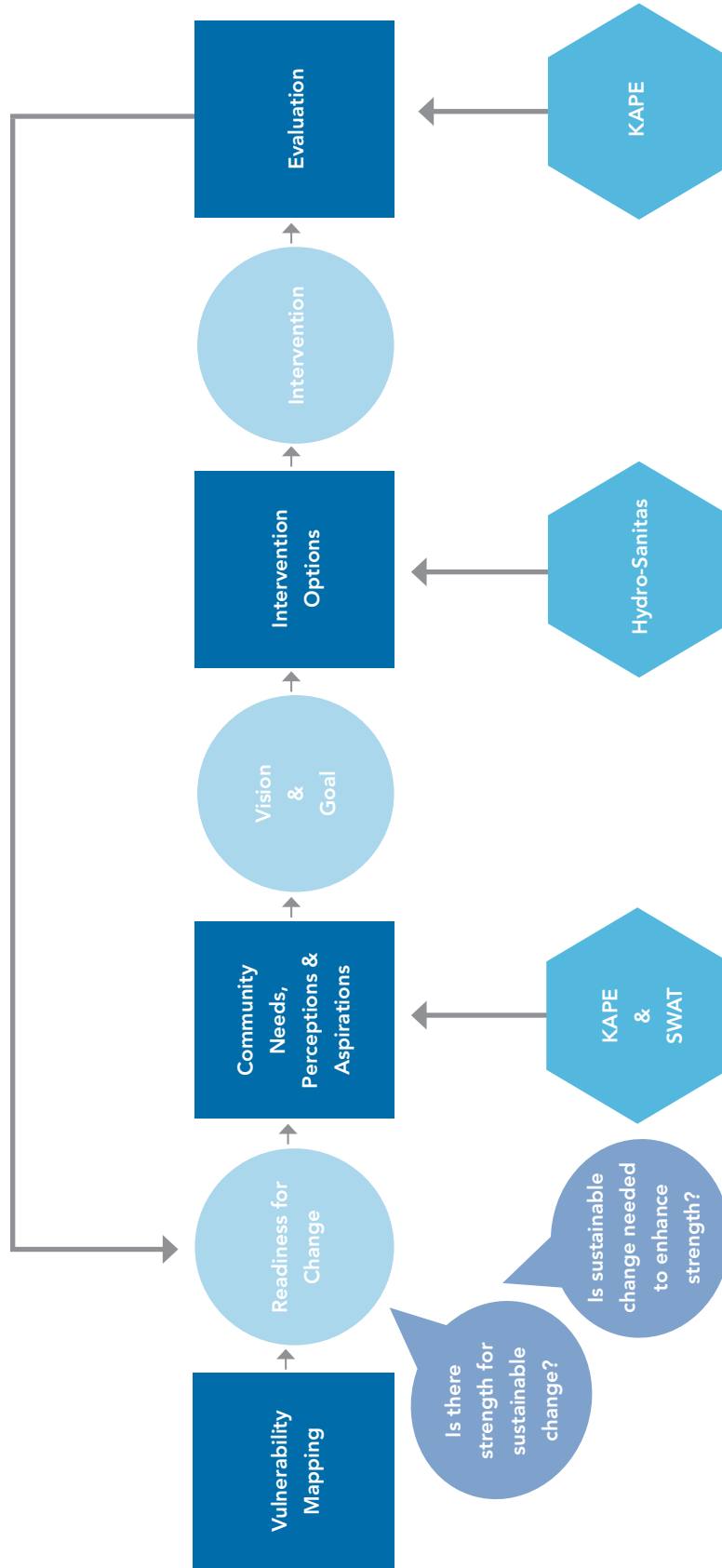
1. The need for an holistic approach to WaSH and Wellbeing that moves beyond the traditional biomedical model and which seeks to understand the complex linkages between people, water, the environment, and health;
2. The need to integrate information and knowledge across geographies, scales, sectors, and stakeholders; and,
3. The importance of social empowerment and social capital for sustainable development interventions.

4 RWSN Executive Steering Committee (2010) Myths of the Rural Water Supply Sector. RWSN Perspective No 4, RWSN, St Gallen, Switzerland.

5 Brett E.A. 2003. Participation and accountability in development management. *J. Dev. Studies* 40(2):1—29

6 WaSH and Wellbeing — changing evidence and evidence for change — is an approach borne out of trans-sectoral, transdisciplinary dialogue to re-imagine community development differently. <http://inweh.unu.edu/wash/>

FIGURE 1: WaSH AND WELLBEING APPROACH TO COMMUNITY DEVELOPMENT



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The W:ISE toolkit is predicated on the principles of readiness/willingness for change, strength-based solutions, stakeholder participation, equity, sustainability, and transdisciplinarity within an holistic socioeconomic, cultural, and ecological context. As such, we believe it is important to understand knowledge, attitudes, and practices in order to empower communities through co-creating research and knowledge and co-owning findings and solutions. Empowerment is not always incorporated into an intervention and this can contribute to the failure of the project over time.<sup>7</sup> Empowerment can only occur if community members are involved in the creation of new knowledge and the development of a vision for their future. Interventions must include groups that are often excluded from decision-making. For example, experience has shown that women are commonly excluded in decision-making, yet they are often the most knowledgeable about WaSH interactions. Community unity and social capital are crucial components for long-term change that can be enhanced through individual and community empowerment. W:ISE tools and methods can identify and break down barriers to social capital and build up community cohesion and capacity.

## Knowledge

WaSH projects should be designed around community member knowledge of water, the environment, and their health in order to ensure that they build appropriately on the strength of the community to resolve its WaSH problems. W:ISE tools and methods will help you assess existing knowledge of WaSH and the environment in a community. They provide opportunities for individuals to learn more about these issues, capture local (indigenous) knowledge, and internalise new knowledge for success. Existing knowledge of WaSH may be based on cultural factors and environmental conditions that are specific to a community's location. It is important to build on existing knowledge by increasing social cohesion and learning opportunities. Helping a community to generate new knowledge and articulate their tacit knowledge and priorities can empower them to make informed decisions regarding WaSH practices.

*“Greater attention needs to be paid both to enabling people to make and shape their own spaces for engagement and to processes to enhance the accountability of local and global institutions that affect people’s lives. With this, participation comes to mean more than taking up invitations extended by others.”<sup>6</sup>*

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7 OECD. 2012. Policy Guidance Note: The role of empowerment for poverty reduction and growth. <http://www.oecd.org/development/povertyreduction/50157329.pdf>

8 Cornwall A. 2002. Beneficiary, consumer, citizen: perspectives on participation for poverty reduction. SIDA Studies no. 2. Stockholm, Sweden: Swedish International Development Cooperation Agency. [http://www.sida.se/English/publications/Publication\\_database/publications-by-year1/2002/march/beneficiary-consumer-citizen---perspectives-on-participation-for-poverty-reduction](http://www.sida.se/English/publications/Publication_database/publications-by-year1/2002/march/beneficiary-consumer-citizen---perspectives-on-participation-for-poverty-reduction)

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## Attitudes

Attitudes can be shaped by practices, beliefs, values, norms, experiences, and geography. They are linked to knowledge (learned or experienced, factual or perceived), that has informed beliefs and norms. We can understand attitudes through assessing behavior. For example understanding why a person defecates in a specific area may provide insight about their attitudes toward sanitation and hygiene and the best approach to changing their knowledge and, ultimately, their behaviour. It can be challenging to assess attitudes as they often vary from person to person or social group to social group. The practices that a person develops may be a result of their attitude towards water and the environment. It can be difficult to change negative attitudes but one approach is through public outreach and education. Many development initiatives overlook the importance of outreach and education (the so-called software in a project) and may fail over time as a result. The tools and methods used in these forms of interventions allow you and your team to assess attitudes in your community and determine the community's willingness and capacity to change.

## Practices

Practices are the routine interactions that community members have with WaSH, the environment, and health. They can include activities such as how water is collected and stored, how hands are cleaned, and how faeces are disposed of. Practices, along with attitudes and knowledge, differ across communities. Practices are closely linked to attitudes and knowledge. Assessing the practices that take place in a community can be challenging because participants informing you about their practices may alter the description of a practice to what they think you want to hear or what they think would be socially acceptable. The tools and methods described in this handbook will allow you to assess different water, sanitation, and health interactions and incorporates questions designed to capture true practices in a community.

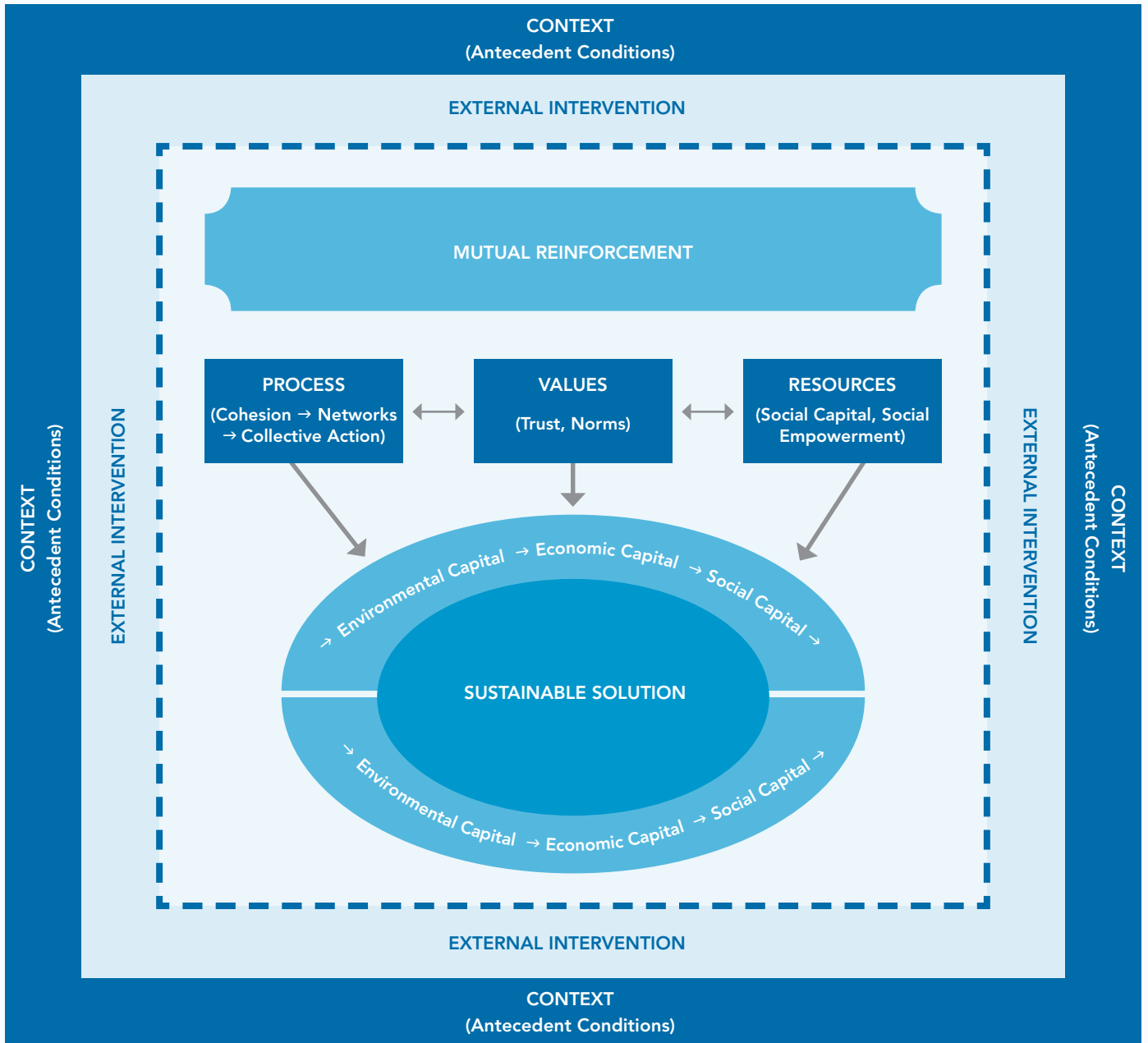
## Social Capital and Social Empowerment<sup>9</sup>

In addition to knowledge, attitudes, and practices, social networks and the capacity to make change have been linked to poverty alleviation and proactive health enhancing behaviour. While individual capacity and knowledge are important, they do not translate automatically into community engagement and action. Many researchers point to social empowerment and social capital as important drivers leading to sustainable change.

Social capital is generated by the relationships between people and their associated behaviours (norms) and values. It has been described, appropriately, as an "engine of action"<sup>10</sup>. Community social empowerment builds upon individual strengths and competencies and can be described as "collective action to improve the quality of life in a community and to the connections among community organisations"<sup>11</sup>. More specifically, empowerment changes existing power relationships and develops both "power within" and "power to"<sup>12</sup>.

- 
- 9 For further information, see, for example:  
Perkins D.D. and Zimmerman M.A. 1995. Empowerment theory, research, and application. *Am. J. Community Psychology*. 23(5):569-579  
Narayan D. and Pritchett L. 1997. Cents and Sociability: Household Income and Social Capital in Rural Tanzania. World Bank. <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-1796>  
Grootaert C. 1999. Social Capital, Household Welfare and Poverty in Indonesia. Local Level Institutions Working Paper No. 6 World Bank. <http://siteresources.worldbank.org/INTRANETSOCIALDEVELOPMENT/882042-1111748261769/20502273/LLI-WPS-6.pdf>  
Grootaert C. and van Bastelaer T. (Eds). 2002. *The Role of Social Capital in Development: An Empirical Assessment*. Cambridge University Press  
Bisung E. and Elliott S.J. 2014. Toward a social capital based framework for understanding the water-health nexus. *Social Science & Medicine*, 108:194-200. <http://dx.doi.org/10.1016/j.socscimed.2014.01.042>
- 10 Coleman J.S. 1988. Social Capital in the Creation of Human Capital. *Am. J. Sociology*. 94:S95-S120
- 11 Perkins D.D. and Zimmerman M.A. 1995. Empowerment theory, research, and application. *Am. J. Community Psychology*. 23(5):569-579 (p.571)
- 12 Paradiso de Sayu R. and Chanmugam A. 2015. Perceptions of Empowerment Within and Across Partnerships in Community Based Participatory Research: A Dyadic Interview Analysis. *Qualitative Health Research*. DOI: 10.1177/1049732315577606
-

FIGURE 2: EMPOWERING CHANGE



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## FROM THEORY TO PRACTICE

The W:iSE Toolkit has been developed to support UNU INWEH and its partners in realising “a world free of water problems”<sup>13</sup> at the community scale. It is premised on three beliefs:

1. Individuals in communities possess untapped potential for improving health and wellbeing;
2. Sustainable solutions are only possible when there is a clear understanding of the local context, communities are engaged partners in identifying and implementing solutions, and solutions include environmental and economic benefits; and,
3. Communities have to be ready for change in order to be able to maximise benefits from interventions.

In a manner similar to Fawcett et al.<sup>14</sup> who describe the process of empowerment in five stages (collaborative planning; community action; community change; community capacity and outcomes; adaptation, renewal, and institutionalisation), the W:iSE Toolkit is designed to support the empowerment process (Figures 1 and 2) through identification of community needs, capacity, and aspirations (collaborative planning and community action), intervention options (community capacity and outcomes), and iterative evaluation (adaptation and renewal). It is important for us to remember that both the process and the outcomes need to be empowering. While many of the research projects utilising these tools are ongoing, there are some practical demonstrations that the process is empowering, both for communities and for local partners. Specific outcomes to date include: i) establishment of an elected community water committee in a rural Kenyan community, supported by an external advisory group consisting of local government, public health, water utility, private sector, and NGO representatives; ii) understanding of why uptake of a household point of use treatment has not been greater in the Dominican Republic; iii) the importance of, and ability to measure, community resources, including social capital, for community leaders and local NGOs; and, iv) a realisation that, across many different countries, rural community members use visual indicators in order to assess that their water is of sufficient quality to drink.<sup>15</sup> Not only have the tools been utilised across geographically and culturally diverse contexts and differing communities by different groups, they have been applied at different scales and used to answer different questions (Appendices Part B-Tools; Appendices Part C-KAPE questionnaire variations).

## USING THIS HANDBOOK

Section One describes and explains the tools and methods in the W:iSE toolkit, which you can use to understand community knowledge, attitudes, practices, state of resources (community, environment, and WaSH), and capacity for change. Not all tools and methods may be necessary or useful in your community. Once you have developed a full understanding of the suite of tools provided, you will be able to determine which tool(s) work best for your intervention. The suite of methods and tools can be found in Appendices Part A-How to collect data; Appendices Part B-Tools; Appendices Part C-KAPE questionnaire variations.

Section Two explains how to bring together the information from these different tools and provides a road map for action once you have used the relevant tools from the W:iSE toolkit. This is not a step-by-step instruction manual but rather a guide that will allow you as a community leader, NGO, government officer, or policy maker to work with a variety of different communities. You may use this chapter as a guide to develop your own intervention.

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13 UNU INWEH vision statement: <http://inweh.unu.edu/wp-content/uploads/2014/12/UNU-INWEH-Strategic-Plan-2015-2019.pdf>

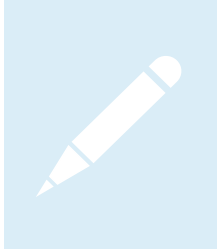
14 Fawcett S.B., Paine-Andrews A., Francisco V.T., Schultz J.A., Richter K.P., Lewis R.K., Williams E.L., Harris K.J., Berkley J.Y., Fisher J.L. and Lopez C.M. 1995. Using Empowerment Theory in Collaborative Partnerships for Community Health and Development. *Am. J. Community Psychology*. 23(5):677-97

15 See Associated Publications section for more information.





# Part Two



# Methods and Tools for Assessing WaSH and Wellbeing

This section provides a short overview of each tool and method available within the W:ISE toolkit that can be used in a community WaSH project (Box 2).

**Methods** are particular ways to gather data as the foundation of information. The W:ISE toolkit is based on social science mixed methods, participatory approaches, and triangulation of information. The latter is accomplished through the melding of findings from the different methods as well as ground truthing information acquired in order to validate or dispute results. The collection of data required to inform the WaSH and Wellbeing process requires the participation and education of community members as well as incorporation of knowledge from other key stakeholders. The methods and tools used for engaging participants are summarised in Table 1. Please be sure to refer to Appendices Parts A - C for more detailed explanations of the W:ISE toolkit assessment methods and additional resources.

**Tools** are devices that can be used by you or a group facilitator to help gather data about community knowledge, attitudes, and practices, water resources, and capacity. This handbook specifically refers to the W:ISE toolkit developed by UNU-INWEH and its partners. The tools described can be used individually, in conjunction with other W:ISE tools, or in conjunction with other tools that you may already use in WaSH project development. It should be noted that none of the tools presented in this section deal with project implementation (design, costing, training etc.).



Photo Credit: Dr. Corinne Schuster-Wallace

## BOX 2: W:ISE TOOLKIT METHODS AND TOOLS

### Methods

- » Household surveys
- » Key informant interviews
- » Focus groups
- » Photo voice
- » Community meetings
- » Community mapping
- » Ground truthing

### Tools

- » KAPE assessment
- » Community-SWAT
- » HydroSanitas lessons learned
- » WADI mapping

**TABLE 1: W:ISE TOOLKIT METHODS AND TOOLS**

PURPOSE	STAKEHOLDER	W:ISE TOOL	METHODS
To understand baseline WaSH status, community KAP (water, environment, and health; WaSH), cohesion, priorities and willingness to change	COMMUNITY MEMBER	KAPE ASSESSMENT	HOUSEHOLD SURVEY PHOTO VOICE COMMUNITY MAPPING FOCUS GROUPS
	COMMUNITY LEADER	KAPE ASSESSMENT SWAT	KEY INFORMANT INTERVIEW FOCUS GROUPS COMMUNITY MAPPING COMMUNITY WATER ASSESSMENT
	OTHER EXPERTS	KAPE ASSESSMENT SWAT	KEY INFORMANT INTERVIEW COMMUNITY WATER ASSESSMENT (Facilitate with community leaders)
To identify vulnerabilities and strengths around water resources, wastewater, health, and environment and assess available community resources	FACILITATOR (Within or working with community)	HydroSanitas:SWAT	COMMUNITY WATER ASSESSMENT
To ground truth community knowledge with quantitative data and site visits	ALL	SWAT TOOLKIT RESULTS COMMUNITY REPORT BACK	GPS AND COMMUNITY WALKABOUT WATER QUALITY TESTING COMMUNITY MEETING

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## W:ISE TOOLKIT: METHODS<sup>16</sup>

The various tools that make up the W:ISE toolkit use a combination of methods to collect information. Community members should be partners in generating the focus of the research, owning the problems, and determining the solutions. They must engage in the process of gathering information around water, sanitation, and health in order to determine their needs and vision for the future. Tools such as **photo voice** and **participatory community mapping** allow a deeper understanding of the experiences of individuals and identification of common patterns across the community. They also enable community members to learn more about themselves and their relationships with water, sanitation, and health for improved WaSH and wellbeing.

### Household Surveys

These surveys are used to capture KAP and opinions on topics. They are usually administered to the head of the household and can include a sanitary risk inspection of the home, although in some studies it might be decided to administer only to female heads within households. By using qualitative and quantitative questions in an interview style, richer data can be acquired. This also allows the surveyor to observe the household facilities and determine if the answers are accurate in relation to water and wellbeing practices. While the length of the survey will vary depending on your topics, it is recommended that administration of a survey should not exceed 30-45 minutes. It can be easier to pair surveyors into a survey team, one questioner and one observer.

