

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

### **Supplementary materials S1:**

#### **Interview guideline grounded theory**

Water concerns

- 3) What are the water related problems you are most concerned about?

In the following section the main goal is to have a conversation with the respondent. There are questions (indicated in bold) which have to be asked in this very exact way. And then there are a lot of sub-questions prepared to sum up, what the content of the response should include. The goal now is to let the respondent talk freely and provide us with the information that comes into his mind and at the same time to lead the talk so that we get what we want to learn.

Organization of water system

In this first part of the interview, we'd like to learn from you about the water supply in your village.

- 5) Can you tell me, how water supply is organized?
  - o How is the water system during dry season? How is it during rainy season?
  - o Who is responsible for collecting water?
  - o How many times do you collect water a day at this source?
  - o When do you collect the water?
  - o What triggers you to go and collect water? What do you do most of the times directly before collecting water?
- 4) What is your first thought when you think of water collection?
  - o Where is the closest community filter for you?
  - o Why do/don't you collect water there?

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- o Who decided that you collect/don't collect water there?
  
- 7) What is the procedure when you are going to collect water?
- o How long does it take you to collect water?
- o Who else uses this water source?
- o Who takes care of this water source?
- o Do you meet other people when collecting water?
- o What are the benefits of using this water source?
- o What are the disadvantages of using this water source?
  
- 8) How is this system organized? Who is responsible for which task?
- o How much does it cost to collect water?
- o Do you think this is a fair fare?
- o How much do you pay for maintenance of this water source?
- o Who else pays for maintenance of this water source?
- o How much did you pay for the installation of this water source?
- o Who installed this water source?
- o How was the system installed? Can you tell me, how this came about?
- o Who looks after the system?
- o Who may use the water system? Who may not use it?

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- o How many people are using the filter in your community?
- o What happened to the water before collecting?
  
- 9) How do you rate the organization of this system?
- o How easy is it to access and to use?
- o What could be better?
- o What is the most preferred water collection option for you? Why?
- o If you saw someone damaging or vandalizing the water system, what would you do?
- o How IMPORTANT would you say the water filter is to the LIVELIHOODS of you and your family?
- o How IMPORTANT would you say the water system is to the LIVELIHOODS of people in this village?
- o What else is important for the LIVELIHOODS of people in this village?
  
- 10) What was there before?
- o Were you ever visited by people from NGOs or the government who talked to you about water-related issues?
- o What kind of community or group activity regarding water-related issues have been going on in your village?
- o What were your fears and hopes before they started the project? What are your feelings now?
- o How did you get the filter?
- o Who was involved in the construction?
- o How useful is it to collect water at this source?
- o How easy is it to use?

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- o What are barriers for using this water source?
- o What would make the use more convenient for you?
- o What water source did you use before?
- o What is better now? What was better before?
- 11a) What do you think of the water you collect?
- o Do you believe this water source is safe?
- o Has this source ever been tested for arsenic?
- o By whom?
- o Is this source contaminated with other things (e.g. bacteria)?
- o Has this source ever been tested for other indicators of water quality?
- o For which ones?
- o Is this source contaminated with arsenic?
- o Do you think you are at low or high risk to develop an illness when drinking water from this source?
- o How high/low do you think is the risk?
- o What is the risk?
- o Do you think there is something harmful in the water collected from this source?
- o What is it?
- o What does it do that you perceive as harmful?
- o How does it get into the water?
- o How can you clean the water?

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- o Which of these substances does the water from this source contain?
  - o Is it necessary to purify the water form this substance?
  - o How can you purify it?
  - o Do you think there is something harmful in the food you cooked with this water?
  - o What is it?
  - o What does it do that you perceive as harmful?
  - o How does it get into the water?
  - o How can you clean the water?
  - o Which of these substances does the food cooked with water from this source contain?
  - o Is it necessary to purify the water form this substance?
  - o How can you purify it?
- 11b) How would a water-collection option best be organized for you?

Ownership towards this water system

- 122) Can you give me some examples of what you would say, that you own?
- 121) In your own words, can you tell me what you feel, when you think about these things?
- o Can you imagine not actually owning something, but feeling like it's yours?
- o What is important to you to feel a certain level of security over a thing: investing the self, knowledge or being in control?