### Focus Groups

This method asks a group of participants about interests, perspectives, beliefs, attitudes, and practices in relation to a situation or concept, allowing for community member interactions and social organisation to be observed and better understood. The selection of the small group of participants is essential and should include key stakeholders. It is suggested that participants in focus groups be divided based on social characteristics, such as age and gender, depending on the questions being asked or problems being explored. This is to increase their comfort level and thereby conversation flow. Group discussions allow individuals to remember stories and experiences they may have forgotten on their own. Being in a group also provides many with a sense of comfort and solidarity, which may encourage them to share more experiences. It further provides an opportunity to obtain different explanations of the same event, giving a more textured representation of the community.

### Photo Voice

This method requires participants to take photos of their experiences with their health and the environment, putting together a unique snapshot of individuals' interactions and understanding of WaSH and Wellbeing. This technique empowers and engages participants in the relationship between water, the environment, and health as well as creating a partnership between your team and the community. It is useful to ask people who have participated in other activities and ensure proper training for their participation and use of the equipment (disposable camera) prior to the activity beginning. On average 1-2 weeks for this activity is sufficient and should end with a discussion of select significant photos.

### Key Informant Interviews

A diverse range of participants will enhance the breadth of data collected, including community leaders and community members of various demographics. Your interview should begin generally and move into more open ended in-depth questions to create dialogue and comfort. These interviews should occur at a comfortable location for the participant, potentially their home if they agree and it is more convenient for them. Interview length will vary depending on the topics, but will usually last for 1 – 2 hours.

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<sup>16</sup> For additional information: Israel B.A., Eng E., Schulz A.J. and Parker E.A. (Eds.) 2012. *Methods for Community-Based Participatory Research for Health*, 2nd Edition. Jossey-Bass ISBN: 978-1-118-02186-6; Glossary of terms: <http://www.hsrmethds.org/glossary.aspx?mode=full>; Community Toolkit: <http://ctb.ku.edu/en/table-of-contents>

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## Community Meetings

These events should be held at a convenient time for the community. Prior to the event, engage with community leaders to discuss what will occur and encourage leaders to spread the word around the community. It is important to have your team prepared to facilitate this event and ensure that they are fully aware of all project details. These meetings allow individuals who may not want to participate in other aspects of the data collection to share their opinions. It is important to have an individual recording the meeting proceedings to later review information that arose. Lastly, this event is usually held prior to the beginning of a campaign or after data collection has occurred in order to report back findings.

## Participatory Community Mapping

This method allows community members, as a group, to highlight important areas, such as latrines or water sources on a printed or hand-drawn map. It allows them to present their socially or culturally distinct understanding of these areas. It is important to focus this project on areas where they interact with water or conduct sanitation practices, which gives you a better assessment of community, environment, and social patterns that exist.

## GPS Georeferencing and Community Walkabouts

These provide additional data, and an opportunity to triangulate and validate results. Plotting important community locations and WaSH facilities on a map provides a visual resource that can be linked to water quality and other data. You can do this through a community walkabout in which members of the community guide you around and indicate locations, which are captured and coded using a handheld GPS device.

## Water Quality Testing

Completing simple tests can tell you if there are waterborne diseases, like *Escheria coli* (*E. coli*) or *Salmonella*, present in the community's drinking water. Some water quality testing kits that have been used by partners include: Coliscan Easygel®, which has an online manual for using the product with step-by-step instructions for testing water for disease and fecal matter, Colilert®, The Enterolert® Test, and PathoScreen® products.

Following the completion of these tests, you should compare the results to relevant regulatory standards, for instance the World Health Organisation's Guidelines for Drinking Water Quality.<sup>17</sup>

## W:ISE TOOLKIT: TOOLS

### KAPE Assessment

The KAPE (Knowledge, Attitudes and Practices for Empowerment) Assessment is a series of interview schedules to gather information that is used to assess and understand community perceptions and current knowledge of water, sanitation, and health and linkages between them, different types of interactions people have with water and the environment, WaSH practices and preferences among community members (behaviour), insights to aspirations and constraints around WaSH and Wellbeing and overall readiness for change towards a WaSH intervention. These interview schedules are designed for different stakeholders, including community members, community leaders, and experts. The schedules employ different methods in order build up as complete a picture as possible with minimal resources. Data are collected on a broad range of subjects including household demographics, water and sanitation resources and needs, and community challenges and opportunities. These subjects can, and have been, augmented for different purposes to

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17 WHO. (2011). *Guidelines for drinking-water quality - 4th ed.* World Health Organization. Geneva, Switzerland. [http://apps.who.int/iris/bitstream/10665/44584/1/9789241548151\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44584/1/9789241548151_eng.pdf)

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include willingness to pay, attitudes towards specific solutions, KAP of different populations (e.g. new mothers), and aspirations for post-disaster transitioning.

The tool requires direct interaction with community members and other stakeholders. When administered across a community, this multi-method tool can collect a variety of water experiences. It invites the participation of community members who are most familiar with WaSH and Wellbeing issues and who would benefit most from safe water practices, such as women, who are typically responsible for water collection and caretaking in developing countries.

## HydroSanitas Community SWAT (Self-Water Assessment Tool)

HydroSanitas:SWAT is an Internet-based tool within HydroSanitas that allows you to evaluate the status of social, physical, and infrastructure water-related resources in a community. It assesses eight themes of water security based on information provided in response to a series of questions. It produces an holistic evaluation of water security in the community that incorporates information about water source points and community characteristics. HydroSanitas:SWAT is a participatory evaluative tool which is designed to lead to improved knowledge of water and health relationships. Using the collective local knowledge of water issues in a community (both internal and external) will help to establish a baseline for the barriers and facilitators of a WaSH intervention. The tool consists of several modules, including an overall community assessment, threats to water quality and quantity, community knowledge and capacity, and water and sanitation infrastructure. This assessment tool was designed to use indigenous(local) knowledge in the absence of recorded data. Some of these data can be collected through the KAPE Assessment if they are not currently available. Once registered with a login and password, the tool can be accessed online<sup>18</sup>.

## HydroSanitas Lessons Learned

This tool captures experiences of different communities as part of the HydroSanitas online knowledge portal. These experiences are designed to act as a resource for other communities as well as a mechanism for tracking various interventions within individual communities or programmes. It captures not only the intervention, but the socio-cultural context within which it occurred and useful information on challenges overcome, financing, and cost. Community or project leaders can fill in a form and submit it to the portal.<sup>19</sup>

## WADI — Water Associated Disease Index

While not a community based tool, the WADI is a tool that can be used to identify areas with higher vulnerability to specific water-associated diseases for prioritisation and resource allocation purposes<sup>20</sup>. The tool can be applied to a specific disease, time period, and / or geographic area, although technical geographic information system (GIS) skills are required to develop the map outputs. WADI is designed to make use of openly available software so that it can be applied in low resource settings. It can be applied to different diseases, but is only currently available as WADI: Dengue<sup>21</sup>, and WADI: Schistosomiasis and WADI: Leishmaniasis, which are forthcoming under the Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR) project<sup>22</sup>.

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18 <http://projects.inweh.unu.edu/swat>

19 <http://projects.inweh.unu.edu/hydrosanitas>

20 Dickin S.K., Schuster-Wallace C.J. and Elliott S.J. 2013. Developing a Vulnerability Mapping Methodology: Applying the Water-Associated Disease Index to Dengue in Malaysia. PLoS ONE 8(5): e63584. doi:10.1371/journal.pone.0063584 <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0063584>

21 <http://inweh.unu.edu/wp-content/uploads/2014/12/Mapping-Global-Vulnerability-to-Dengue-using-WADI.pdf>

22 <http://www.escwa.un.org/RICCAR/ri.asp?ReferenceNum=RI>

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## W:ISE TOOLKIT: IMPLEMENTATION

### Understanding Community Knowledge, Attitudes, and Practices

If the tools are being applied by someone from outside the community, the first stage of the W:ISE toolkit implementation is to engage the community and its members in the process and ensure that this is something that will help them. This is a very complex process, often requiring people from a variety of disciplines, and our intent is to guide, rather than prescribe. Moreover, if community engagement fails, it is important to rethink the readiness of the community for change (Figure 1).

It is important to begin by meeting community leaders, who are an essential part of any successful WaSH initiative. They can assist in building a strong relationship between you and community members and can introduce you to groups of stakeholders who may be willing to participate. It is important to spend time getting to know members and groups of the community. Often, budgets and time constraints do not make this easy, but research indicates that developing a rapport with the community is crucial to fully understanding WaSH and Wellbeing needs and opportunities with the framework of existing physical, social, and economic resources. The goal of the W:ISE toolkit, whether implemented by people within or outside the community, is to support the community in understanding, owning, and managing WaSH-related problems and solutions through access to relevant information.

### KAPE Assessment

**Designing your KAPE Assessment:** work with your team to decide: 1) the problem(s) you would like to understand; 2) the questions you would like to answer; 3) the nature and scope of data you want to collect; 4) which methods you will utilise to achieve this; and, 5) who your target group(s) are. The core KAPE Assessment questions should always be included in your assessment, as these provide important context for your findings. Other types of information you may wish to obtain include willingness to pay, water handling and hygiene practices, aspirations for community WaSH etc. When thinking about whom to request to participate in the assessment, women, the primary water collectors in many developing countries, tend to have the most direct experience with WaSH activities. However, it is important to obtain a broad selection of opinions. This is where the combination of methods becomes useful. For example, women may be the target participant for household surveys, but male perspectives are solicited through focus groups. Once the questions have been determined they should be translated into the local language(s).

**Obtaining Ethics to Administer the Assessment:** If you are conducting research in a community you may be required to obtain ethics through a community ethics protocol, or university/organisation ethics board prior to administering the assessment.

**Preparing to Administer the Assessment:** The best way to collect the assessment data is by using pairs of interviewers — one interviewer to ask questions and the other to capture the data and observe the surroundings and the process. Alternatively, one person can take a voice recorder to capture all that is said. Each interviewer should understand WaSH and water-environment-health linkages and be trained on how to conduct an interview. It is important to practice the interview on people, in order to be able to understand the ethics of asking for consent and confidentiality and to troubleshoot potential issues, such as misunderstanding questions. Under certain circumstances, community members can be helpful as interviewers when collecting information and this participation will build their skills and knowledge of WaSH. Once the interviewers are prepared, participants have to be recruited according to a pre-defined sampling strategy. Community leaders can be very useful in introducing interviewers to the community. Local NGOs can also provide this support. While household surveys tend to have a random element to the selection criteria, key informants (leaders and experts) tend to be identified through recommendations from others (snowball sampling).

**Undertaking the Assessment:** Data can be collected on paper copies of the survey (one for each respondent), or on a digital tablet using the QuestionPro<sup>®23</sup> KAPE Assessment. Voice recordings can be a useful aid, particularly for responses to qualitative questions, as you can go back to the interview to fact-check.

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23 <http://www.questionpro.com/>



Photo Credit: Dr. Corinne Schuster-Wallace

## HydroSanitas SWAT

The tool leads the user through different sets of related questions. It may be useful to ensure access to any community records, reports, and other documents before starting the assessment. First a community profile is established. Complete each section as fully as possible, although it is possible to go back and change responses or fill in gaps at a later date. HydroSanitas:SWAT was designed so that only answered questions are used to calculate the summary. However, the more accurate and complete the information, the more reliable the results. Most questions provide multiple choice options, where the choice that best describes the situation in the community is chosen. Once the answers have been filled in, the results can be accessed. They are provided as simple graphs and charts to help understand what the information is describing. The results will tell you how secure water is in your community and this information can tell community members about what is needed to maintain public health. If a score is in the red area of the graph, it means that this particular area needs improvement in the community. Values in the green area are less problematic, although this should not be interpreted as there being nothing more to be done.

## Analysis and Dissemination

The final stage in implementing the W:ISE toolkit is to analyse, reflect on, and share the collected information. Many analytical methods and tools exist. Quantitative data can be assessed in a spreadsheet programme, such as Excel® or using qualitative software tools such as NVivo®. Findings from different tools should be triangulated and used to transform data into information to answer the specific questions posed at the outset.

An important stage in implementing the W:ISE toolkit involves discussing the findings with community members, for example, during community meetings. This method allows for members of the community, who were not able to partake in focus groups and interviews, to contribute their views or insights and to authenticate the qualitative reports. It further allows community members to own the information and to use it to discuss what they envision for their future health and wellbeing, for example, creating community committees to manage water projects. Additional dissemination opportunities could include donors, NGOs, businesses, etc. who are looking to invest resources in the community. The results can also be used in funding applications or project proposals.





# Part Three



# Planning a Community Intervention

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The application of tools in the W:ISE toolkit provide the evidence for informed decision-making at the local level. The toolkit itself is simply a mechanism to ensure sufficient collective knowledge so that a community can own the discussion and decisions made around WaSH provisioning. This does not mean that a community must stand alone in planning and implementing the intervention; rather they are a partner in the process and must be able to draw upon external expertise and support. Remember that every WaSH intervention is unique as it must account for local conditions. This is why it is so important to understand not only the physical context for WaSH in a community, but also the socio-cultural-economic conditions as well.

The information collected through the W:ISE toolkit, once analysed, presented, and discussed, forms a big picture overview of the challenges, opportunities, and resources surrounding WaSH in that community. Knowing this information and knowing that it is extracted from local knowledge provides an opportunity to talk about WaSH and wellbeing in the community and to develop a unified vision and plan for change.

There are several elements articulated below, education and outreach, community vision to address WaSH needs, and narrowing the choices, which may be included within the vision in order to achieve the goal articulated by the community.

## EDUCATION AND OUTREACH

Understanding why people think the way they do about linkages between water, sanitation, environment, and health, provides insight into the knowledge gaps which may exist. Education campaigns should support and reinforce existing WaSH knowledge and best practices. Additionally, the toolkit will provide information on community context, which is essential for deciding on the right messaging and delivery mechanism(s). Education campaigns may involve incorporating proper hand washing techniques and bathroom etiquette into school curriculum, or on the walls of school toilets, or posting educational information and pictures around the community. In order to reinforce learning and subsequent behaviour change, learning about proper WaSH practices and the relationship between water, sanitation, environment, and health should be built into each stage of an intervention.

## COMMUNITY VISION TO ADDRESS WaSH NEEDS

One of the key objectives of the W:ISE approach is to create a sense of unity and engagement among community members so that the entire community is committed to self-articulated WaSH goals. This can occur through different activities, such as a **community**

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**meeting** or other stakeholder consultation mechanisms. It is important that every voice has an opportunity to be heard. To be successful and sustainable, community leaders can only move forward on a vision about which everyone is in agreement. Readiness for change is an important component in taking any vision from paper to practice. If the results of applying the W:ISE toolkit indicate that the community is not yet ready to engage in change, it is unlikely that any intervention will be successful in the long term, or deliver the anticipated results. If a community is not yet ready to invest in change, this simply means that other activities and interventions are required before a specific WaSH intervention. These may include general capacity building of the leadership (e.g. financial, managerial), trust-building between different community groups, and/or strengthening linkages with external partners.

## NARROWING THE CHOICES

An important factor for ensuring long term sustainability of a WaSH intervention is ensuring that the right solution is applied in the right physical, social, cultural, and economic context. **HydroSanitas** is a “one-start” knowledge portal for assisting in narrowing down the potential solutions available to maximise the likelihood of success. Drawing upon technical descriptions, supporting resources, experiences in other communities and a community of practice, **HydroSanitas** provides access to information about WaSH solutions that are most appropriate for the specific community context, as described through the findings from applying the W:ISE toolkit. Community members can use this portal to search for intervention techniques that match their vision. They can also research financial opportunities through the experience of others captured in the lessons learned in this tool. It is at this point that external expertise may be required to aid the community in the final decision-making and to tailor a specific plan of action for the community. An example can be found in the box below (Box 3).



### BOX 3. HYDROSANITAS

An online knowledge database and decision supporting tool, the portal can be accessed by computers (or mobile phone, in the future) that are connected to the Internet. This database acts as a global platform where parties involved in developing solutions to water problems can interact and share ideas. It allows community members to access simple, technical information that is specific to socioeconomic, political, and cultural contexts.

In this portal, information and stories can be exchanged that can support the understanding of relationships between water, sanitation, the environment, and health, and share sustainable and empowering solutions for communities. More importantly, it provides experiences of challenges faced, so that everyone can learn from each other's mistakes. This database allows you to work with other stakeholders involved in water resource management. It provides community members with information about proven approaches to protecting and treating water that may be applicable in their community. On the other hand, the portal provides an opportunity to inform the work of technology designers, researchers, consultants, and practitioners with the needs of and gaps in water security at a local, grassroots level. You and your community have the opportunity through this tool to inform your own work and to inspire work in other areas of the world.

To access this database you will need to contact UNU-INWEH. For information on how to do this please see **Box 4**.

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## ACTION PLAN

Once a solution has been decided upon, partners need to develop a community action plan. This will lay out what needs to be done, how much it will cost, where the money will come from, and who is responsible for what actions. It will set up the different phases of the project, as required, so that it is easy to keep track of progress. It is important to understand roles and responsibilities and build capacity for operating and maintaining preferred intervention(s).

## EVALUATION

After a plan has been implemented and results begin to be visible, the community should gather again and evaluate how well the intervention worked. The W:ISE toolkit can be re-applied to look at changes that have occurred since the intervention. Another tool which can be used is the **Canadian Index of Wellbeing**,<sup>24</sup> which is currently undergoing a new phase for global application. Rarely does an intervention follow a straight line. There will be many challenges that will be faced while learning about capacity and current WaSH status. There may be many instances where it is necessary to take a step back and try a different approach. This evaluative stage will ultimately provide new opportunities and identify any barriers that have prevented achieving the full action plan.



### BOX 4. HOW TO ACCESS HYDROSANITAS

1. Register through the HydroSanitas website for a username and password at:  
<http://projects.inweh.unu.edu/hydrosanitas/>
2. Login using the user name and password.
3. Create a profile.
4. Use the search box to find information about WaSH initiatives or follow the 'problem' steps to find WaSH solutions.
5. Begin networking to share your stories; learn about water, environment, and health links; and develop intervention options.

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24 <https://uwaterloo.ca/canadian-index-wellbeing>



# Part Four



# Conclusions

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The objective of this handbook is to inform you about tools and methods that may be instrumental in building community capacity and knowledge to address water, sanitation, environment, and health problems through sustained behavioral change. The tools and methods described serve three general purposes: to increase knowledge of water, environment, and health relationships among community members to inspire sustainable behavior change; to build the strength of the community to tackle problems together through action; and, to inspire and encourage community aspirations and visions for improved community WaSH and wellbeing. It has been designed so that it can be used in a variety of settings. After using these tools and methods you and your team should be able to develop a broad understanding of your community's KAP as they pertain to WaSH.

Ultimately, the W:ISE toolkit not only collects information about community knowledge, attitudes, and practices, but also empowers communities to learn about water, sanitation, the environment, and their health, build their capacity for change, and provides them with the tools they need to enact it. However, there are several core principles that should always form the basis of any community partnerships. Just as there is no single project or design that can work in every community there is no universal solution to problems that might be uncovered through the W:ISE approach.

## KEY WASH AND WELLBEING LESSONS

- » Build upon pre-existing traditional knowledge when engaging community members;
- » Include **all** social and demographic groups as this is essential for community success;
- » Ensure that solutions are appropriate and sustainable, fulfilling local social, environmental and economic requirements;
- » Where non-existent or weak, social capital (the institutions, relationships and norms that shape the quality and quantity of a society's interactions) should be developed prior to an intervention in order to increase the likelihood for long-term success;
- » Ensure external support to augment and develop local technical and management capacity; and,
- » Build solutions with the community and from within the community so that they remain true to, and realise, community visions and aspirations.<sup>25</sup>

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25 Schuster-Wallace C.J., Cave K., Bouman-Dentener A. and Holle F. 2015. Women, WaSH, and the Water for Life Decade. United Nations University Institute for Water, Environment and Health and the Women for Water Partnership. [http://inweh.unu.edu/wp-content/uploads/2015/06/Women-Wash-and-Water-for-Life-Decade\\_WEB.pdf](http://inweh.unu.edu/wp-content/uploads/2015/06/Women-Wash-and-Water-for-Life-Decade_WEB.pdf)



# Part Five



# Glossary

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**Gate Keeper:**

Community leader who has credibility with multiple social groups

**Ground truthing:**

A term used to describe the process of going on-site (on the ground) in order to verify information sourced through remote sensing, modelling, or secondary data analysis.

**Key informant:**

An individual that has experience with different areas of the Drinking Water Supply Chain (DWSC) and represents a key demographic group in the community.

**Linkages:**

A connection or association between two or more objects or ideas that influence a person's attitudes and practices. An example would be the connections a person makes between water, sanitation, and/or hygiene.

**Method:**

A specific way of completing a task that has been predetermined.

**Social capital:**

The institutions, relationships, and norms that shape the quality and quantity of society's social interactions. This is a crucial component for all forms of development<sup>26</sup>. (World Bank)

**Stakeholder:**

A person who plays an important role in WaSH relations in your community. An example of stakeholder may be a woman who's in charge of water collection and storage in household.

**Tool:**

A device or instrument that can be used to complete a task.

**WaSH:**

Water, sanitation, and hygiene — a commonly used development term that references the linkages between these three elements.

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26 World Bank. (2011). *What is social capital*. <http://go.worldbank.org/K4LUMW43B0>



A photograph of three young children in a rural, outdoor setting. The child on the left is a young girl with short hair, wearing a blue top and a patterned skirt, carrying a baby in a colorful patterned sling. The child in the middle is a baby wrapped in a red and white patterned cloth. The child on the right is a young boy wearing a light-colored, patterned shirt and shorts, looking towards the other children. The background shows a dirt path, sparse vegetation, and a wooden post. A large, white, semi-transparent text overlay reads "Part Six".

# Part Six



## W:ISE Toolkit: Associated Publications

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Bisung E. and Elliott S.J. 2014. Toward a social capital based framework for understanding the water-health nexus. *Social Science & Medicine*, **108**:194 – 200. <http://dx.doi.org/10.1016/j.socscimed.2014.01.042>

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Bisung E., Elliott S.J., Abudho B., Schuster-Wallace C.J. and Karanja D.M. 2015. Dreaming of toilets: Using photovoice to explore knowledge, attitudes and practices around water-health linkages in rural Kenya. *Health and Place*, **31**:208 – 15. doi: 10.1016/j.healthplace.2014.12.007

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Chamberlain J. and Watt S. 2012. Training Multidisciplinary Leaders for Health Promotion in Developing Countries: lessons learned. *Health Promotion Practice*, **13**(3):344 – 348. doi: 10.1177/1524839910384077.

Dickin S.K. and Schuster-Wallace C.J. 2014. Assessing changing vulnerability to dengue in northeastern Brazil using a water-associated disease index approach. *Global Environmental Change*, **29**:155 – 164.

Dickin S.K., Schuster-Wallace C.J., Elliott S.J. 2014. Mosquitoes & vulnerable spaces: Mapping local knowledge of sites for dengue control in Seremban and Putrajaya Malaysia. *Applied Geography*, **46**:71 – 79. doi: 0143-6228

Dickin S.K., Schuster-Wallace C.J. and Elliott S.J. 2013. Developing a Vulnerability Mapping Methodology: Applying the Water-Associated Disease Index to Dengue in Malaysia. *PLoS ONE*, **8**(5): e63584. doi:10.1371/journal.pone.0063584 <http://www.plosone.org/article/info%3Adoi/10.1371/journal.pone.0063584>

Fullerton L.M., Dickin S.K. and Schuster-Wallace C.J. 2014. *Mapping Global Vulnerability to Dengue using the Water Associated Disease Index*. United Nations University. <http://inweh.unu.edu/wp-content/uploads/2014/12/Mapping-Global-Vulnerability-to-Dengue-using-WADI.pdf>

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Levison M.M., Elliott S.J., Schuster-Wallace C.J. and Karanja D.M.S. 2012. Using mixed methods to visualise the water-health nexus: identifying problems, searching for solutions. *African Geographical Review*, 31(2), 183-199. DOI:10.1080/19376812.2012.728489

Levison M.M., Elliott S.J., Karanja D.M.S., Schuster-Wallace C.J. and Harrington D.W. 2011. "You cannot prevent a disease, you only treat diseases when they occur": Knowledge, attitudes and practices to water-health in a rural Kenyan community. *East African Journal of Public Health*, 8(2):103-11.

Levison M.M. 2010. "Diseases are a must. Human beings must get sick": A Rural Community's Knowledge, Attitudes and Practices towards Water, Sanitation and Health. Open Access Dissertations and Theses. Paper 4240. <http://digitalcommons.mcmaster.ca/opendissertations/4240>

Mulligan K., Elliott S.J. and Schuster-Wallace C.J. 2012a. The place of health and the health of place: dengue fever and urban governance in Putrajaya, Malaysia. *Health and Place*, 18(3), 613-620 doi:10.1016/j.healthplace.2012.01.001

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Schuster-Wallace C.J., Elliott S.J. and Bisung E. 2014. The Water-Health Nexus. In Luginaah I. and Kerr R.B. (Eds.), *Geographies of Health and Development (197-208)*, England: Ashgate.

Schuster-Wallace C.J., Grover V.I., Adeel Z., Confalonieri U. and Elliott S. 2008. *Safe Water as the Key to Global Health*. United Nations University Institute for Water, Environment and Health. [http://inweh.unu.edu/wp-content/uploads/2013/05/SafeWater\\_Web\\_version.pdf](http://inweh.unu.edu/wp-content/uploads/2013/05/SafeWater_Web_version.pdf)

Schuster-Wallace C.J., Cave K., Bouman-Dentener A. and Holle F. 2015. *Women, WaSH, and the Water for Life Decade*. United Nations University Institute for Water, Environment and Health and the Women for Water Partnership. [http://inweh.unu.edu/wp-content/uploads/2015/06/Women-Wash-and-Water-for-Life-Decade\\_WEB.pdf](http://inweh.unu.edu/wp-content/uploads/2015/06/Women-Wash-and-Water-for-Life-Decade_WEB.pdf)

UNU-INWEH. 2010, *Sanitation as a Key to Global Health: Voices from the Field*. United Nations University Institute for Water, Environment and Health. [http://inweh.unu.edu/wp-content/uploads/2013/05/2010\\_Sanitation\\_PolicyBrief.pdf](http://inweh.unu.edu/wp-content/uploads/2013/05/2010_Sanitation_PolicyBrief.pdf)

Watt S. 2012. Water, Women, & Health: The dilemma of the two goats. *Human Evolution/Global Bioethics*, 27(1-3):17-20.

Watt S. and Chamberlain J. 2012. Sustained and Effective Leadership Training for Safe Motherhood. *Interdisciplinary Studies Journal*, 1(4):8-20.

Watt S. and Chamberlain J. 2011. Water, climate change, and maternal and newborn health. *Current Opinions in Environmental Sustainability*, 3:491-496.

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# Appendix A

## How to Collect Data

Photo Credit: Dr. Corinne Schuster-Wallace

## APPENDIX I:

# How to Conduct a Household Survey

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Household surveys are administered to one individual representing the household, usually the head of household, or in this case, given the importance of women in WaSH, potentially the female head of households. The household survey is based on a semi-structured interview approach. It combines questions which collect quantitative and qualitative data. The quantitative data are collected through questions, which constrain responses to those provided (e.g. Yes/No; option A, B or C). The qualitative data are collected through open-ended questions to encourage participants to provide deeper insight or reflection on a certain topic. While the quantitative data can be used to draw general conclusions and compare responses between different community groups (or different communities), the qualitative data provide the reasoning behind these results.

Sometimes survey respondents will tell you a story that is different from the truth because they feel uncomfortable and want to give answers, which they think are socially acceptable. In order to overcome this natural response you can perform a visual household assessment. This is an important method because assessing observed practices and behaviors may indicate if people have tried to mask the truth in their answers. Observing family dynamics and relations in the household will also inform you about social patterns in the community, which are important for understanding the roles people play and whether the community is ready for change. This method can also reveal differences in resources and capacity between households and neighborhoods in the community.

The process for administering household surveys involves:

1. Sampling strategy;
2. Recruiting participants;
3. Obtaining consent;
4. Administering the survey; and,
5. Analysing the results.

## SAMPLING STRATEGY

The sampling strategy should reflect the type of people you are looking to recruit. This can, and should, be based on maximising the diversity of respondents. This diversity can be geographic, cultural, religious, socio-economic or demographic, or a combination of these factors. For example, a sampling strategy could be to recruit old and young female participants with and without children from different parts of a rural community. Sampling can be stratified, meaning that it follows a regular pattern (e.g. every 4th house along a road) or random, meaning that you don't use a pattern to select who you survey (e.g. people at a community event).

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A stratified random sample is used to ensure representation from different groups (stratified), while not being concerned with who you survey within that group (random).

## RECRUITMENT

In order to ensure that you find enough participants, there are several recruitment tools that you can use. The first is to seek the support of community leaders, the second is to put posters up in community places, and the third is to go to places where specific groups meet and ask them in person (e.g. women at a water collection point). When asking in person, it is important to provide a contact so that the individuals can follow up with the recruiter at a later time and not feel pressured to participate. It is always important to obtain advance voluntary informed consent from participants.

## ADMINISTERING THE SURVEY

Anyone can administer a survey provided that they: a) can speak the language or have a translator; b) have been trained in survey techniques; and, c) have had supervised practice surveying. It should be noted that people from outside the community may face issues of mistrust, or misunderstanding, particularly if they do not speak the local language. Hiring and training community members has the advantage of building local capacity, increasing their knowledge of positive water-environment-health relationships, contributing to the local economy and overcoming potential barriers of having a non-community member administer the survey. However, community members can be so familiar with the respondents that they either answer for the respondent or, the respondent is hesitant to share certain information.

The questionnaire can be completed using a pen/pencil and paper or on a tablet loaded with the surveys developed using QuestionPro® software.

## ADDITIONAL RESOURCES

ACF International. 2013. *Conducting KAP Surveys: A Learning Document Based on KAP Failures*. [http://dd0jh6c2fb2ci.cloudfront.net/sites/default/files/publications/ACF\\_Conducting\\_KAP\\_Surveys\\_Jan13.pdf](http://dd0jh6c2fb2ci.cloudfront.net/sites/default/files/publications/ACF_Conducting_KAP_Surveys_Jan13.pdf)

Deaton, A. (1997). *The Analysis of Household Surveys: A Microeconomic Approach to Development Policy*. World Bank Publications. [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/1997/07/01/000009265\\_3980420172958/Rendered/PDF/multi\\_page.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/1997/07/01/000009265_3980420172958/Rendered/PDF/multi_page.pdf)

Groves R.M., Fowler Jr F.J., Couper M.P., Lepkowski J.M., Singer E. and Tourangeau R. 2011. *Survey methodology* (Vol. 561). John Wiley & Sons.

Lynn P. and Kaminska O. 2012. The impact of mobile phones on survey measurement error. *Public Opinion Quarterly*, nfs046.

U.S. Centers for Disease Control and Prevention (CDC). 2008. *A Guide to Conducting Household Surveys for Water Safety Plans*. Atlanta: U. S. Department of Health and Human Services. [http://www.cdc.gov/nceh/ehs/gwash/Publications/Guide\\_Conducting\\_Household\\_Surveys\\_for\\_Water\\_Safety\\_Plans.pdf](http://www.cdc.gov/nceh/ehs/gwash/Publications/Guide_Conducting_Household_Surveys_for_Water_Safety_Plans.pdf)

Community Toolbox— Section 13. *Conducting Surveys*: <http://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/conduct-surveys/main>

Living Standards Measurement Study Surveys Distance Learning Course: [http://lsms.adeptanalytics.org/course/Home\\_eng.html](http://lsms.adeptanalytics.org/course/Home_eng.html)

## APPENDIX II:

# How to Conduct Focus Groups

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A focus group collects information from a group of participants, rather than one person at a time. Focus groups are a useful strategy for collecting information about KAP because they allow for dialogue to occur. The schedules in the W:ISE toolkit collect similar information about interests, perspectives, beliefs, and attitudes around important water, sanitation, environment, and health issues, such as the use of latrines or water collection practices. This tool provides you with an opportunity to observe community relations during group discussions. One of the main goals of a focus group is to create a space for dialogue between participants so that a variety of perspectives on water and health can surface, potentially providing more information than a one-on-one interview would. A focus group can also allow you to witness similarities and differences in opinions among community members, allowing you to observe in advance where problems may arise during project planning or implementation. If conducted in a safe environment, focus groups can empower community members as they take on an active role in assessing their KAP and brainstorming goals for the future. Most importantly, it can become a motivational session that can lead to new ideas for addressing community gaps in WaSH.

The process for focus groups follows the same steps as for household surveys, although recruitment involves a smaller number of participants. It is also important to ensure that focus groups do not include participants who hold different amounts of power in the community, as this can lead to intimidation on behalf of some participants. Usually this means that focus groups recruit participants of similar age, gender, and socio-economic status.

The focus group should be hosted at a time and place that is convenient for participants and where they feel comfortable sharing their experiences. Focus groups do not have a set length of time that they should last, but it is important to be sensitive to participants, their comfort, needs, and the burden of time. It is crucial to create a safe environment, both for the comfort and wellbeing of the participants and for the quality of data collected, as people are more likely to share their knowledge and attitudes when they are at ease. One way to set your participants at ease may be to offer them a choice of what language the groups use for discussion. It is important that you have translators available for this purpose.

## ADDITIONAL RESOURCES

Blank G. n.d. *Conducting A Focus Group*. <http://www.cse.lehigh.edu/~glennb/mm/FocusGroups.htm>

Community Toolbox — Section 6. Conducting Focus Groups: <http://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/conduct-focus-groups/main>

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Lamb D. 2012. Establishing and Maintaining Focus in Your Research: Promoting the use and Effective Implementation of Focus Group Methodology in a 'Real-Life' Research Study. In *Proceedings of the 11th European Conference on Research Methods* (p. 215). Academic Conferences Limited.

Liamputtong P. 2011. *Focus group methodology: Principle and practice*. Sage.

Massey O.T. 2011. A proposed model for the analysis and interpretation of focus groups in evaluation research. *Evaluation and program planning*, **34**(1):21-28.

OMNI (<http://www.omni.org>) Toolkit for Conducting Focus Groups: <http://www.rowan.edu/colleges/chss/facultystaff/focusgroup-toolkit.pdf>

Stewart D.W. and Shamdasani P.N. 2014. *Focus groups: Theory and practice* (Vol. 20). Sage Publications.



# Focus Group — Participant Characteristics

These characteristics were originally used by Levison<sup>27</sup> and have been adapted for general use. Make sure that you include questions at the start of the data collection process so that you will be able to group the responses according to the pre-determined characteristics when you start the data analysis. The following table gives some examples of the types of criteria you may apply to stratify your data and some examples of criteria by which to differentiate them. It may be useful to adapt some of these characteristics to best capture the important demographics in your community based on the question(s) you are asking.

SOCIO-ECONOMIC CRITERIA						ROLES AND RESPONSIBILITIES	LOCATION
Age	Marital Status	Children	Grandchildren	Level of Education	Employment Sector	Community	Community
Younger Women				Primary		Faith Based	Pre-determined sample area e.g. quadrant
Older Women				Secondary			
Younger Men							
Older Men							

27 Levison M.M. 2010. "Diseases are a must. Human beings must get sick": A Rural Community's Knowledge, Attitudes and Practices towards Water, Sanitation and Health. Open Access Dissertations and Theses. Paper 4240. <http://digitalcommons.mcmaster.ca/pendissertations/4240>

## APPENDIX III:

# How to Conduct Photo Voice

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Photo voice is a unique activity that engages community members in showing, as well as learning about, relationships between water, sanitation, environment, and health. Participants are taught how to use a camera and take photographs, given a disposable camera, and asked to go out into the community and take pictures related to a topic while they go about their daily lives.<sup>28</sup> It is a method that can provide strong visual snapshots of each participant's interaction with WaSH on a daily basis, and may illustrate some of the problems that your community is facing. It engages community members in the process of collecting data, enabling them to frame the water issues at hand. Participants come back together in a focus group setting to share their pictures as a basis for dialogue. The discussions which follow provide a different perspective to be incorporated into the overall analysis.

Through this method participants are able to express their perceptions of WaSH in a way that is inclusive, as it does not rely on literacy rates or social status. This method allows community members to take control of the project and fully contribute to its direction while learning about safe WaSH practices. Previous experiences show that this type of consultation is an effective way to build a strong partnership between your team and the community.

Recruitment for photo voice tends to piggyback on other methods. For example, a group of people who participated in household surveys could be asked to continue their participation through photo voice. Alternatively, photo voice can be incorporated as an additional focus group activity. In the W:ISE toolkit context, the latter approach has been most widely used. Rather than taking a random approach to photo voice participants, it can be useful to ask specific people who seem most engaged in and enthusiastic about the process in order to ensure follow through with the photography. There should be fewer participants engaged in this method of data collection than the number that participated in the focus groups.

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- 28 Levison M.M., Elliott S.J., Schuster-Wallace C.J. and Karanja D.M.S. 2012. Using mixed methods to visualise the water-health nexus: identifying problems, searching for solutions. *African Geographical Review*. DOI:10.1080/19376812.2012.728489.
- Bisung E., Elliott S.J., Abudho B., Karanja D.M. and Schuster-Wallace C.J. 2015. Using photovoice as a community based participatory research (CBPR) tool for changing water, sanitation and hygiene behaviours in Usoma, Kenya. *BioMed Research International*. Article ID 903025.
- Bisung E., Elliott S.J., Abudho B., Schuster-Wallace C.J. and Karanja D.M. 2015. Dreaming of toilets: Using photovoice to explore knowledge, attitudes and practices around water-health linkages in rural Kenya. *Health and Place*. 31:208 – 15. doi:10.1016/j.healthplace.2014.12.007.
- Bisung E., Elliott S.J., Schuster-Wallace C.J., Karanja D.M. and Bernard A. 2014. Social capital, collective action and access to water in rural Kenya. *Social Science & Medicine*, 119, 147-154.
- Bisung E. and Elliott S.J. 2014. Toward a social capital based framework for understanding the water-health nexus. *Social Science & Medicine*, 108, 194-200.
- Bisung E., Elliott S.J., Abudho B., Schuster-Wallace C.J., Karanja D.M. One community's journey to lobby for water in an environment of privatized water: Is Usoma too poor for the pro-poor program? *African Geographical Review*, Accepted August 2015.
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## TRAINING

You should first provide photo voice participants with some training that explains the significance of the activity and what they should be aiming to capture when taking photos. The training should take place at a mutually agreed-upon time and the importance of asking for consent to photograph another person should be discussed. You must also ensure that participants are fully trained in using a disposable camera. Over a short period of time (between one and two weeks is optimum), community members will document social and environmental experiences in their community.

## DISCUSSION

Once the cameras have been handed in, the photographs need to be developed in duplicate (one for the database and one for the participant). Participants should reconvene to view the photographs they have taken and discuss them. This should follow the principles laid out for focus groups. Each photographer should select three photographs that they think best convey the message they are trying to explain. You and the photographers should facilitate a discussion around the photographs to discover where and why they were taken and what they represent to the photographer. This activity provides community members with an opportunity to express their experiences, knowledge, and preferences. Following this discussion the community can decide what they would like to do with the photographs. One suggestion for their use is to contribute to an education campaign that teaches about safe WaSH practices.

## ADDITIONAL RESOURCES

Walton, G., Schleien, S. J., Brake, L. R., Trovato, C., & Oakes, T. (2012). Photovoice: A collaborative methodology giving voice to underserved populations seeking community inclusion. *Therapeutic Recreation Journal*, 46(3), 168.

Wang C. and Burrell M.A. 1997. Photovoice: concept, methodology, and use for participatory needs assessment. *Health Educ. Behav.* 24(3):369-87

Community Tool Box - Section 20. Implementing Photovoice in Your Community: <http://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/photovoice/main>



## APPENDIX IV:

# How to Conduct Key Informant Interviews

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In addition to collecting information from community members, it is important to understand the broader context within which community perceptions, knowledge, attitudes, and practices are being shaped and formed. Key Informants are individuals who have a leadership role, either within the community, or the broader area and/or are technical experts. Ideally, between six and ten interviews will be conducted with people who hold different views and roles. Unlike community methods, these informants are targeted, so sampling and recruitment strategies are different. Typically participants are identified through snowball sampling — one or two key people are identified and, during their interviews, are asked who else should be spoken to. Once the same key messages and themes are being shared, and/or, a broad representation has been achieved, the snowball sampling can be stopped.

Interviews should be held in the participant's place of work, at a time that is convenient for them, and in the language which they prefer. Research suggests that you should begin the interview with some general discussion and questions; you should attempt to create a dialogue and environment where the participant feels comfortable so that they are able to address more difficult or sensitive questions later on (Levison, 2010). You should record the interviews, either digitally or manually, with the permission of the participant, so that you can review them at a later date.

### ADDITIONAL RESOURCES

UCLA Center for Health Policy Research. n.d. *Section 4: Key Informant Interviews*. Health DATA Program — Data, Advocacy and Technical Assistance. [http://healthpolicy.ucla.edu/programs/health-data/trainings/documents/tw\\_cba23.pdf](http://healthpolicy.ucla.edu/programs/health-data/trainings/documents/tw_cba23.pdf)

USAID Centre for Development Information and Evaluation. 1996. *Conducting Key Informant Interviews*. TIPS, Number 2. Performance Monitoring and Evaluation. [http://pdf.usaid.gov/pdf\\_docs/PNABS541.pdf](http://pdf.usaid.gov/pdf_docs/PNABS541.pdf)

## APPENDIX V:

# How to Conduct Community Meetings

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Community meetings are an important vehicle for maximising the number of community members reached. Typically these are regular and familiar events where findings can be reported back to community members; members can be taught about aspects of water, sanitation, environment, and health; and, more information can be solicited from members. This method allows for overlooked or undiscovered themes and problems to emerge. Additionally, this method can increase community cohesion and empowerment through dialogue. Meetings can enable communities to work together and reconcile differences. They can be empowering and can develop sustainable, long-term solutions.

This is an important method, as it is not always feasible to survey every community member through household surveys or focus groups. Holding community meetings provides community members with an opportunity to voice their opinion or ask questions. It can be a learning opportunity for those who have questions about WaSH and it can be an opportunity for you and your team to learn about information that has not been provided by other participants. Additionally, this is a method that allows the community to come together to discuss and determine issues that require attention.