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- o What is the meaning or the importance of owning?
- o What advantages has it, that it is your own?
- o What disadvantages has it, that it is your own?
- o What items belong to the members of your family together? What items belong to the members of your village together?
- o Can you tell me why/how something just belongs to you and other things to your family or village? What is the difference?

- 13) You said you feel you are / are not one of the owners of the community water filter. Can you explain what makes you feel that the community filter belongs / doesn't belong to you?

- o Who decided or decides about the community filter? Can you influence this?
- o Can you explain to me, how the drinking water system works? Can you explain me, how the filter works?
- o How much did you or how much do you invest into the system?

14) And what are the consequences, when you say the community filter is your own?

o Let's think of the drinking water system in your village: Can you explain, who owns it? Who is responsible for ensuring the system works properly? Do you feel responsible?

- o What are your responsibilities for the functioning of the community filter?  
E.g. paying money for maintenance and use, making repairs, perhaps also social responsibilities etc.
- o What rights do you have when it comes to the community filter?

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E.g. using it anytime you like, or fixed amount of water you can get etc.

- o Who else is responsible for the community filter?

What are their tasks? How well are they doing them?

- o Individual and collective ownership – what are your different associations with possession of yourself and shared possession? How do you distinguish these two levels?

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**Supplementary materials S2:**

**Interview guideline think aloud reasoning**

I am now reading you a couple of statements and sentences on your water system, which you can please complete or tell us what goes through your head. Please think aloud – tell us everything that goes through your mind. It is very important to emphasize that you cannot say anything wrong. What you are thinking is what we are interested in.

- 151: This is my water system.
  
- 152: This is our community's water system.
  
- 153: It is hard for me to think about this water system as mine.
  
- 154: My family is one of the owners of the water system.
  
- 155. The water system is owned by all the people who live in this village
  
- 156. This is my filter
  
- 157. This is OUR FAMILY's water filter
  
- 158. It is hard for me to think about this water filter as MINE.



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- 159. MY favourite water collection option is...
- 1510. MY FAMILY's favourite water collection option is...
- 1511. OUR favourite water collection option is...

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### **Supplementary materials S3:**

#### **Questionnaire**

The questionnaire with all the items included in the survey is attached here.

	<b>choices</b>	
English label text	<b>code</b>	choices English

Hello, my name is

.....

and I am a  
volunteer for  
Paridhi. In  
collaboration  
with Eawag, the  
Swiss Federal  
Institute of  
Aquatic Science  
and Technology,  
we are  
conducting a  
community based  
action on water  
consumption. If  
you don't mind, I  
would like to  
interview you  
about your water

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consumption  
preferences. We  
are also  
interviewing  
other households  
in your  
community as  
well as other  
communities in  
Bhagalpur  
District. It will  
take about 1 hour  
to complete the  
interview. Do you  
have the time for  
the interview?  
We are not  
interested in any  
particular  
answers, just in  
the answers that  
really represent  
your opinion.  
Your answers will  
be treated  
anonymously. We  
would like to  
know why people  
are doing what  
they are doing so  
that we can  
improve the

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drinking water  
situation  
depending on this  
information in  
villages in  
Bhagalpur  
District. It helps  
us most if you  
answer as honest  
and properly as  
possible. Please  
help us in finding  
out how things  
really are!

Would you like to  
proceed with the  
interview?

1 yes

0 no

Thank you for  
your interest,  
anyway! I wish  
you a good day.



Enter household-  
ID:

What is your  
name?

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What is your  
name, other  
villagers call you?

What is the name  
of the  
household's  
head?

What is the main  
landmark of this  
house?

How can we find  
you most easily?

- 1 call
- 2 ask in the village for you
- 3 see you at the house

After the rainy  
season, we will  
come and  
interview again, if  
you agree. To find  
you as easy as  
possible - please  
provide us with  
your phone  
number!

To whom belongs  
this number?

- 1 the household of the respondent
- 2 relatives, neighbours, friends
- 3 no phone number

How old are you?

Observe: Sex?