There may be some disagreement about WaSH issues among community members but it is important for this tension to be dealt with in advance of implementing a project. In this way, it can be identified and hopefully resolved, instead of potentially derailing future projects where it may act as a barrier to development. Community meetings allow the community to take ownership of any problems and solutions they come up with, which is an important part of the W:ISE objectives.

It is important to find a time and location to hold community meetings that is convenient for community members so that as many people as possible may attend. You should be aware of which groups or individuals are able to attend a meeting during certain times, and which may not, so that you can plan for a variety of groups to be represented during meetings. You should discuss your plans with community leaders to ensure that you select an appropriate time and location. You should plan your meeting ahead of time with an understanding of what you and your team will say and what you will not; the types of questions you anticipate or could ask community members; and set a time for discussion and questions at the end of the meeting. This is an opportunity to learn more about linkages in the community and you should have a team member record the proceedings, after disclosing this information with the group, so that you can review it later. You may have to have more than one community meeting to reach an adequate number of community participants. You can ask community leaders to act as liaisons and spread the word about community meetings. During meetings it is important that you use the preferred language of the majority of people when discussing your findings so far, which may require a translator. Through this method, community members can take ownership of the WaSH problems they have in their community. This may also be a time for community members to develop ideas for future action and to begin an educational campaign, if one had not previously been implemented, so that community members can continue to learn more about safe WaSH practices.

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## ADDITIONAL RESOURCES

Breda K.L. 2014. Participatory action research. *Nursing research using participatory action research*. New York: Springer, 1-11.

Community Tool Box - Section 1. Conducting Effective Meetings: <http://ctb.ku.edu/en/table-of-contents/leadership/group-facilitation/main>

Thomas Tufte T. and Mefalopulos P. 2009. Participatory Communication A Practical Guide. World Bank Working Paper No. 170. <http://siteresources.worldbank.org/EXTDEVCOMMENG/Resources/Participatorycommunication.pdf>

Wiggins N. 2011. Popular education for health promotion and community empowerment: a review of the literature. *Health Promotion International*, dar046.

## APPENDIX VI:

# Participatory Community Mapping

Community mapping is a technique that allows individuals to share knowledge of their community, environment, and social patterns with you through their drawing of maps. Community mapping further allows participants to teach you about their perceptions of community space. This method also acts as a form of empowerment for participants as they are able to contribute to the intervention. It involves having community members physically highlight important areas related to WaSH and social activities on a map of their community, or to draw a map of their community for you. There are many types of participatory community mapping, as shown in Table A.VI.1.

In order for the community to develop a full understanding of the relationship between water, sanitation, the environment, and health, they must be aware of how their actions and practices interact with water resources. Participatory community mapping empowers community members by allowing them to determine the important locations for water and health in the community. Participatory community mapping can be complimented by ground truthing or community walkabouts using global positioning system (GPS) mapping. Utilising a GPS, you and your team can map key water and sanitation sites and important community areas. Having community members train with GPS and map important features also contributes to capacity development. The map that you produce could aid future WaSH projects and research in the community.

Similar to recruiting procedures used in the other tools and methods in this handbook, participants should be selected for this activity based on their socioeconomic and geographic positions in the community. Community mapping involves community members highlighting areas that are important to them, such as latrines or water sources, on a map. It is best to conduct this activity wherever the participants feel most comfortable so that they are able to provide many details about important community and water and sanitation sites. In order to do this, pencil crayons, pens, and a pencil sharpener should be provided to the participants. You may ask them to draw how they perceive their community and encourage them that there is no wrong answer. Have them focus on areas where they interact with water or conduct sanitary practices (e.g. Box A.VI.1). It is important to show your appreciation for their assistance and you can do this by leaving behind the supplies that you brought with you.

### BOX A.VI.1. WHAT COULD GO ON THE MAP?

- » Latrines and water sources
- » Houses
- » Community boundaries
- » Drainage systems
- » Status of land
- » Locations of small businesses
- » Infrastructure like schools and health clinics
- » Other important sites to the participant

You and your team can use a GPS to collect and map all of the field sites that you visit, including water collection points, latrines, and households. During the process of collecting GPS coordinates you should record longitudinal and latitudinal coordinates and elevations.

## ADDITIONAL RESOURCES

Fiorini, S. (2013). Change in Natural Resource Management: An Experiment with “Participatory GIS”. In Human-Environment Interactions (pp. 97-112). Springer Netherlands.

TABLE A.VI.1: DIFFERENT COMMUNITY MAPPING TYPES<sup>29</sup>

TYPE OF MAP	DESCRIPTION	RESOURCES	STRENGTHS	WEAKNESSES
<b>GROUND</b>	Community members draw maps on the ground from memory using natural resources.	<p>Raw material</p> <ul style="list-style-type: none"> <li>• Open space</li> <li>• Paper to draw finished map</li> <li>• Camera (if available to photograph the map)</li> </ul>	<ul style="list-style-type: none"> <li>• Low cost</li> <li>• Simple to complete</li> <li>• Members can interact with the product</li> </ul>	<ul style="list-style-type: none"> <li>• Cannot reproduce</li> <li>• Impermanent</li> <li>• Not to scale</li> </ul>
<b>SKETCH (Explained in this handbook)</b>	These maps are drawn on large pieces of paper from memory. Community members draw important features on the map.	<ul style="list-style-type: none"> <li>• Large sized paper</li> <li>• Pens, coloured pens, pencils</li> </ul>	<ul style="list-style-type: none"> <li>• If multiple demographic groups participate (related to age, gender, education, etc.) this can be telling of different experiences in the community</li> <li>• Low cost</li> <li>• Easy to complete</li> </ul>	<ul style="list-style-type: none"> <li>• Inaccurate often</li> <li>• Not to scale</li> <li>• Lack of accuracy can undermine credibility</li> </ul>
<b>TRANSECT</b>	A map that involves important community features (churches, schools, etc.) and geophysical features (types of land, etc.) along an imaginary line that you will walk with community members.	<ul style="list-style-type: none"> <li>• Paper and coloured pencils</li> </ul>	<ul style="list-style-type: none"> <li>• Involves as many ecological, production and social groups along the route as possible</li> <li>• Stimulates community discussions</li> <li>• Low cost</li> <li>• Easy to replicate</li> <li>• Tracks participant's everyday movements</li> </ul>	<ul style="list-style-type: none"> <li>• Does not promote geographic or locational accuracy</li> <li>• Limited perspective of the landscape</li> <li>• Lacks credibility with government officials</li> </ul>
<b>SCALE</b>	A map that is geographically accurate to the community. Distance between objects can be measured on this map and the measurement will be the same in the community.	<ul style="list-style-type: none"> <li>• Scale maps (that show where key features of the community and its environment are)</li> <li>• Large sheets of mylar (transparent plastic sheets)</li> <li>• Pencils and/or coloured pens</li> </ul>	<ul style="list-style-type: none"> <li>• Understandable and accurate representation of the community</li> <li>• Fast so long as resources are available and training is not required</li> <li>• Low cost</li> </ul>	<ul style="list-style-type: none"> <li>• Access to scale maps can be difficult</li> <li>• Lack of accuracy</li> <li>• Training is required</li> <li>• Harder to understand this procedure, compared to sketch, transect and ground mapping</li> </ul>

29 Adapted from: International Fund for Agricultural Development. 2009. Good Practices in Participatory Mapping. IFAD. [http://www.ifad.org/pub/map/pm\\_web.pdf](http://www.ifad.org/pub/map/pm_web.pdf)





# Appendix B Tools

## APPENDIX VII:

# KAPE Questionnaire: Community Leader

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Used in Kenya, translated into Kiswahili

### INTRODUCTION AND INSTRUCTIONS:

Hello. I am \_\_\_\_\_ and this is \_\_\_\_\_ (translator/facilitator). Thank you for agreeing to participate in this questionnaire. Today I will ask you some general questions about yourself and your community. You do not have to answer any questions that you do not want to. We know you are very busy. Participation is your choice, and it is okay to say no. We do not have money to give you. Would you like to participate in the survey?

Was the participant informed?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>
Is he/she willing to participate?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>

**Signature (Interviewer):** \_\_\_\_\_

**Signature (Interviewee):** \_\_\_\_\_

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## GENERAL BACKGROUND

I would like to begin by asking you some general questions about you and your community.

1. \*How many people live in your community?

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2. \*How many households are in your community?

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3. \*How many of the people in your community are children <16 years of age?

4. \*How many of the people in your community are children <5 years of age?

5. \*How many schools are in your community?

6. \*How many people are educated? What is the highest level of education?

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7. \*What types of jobs are available in your community?

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8. \*What do you do for work?

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9. \*How long have you lived here in your community?

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10. \*What are you proud of about your community?

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11. \*You have been identified as a respected leader in this community.

- \*a) How long have you had this job?

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\*b) What is your role in this community?

---

\*c) How are you involved in community activities?

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12. \*Who are the vulnerable people in your community?

---

13. \*What are the major challenges facing your community right now?

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14. \*How are these challenges different from the challenges you've faced in the past?

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15. \*How does the community cope with these challenges?

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## COMMUNITY HEALTH INFORMATION

Through these questions, we hope that your community can begin to understand the health concerns of you and your children. These questions will help us to work with you in achieving your community's goals.

16. \*a) In general, how would you rate the health of your community?

Very Good       Good       Moderate       Bad       Very Bad

\*b) What are the main health problems that people in your community face?

---

\*a) In general, how would you rate the health of men in your community?

Very Good       Good       Moderate       Bad       Very Bad

\*b) What are the main health problems that men in your community face?

---

---

17. \*a) In general, how would you rate the health of women in your community?

- Very Good       Good       Moderate       Bad       Very Bad

\*b) What are the main health problems that women in your community face?

---

18. \*a) In general, how would you rate the health of your children <5 years of age?

- Very Good       Good       Moderate       Bad       Very Bad

\*b) What are the main health problems that children <5 years of age in your community face?

---

19. \*What are the main causes of health problems in your community?

---

20. \*a) Where is the closest health care provider?

---

\*b) What services do they provide?

---

## HEALTH, WATER AND SANITATION NEEDS

Thank you. The next set of questions relates to current water and sanitation needs in your community.

21. \*What are the main sources of drinking water for members in your community?

SOURCE OF WATER	YES/NO	# OF COMMUNITY MEMBERS
Piped water into a dwelling		
Piped water into a yard/plot		
Public tap/standpipe		
Tubewell/borehole		
Protected dug well		
Unprotected dug well		
Protected spring		
Unprotected spring		
Rainwater collection		
Bottled water		

---

SOURCE OF WATER	YES/NO	# OF COMMUNITY MEMBERS
Cart with small tank/drum		
Tanker-truck		
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)		
Other (specify)		

22. \*a) Have these water sources changed from the past?  Yes  No

\*b) If so, how and why?

---

23. \*In your community, what do you think **most** of the water is used for?  
(Prompt: for farming, for drinking, for house cleaning)

---

24. In your community, what is your priority use for water?  
(Prompt: agriculture, domestic, business)

---

25. \*In your opinion, what are the main factors that determine whether families have access to safe water in your community?  
(Prompt: wealth, location in village, position of power)

---

26. \*In your opinion, what are the main factors that determine whether families have access to sanitation in your community?

---

27. \*Please rate your community on the following statements:  
(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)

a) Community members are interested in becoming involved in water related issues

b) Community members are aware about water related issues in your community

c) Community members have knowledge about water related issues in your community

28. \*In your experience, can you please tell me some of the things (programs or activities) that your community does to promote health, safe drinking water and/or sanitation?

---

---

29. \*Do you feel that these things (programs or activities) are effective in promoting health, safe drinking water and/or sanitation? Why or why not?

---

30. \*What do you see as the biggest accomplishment your community has made in improving access to water and/or sanitation?

---

31. \*What do you see as the most important priority for your community as you seek to improve access to water and sanitation? (Prompt: why is this important?)

---

## CONCLUSION

Thank you so much for your time and contributions. This is the end of our questions, but we would still welcome any additional comments, ideas, or concerns that you have. Is there anything we forgot or anything you would like to add?

\*identifies questions which form the core of the KAPE Assessment tool and should be included in any design.

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## APPENDIX VIII:

# KAPE Questionnaire: Community Member

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Used in Kenya and Sierra Leone, translated into Kiswahili.

### INTRODUCTION AND INSTRUCTIONS:

Hello. I am \_\_\_\_\_ and this is \_\_\_\_\_ (translator/facilitator). Thank you for agreeing to participate in this questionnaire. Today I will ask you some general questions about yourself and your community. You do not have to answer any questions that you do not want to. We know you are very busy. Participation is your choice, and it is okay to say no. We do not have money to give you. Would you like to participate in the survey?

Was the participant informed?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>
Is he/she willing to participate?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>

**Signature (Interviewer):** \_\_\_\_\_

**Signature (Interviewee):** \_\_\_\_\_

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---

## GENERAL BACKGROUND

I would like to begin by asking you some general questions about you and your community.

1. \*How many people live in your household?

2. \*How many of the people who live in your household are children <5 years of age?

3. \*How many of the people who live in your household are children <16 years of age?

4. \*How many of your children go to school?

5. \*a) Have you been to school?  Yes  No

\*b) If yes, how far did you go in school?

- Some primary
- Complete primary
- Some secondary
- Complete secondary
- Beyond secondary

6. \*What do you do for work?

---

7. \*How long have you had this job?

---

8. \*Were you born in the city/village/tribe where you currently live?

- Yes  No  Don't Know

9. \*How long have you lived here?

---

10. \*What are you proud of about your community?

---

11. \*What are the major challenges facing your community right now?

*(Prompt: jobs, health, corruption, school, electricity, crime)*

---

---

12. \*How are these challenges different from the challenges you've faced in the past?

---

13. \*How does the community cope with these challenges?

---

14. \*What do you estimate is the average weekly household income in your community?

15. \*Based on this average, would you rank your household income as:

- Above average       Average       Below average

## COMMUNITY HEALTH INFORMATION

Through these questions, we hope that your community can begin to understand the health concerns of you and your children. These questions will help us to work with you in achieving your community's goals.

16. \*In general, how would you rate/describe the health of your community?

- Very Good       Good       Moderate       Bad       Very Bad

17. \*In general, how would you rate/describe your family's health?

- Very Good       Good       Moderate       Bad       Very Bad

18. \*In general, how would you rate the health of your children <5 years of age?

- Very Good       Good       Moderate       Bad       Very Bad

19. \*What are the main health problems in your community?

*(Prompt: pregnancy, diarrhoea, fever)*

---

20. \*What are the main health problems that your children and other children in your community face?

*(Prompt: diarrhoea, fever, rash)*

---

---

21. \*What do you believe are the main causes of health problems in your community?

*(Prompts: water, mosquitoes, accidents, working too hard)*

---

22. \*How long does it take you to get to the closest health care provider?

---

23. \*a) Have any of your household members, including children, have suffered from diarrhoea in the past 2 weeks? Diarrhoea is defined as the passage of 3 or more loose or liquid stools per day, or more frequently than is normal for the individual.

Yes       No

\*b) If yes, how many?

\*c) If yes, how many were children <5 years of age?

Please fill in the following table:

CHILD	AGE	TREATMENT FOR DIARRHOEA (Yes, No, DK)	WHAT KIND OF TREATMENT? [traditional medicine/healer; buy medicine from pharmacy/kiosk; visit the health care/doctor; other (specify)]	HAS YOUR CHILD HAD ANY OTHER ILLNESSES? (Yes, No, DK) If yes, please explain.
Child #1				
Child #2				
Child #3				
Child #4				
Child #5				

## WATER NEEDS

Thank you. The next set of questions is about how you see water needs in your community.

24. \*What are the main sources of drinking water for members in your household?

SOURCE OF WATER	CHECK Yes OR No		FREQUENCY (# of times per week)	USED IN DRY OR WET SEASON (Check which apply)	
	YES	NO		DRY	WET
Piped water into a dwelling					
Piped water into a yard/plot					
Public tap/standpipe					
Tubewell/borehole					
Protected dug well					
Unprotected dug well					
Protected spring					
Unprotected spring					
Rainwater collection					
Bottled water					
Cart with small tank/drum					
Tanker-truck					
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)					
Other (specify)					

a) \*Have these water sources changed from the past? If so, how and why?  Yes  No

b) \*If so, how and why?

---

25. \*What is the main source of water used by **your** household for **other domestic purposes**, such as cooking and hand washing etc.? (Fill in all that apply.)

SOURCE OF WATER	CHECK YES OR NO		FREQUENCY (# of times per week)	USED IN DRY OR WET SEASON (Check which apply)	
	YES	NO		DRY	WET
Piped water into a dwelling					
Piped water into a yard/plot					
Public tap/standpipe					
Tubewell/borehole					
Protected dug well					
Unprotected dug well					
Protected spring					
Unprotected spring					
Rainwater collection					
Bottled water					
Cart with small tank/drum					
Tanker-truck					
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)					
Other (specify)					

26. Who has the major responsibility for water collection for your household?

- Adult woman
- Adult man
- Female child (<15 years)
- Male child (<15 years)
- Don't Know

a) How long does it take one person to go to your water source, get water, and come back?

\_\_\_\_\_

b) How many round trips are made in total by your household each day to collect water?

---

c) How many people make these trips?

27. In your community, what do you think most of the water is used for?

*(Prompt: for farming, for drinking, for house cleaning)*

---

28. In your household, what is your priority use for water?

*(Prompt: bathing, drinking, laundry)*

---

a) How do you know when the water you use is clean and/or safe?

*(Prompt: color, odor, particles, told it is safe by others)*

---

b) If you do not think it is clean and/or safe, what things have you done to try to deal with it?

*(Prompt: boil; add bleach/chlorine; strain it through a cloth; use a water filter; solar disinfection; let it stand and settle)*

OR

If you do not think it is clean and/or safe, why have you not done anything to deal with it?

---

29. In your opinion, what are the main factors that determine whether families have access to safe water in your community?

*(Prompt: wealth, location in village, position of power)*

---

a) Describe what your ideal access would be.

---

b) What would you be willing to pay for this?

---

---

## SANITATION

Thank you. Now we have a few questions about sanitation in your community.

30. Where do your young children <5 years of age go to urinate?

---

31. Where do your young children <5 years of age go to defecate?

---

a) Where do people over the age of 5 in your household most often go to urinate?

---

b) How do you dispose of your urine?

---

32. Where do people over the age of 5 in your household most often go to defecate?

---

a) How do you dispose of your feces?

---

b) How far away is the disposal site from your home?

---

33. If applicable, what kind of toilet facility do members of your household use?

- Flush/pour flush to:**
  - piped sewer system
  - septic tank
  - pit latrine
  - elsewhere
  - unknown place/not sure/DK where
- Ventilated improved pit latrine**
- Pit latrine:**
  - with slab
  - without slab/open pit
- Composting toilet**
- Bucket**
- Hanging toilet/hanging latrine**
- Other (specify) \_\_\_\_\_**

---

a) Do you share this facility with other households?

Yes       No       Don't Know

b) If so, how many households use/share this toilet facility?

---

c) If you don't share these facilities, would you be willing to share toilet facilities?

Yes       No       Don't Know

34. In general, how would you rate/describe you sanitation and toilet facilities?

Very Good       Good       Moderate       Bad       Very Bad

35. In your opinion, what are the main factors that determine whether families have access to sanitation facilities in your community?  
(Prompt: wealth, location in community, position of power)

---

a) Briefly describe what your ideal access would be.

---

b) Would you be willing to pay for this access?

Yes       No       Don't Know

c) If yes, how much would you be willing to pay per week?

---

d) If no, why not?

*(Prompt: financial barriers, a convenient toilet facility is already present, never thought about it before)*

---



---

## HEALTH AND HYGIENE

Thank you. This set of questions deals with health and hygiene in your community.

36. From whom do you learn about health information, such as ways to keep your children healthy or ways to ensure that you are healthy and can work?

*(Prompt: health practitioner, public information, NGO, relative)*

---

37. From whom would you prefer to learn about health information? (Prompts: head mama, women's group leader, public health nurse, someone from outside the community).
- 

38. Do you regularly use soap?  Yes  No

a) If yes, what do you use it for? (Prompts: dish washing, laundry, hand washing, bathing)

---

b) If no, why not?

---

I would like to ask you a few questions about how children in your household use soap for hand washing.

39. Please indicate in the following chart how often and when your children <5 years of age use soap for hand washing at the following times.

ACTIVITY	NEVER	RARELY	SOMETIMES	MOSTLY	ALWAYS
Before eating					
After eating					
Before cooking					
After urinating					
After defecating					
Before sleeping					
Upon waking					
When hands are dirty					
When bathing					
Other (specify)					

---

---

40. Do you currently have a cake of soap on the premises?

Yes       No       Don't Know

a) If so, where do you keep it?

---

## LOCAL PERCEPTIONS AND BEHAVIOURS RELATED TO WATER AND HEALTH

41. Where do you get information from on health, water and sanitation?

*(Prompt: medical practitioners, community resource persons, community meetings, community leaders, neighbours/family/friends etc.)*

---

42. Have you ever received any information regarding diarrhoea?

Yes       No       Don't Know

a) If Yes, what was the source of the information?

*(Prompt: medical practitioners, community resource persons, child in school, community meetings, community leaders, telecommunications, neighbours/family/friends etc.)*

---

43. Has your child/children received any teachings about diarrhoea at school?

Yes       No       Don't Know

44. Do you know what causes diarrhoea?

*(Prompt: drinking Bad water; eating Bad food; flies/insects; poor hygiene; spirits/curse/Bad omen)*

---

45. How can you prevent you or your family from getting sick/diarrhoea?

*(Prompt: cannot prevent; herbs; wash hands; cook food thoroughly; boil and treat water; clean cooking utensils/vessels)*

---

46. Are you currently a member of an environmental, conservation or watershed organisation?

Yes       No       Don't Know

---

---

47. Please rate yourself on the following statements:

*(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)*

- a) **I am interested in becoming involved in water related issues**
- b) **I am aware about water related issues in my community**
- c) **I have knowledge about water related issues in my community**

48. How much do you agree with the following statements:

*(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)*

- a) **My community is a place that I feel a strong connection with**
- b) **My community is a place that I care a lot about**
- c) **There are places in my community that are special to me**
- d) **Community members have an emotional and physical bond with our community**
- e) **My community has a sense of togetherness**
- f) **Mistrust/suspicion of others is an issue in my community**

## CONCLUSION

Thank you so much for your time and contributions. This is the end of our questions, but we would still welcome any additional comments, ideas, or concerns that you have. Is there anything we forgot or anything you would like to add?

## APPENDIX IX:

# KAPE Focus Group

---

### INTRODUCTION AND INSTRUCTIONS:

Hello. I am \_\_\_\_\_ and this is \_\_\_\_\_ (translator/facilitator). Thank you for agreeing to participate in this questionnaire. Today I will ask you some general questions about yourself and your community. You do not have to answer any questions that you do not want to. We know you are very busy. Participation is your choice, and it is okay to say no. We do not have money to give you. Would you like to participate in the survey?

Was the participant informed?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>
Is he/she willing to participate?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>

**Signature (Interviewer):** \_\_\_\_\_

**Signature (Interviewee):** \_\_\_\_\_

---

I would like to begin by asking you some general questions about you and your community.

**1. Can you please introduce yourselves to us?**

**Participant 1:** Name \_\_\_\_\_  
Age \_\_\_\_\_  
Family Status \_\_\_\_\_  
How many people live in your household? \_\_\_\_\_  
How many children do you have? \_\_\_\_\_  
What is your favourite leisure activity? \_\_\_\_\_

**Participant 2:** Name \_\_\_\_\_  
Age \_\_\_\_\_  
Family Status \_\_\_\_\_  
How many people live in your household? \_\_\_\_\_  
How many children do you have? \_\_\_\_\_  
What is your favourite leisure activity? \_\_\_\_\_

**Participant 3:** Name \_\_\_\_\_  
Age \_\_\_\_\_  
Family Status \_\_\_\_\_  
How many people live in your household? \_\_\_\_\_  
How many children do you have? \_\_\_\_\_  
What is your favourite leisure activity? \_\_\_\_\_

**Participant 4:** Name \_\_\_\_\_  
Age \_\_\_\_\_  
Family Status \_\_\_\_\_

---

---

How many people live in your household? \_\_\_\_\_

How many children do you have? \_\_\_\_\_

What is your favourite leisure activity? \_\_\_\_\_

**Participant 5:** Name \_\_\_\_\_

Age \_\_\_\_\_

Family Status \_\_\_\_\_

How many people live in your household? \_\_\_\_\_

How many children do you have? \_\_\_\_\_

What is your favourite leisure activity? \_\_\_\_\_

**Participant 6:** Name \_\_\_\_\_

Age \_\_\_\_\_

Family Status \_\_\_\_\_

How many people live in your household? \_\_\_\_\_

How many children do you have? \_\_\_\_\_

What is your favourite leisure activity? \_\_\_\_\_

**Participant 7:** Name \_\_\_\_\_

Age \_\_\_\_\_

Family Status \_\_\_\_\_

How many people live in your household? \_\_\_\_\_

How many children do you have? \_\_\_\_\_

What is your favourite leisure activity? \_\_\_\_\_

---

---

**Participant 8:** Name \_\_\_\_\_  
Age \_\_\_\_\_  
Family Status \_\_\_\_\_  
How many people live in your household? \_\_\_\_\_  
How many children do you have? \_\_\_\_\_  
What is your favourite leisure activity? \_\_\_\_\_

**2. Tell me about your community.**

What are the major challenges facing your community right now?

Are they different from the challenges you have faced in the past?

» How are they different?

How does the community cope with these challenges?

» What do you do about them?

How is health in this community?

» Your health?

» Your family's health?

» The community's health?

What's the major health concern in this community right now?

» For adults?

» For children?

Is this different than it's been in the past?

» How?

» In what way?

In what ways has this community addressed these health issues?

What happens when someone gets sick...

» You?

» Your husband / wife?

» Your mother?

» Your children?

Who teaches you how to stay healthy? (mum/parents; school; community health workers; community elder/leader; other)

» Do you teach your children how to stay healthy? What do you tell them?

---

Where do you get your water from?

- » Why?
- » How?
- » How often?

Do you use different sources of water at different times? Tell me about that.

- » Is this different from where you've taken water from in the past?
- » Why?
- » How?

Are some water sources better than others?

- » Cleaner?
- » Safer?
- » Better for you?
- » Better for the children?

How do you know when the water is clean and/or safe?

- » (If not clean/safe) What things have you done to try to fix this?
- » If nothing, why not? (What are the barriers to action)

Are there things this community could do to improve local water supplies? (*Refer back to barriers, if appropriate.*)

Do you have latrines in this community?

- » Why not if they say no
- » Where are they?
- » Are they used?
- » By adults? (If not used, ask why not)
- » By the children? (If not used, ask why not)



## APPENDIX X:

# KAPE Community Mapping

### WATER, SANITATION, AND HEALTH: KNOWLEDGE, ATTITUDES, PRACTICES, EMPOWERMENT IN RURAL COMMUNITIES

PURPOSE OF CHECKLIST:		
This checklist will guide in the collection of perceptions related to water, sanitation and health, and the current attitudes and practices in the community.		
CONSTRUCT	QUESTION	PROBES
<b>PERCEPTION OF THE COMMUNITY SPACE</b>	To start out with, I am going to ask you to draw for me a map of your community. Please highlight areas in your community such as latrines, water collection areas, and anything else that you think is important.	<i>Please feel free to add anything within your community that you feel is important</i>  <i>Which of the places found on your map is the most important to your? Why?</i>
<b>SOCIO-ECONOMIC STATUS</b>  » Current economic standing » Facilities within their home and community	Ok, now I am going to ask a few questions about your home and daily life.  1. Do you have electricity?  2. Does your family have a radio?  3. What is your house made of? Is this typically what houses are made of in your community? How many rooms do you have?  4. How many children do you have? Do they all attend school?  5. What are the goals for your children? What do you want them to be when they grow up?	1a. <i>If yes, do you use it for cooking? If no, what do you use for cooking your food?</i>          4a. <i>If some children do not attend school, why not? Is it age, gender, money?</i>

CONSTRUCT	QUESTION	PROBES
<p><b>WATER AND SANITATION</b></p> <ul style="list-style-type: none"> <li>» Availability of water</li> <li>» Perception of “safeness” of water within the community</li> <li>» Availability of sanitation facilities and how they use them</li> </ul>	<p>Thank you very much! Now I am going to change topics, and ask you some questions about the water and sanitation facilities in your community.</p> <ol style="list-style-type: none"> <li>1. Do you have running water in your house? Near your house? Within your community? How far is it?</li> <li>2. Do you get your water from the same sources every day? If not, why?</li> <li>3. Is the water clean? How do you know it's clean?</li> <li>4. Do you treat your water? What method do you use to treat it?</li> <li>5. How do you store your water? How do you transport your water?</li> <li>6. Can you show me how you get your water out of the container?</li> <li>7. How do you use your water? How much do you use on a daily basis?</li> </ol> <p>Great, now I'm going to ask you about your sanitation facilities.</p> <ol style="list-style-type: none"> <li>1. Do you have a latrine?</li> <li>2. How long have you had the latrine? What made you put a latrine in? How did you pay for the latrine?</li> <li>3. Do you use it? Does everyone in the household use it?</li> <li>4. Do your neighbors have a latrine? Do they use it? Do your neighbors use your latrine?</li> <li>5. Who is responsible for maintaining the latrine? Who would take responsibility if you shared the latrine?</li> <li>6. What about babies and small children? Where do they defecate?</li> <li>7. What happens to the waste from the latrines? Would you be willing to compost the waste and use it as fertiliser on your crops?</li> </ol>	<ol style="list-style-type: none"> <li>1a. <i>If not, where do you get your water from? How do you collect it? How much time does this take?</i></li> <li>4a. <i>Do you boil, use chlorine, filters? Why/why not?</i></li> <li>5a. <i>Why do you do it this way?</i></li> <li>6a. <i>Why do you do it this way?</i></li> <li>7a. <i>Is the main use cooking? Do you use less if you have to walk further to collect it?</i></li> <li>1a. <i>If you do, where is it? Can you show it to me?</i></li> <li>3a. <i>Why/Why not?</i></li> <li>4a. <i>Why/Why not? What would they use if they do not have a latrine? Would community members share latrines?</i></li> <li>5a. <i>Can you explain how it is kept clean and safe?</i></li> <li>6a. <i>Can you show me?</i></li> <li>7a. <i>What would stop you from using it as fertiliser? Why?</i></li> </ol>

CONSTRUCT	QUESTION	PROBES
<p><b>HEALTH OF FAMILY AND COMMUNITY</b></p> <ul style="list-style-type: none"> <li>» Current level of illness perceived within the community</li> <li>» How they deal with sickness</li> <li>» Facilities/infrastructure available for the community</li> </ul>	<p>Thank you! I now would like to discuss the health of the community, and any health issues that you or your family have.</p> <ol style="list-style-type: none"> <li>1. Firstly, do you have access to a health clinic? Where is it? Is it free?</li> <li>2. Do you use the clinic when you or your family gets sick?</li> <li>3. Where do you get medicine from? Do you have to pay for it?</li> <li>4. What are the main health issues for you? Your family? Your community? Does this change during different times of the year?</li> <li>5. How often are your children sick? What are their symptoms?</li> <li>6. What makes them sick? What do you do with them when they are sick?</li> <li>7. How does your daily routine change when you have a sick family member?</li> <li>8. How often is your child sick from diarrhoea? Does it cause them to miss school? How often? Do you see this as a problem?</li> <li>9. How do you respond when your child is sick?</li> <li>10. How often in a month does your child have loose stools more than three times a day?</li> <li>11. How do you try to prevent diarrhoea? Other diseases?</li> <li>12. Do these preventions help?</li> </ol>	<ol style="list-style-type: none"> <li>2a. <i>If no, why not? Economics, distance, time? What stops you?</i></li> <li>4a. <i>If yes, why do you think that these issues would change?</i></li> <li>6a. <i>Water? Food? Bugs? How do you know what makes them sick?</i></li> <li>7a. <i>Less time to do normal activities? Do you try to be more careful about sanitation when you/family are sick?</i></li> <li>8a. <i>Why is this a problem?</i></li> <li>9a. <i>Do you change what they eat/drink? Use medication? Do you go to a doctor?</i></li> <li>11a. <i>Boil water? Food? Medications? Bed nets for other children?</i></li> <li>12a. <i>If yes, how? If no, why do you think they do not help?</i></li> </ol>

CONSTRUCT	QUESTION	PROBES
<p><b>EDUCATION AND SOLUTIONS</b></p> <ul style="list-style-type: none"> <li>» Amount of health education programs</li> <li>» Solutions that the community would like to see happen</li> </ul>	<p>Thank you. There is just one more area that I would like to discuss with you today. First I will ask about how you keep yourself and your family healthy, and then I will discuss what you would do about the problems in your community.</p> <ol style="list-style-type: none"> <li>1. Who taught you how to be healthy?</li> <li>2. Who taught your <b>children</b> how to stay healthy? Did your children teach you anything about health that you didn't know?</li> <li>3. What other things would you like to see in your community to help make you healthy? Do you think that community members can teach each other about health and health problems?</li> <li>4. If you were in charge of the community, how would you make sure the children/community stay healthy?</li> <li>5. What would you like to see done with the resources your community currently has?</li> <li>6. How do you think the community can make this happen? Where would you go for additional resources?</li> </ol>	<ol style="list-style-type: none"> <li>1a. <i>Was it your parents, media, elders, women's group, church, teachers?</i></li> <li>2a. <i>You? School programs?</i></li> <li>3s. <i>Why/Why not? What stops community members from teaching each other?</i></li> <li>4s. <i>If they don't mention water, ask "what about the water, what would you do about it?"</i></li> </ol>
<p><b>CONCLUSION</b></p>	<p>Thank you very much for your time. Is there anything else you would like to tell me about your water and health in your community? Would you like to add or expand on anything that you put into your map?</p>	

## APPENDIX XI:

# KAPE Community Meeting Report Back Script

---

This script has been adapted from Levison (2013). This is an instrument that you may be able to use during a community meeting to deliver information about the information you have collected and to learn more about the community.

### SCRIPT TEXT:

“Welcome and thanks (for attending; for providing the opportunity).

Why you are here (to share some of the things that peoples shared with you when you were in the community talking with them about things that were important to them).

Share the findings (this is what you told me OR this is what we talked about):

- » Water
- » Sanitation
- » Health
- » Education
- » Solutions

Final thanks and opportunity to ask questions and start a discussion.”

### NOTE:

If there are issues raised through your findings, you may want to consider linking with other NGOs and/or government partners to explain and demonstrate some solutions which may help improve health and wellbeing.

## APPENDIX XII:

# Example Key Informant Interview Questions

---

These interview questions have been adapted from Newton (2013).

### BACKGROUND

What do you do for work?

What are your responsibilities?

For how long have you had this job?

What is your connection to the community?

Do you have any responsibilities within the community?

If YES, what are they?

If NO, do you have any responsibilities within another community?

### WATER ISSUES

What are all the different water needs for the community?

Which uses require the most water?

Which use is most important?

What would you say are the key water issues in this area?

Are there any plans to solve any of these problems?

What are they and what timeline is associated with them?

What has been done to date?

What obstacles have you encountered or do you expect to encounter?

Are any of these goals or achievements written in any documents, plans, reports? If so, may we have a copy?

---

---

## DRINKING WATER AND SANITATION

In your experience, what are the success factors for water and sanitation development?

In your experience, what hinders community water resource development?

What is challenging about hygiene and sanitation improvement in the community?

Are there plans for hygiene and sanitation improvement? Yes No

If yes... What are they? If no... Why not?

How does current legislation impact upon the work you are doing?

What are the implications for rural water supply and development?

How difficult is it to access financial support?

What sources of financial support are available?

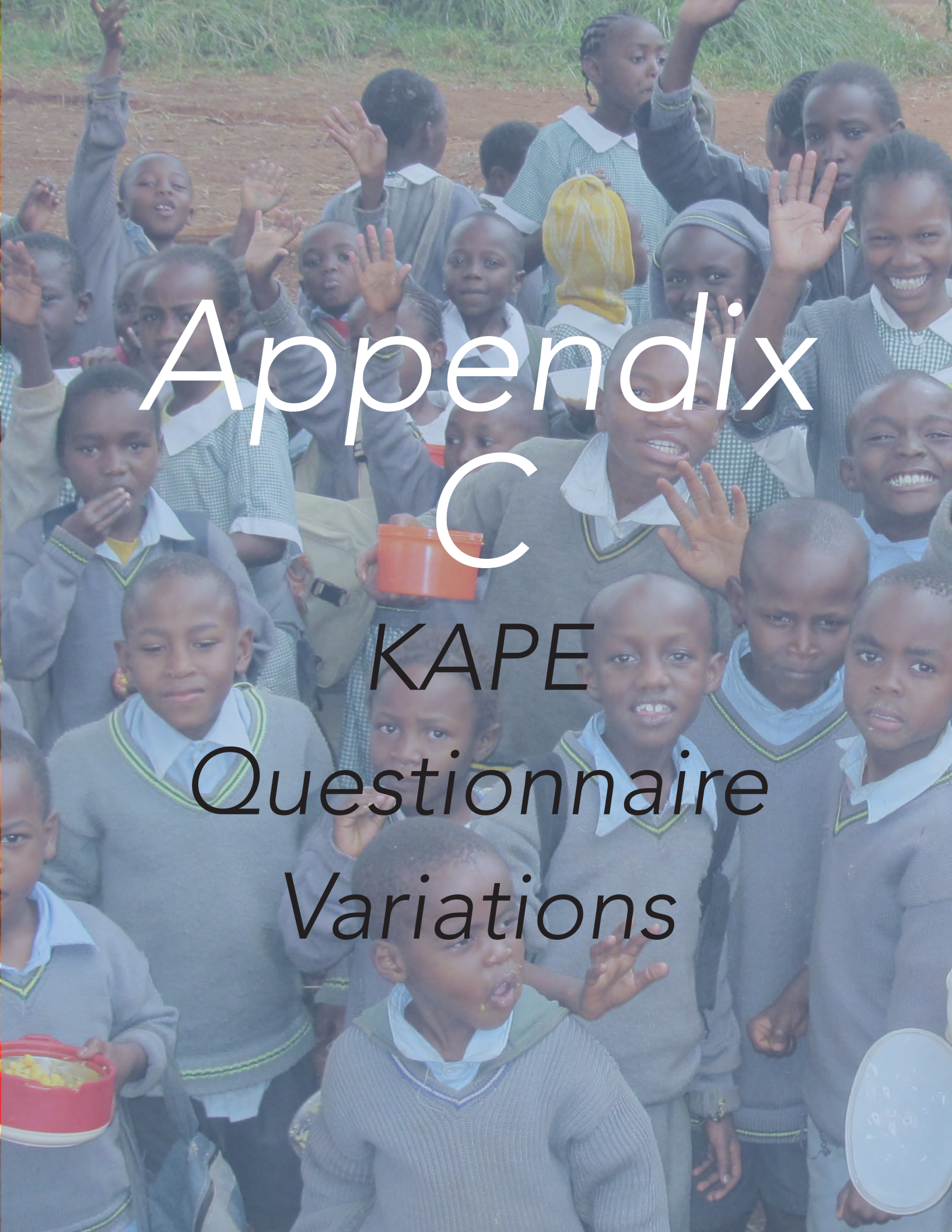
## HEALTH

In your opinion, what are the health challenges facing this community?

What is being done to deal with them?

What do you see as the ideal solution?

## ANY OTHER THOUGHTS YOU WOULD LIKE TO SHARE



# Appendix

## C

### KAPE

#### Questionnaire

#### Variations



APPENDIX XIII:

# KAPE Questionnaire Variations: Maternal and Newborn Health (Practitioners)

---

COMMUNITY ASSESSMENT SURVEY ON HEALTH CARE FACILITY QUESTIONNAIRE  
FOR COMMUNITY PROFESSIONALS/PRACTITIONERS

## INTRODUCTION AND INSTRUCTIONS:

Hello. I am \_\_\_\_\_ and this is \_\_\_\_\_ (translator/facilitator). Thank you for agreeing to participate in this questionnaire. Today I will ask you some general questions about yourself and your community. You do not have to answer any questions that you do not want to. We know you are very busy. Participation is your choice, and it is okay to say no. We do not have money to give you. Would you like to participate in the survey?

Was the participant informed?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>
Is he/she willing to participate?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>

**Signature (Interviewer):** \_\_\_\_\_

**Signature (Interviewee):** \_\_\_\_\_

---

---

## GENERAL BACKGROUND

I would like to begin by asking you some general questions about you and your health care facility.

1. What service level is this health care facility?

---

2. How many departments are in your facility?

---

3. In total, how many staff are in your facility/department? (*circle either facility or department*)

---

4. How many patients come to your facility per day?

---

5. Are they usually accompanied by family members?

---

6. What distance do patients travel to get to your facility?

---

7. What is the basic fee for a clinic visit?

---

8. What is the cost for an anti-natal visit?

---

9. What is the cost for a delivery?

---

10. What is the cost for a caesarian-section?

---

---

11. What is your position?

---

12. What is the highest level of education that you have?

---

13. How long have you worked here?

---

14. What are you proud of about your facility/department? *(circle either facility or department)*

---

15. What are the major health challenges facing your patients right now?

---

16. What are the major challenges facing your facility/department right now? *(circle either facility or department)*

---

17. How are these challenges different from the challenges you've faced 5 years ago?

---

18. How do you cope with these challenges?

---

## RECORD KEEPING

19. Do you chart records?  Yes  No

20. Who records the information?

---

21. What data do you collect?

*(Prompt: births; deaths; HIV/AIDS; acute illnesses; pregnancy related complications)*

---

---

22. Are records reported out?  Yes  No

23. If yes, who reports them and to who?

---

24. How do you access records of the patient's prior visit(s) to the facility?

---

25. Do you register births?  Yes  No

- a) Do you record deaths?  Yes  No
- b) Do you record neo-natal deaths?  Yes  No
- c) Are they also registered as births?  Yes  No

## MATERNAL/NEONATAL HEALTH INFORMATION

26. In general, how would you rate/describe the condition of your facility?

Very Good  Good  Moderate  Bad  Very Bad

27. In general, how would you rate/describe access to potable water at your facility?

Very Good  Good  Moderate  Bad  Very Bad

28. In general, how would you rate/describe access to sanitation at your facility?

Very Good  Good  Moderate  Bad  Very Bad

29. a) In general, how would you rate/describe the health of your incoming patients?