- 1 female
- 2 male

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What is the religion of the household?	<ul style="list-style-type: none"> <li>0 other</li> <li>1 Hinduism</li> <li>2 Buddhism</li> <li>3 Islam</li> <li>4 Other</li> </ul>
If other, please specify: To which caste do you belong to?	<ul style="list-style-type: none"> <li>1 Upper Caste</li> <li>2 General Caste</li> <li>3 OBC</li> <li>4 Scheduled Tribe</li> <li>5 Scheduled Caste</li> </ul>
What is your highest educational degree?	<ul style="list-style-type: none"> <li>7 Profession or honours</li> <li>6 Graduate or postgraduate</li> <li>5 Intermediate or post high school diploma</li> <li>4 High school certificate</li> <li>3 Middle school certificate</li> <li>2 Primary school certificate</li> <li>1 Literate</li> <li>0 Illiterate</li> </ul>
What is the head of household's highest	<ul style="list-style-type: none"> <li>7 Profession or honours</li> </ul>

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educational  
degree?

- 6 Graduate or postgraduate
- 5 Intermediate or post high school diploma
- 4 High school certificate
- 3 Middle school certificate
- 2 Primary school certificate
- 1 Literate
- 0 Illiterate

Are you able to  
read?

- 1 yes
- 0 no

Are you able to  
write?

- 1 yes
- 0 no

What is your  
occupation?

- 10 Profession or honours
- 6 Semi-Profession
- 5 Clerical, Shop-owner
- 4 Skilled worker
- 3 Semi-skilled worker
- 2 Unskilled worker / Farmer
- 1 Unemployed / Housekeeper

What is the head  
of household's  
occupation?

- 10 Profession or honours
- 6 Semi-Profession
- 5 Clerical, Shop-owner
- 4 Skilled worker
- 3 Semi-skilled worker

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	2	Unskilled worker / Farmer
	1	Unemployed / Housekeeper
Is this your own house?	1	yes
	0	no
If no: Who owns this house?		
What is your relation to the head of the household?	1	wife
	2	husband
	3	daughter
	4	mother
	5	sister
	6	son
	7	father
	8	brother
	9	grandson
	10	granddaughter
	11	I am the head of the household
What is the monthly income of the family?	12	more than 41430 INR
	10	20715-41429 INR
	6	15536-20714 INR
	4	10357-15535 INR
	3	6214-10356 INR
	2	2092-6213 INR
	1	less than 2091 INR



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How much land  
does your  
household own  
(incl. homestead  
land)?



Think about the  
home or the cow  
or the bike or the  
mobile that you  
own and the  
experiences and  
feelings  
associated with  
the statement  
'this is my home!'  
'this is my cow!'.  
'this is my bike!'  
'this is my  
mobile!'. The  
following  
questions deal  
with the 'sense of  
ownership' that  
you feel for the  
water scheme  
that you have in  
this community.  
Indicate the

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degree to which  
you personally  
agree or disagree  
with the following  
statements:

This is my water  
scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I sense that this  
water scheme is  
our water  
scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I feel a very high  
degree of

- 10 I agree.

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personal  
ownership for this  
water scheme.

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

I sense that this is  
my water  
scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

This is our water  
scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

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How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

It is hard for me  
to think about  
this water  
scheme as mine.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

Most of the  
people that live in  
this village feel as  
though they own  
the water  
scheme.

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

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I feel like I own  
the water  
scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I have rights on  
the water  
scheme, that no  
one else has.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

If something  
happens to this  
water scheme,  
others think that I  
am responsible  
for the water  
scheme.

- 20 I disagree.

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How much do you agree?	3	I neither agree nor disagree.
	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I feel I have autonomy over the water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
The feelings I have towards the water scheme are unique and cannot be matched by the feelings somebody else has towards the water scheme.	20	I disagree.
	3	I neither agree nor disagree.

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How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

If others use the  
water scheme  
they have to  
follow my ideas  
of how to use.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

I feel the water  
scheme belongs  
to all community  
members in my  
village.

10 I agree.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

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It bothers me, when other people collect their water from the water system.	1 I strongly disagree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
Other community members think that this is my water system.	10 I agree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
I like the water scheme.	10 I agree.
	20 I disagree.
	3 I neither agree nor disagree.



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How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
The water scheme is very important to me.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I feel that I need to own this water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I am passionate about the water scheme.	10	I agree.

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	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I feel that the water scheme belongs to me.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
If the water scheme is broken, I feel personally sad.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.

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Thinking of the water scheme gives me a positive feeling.	1 I strongly disagree.
	10 I agree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
The water scheme has no special meaning for me.	10 I agree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
I feel the need to defend the water scheme when it is criticized by others.	20 I disagree.