Very Good  Good  Moderate  Bad  Very Bad

b) What are the main health problems of incoming patients?  
(Prompt: malnutrition; anemia; acute illness — diarrhea, malaria; HIV/AIDS; pregnancy related complications)

---

30. What percentage of women coming for delivery have had any prenatal care?

---

31. What percentage of women from your area do you think come to give birth rather than at home?

---

32. a) In general, how would you rate/describe the health of the babies when born?

- Very Good     
  Good     
  Moderate     
  Bad     
  Very Bad

b) What are the main health problems that the babies face?  
 (Prompt: premature; low birth weight; APCAR; jaundice; HIV/AIDS)

---

33. What working equipment do you have in your facility/department? (circle either facility or department) Please fill in the chart below:

EQUIPMENT	ALWAYS	SOMETIMES	NEVER
Delivery gloves with long sleeves			
Incubators (how many?)			
Blood			
Drugs			
Beds			
Ultrasound			
Weighing scale for baby			
Mosquito nets			
Other (please indicate)			

## WATER, SANITATION AND HYGIENE NEEDS

Thank you. The next set of questions relates to current water and sanitation needs in your facility.

34. What are the main sources of water for staff in your facility/department? (circle either facility or department)

SOURCE OF WATER	YES/NO	DISTANCE FROM THE FACILITY/DEPARTMENT
Piped water into each department		
Piped water into a central location		
Public tap/standpipe		
Tubewell/borehole		
Protected dug well		
Unprotected dug well		
Protected spring		
Unprotected spring		
Rainwater collection		
Bottled water		
Cart with small tank/drum		
Tanker-truck		
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)		
Other (specify)		

---

35. Have these water sources changed from the past? If so, how and why?

---

36. What is the water used for?

*(Prompt for different use of safe vs. unclean water for medical; hand washing; food preparation)*

---

37. Is the safe water accessible for patients and families?     Yes             No             N/A

38. Is the water accessible for the local community?     Yes             No             N/A

39. How many toilets are available for the following:

a) Facility

b) Each Department

c) Public

40. How many areas are available for bathing:

a) Patients

b) Babies

41. a) Do you have an infection control protocol?             Yes             No

b) If yes, what are all the elements available to put the protocol into practice?

---

c) If no, what elements are missing to put the protocol into practice?

---

42. Do you have hand washing stations?             Yes             No

43. How many hand washing stations are in your facility/department? (circle either facility or department)

---

---

44. How often do they have clean water?

- Always     Mostly     Sometimes     Rarely     Never

45. Do the hand washing stations have soap?     Always     Sometimes     Never

46. Do you use non-water based hand washing? Please circle:     Yes     No

If yes, please describe: \_\_\_\_\_

47. How would you describe hygiene in the facility/department? (circle either facility or department)

- Very Good     Good     Moderate     Bad     Very Bad

48. a) Do you think hygiene impacts on the health of the patients?     Yes     No

If so how? \_\_\_\_\_

b) Does the level of access to water and sanitation impact on this?     Yes     No

If so how? \_\_\_\_\_

49. a) Do you think hygiene impacts on the health of the staff?     Yes     No

If so how? \_\_\_\_\_

b) Does the level of access to water and sanitation impact on this?     Yes     No

If so how? \_\_\_\_\_

50. In your experience, can you please tell me some of the things (programs or activities) that your facility/department does to promote health, safe drinking water and/or sanitation? (circle either facility or department)

\_\_\_\_\_

51. Do you feel that these things (programs or activities) are effective in promoting health, safe drinking water and/or sanitation? Why or why not?

\_\_\_\_\_

52. What do you see as the biggest accomplishment your facility/department has made in improving access to water and/or sanitation? (circle either facility or department)

\_\_\_\_\_

---

53. What do you see as the most important priority for your department/facility as you seek to improve access to water and sanitation? (Prompt: why is this important?)

---

## CONCLUSION

Thank you so much for your time and contributions. This is the end of our questions, but we would still welcome any additional comments, ideas, or concerns that you have. Is there anything we forgot or anything you would like to add?



APPENDIX XIV:

# KAPE Questionnaire Variations: Health Care (Patients)

---

## INTRODUCTION AND INSTRUCTIONS:

Hello. I am \_\_\_\_\_ and this is \_\_\_\_\_ (translator/facilitator). Thank you for agreeing to participate in this questionnaire. Today I will ask you some general questions about yourself and your community. You do not have to answer any questions that you do not want to. We know you are very busy. Participation is your choice, and it is okay to say no. We do not have money to give you. Would you like to participate in the survey?

Was the participant informed?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>
Is he/she willing to participate?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>

**Signature (Interviewer):** \_\_\_\_\_

**Signature (Interviewee):** \_\_\_\_\_

---

---

## GENERAL BACKGROUND

I would like to begin by asking you some general questions about you and your household.

1. How many people live in your household?

2. How many children who live in your household are <1 years of age?

3. How many children who live in your household are between 1 and 5 years of age?

4. How many children who live in your household are between 5 and 16 years of age?

5. How many of your children go to school?

6. a) Have you been to school?  Yes  No

b) If yes, how far did you go in school?

- Some primary
- Complete primary
- Some secondary
- Complete secondary
- Beyond secondary

7. What do you do for work?

---

8. How long have you had this job?

---

9. Were you born in the city/village/tribe where you currently live?

Yes  No  Don't Know

10. How long have you lived here?

---

---

## COMMUNITY AND HOME HEALTH INFORMATION

11. In general, how would you rate/describe the health of your community?

- Very Good       Good       Moderate       Bad       Very Bad

12. In general, how would you rate/describe your family's health?

- Very Good       Good       Moderate       Bad       Very Bad

13. In general, how would you rate/describe the health of your children <1 years of age?

- Very Good       Good       Moderate       Bad       Very Bad

14. In general, how would you rate/describe the health of your children between 1 and 5 years of age?

- Very Good       Good       Moderate       Bad       Very Bad

15. In general, how would you rate/describe the health of your children between 5 and 16 years of age?

- Very Good       Good       Moderate       Bad       Very Bad

16. What are the main health problems in your community face?

*(Prompts: pregnancy, diarrhea, fever)*

---

17. What are the main health problems that your children and other children in your community face?

*(Prompts: diarrhea, fever, rash)*

---

18. a) Have any of your household members, including children, have suffered from diarrhea in the past 2 weeks?

*Diarrhoea is defined as the passage of 3 or more loose or liquid stools per day, or more frequently than is normal for the individual.*

- Yes       No

b) If yes, how many?

c) If yes, how many were children < 5 years of age?

d) Please fill in the following table:

CHILD	AGE	TREATMENT FOR DIARRHEA (Yes , No or DK)	WHAT KIND OF TREATMENT? [traditional medicine/healer; buy medicine from pharmacy/kiosk; visit the health care/doctor; other (specify)]	HAS YOUR CHILD HAD ANY OTHER ILLNESSES? (Yes, No, DK) If yes, please explain.
Child #1				
Child #2				
Child #3				
Child #4				
Child #5				

19. From whom do you learn about health information, such as ways to keep your children healthy or ways to ensure that you are healthy and can work?

*(Prompt: health practitioner, public information, NGO, relative)?*

---

20. From whom would you prefer to learn about health information?

*(Prompt: head mama, women's group leader, public health nurse, someone from outside the community)*

---

21. How regularly, to the best of your knowledge, do your neighbours use soap? If they do use soap, what do they use it for?

*(Prompt: dish washing, laundry, hand washing, bathing)*

---

22. Do you regularly use soap?  Yes  No  Don't Know

a) If yes, what do you use it for?

*(Prompts: dish washing, laundry, hand washing, bathing)*

---

b) If no, why not?

---

---

I would like to ask you a few questions about how children in your household use soap for hand washing.

23. Please indicate in the following chart how often and when your children <5 years of age use soap for hand washing at the following times.

ACTIVITY	NEVER	RARELY	SOMETIMES	MOSTLY	ALWAYS
Before eating					
After eating					
Before cooking					
After urinating					
After defecating					
Before sleeping					
Upon waking					
When hands are dirty					
When bathing					
Other (specify)					

24. a) Do you currently have a cake of soap in your home?

Yes       No       Don't Know

b) If so, where do you keep it?

---

25. a) Do you currently have liquid soap for handwashing in your home?

Yes       No       Don't Know

b) If so, where do you keep it?

---

---

## HEALTH CARE FACILITY

26. How long does it take you to get to the closest health care provider?

---

27. How long have you used this health care provider?

---

28. What have you used this health care provider for?

*(Prompt: anemia; acute illnesses; prenatal care; pregnancy related complications; HIV/AIDS)*

---

29. What health care providers have you see in the past year? (Prompts: physician, nurse, traditional healer, herbalist)

---

30. Do the health care professionals record the information from your visit?

Yes       No

31. What information do the health care professionals ask you for?

---

32. In general, how would you rate/describe the condition of this facility and why?

Very Good       Good       Moderate       Bad       Very Bad

Please explain: \_\_\_\_\_

33. In general, how would you rate/describe the services of this facility and why?

Very Good       Good       Moderate       Bad       Very Bad

Please explain: \_\_\_\_\_

34. What additional services do you think should be provided?

---

---

## MATERNAL/NEONATAL HEALTH INFORMATION

35. a) Have you used this health care facility for prenatal care in your last pregnancy?

Yes                       No

b) Why or why not?

---

If yes was answered for Question 34, please answer the following. Otherwise go to Question 41.

36. a) What care did you receive?

---

b) Why or why not?

---

37. How would you rate this care?

Very Good                       Good                       Moderate                       Bad                       Very Bad

38. In general, how would you rate/describe the health of your baby when born?

Very Good                       Good                       Moderate                       Bad                       Very Bad

39. a) Do you think that most women in your community use the health care facility for prenatal care?

Yes                       No

b) Why or why not?

---

40. What percentage of women do you think come to give birth here at the facility rather than at home?

---

41. Why do you think that women choose to give birth at home instead of at the clinic?

---

## WATER, SANITATION, AND HYGIENE AT HEALTH CARE FACILITY

42. What are the main sources of water at this health care facility?

SOURCE OF WATER	YES/NO	DISTANCE FROM THE FACILITY/DEPARTMENT
Piped water into each department		
Piped water into a central location		
Public tap/standpipe		
Tubewell/borehole		
Protected dug well		
Unprotected dug well		
Protected spring		
Unprotected spring		
Rainwater collection		
Bottled water		
Cart with small tank/drum		
Tanker-truck		
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)		
Other (specify)		

43. Have these water sources changed from the past? If so, how and why?

---

44. What is the water used for?

*(Prompts: medical; hand washing; food preparation)*

---

45. Is safe water accessible for patients and families?  Yes  No

46. Is safe water accessible for the local community?  Yes  No

47. Are there hand washing stations at the health care facility?  Yes  No

48. How often do they have running water?

Very Good  Good  Moderate  Bad  Very Bad



---

49. Do the hand washing stations have soap?

- Always**       **Mostly**       **Sometimes**       **Rarely**       **Never**

50. a) Does the health care facility use non-water based hand washing?       **Yes**       **No**

If yes, please describe:

---

b) How would you describe hygiene at the health care facility?

- Very Good**       **Good**       **Moderate**       **Bad**       **Very Bad**

51. a) Do you think hygiene impacts on the health of the patients?       **Yes**       **No**

If so, how?

---

b) Does the level of access to water and sanitation affect hygiene?       **Yes**       **No**

If so how?

---

52. a) Do you think hygiene is import to the health of the staff?       **Yes**       **No**

If so how?

---

b) Does the level of access to water and sanitation affect the health of staff on this?       **Yes**       **No**

If so how?

---

---

## LOCAL PERCEPTIONS AND BEHAVIOURS RELATED TO WATER AND HEALTH

53. Where do you get information from on health, water, and sanitation?

*(Prompt: medical practitioners, community resource persons, child in school, radio/TV, newspapers, community meetings, posters, neighbours, aid workers, religious leaders)*

---

54. Have you ever received any information regarding diarrhea?

Yes       No       Don't Know

If yes, what was the source of the information?

*(Prompt: medical practitioners, community resource persons, child in school, radio/TV, newspapers, community meetings, posters, religious leaders, neighbor)*

---

55. Has your child/children received any teachings about diarrhea at school?

Yes       No       Don't Know

56. What did they learn about preventing diarrhoea?

*(Prompt: treat drinking water; wash hands after visiting the latrine; wash hands before eating; use the latrine)*

---

57. Do you know what causes diarrhoea?

*(Prompt: drinking Bad water; eating Bad food; flies/insects; poor hygiene; spirits/curse/Bad omen)*

---

58. How can you prevent you or your family from getting sick/diarrhoea?

*(Prompt: cannot prevent; herbs; wash hands; cook food thoroughly; boil and treat water; clean cooking utensils/vessels)*

---

## CONCLUSION

Thank you so much for your time and contributions. This is the end of our questions, but we would still welcome any additional comments, ideas, or concerns that you have. Is there anything we forgot or anything you would like to add?

APPENDIX XV:

# KAPE Questionnaire Variations: Anaerobic Digestion (Community Leader)

---

Used in Uganda; translated into Lugandan and Runyankore

## INTRODUCTION AND INSTRUCTIONS:

Hello. I am \_\_\_\_\_ and this is \_\_\_\_\_ (translator/facilitator). Thank you for agreeing to participate in this questionnaire. Today I will ask you some general questions about yourself and your community. You do not have to answer any questions that you do not want to. We know you are very busy. Participation is your choice, and it is okay to say no. We do not have money to give you. Would you like to participate in the survey?

Was the participant informed?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>
Is he/she willing to participate?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>

**Signature (Interviewer):** \_\_\_\_\_

**Signature (Interviewee):** \_\_\_\_\_

---

---

## GENERAL BACKGROUND

I would like to begin by asking you some general questions about you and your community.

1. \*How many people live in your community?
2. \*How many households are in your community?
3. \*How many of the people are children are <16 years of age?
4. \*How many children in your community are <5 years of age?
5. \*How many schools are in your community?
6. \*How many people are educated? What is the highest level of education?

- 
7. \*What types of jobs are available in your community?
- 

8. What do you estimate is the average daily income in your community?
- 

9. What do you do for work?
- 

10. How long have you lived here in your community?
- 

11. What are you proud of about your community?
- 

12. You have been identified as a respected leader in this community.

- a) How long have you had this job?
  - b) What is your role in this community?
-

---

c) How are you involved in community activities?

---

13. Who are the vulnerable people in your community?

---

14. What are the major challenges facing your community right now?

---

15. How are these challenges different from the challenges you've faced in the past?

---

16. How does the community cope with these challenges?

---

## COMMUNITY HEALTH INFORMATION

Through these questions, we hope that your community can begin to understand the health concerns of you and your children. These questions will help us to work with you in achieving your community's goals.

17. a) \*In general, how would you rate the health of your community?

Very Good       Good       Moderate       Bad       Very Bad

b) \*What are the main health problems that people in your community face?

---

18. a) \*In general, how would you rate the health of men in your community?

Very Good       Good       Moderate       Bad       Very Bad

b) \*What are the main health problems that men in your community face?

---

19. a) \*In general, how would you rate the health of women in your community?

Very Good       Good       Moderate       Bad       Very Bad

---

b) \*What are the main health problems that women in your community face?

---

20. a) \*In general, how would you rate the health of your children <5 years of age?

Very Good       Good       Moderate       Bad       Very Bad

b) \*What are the main health problems that children <5 years of age in your community face?

---

21. \*What are the main causes of health problems in your community?

---

22. a) Where is the closest health care provider?

---

b) What services do they provide?

---

## HEALTH, WATER AND SANITATION NEEDS

Thank you. The next set of questions relates to current water and sanitation needs in your community.

23. \*What are the main sources of drinking water for members in your community?

SOURCE OF WATER	YES/NO	# OF COMMUNITY MEMBERS
Piped water into a dwelling		
Piped water into a yard/plot		
Public tap/standpipe		
Tubewell/borehole		
Protected dug well		
Unprotected dug well		
Protected spring		
Unprotected spring		
Rainwater collection		
Bottled water		
Cart with small tank/drum		
Tanker-truck		
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)		
Other (specify)		

---

24. Have these water sources changed from the past? If so, how and why?

\_\_\_\_\_

25. What uses the most water in your community  
(Prompt: crops, Animals, drinking water for people)

\_\_\_\_\_

26. \*What is the priority water use in your community?

\_\_\_\_\_

27. In your opinion, what are the main factors that determine whether families have access to safe water in your community?  
(Prompt: wealth, location in village, position of power)

\_\_\_\_\_

28. a) How would you rate any current community sanitation and toilet facilities in this area?

Very Good       Good       Moderate       Bad       Very Bad

b) Please describe these facilities:

\_\_\_\_\_

29. In your opinion, what are the main factors that determine whether families have access to sanitation in your community?

\_\_\_\_\_

30. \*Please rate your community on the following statements:

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)

a) **Community members are interested in becoming involved in water related issues**

b) **Community members are aware about water related issues in your community**

c) **Community members have knowledge about water related issues in your community**

31. In your experience, can you please tell me some of the things (programs or activities) that your community does to promote health, safe drinking water and/or sanitation?

\_\_\_\_\_

---

32. Do you feel that these things (programs or activities) are effective in promoting health, safe drinking water and/or sanitation? Why or why not?

---

33. What do you see as the biggest accomplishment your community has made in improving access to water and/or sanitation?

---

34. What do you see as the most important priority for your community as you seek to improve access to water and sanitation? (Prompt: why is this important?)

---

## SANITATION AND ENERGY NEEDS: BEHAVIORS AND PERCEPTIONS

35. Please rank (hi, medium or low) the current energy sources in your community:

	USE (Hi/Med/Low)	AVAILABILITY (Hi/Med/Low)	PURPOSE (Hi/Med/Low)
Charcoal			
Firewood			
Electricity			
Natural gas			
Kerosene			

36. a) Have you ever heard of anaerobic digestion and its by-products (Biogas, sludge pellets, etc.)?

Yes       No

b) If yes, what was the source of this information?

---

37. In your opinion, what do you think are some of the preconceived perceptions your community has about the use of human waste by-products as fertiliser?

---

38. In your opinion, what do you think are some of the preconceived perceptions your community has about the use of treated human waste by-products (i.e., fuel pellets or briquettes) as a fuel resource in domestic settings?

---



---

39. In your opinion, what do you think are some of the preconceived perceptions your community has about the use of biogas from human waste by-products for lighting?

---

40. In your opinion, what do you think are some of the preconceived perceptions your community has about the use of biogas from human waste by-products for cooking?

---

41. Would you promote the use of the human waste by-products (Biogas, sludge pellets) as a source of domestic fuel in your community if it proved to be (choose all that apply):

- Cheaper than your current source of energy**
- More efficient than the currently popular energy sources**
- Better for trees, the environment in general, sustainable**
- Meant improved sanitation facilities for your community**
- Safe and not harmful to health**
- Easy to use and time efficient**
- The norm/popular**
- Provided an income source to improve water and sanitation access for your community**

If not, why not?

---

42. What information would you need to change your mind?

---

43. Would you support the introduction of community anaerobic digestion toilet facilities?

- Yes**             **No**

If not, why not?

---

## CONCLUSION

Thank you so much for your time and contributions. This is the end of our questions, but we would still welcome any additional comments, ideas, or concerns that you have. Is there anything we forgot or anything you would like to add?

APPENDIX XVI:

# KAPE Questionnaire Variations: Anaerobic Digestion (Community Member)

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## INTRODUCTION AND INSTRUCTIONS:

Hello. I am \_\_\_\_\_ and this is \_\_\_\_\_ (translator/facilitator). Thank you for agreeing to participate in this questionnaire. Today I will ask you some general questions about yourself and your community. You do not have to answer any questions that you do not want to. We know you are very busy. Participation is your choice, and it is okay to say no. We do not have money to give you. Would you like to participate in the survey?

Was the participant informed?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>
Is he/she willing to participate?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>

**Signature (Interviewer):** \_\_\_\_\_

**Signature (Interviewee):** \_\_\_\_\_

---

## GENERAL BACKGROUND

I would like to begin by asking you some general questions about you and your community.

1. \*How many people live in your household?

2. \*How many of the people who live in your household are children <16 years of age?

3. \*How many children who live in your household are <5 years of age?

4. \*How many of your children go to school?

5. \*Have you been to school? (If so: how far did you go in school?)

6. \*What do you do for work?  

---

7. \*How long have you had this job?  

---

8. \*Were you born in the city/village/tribe where you currently live?

Yes       No       Don't Know

9. \*How long have you lived here?  

---

10. \*What are you proud of about your community?  

---

11. \*What are the major challenges facing your community right now?  

---

12. \*How are these challenges different from the challenges you've faced in the past?  

---

13. \*How does the community cope with these challenges?  

---

---

14. \*What do you estimate is the average daily income in your community?

---

15. \*Based on this average daily income estimation in your community, would you rank your household income as:

- Above Average                       Average                       Below Average

## COMMUNITY HEALTH INFORMATION

Through these questions, we hope that your community can begin to understand the health concerns of you and your children. These questions will help us to work with you in achieving your community's goals.

16. \*In general, how would you rate the health of your community?

- Very Good                       Good                       Moderate                       Bad                       Very Bad

17. \*In general, how would you rate your family's health?

- Very Good                       Good                       Moderate                       Bad                       Very Bad

18. \*In general, how would you rate the health of your children <5 years of age?

- Very Good                       Good                       Moderate                       Bad                       Very Bad

19. \*What are the main health problems that people in your community face?

---

20. \*What are the main health problems that your children and other children in your community face?

---

21. \*What are the main causes of health problems in your community?

---

22. \*How long does it take you to get to the closest health care provider?

---

23. \*Have any of your children below 5 years suffered from diarrhea in the past 2 weeks?

*Note: diarrhea is defined as the passage of 3 or more loose or liquid stools per day, or more frequently than is normal for the individual*

- Yes                       No

24. Fill in the following table:

CHILD	AGE	TREATMENT FOR DIARRHEA (Yes , No or DK)	WHAT KIND OF TREATMENT? [traditional medicine/healer; buy medicine from pharmacy/kiosk; visit the health care/doctor; other (specify)]	HAS YOUR CHILD HAD ANY OTHER ILLNESSES? (Yes, No, DK) If yes, please explain
Child #1				
Child #2				
Child #3				
Child #4				
Child #5				

## WATER NEEDS

Thank you. The next set of questions relates to current water and sanitation needs in your community.

25. \*What are the main sources of drinking water for members in your household?

SOURCE OF WATER	CHECK Yes OR No		FREQUENCY (# of times per week)	USED IN DRY OR WET SEASON (Check which apply)	
	YES	NO		DRY	WET
Piped water into a dwelling					
Piped water into a yard/plot					
Public tap/standpipe					
Tubewell/borehole					
Protected dug well					
Unprotected dug well					
Protected spring					
Unprotected spring					
Rainwater collection					
Bottled water					
Cart with small tank/drum					
Tanker-truck					
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)					
Other (specify)					

26. \*Have these water sources changed from the past? If so, how and why?

---

27. \*What is the main source of water used by your household for other purposes, such as cooking and hand washing etc.?

SOURCE OF WATER	YES/NO	FREQUENCY (# OF TIMES PER WEEK)
Piped water into a dwelling		
Piped water into a yard/plot		
Public tap/standpipe		
Tubewell/borehole		
Protected dug well		
Unprotected dug well		
Protected spring		
Unprotected spring		
Rainwater collection		
Bottled water		
Cart with small tank/drum		
Tanker-truck		
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)		
Other (specify)		

28. \*Who has the major responsibility for water collection for your household?

- Adult woman
- Adult man
- Female child (<15 years)
- Male child (<15 years)
- Don't know

29. \*How long does it take one person to go to your water source, get water, and come back?

---

30. a) \*How many trips round trips are made in total by your family each day to collect water?

b) \*How many people make these trips?

31. \*What uses the most water in your community?

---

32. \*What is the priority water use in your household?

---

---

33. a) \*How do you know when the water you use is clean and/or safe?

\_\_\_\_\_

34. \*If it is not clean and/or safe, what things have you done to try to deal with it?

\_\_\_\_\_

35. \*Do you treat your water in any way to make it safer to drink?

Yes       No       Don't Know

36. a) \*What do you usually do to the water to make it safer to drink?

*(Prompts: boil; add bleach/chlorine; strain it through a cloth; use a water filter; solar disinfection; let it stand and settle)*

\_\_\_\_\_

b) \*Why do you treat it?

\_\_\_\_\_

37. \*In your opinion, what are the main factors that determine whether families have access to safe water in your community?

*(Prompt: wealth, location in village, position of power)*

\_\_\_\_\_

38. In your opinion, what are the main factors that determine whether families have access to sanitation in your community?

\_\_\_\_\_

39. Are you currently a member of an environmental, conservation or watershed organisation?

Yes       No       Don't Know

40. Please rate yourself on the following statements:

*(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)*

a) I am interested in becoming involved in water related issues

b) I am aware about water related issues in my community

c) I have knowledge about water related issues in my community

---

41. How much do you agree with the following statements:

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)

- a) **My community is a place that I feel a strong connection with**
- b) **My community is a place that I care a lot about**
- c) **There are places in my community that are special to me**
- d) **Community members have an emotional and physical bond with our community**
- e) **My community has a sense of togetherness**
- f) **Mistrust/suspicion of others is an issue in my community**

## SANITATION

Thank you. Now we have a few questions about sanitation in your community.

42. a) \*Where does your family most often go to the toilet?

---

b) How far is this away from where you collect water?

---

43. \*If applicable, what kind of toilet facility do members of your household use?

- flush/pour flush to:**
  - piped sewer system
  - septic tank
  - pit latrine
  - elsewhere
  - unknown place/not sure/DK where
- ventilated improved pit latrine
- pit latrine with slab
- pit latrine without slab/open pit
- composting toilet
- bucket
- hanging toilet/hanging latrine
- other (specify)

44. \*Where do your young children <5 years of age go to the toilet?

---



---

45. a) \*Do you share this facility with other households?

Yes       No       Don't Know

b) \*If so, how many households use/share this toilet facility?

46. \*If you don't share these facilities, would you be willing to share toilet facilities?

Yes       No       Don't Know

47. \*In general, how would you rate your sanitation and toilet facilities?

Very Good       Good       Moderate       Bad       Very Bad

48. Briefly describe your ideal sanitation toilet facility

---

49. a) Do you own your current sanitation/toilet facilities?       Yes       No

b) If yes, how did you acquire them?

*(Prompt: Paid cash, loan, donated by NGO (give specific name), government, family etc.)*

---

c) If no, who owns them?

---

d) Do you pay for them?

---

e) How much do you pay to use these facilities?

---

50. What estimated percentage of your income would you say goes to sanitation management and use?

---

---

51. Would you be willing to pay for improved alternative sanitation facilities/toilet facilities?  
(Improved meaning: septic tank? flushing? shared? Described ideal sanitation toilet facility?)

Yes       No

52. If yes, what percentage of your income would you put towards this sanitation facility?

53. Would you pay for the construction of this facility?

Yes       No

54. Would you pay for maintenance of these facilities?

Yes       No

55. Would you prefer to own the facility or pay for every use?

Own       Pay

56. a) If you would pay for use, how much would you be willing to pay?

Per Use:

Per Month:

b) If no, why not?

(Prompts for financial barriers? Convenient toilet facility alternatives already present? Never thought about it before)

---

57. Would you use a community toilet facility, if:

- The facility was free
- If the facility was free for children
- The facility was shared
- If you received human waste by-products back such as fertiliser or fuel briquettes

58. Please describe your ideal shared community toilet facilities:

(Prompt: distance; shower facilities; hand washing facilities; lighting for safety at night; would you use it at night)

---

---

## HEALTH AND HYGIENE

59. \*From whom do you learn about health information, such as ways to keep your children healthy or ways to ensure that you are healthy and can work?

---

60. \*From whom would you prefer to learn about health information?

*(Prompts: head mama, women's group leader, public health nurse, someone from outside the community)*

---

61. \*How regularly, to the best of your knowledge, do your neighbors use soap? If they do use soap, what do they use it for?

*(Prompts: dish washing, laundry, hand washing, bathing)*

---

62. a) \*Do your children <5 years of age use soap for hand washing?

Yes       No       Don't Know

b) If yes, how often? Please circle:

Never       Rarely       Sometimes       Mostly       Always

63. \*When do your children <5 years of age wash their hands? Please circle all that apply:

- Before eating
- After eating
- Before cooking
- After toilet
- Before sleeping
- Upon waking
- When hands are dirty
- When bathing
- oOher (specify)

---

64. a) \*Do you currently have a cake of soap on the premises?

Yes       No       Don't Know

b) \*If so, where do you keep it?

---

---

## LOCAL PERCEPTIONS AND BEHAVIORS RELATED TO WATER AND HEALTH

65. \*Where do you get information from on health, water and sanitation, water? Please check all that apply:

- Medical practitioners
  - Community resource persons
  - Child in school
  - Radio/TV
  - Newspapers
  - Community meetings/chief's barazas
  - Posters
  - Neighbor/family/friends
  - Other (specify)
- 

66. Have you ever received any information regarding diarrhea?

- Yes       No       Don't Know

67. What was the source of the information? Please check all that apply:

- Medical practitioners
  - Community resource persons
  - Child in school
  - Radio/TV
  - Newspapers
  - Community meetings/chief's barazas
  - Posters
  - Neighbor/family/friends
  - Other (specify)
- 

68. Has your child/children received any teachings about diarrhea at school?

- Yes       No       Don't Know

69. What did they learn about preventing diarrhea?

*(Prompts: treat drinking water; wash hands after visiting the latrine; wash hands before eating; use the latrine)*

---

---

70. Do you know what causes diarrhea?

*(Prompts: drinking Bad water; eating Bad food; flies/insects; poor hygiene; spirits/curse/Bad omen)*

---

71. How can you prevent you or your family from getting sick/diarrhea?

*(Prompts: cannot prevent; herbs; wash hands; cook food thoroughly; boil and treat water; clean cooking utensils/vessels)*

---

## ENERGY AND FUEL NEEDS: BEHAVIORS AND PERCEPTIONS

Thank you. The next set of questions relates to current energy and fuel needs in your community.

72. Are you using any of the following energy sources for your household's daily domestic needs?

*(Needs such as cooking, light, heat, electricity, etc. as applicable)*

ENERGY SOURCE	YES/ NO	DISTANCE/ TIME NEEDED TO COLLECT ENERGY SOURCE (KM/hours)	COST OF ENERGY SOURCE (approx.% of income)	AMOUNT OF ENERGY REQUIRED WEEKLY (units/week)	USE OF ENERGY (e.g. for cooking, light, heat, electricity)	DURATION OF USE OF ENERGY SOURCE (# of hours per day)
Firewood						
Charcoal						
Electricity (grid)						
Solar						
Natural gas						
Kerosene						
Other						

73. In general, how satisfied are you with your current energy sources for domestic purposes?

Very satisfied     Satisfied     Neutral     Dissatisfied     Very Dissatisfied

74. Briefly describe any health concerns you have about your current energy sources.

---

---

75. In your opinion, what do you think are some of the preconceived perceptions your community has about the use of human waste by-products as fertiliser?

---

76. In your opinion, what do you think are some of the preconceived perceptions your community has about the use of treated human waste by-products (i.e., fuel pellets or briquettes) as a fuel resource in domestic settings?

---

77. In your opinion, what do you think are some of the preconceived perceptions your community has about the use of biogas from human waste by-products for lighting?

---

78. In your opinion, what do you think are some of the preconceived perceptions your community has about the use of biogas from human waste by-products for cooking?

---

79. Would you use treated sludge pellets/briquettes made from human waste as an alternative source of fuel and energy for domestic purposes?

Yes       No

80. Why or why not?

*(Prompts: personal preferences; cleanliness; fear of diseases; financial barriers; lack of information)*

---

81. Would you use biogas made from human waste as an alternative source of fuel and energy for domestic purposes?

Yes       No

82. Why or why not?

*(Prompts: personal preferences; cleanliness; fear of diseases; financial barriers; lack of information)*

---

83. Would you engage in the production of these by-products for a living?

---

---

84. Would you be willing to make the switch to using human waste biogas and products as a source of domestic fuel if it proved to be *(choose all that apply)*:

- Cheaper than your current source of energy - (If so, how much cheaper?)
- More efficient than your current energy source
- Better for trees, the environment in general, sustainable
- Meant improved sanitation facilities for your community
- Safe and not harmful to your health
- Easy to use and time efficient
- The norm/popular

a) If not, why not?

---

85. What information would you need to change your mind?

---

86. Have you ever received any information regarding anaerobic digestion?

- Yes       No       Don't Know

87. What was the source of this information?

---

88. Are you interested in any additional information?

---

## CONCLUSION

Thank you so much for your time and contributions. This is the end of our questions, but we would still welcome any additional comments, ideas, or concerns that you have. Is there anything we forgot or anything you would like to add?

APPENDIX XVII:

# KAPE Questionnaire Variations: Post Disaster Transitioning (Community Leader)

---

## INTRODUCTION AND INSTRUCTIONS:

Hello. I am \_\_\_\_\_ and this is \_\_\_\_\_ (translator/facilitator). Thank you for agreeing to participate in this questionnaire. Today I will ask you some general questions about yourself and your community. You do not have to answer any questions that you do not want to. We know you are very busy. Participation is your choice, and it is okay to say no. We do not have money to give you. Would you like to participate in the survey?

Was the participant informed?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>
Is he/she willing to participate?	<b>Please circle:</b>	<b>Yes</b>	<b>No</b>

**Signature (Interviewer):** \_\_\_\_\_

**Signature (Interviewee):** \_\_\_\_\_

**Gender:** \_\_\_\_\_

**Age:** \_\_\_\_\_

---



---

## GENERAL BACKGROUND

I would like to begin by asking you some general questions about you and your community.

1. How many people live in your community?
2. How many households are in your community?
3. How many men in your community?
4. How many women in your community?
5. How many of the people are children are <16 years of age?
6. How many children in your community are <5 years of age?
7. How many schools are in your community?
8. What is the highest level of education?

---

9. What types of jobs are available in your community?

---

10. What do you do for work?

---

11. How long have you lived here in your community?

12. What are you proud of about your community?

---

13. You have been identified as a respected leader in this community.

- a) How long have you had this job?
- b) What is your role in this community?

---

---

c) How are you involved in community activities?

---

14. Who are the vulnerable people in your community?

---

15. What are the major challenges facing your community right now?

---

16. How are these challenges different from the challenges you've faced in the past?

---

17. How does the community cope with these challenges?

---

## COMMUNITY HEALTH INFORMATION

Through these questions, we hope that your community can begin to understand the health concerns of you and your children. These questions will help us to work with you in achieving your community's goals.

18. a) In general, how would you rate the health of your community?

Very Good       Good       Moderate       Bad       Very Bad

b) What are the main health problems that people in your community face?

---

19. a) In general, how would you rate the health of men in your community?

Very Good       Good       Moderate       Bad       Very Bad

b) What are the main health problems that men in your community face?

---

20. a) In general, how would you rate the health of women in your community?

Very Good       Good       Moderate       Bad       Very Bad

---

b) What are the main health problems that women in your community face?

---

21. a) In general, how would you rate the health of your children <5 years of age?

Very Good       Good       Moderate       Bad       Very Bad

b) What are the main health problems that children <5 years of age in your community face?

---

22. What are the main causes of health problems in your community?

---

23. a) Where is the closest health care provider?

---

b) What services do they provide?

---

## HEALTH, WATER AND SANITATION NEEDS

Thank you. The next set of questions relates to current water and sanitation needs in your community.

1. What are the main sources of drinking water for members in your community?

SOURCE OF WATER	WAS THIS A SOURCE OF WATER <i>BEFORE</i> [DISASTER]? (Y or N)	HAS THIS BEEN A SOURCE OF WATE <i>AFTER</i> [DISASTER]? (Y or N)
Piped water (i.e. 'line water')		
Public tap/standpipe		
Protected dug well		
Unprotected dug well		
Springs		

SOURCE OF WATER	WAS THIS A SOURCE OF WATER <i>BEFORE</i> [DISASTER]? (Y or N)	HAS THIS BEEN A SOURCE OF WATE <i>AFTER</i> [DISASTER]? (Y or N)
Surface water (dam, stream, swamp, canal, reservoir)		
Rain water collection system		
Purchase from vendor		
Bottled water		
Tanker-truck		
Bladder		
Other (specify): _____		

24. What uses the most water in your community (prompt: crops? Animals? Drinking water for people?)

\_\_\_\_\_

25. What is the priority water use in your community?

\_\_\_\_\_

26. In your opinion, what are the main factors that determine whether families have access to safe water in your community? (Prompt: wealth, location in village, position of power)

\_\_\_\_\_

27. In your opinion, what are the main factors that determine whether families have access to sanitation in your community?

\_\_\_\_\_

28. Please rate your community on the following statements:

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = moderately agree, 5 = strongly agree)

- a) Community members are interested in becoming involved in water related issues
- b) Community members are aware about water related issues in your community
- c) Community members have knowledge about water related issues in your community

---

29. In your experience, can you please tell me some of the things (programs or activities) that your community does to promote health, safe drinking water and/or sanitation?

---

30. Do you feel that these things (programs or activities) are effective in promoting health, safe drinking water and/or sanitation? Why or why not?

---

31. What do you see as the biggest accomplishment your community has made in improving access to water and/or sanitation?

---

32. What do you see as the most important priority for your community as you seek to improve access to water and sanitation? (Prompt: *why is this important?*)

---

33. Which aid agencies have assisted your community since the [Disaster] on water, sanitation and hygiene issues and in what ways?

---

34. What did you like about the help you received?

---

35. What didn't you like about the help you received?

---

36. If you ever needed help in another disaster or emergency situation, what sorts of things would you like to have first?

---

37. How would you like to interact with aid agencies regarding this help?

---

## CONCLUSION

Thank you so much for your time and contributions. This is the end of our questions, but we would still welcome any additional comments, ideas, or concerns that you have. Is there anything we forgot or anything you would like to add?

APPENDIX XVIII:

# KAPE Questionnaire Variations: Post Disaster Transitioning (Community Member)

---

## INTRODUCTION AND INSTRUCTIONS:

Hello. I am \_\_\_\_\_ and this is \_\_\_\_\_ (translator/facilitator). Thank you for agreeing to participate in this questionnaire. Today I will ask you some general questions about yourself and your community. You do not have to answer any questions that you do not want to. We know you are very busy. Participation is your choice, and it is okay to say no. We do not have money to give you. Would you like to participate in the survey?

Was the participant informed?      **Please circle:**      **Yes**      **No**  
Is he/she willing to participate?      **Please circle:**      **Yes**      **No**

**Signature (Interviewer):** \_\_\_\_\_

**Signature (Interviewee):** \_\_\_\_\_

---

## GENERAL BACKGROUND

I would like to begin by asking you some general questions about you and your community.

1. How many people live in your household?

---

2. How many of the people who live in your household are children <16 years of age?  
(List gender and age of children)

---

3. a) Have you been to school?

Yes             No

- b) If so, how far did you go in school?

---

4. What are you proud of about your community?

---

## HEALTH INFORMATION

Thank you. Now we have some questions about the health of your family.

5. a) In general, how would you rate the health of your community?

Very Good             Good             Moderate             Bad             Very Bad

- b) Please explain (if Moderate, Bad or Very Bad):

---

6. a) In general, how would you rate your family's health?

Very Good             Good             Moderate             Bad             Very Bad

- b) Please explain (if Moderate, Bad or Very Bad):

---

---

7. a) In general, how would you rate the health of your children <5 years of age?

- Very Good       Good       Moderate       Bad       Very Bad

b) Please explain why/how you rate it at this level:

---

8. What are the main causes of health problems in your community?

---

9. a) Have any of your family members suffered from diarrhea in the past 2 weeks?

*Note: diarrhea is defined as the passage of 3 or more loose or liquid stools per day, or more frequently than is normal for the individual*

- Yes       No       Don't Know

b) If Yes, please fill in the following table:

PERSON	AGE [Only for Children]	DID THIS PERSON GET TREATMENT FOR DIARRHEA (Yes, No, or DK)	WHAT KIND OF TREATMENT? [buy medicine from pharmacy/kiosk; visit the health care/doctor; traditional medicine/healer; other (specify)]
Person #1			
Person #2			
Person #3			

## WATER NEEDS

Thank you. The next set of questions relates to water availability and treatment before and after [Disaster].

### Water Availability

10. Do you have access to line (piped) water?

- Yes       No       Don't Know



11. What are the main sources of **drinking water** for members in your household (fill in all that apply)?

SOURCE OF WATER	WAS THIS A SOURCE OF WATER <i>BEFORE</i> [DISASTER]? (Y or N)	HAS THIS BEEN A SOURCE OF WATER <i>AFTER</i> [DISASTER]? (Y or N)	CURRENTLY, HOW MANY TIMES PER WEEK DO YOU GET WATER FROM THIS SOURCE?
Piped water (i.e. 'line water')			
Public tap/standpipe			
Protected dug well			
Unprotected dug well			
Springs			
Surface water (dam, stream, swamp, canal, reservoir)			
Rain water collection system			
Purchase from vendor			
Bottled water			
Tanker-truck			
Bladder			
Other (specify): _____			

12. a) Currently, what is the cost (php) to obtain and transport this drinking water?

b) What distance is this source of drinking water from your home (in m or km)?

c) How long (hours) does it take one person to go to your drinking water source, get water, and come back?

d) How do you transport this drinking water to your home  
(Prompt: *jerry cans, pots*)



e) Is this water safe to drink?

Yes       No       Don't Know

13. What are the main sources of water used by your household for **other domestic purposes**, such as cooking, hand washing, bathing and cleaning etc. (fill in all that apply)?

SOURCE OF WATER	WAS THIS A SOURCE OF WATER <i>BEFORE</i> [DISASTER]? (Y or N)	HAS THIS BEEN A SOURCE OF WATER <i>AFTER</i> [DISASTER]? (Y or N)	CURRENTLY, HOW MANY TIMES PER WEEK DO YOU GET WATER FROM THIS SOURCE?
Piped water (i.e. 'line water')			
Public tap/standpipe			
Protected dug well			
Unprotected dug well			
Springs			
Surface water (dam, stream, swamp, canal, reservoir)			
Rain water collection system			
Purchase from vendor			
Bottled water			
Tanker-truck			
Bladder			
Other (specify): _____			

14. a) Currently, what is the cost (php) to obtain and transport this drinking water?
- b) What distance is this source of drinking water from your home (in m or km)?
- c) How long (hours) does it take one person to go to your drinking water source, get water, and come back?
- d) How do you transport this drinking water to your home  
(Prompt: jerry cans, pots)

15. Who has the major responsibility for water collection for your household?:

- Adult woman
- Adult man
- Female child (<15 years)
- Male child (<15 years)
- Don't know

---

16. What is the most important water use in your household?

*(Prompt: drinking, cooking, bathing, washing)*

---

17. a) In your opinion, what are the main factors that determine whether families have access to safe water in your community?

*(Prompt: wealth, location in community, position of power)*

---

b) Describe what your ideal access would be?

---

c) How does this differ from pre-[Disaster]?

---

d) What would you be willing to pay for this per month?

---

18. Please rate yourself on the following statements:

*(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)*

a) **I am interested in becoming involved in water related issues**

b) **I am aware about water related issues in my community**

c) **I have knowledge about water related issues in my community**

19. How much do you agree with the following statements:

*(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)*

a) **My community is a place that I care a lot about**

b) **There are places in my community that are special to me**

c) **My community has a sense of togetherness**

d) **Mistrust/suspicion of others is an issue in my community**

e) **Community leaders understand the needs of my community**

---

## Water Treatment

The following questions relate to your current water treatment practices since [Disaster].

20. a) How do you know when the water you use for domestic purposes (other than drinking) is clean and/or safe?

---

- b) If it is not clean and/or safe, what things have you done to try to deal with it?

---

21. a) Do you currently treat the water you use for drinking in any way to make it safer?

Yes       No       Don't Know

- b) If Yes, what do you usually do to the water to make it safer to drink?

*(Prompt: boil; use a water filter; add bleach/chlorine; water tablets; strain it through a cloth; solar disinfection; let it stand and settle)*

---

- c) Why do you treat it?

---

22. What is your preferred way to treat or purify water for your household?

---

23. Did you or your family receive a Rainfresh water purification unit from Global Medic or Léger Foundation?

Yes       No       Don't Know

24. Did you or your family member receive training on how to use it?

Yes       No       Don't Know

25. Do you use the Rainfresh unit for drinking purposes only?

Yes       No       Don't Know

26. How many times per week do you use it?

27. How many days ago was the last time you used it?

---

28. a) How do you know when the ceramic filter needs cleaning?

---

b) Have you had to clean the ceramic filter yet?

Yes       No       Don't Know

29. a) How do you clean the Rainfresh Unit?

---

b) How often do you clean it?

---

c) Have you had any trouble with it?

Yes       No       Don't Know

d) If Yes, please describe the problem:

---

e) What is your overall feedback on the Rainfresh unit?

Very Good       Good       Moderate       Bad       Very Bad

f) Other comments:

---

## SANITATION

Thank you. Now we have a few questions about the current state of sanitation and latrines in your community.

30. a) Do you have any toilets at home?

Yes       No       Don't Know

b) Do you use a public toilet?

Yes       No       Don't Know

31. a) Where does your family most often go to the toilet?

---

---

b) How far away is this from where you collect water?

---

32. a) In your opinion, what are the main factors that determine whether families have access to sanitation in your community?

*(Prompt: wealth, location in community, position of power)*

---

b) Describe what your ideal access would be?

---

c) How does this differ from pre-[Disaster]?

---

d) What would you be willing to pay for this?

---

33. If applicable, what kind of toilet facility do members of your household use?

---

34. a) Do children 5 years or younger use a toilet?

Yes       No       Don't Know

b) If yes, where is that toilet in relation to your home?

---

35. a) Do you share your toilet facility with other households?

Yes       No       Don't Know

b) If so, how many households use/share this toilet facility?

---

---

## HEALTH AND HYGIENE

Thank you. The next set of questions deal with health and hygiene in your community.

36. From whom do you learn about health information, such as ways to keep your children healthy or ways to ensure that you are healthy and can work?

*(Prompts: older family members, health care providers, at school, on the radio)*

---

37. From whom would you prefer to learn about health information?

*(Prompt: women's group leader, public health nurse, someone from outside the community)*

---

38. a) To the best of your knowledge, how regularly do your neighbours use soap? If they do use soap, what do they use it for?

*(Prompt: dish washing, laundry, hand washing, bathing)*

---

- b) Is this more or less often than you do?

**More Often**                       **Less Often**

39. a) Do your children <5 years of age use soap for hand washing?

**Yes**                       **No**                       **Don't Know**

- b) If yes, how often? Please circle:

**Never**                       **Rarely**                       **Sometimes**                       **Mostly**                       **Always**

40. When do your children <5 years of age wash their hands? Please check all that apply:

- Before eating**
  - After eating**
  - Before food preparation / cooking**
  - After toilet**
  - Before sleeping**
  - Upon waking**
  - When hands are dirty**
  - When bathing**
  - Other (specify**
-

---

41. Did you or your family receive a hygiene kit from Global Medic or Léger Foundation?

- Yes       No       Don't Know

42. a) Have you had any trouble with the hygiene kit?

- Yes       No       Don't Know

b) If Yes, please describe the problem:

---

43. a) What is your overall feedback on the hygiene kit?

- Very Good       Good       Moderate       Bad       Very Bad

b) Other comments:

---

44. Did you or your family receive hygiene promotion training from Global Medic or Léger Foundation?

- Yes       No       Don't Know

45. a) What is your overall feedback on the hygiene promotion training you received?

- Very Good       Good       Moderate       Bad       Very Bad

b) Other comments:

---

## LOCAL PERCEPTIONS AND BEHAVIOURS RELATED TO WATER AND HEALTH

Thank you. The last set of questions deal with perceptions and behaviour related to water and health in your community.

46. Where do you get information from on health, water and sanitation?

*(Prompt: medical practitioners, community resource persons, community meetings/Barangay captains, neighbours/family/friends, etc.)*

---



---

47. Have you ever received any information regarding diarrhea?

Yes       No       Don't Know

48. What was the source of the information?

*(Prompt: medical practitioners, community resource persons, child in school, community meetings/Barangay captains, neighbours/family/friends etc.)*

---

49. Has your child/children received any teachings about diarrhea at school?

Yes       No       Don't Know

50. What did they learn about preventing diarrhea?

*(Prompt: treat drinking water; wash hands after visiting the latrine; wash hands before eating; use the latrine)*

---

51. Do you know what causes diarrhea?

*(Prompt: drinking Bad water; eating Bad food; flies/insects; poor hygiene)*

---

52. How can you prevent you or your family from getting sick/diarrhea?

*(Prompt: cannot prevent; wash hands; cook food thoroughly; boil and treat water; clean cooking utensils/vessels)*

---

## CONCLUSION

Thank you so much for your time and contributions. This is the end of our questions, but we would still welcome any additional comments, ideas, or concerns that you have. Is there anything we forgot or anything you would like to add?

APPENDIX XIX:

# KAPE Questionnaire Variations: Ceramic Filter (Community Member)

---

Used in Dominican Republic; translated into Spanish

Date:

Location:

---

Identifier Code:

## GENERAL BACKGROUND

I would like to begin by asking you some general questions about you and your community.

1. How many people live in your household?
2. How many of the people who live in your household are children <5 years of age?
3. How many of the people who live in your household are children <16 years of age?
4. a) Have you been to school?

Yes       No

---

---

b) If yes, how far did you go in school?

- Some primary
- Complete primary
- Some secondary
- Complete secondary
- Beyond secondary

5. How many years have you lived in Dona Maria/Angeleta?

- <1 year
  - >1 year (specify)
- 

6. What are you proud of about your community?

---

7. What are the major challenges facing your community right now  
(Prompts: jobs, health, corruption, school, electricity, crime)

---

8. a) What do you estimate is the average weekly household income in your community?

b) Based on this average, would you rank your household income as:

- Above Average
- Average
- Below Average

## COMMUNITY HEALTH INFORMATION

Through these questions, we hope that we can begin to understand the health concerns of you and your children. These questions will help us to work with you in achieving your community's goals.

9. In general, how would you rate/describe the health of your community?

- Very Good
- Good
- Moderate
- Bad
- Very Bad

10. In general, how would you rate/describe your household health?

- Very Good
  - Good
  - Moderate
  - Bad
  - Very Bad
-

11. In general, how would you rate/describe the health of your children <5 years of age?

- Very Good     
  Good     
  Moderate     
  Bad     
  Very Bad

12. What are the main health problems in your community?

*(Prompts: pregnancy, diarrhea, fever)*

---

13. What are the main health problems that your children and other children in your community face?

*(Prompts: diarrhea, fever, rash)*

---

14. What do you believe are the main causes of health problems in your community?

*(Prompts: water, mosquitoes, accidents, working too hard)*

---

15. Have any of your household members, including children, have suffered from diarrhoea in the past 2 weeks?

*Diarrhoea is defined as the passage of 3 or more loose or liquid stools per day, or more frequently than is normal for the individual.*

- Yes     
  No

## WATER NEEDS

Thank you. The next set of questions is about how **you** see water needs in **your community**.

16. What are the main sources of **drinking** water for your household (fill in all that apply)?

SOURCE OF WATER	CHECK YES OR NO		FREQUENCY (# of times per week)	USED IN DRY OR WET SEASON (Check which apply)	
	YES	NO		DRY	WET
Piped water into a dwelling					
Piped water into a yard/plot					
Public tap/standpipe					
Tubewell/borehole					
Rainwater collection					
5 Gallon (Bottled Water)					
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)					
Other (specify)					

17. a) Have these water sources changed from the past?

Yes  No

b) If so, how and why?

---

18. What are the main sources of water used by your household for **other domestic purposes**, such as cooking and hand washing etc. (fill in all that apply)?

SOURCE OF WATER	CHECK YES OR NO		FREQUENCY (# of times per week)	USED IN DRY OR WET SEASON (Check which apply)	
	YES	NO		DRY	WET
Piped water into a dwelling					
Piped water into a yard/plot					
Public tap/standpipe					
Tubewell/borehole					
Rainwater collection					
5 Gallon (Bottled Water)					
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)					
Other (specify)					

19. a) How long does it take one person to go to your water source, get water, and come back?

b) How many total round trips are made by your household each day to collect water?

c) How many people in your household make these trips?

20. Who has the major responsibility for water collection for your household?

- Adult woman
- Adult man
- Female child (<16 years)
- Male child (<16 years)

21. In your community, what do you think most of the water is used for?

*(Prompt: for farming, for house cleaning)*

---

---

22. In your household, what is your priority use for water?

*(Prompt: bathing, drinking, laundry)*

---

23. How do you know when the water you use is clean and/or safe?

*(Prompt: color, odor, particles, told it is safe by others)*

---

24. a) If you do not think it is clean and/or safe, what things have you done to try to deal with it?

*(Prompts: boil; add bleach/chlorine; strain it through a cloth; use a water filter; solar disinfection; let it stand and settle)*

---

OR

b) If you do not think it is clean and/or safe, why have you not done anything to deal with it?

---

25. In your opinion, what are the main factors that determine whether families have access to safe water in your community?

*(Prompt: wealth, location in community, position of power)*

---

26. a) Describe what your ideal access would be.

---

b) What would you be willing to pay for this?

---

I would like to ask you a few questions about your FilterPure ceramic filter.

27. Is there a working FilterPure ceramic water filter in your household?

Yes       No

*If yes, answer the following questions. If no, please proceed to question #36.*

28. a) Where did you get the water filter?

---

---

b) How much did you pay for it?

---

c) How long have you had it?

---

29. Did you or another household member receive training on how to use it?

Yes       No       Don't Know

30. a) How many times per week is the filter used to fill the bucket?

---

b) How many days ago was the last time the filter was used to fill the bucket?

---

31. a) Do you clean the membrane?

Yes       No

b) If yes, how did you clean the membrane?

---

c) How often do you clean the membrane?

---

32. a) Do you clean the bucket?

Yes       No

b) If yes, how did you clean the bucket?

---

c) How often do you clean the bucket?

---

33. a) Do you clean the tap?

Yes       No

---

b) If yes, how did you clean the tap?

---

c) How often do you clean the tap?

---

34. a) Have you had any trouble with the ceramic filter?

Yes       No

b) If Yes, please describe the problem:

---

35. a) Have you ever had the ceramic filter replaced?

Yes       No

b) If yes, why?

---

c) How often and at what cost?

---

## SANITATION

Thank you. Now we have a few questions about the current state of sanitation in your community.

36. Where do your young children <5 years of age go to urinate?

---

37. Where do your young children <5 years of age go to defecate?

---

38. Where do people over the age of 5 in your household most often go to urinate?

---



---

39. How do you dispose of your urine?

---

40. Where do people over the age of 5 in your household most often go to defecate?

---

41. a) How do you dispose of your feces?

---

b) How far away is the disposal site from your home?

---

42. If applicable, what kind of toilet facility do members of your household normally use?

Flush/pour flush to (specify: piped sewer system, septic tank, pit latrine, elsewhere, DK where):

---

- Ventilated improved pit latrine
- Pit latrine with slab
- Pit latrine without slab/open pit
- Composting toilet
- Hanging toilet/hanging latrine
- Other (specify)

---

43. a) Do you share this facility with other households?

Yes             No

b) If so, how many households use/share this toilet facility?

---

c) If you don't share these facilities, would you be willing to share toilet facilities?

Yes             No             Don't Know

44. In general, how would you rate/describe your sanitation and toilet facilities?

Very Good             Good             Moderate             Bad             Very Bad

---

45. In your opinion, what are the main factors that determine whether families have access to sanitation facilities in your community?  
(Prompt: *wealth, location in community, position of power*)

---

46. a) Briefly describe what your ideal access would be.

---

b) Would you be willing to pay for this access?

**Yes**       **No**       **Don't Know**

c) If yes, how much would you be willing to pay per week?

---

d) If no, why not?

(Prompts: *for financial barriers, a convenient toilet facility is already present, never thought about it before*)

---

## HEALTH AND HYGIENE

Thank you. This set of questions deals with health and hygiene in your community.

47. From whom do you learn about health information, such as ways to keep your children healthy or ways to ensure that you are healthy and can work?

(Prompts: *health practitioner, public information, NGO, relative*)

---

48. From whom would you prefer to learn about health information?

(Prompts: *women's group leader, public health nurse, someone from outside the community*)

---

49. Do you regularly use soap?

**Yes**       **No**

50. a) If yes, what do they use it for? (Prompts: *dish washing, laundry, hand washing, bathing*).

---

---

b) If no, why not?

---

I would like to ask you a few questions about how children in your household use soap for hand washing.

51. Please indicate in the following chart how often and when your children <5 years of age use soap for hand washing at the following times.

ACTIVITY	NEVER	RARELY	SOMETIMES	MOSTLY	ALWAYS
Before eating					
After eating					
Before cooking					
After urinating					
After defecating					
Before sleeping					
Upon waking					
When hands are dirty					
When bathing					
Other (specify)					

## LOCAL PERCEPTIONS AND BEHAVIOURS RELATED TO WATER AND HEALTH

This is the last section of questions that I need to ask you and it concerns what you think about how information is shared in your community.

52. Where do you get information from on health, water and sanitation?

*(Prompts: medical practitioners, community resource persons, community meetings/Barangay captains, neighbours/family/friends etc.)*

---

53. a) Have you ever received any information regarding diarrhoea?

Yes       No

b) If yes, what was the source of the information?

*(Prompt: medical practitioners, community resource persons, child in school, community meetings/Barangay captains, telecommunications neighbours/family/friends etc.)*

---

54. a) Has your child/children received any teachings about diarrhoea at school?

Yes       No       Don't Know

---

- 
- b) If yes, what did they learn about preventing diarrhoea?  
(Prompts: treat drinking water; wash hands after urinating or defecating; wash hands before eating)

---

55. Do you know what causes diarrhoea?  
(Prompts: drinking Bad water; eating Bad food; flies/insects; poor hygiene; spirits/curse/Bad omen)

---

56. How can you prevent you or your family from getting sick/diarrhoea?  
(Prompts: cannot prevent; herbs; wash hands; cook food thoroughly; boil and treat water; clean cooking utensils/vessels)

---

57. How much do you agree with the following statements:  
(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)

- |    |   |                      |
|----|---|----------------------|
| a) | <b>My community is a place that I feel a strong connection with</b>             | <input type="text"/> |
| b) | <b>My community is a place that I care a lot about</b>                          | <input type="text"/> |
| c) | <b>There are places in my community that are special to me</b>                  | <input type="text"/> |
| d) | <b>Community members have an emotional and physical bond with our community</b> | <input type="text"/> |
| e) | <b>My community has a sense of togetherness</b>                                 | <input type="text"/> |
| f) | <b>Mistrust/suspicion of others is an issue in my community</b>                 | <input type="text"/> |

## CONCLUSION

Thank you so much for your time and contributions. This is the end of our questions, but we would still welcome any additional comments, ideas, or concerns that you have. Is there anything we forgot or anything you would like to add?

APPENDIX XX:

# KAPE Questionnaire Variations: Social Capital Questions<sup>18</sup>

58. How much do you agree with the following statements:

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)

- |    |   |                      |
|----|---|----------------------|
| a) | <b>My community is a place that I feel a strong connection with</b>             | <input type="text"/> |
| b) | <b>My community is a place that I care a lot about</b>                          | <input type="text"/> |
| c) | <b>There are places in my community that are special to me</b>                  | <input type="text"/> |
| d) | <b>Community members have an emotional and physical bond with our community</b> | <input type="text"/> |
| e) | <b>My community has a sense of togetherness</b>                                 | <input type="text"/> |
| f) | <b>Mistrust/suspicion of others is an issue in my community</b>                 | <input type="text"/> |
| g) | <b>People only worry about themselves</b>                                       | <input type="text"/> |
| h) | <b>People have prospered in this community over the past 5 years</b>            | <input type="text"/> |

59. How much do you agree with the following statements:

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = Moderately agree, 5 = strongly agree)

- |    |  |                              |                             |
|----|--|------------------------------|-----------------------------|
| a) | I know someone I can confide in                  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b) | I know someone who listens to what I have to say | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c) | I know someone who would help me with chores     | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d) | I know someone who would lend me money           | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

30 From Barber (2013), Newton (2013) and modified from the World Bank Social Capital Assessment Tool (SOCAT)  
<http://siteresources.worldbank.org/INTSOCIALCAPITAL/Resources/Social-Capital-Assessment-Tool--SOCAT--annex1.pdf>

- e) I know someone who would help me if I was sick  Yes  No
- f) I don't pay attention to what other people say  Yes  No

60. How many years have you lived in the community?

- <1 year
- >1 year (specify)

61. What are you proud of about your community?

62. What are the major challenges facing your community right now?  
(Prompts: jobs, health, corruption, school, electricity, crime)

63. a) Are you a member of a community or faith-based group or organisation?

b) If so, how long have you been a member?

- <1 year  >1 year (specify)

c) What is your role? (Prompt: Leader, active member, inactive member)

64. In the last 12 months, have you personally:

- |    |   |                              |                             |
|----|---|------------------------------|-----------------------------|
| a) | Actively participated in an association or club               | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b) | Actively participated in educating others on an issue         | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c) | Made the media interested in a problem                        | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d) | Contacted your community leaders or political representatives | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| e) | Run for office somewhere                                      | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| f) | Made a monetary donation                                      | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| g) | Made an in-kind donation                                      | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| h) | Volunteered for a charitable organisation                     | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

65. a) Has your community applied for funding to support any water, drinking water, sanitation or hygiene initiatives in the past year?

- Yes  No

b) If so, how many?

---

c) How many were successful?

c) Who led the proposal?

---

d) Were there any external partners?

Yes       No

e) If so, who were they?

---

66. a) Do you trust the leaders in your community?

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b) If not, why not?

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67. a) If your community had a problem that affected everyone, who do you think would work together to find a solution?  
(Prompts: everyone individually, neighbours, local government, political leaders, community leaders together, the entire community)

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b) Who would take the initiative to lead?

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68. What are the main ways to earn a living in your community for:

a) Men?

---

b) Women?

---

c) Youth?

---

69. Which of the following organisations exist in this community?

- 
- |    |                                 |                              |                             |
|----|---------------------------------|------------------------------|-----------------------------|
| a) | Water Committee                 | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b) | Health Committee                | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c) | Women's Group                   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d) | Community Development Committee | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| e) | Co-operative                    | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| f) | Sports Club                     | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| g) | Parent-Teacher Association      | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| h) | Other:                          |                              |                             |
- 

70. Which members of the community participate most in solving community problems?

- |    |                     |                              |                             |
|----|---------------------|------------------------------|-----------------------------|
| a) | Young men           | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b) | Young women         | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c) | Young men and women | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d) | Men                 | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| e) | Women               | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| f) | Men and women       | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| g) | Elders (men)        | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| h) | Elders (women)      | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| i) | Elders              | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

71. What are the main problems experienced in your community and who do they affect the most?

*(Prompt: Robbery, assault, gangs, violence, domestic violence, alcohol abuse, substance abuse, pregnancy in young girls, prostitution)*

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72. What are the main reasons why people in your community are treated differently?

- |    |               |                              |                             |
|----|---------------|------------------------------|-----------------------------|
| a) | Wealth        | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b) | Education     | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c) | Social Status | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d) | Landholdings  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| e) | Gender        | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| f) | Age           | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| g) | Politics      | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| h) | Religion      | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| i) | Culture       | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| j) | Language      | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

## CONCLUSION

Thank you so much for your time and contributions.

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