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How much do you agree?	3	I neither agree nor disagree.
	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I am proud to tell others of the water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
It is important to me that others think highly of the water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.

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It is important to  
me to support the  
water scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

My wellbeing is  
linked to the  
functionality of  
the water  
scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I consider  
problems at the  
water scheme as  
my own  
problems.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

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How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

This water  
scheme or a piece  
of this water  
scheme is really  
mine.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

If I were to  
describe myself,  
this water  
scheme would

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likely be  
something I  
would mention

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

I feel that I love  
the water system

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

I feel great  
affection for the  
water system

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

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How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I feel like it is in  
my hand who can  
use the water  
system and who  
can not

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I feel like it is in  
my hand how  
often I may use  
the water system

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I would challenge  
anyone in my  
community if I



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thought  
something with  
the water system  
was done wrong.

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

I know best,  
when something  
has to be decided  
over the water  
scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

I am the head of  
the water  
scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I am one of the leaders over the water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I know how this water scheme is organised.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I know how this water scheme works.	10	I agree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I know who is responsible for the water scheme if there are any troubles.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I am familiar with the purpose of this water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I take every  
opportunity to  
oversee how  
things are  
operated in this  
water scheme.

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I have control  
over the water  
scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I organise the  
water scheme to  
better align it

- 10 I agree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

with my water-  
collection  
practice.

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

I was not at all  
involved in the  
planning of the  
water scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

I cannot influence  
what happens  
with the water  
scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you disagree?	5	I agree a little.
	2	I disagree a little.
	1	I strongly disagree.
I strongly influenced the decision, where the water scheme was going to be built.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
My family invested money or donated land in the water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

My family  
invested labour in  
the water  
scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

Without my  
contribution, the  
water scheme  
would not exist.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

I accept the water  
scheme as my  
water scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you disagree?	5	I agree a little.
	2	I disagree a little.
	1	I strongly disagree.
They told me the water scheme was mine.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
They told me I was responsible for the water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
The water collected at the water scheme, is of good quality		



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

and drinkable and  
usable for  
cooking purpose.

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

The community  
water scheme is  
very important  
for me.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

When the water  
scheme is not in  
use, I don't care.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you disagree?	5	I agree a little.
	2	I disagree a little.
	1	I strongly disagree.
Every other water source is second to the water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I benefit from the water scheme financially.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
The water scheme is good for me and my family.	10	I agree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
News about the water scheme are big news for me.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I perceive myself as very effective, if I would like to change something at the water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I can do whatever  
I want for the  
water scheme, I  
will not achieve  
anything.

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

When I want to  
collect water at  
the water  
scheme, I use it  
anytime at my  
convenience.

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

The water  
scheme makes  
me feeling strong  
and influential.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

If I wanted, I  
could ignore  
other peoples  
claims and have it  
as I like.

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

I feel I need to  
protect the water  
scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

I feel that other  
villagers should  
not use the water  
scheme.

10 I agree.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

Other people  
mustn't handle  
the water  
scheme.

10 I agree.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

I feel that we in  
the village all  
have the same  
rights on the  
water scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

Everybody can  
use the water  
scheme equally.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

We are all obliged  
to contribute  
equally to  
repairing and  
maintenance of  
the water  
scheme.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
I really care about the fate of the water scheme.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
When the water scheme is damaged, I try my best to have it repaired.	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I often motivate  
other people to  
take care of the  
water scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I am sure, the  
water scheme will  
be broken in the  
future.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I think the water  
scheme provides  
me with safe

- 10 I agree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

water in the next  
4 weeks.

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

I feel responsible  
for the water  
scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

Do you feel  
responsible for  
the repairing of  
the water system  
in case of  
interruption?

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

I feel the duty to  
personally take  
care of the water  
system.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

I feel the same, it  
doesn't matter if I  
do maintain the  
water scheme or  
not.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

There are  
valuable things in  
the water scheme  
to look after.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I am having rights  
on the water  
scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

I have to follow  
the instructions  
of the people that  
have rights on the  
water scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.



Think about the  
temple, public  
schools, a public  
hospital, or some  
other item that  
you own or co-  
own with the  
community, and  
the experiences  
and feelings  
associated with  
the statement  
'THIS IS OURS!'  
The following  
questions  
deal with the  
'feelings of  
ownership' that  
you and your  
community  
members feel for

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

the water scheme  
in the village.

We, my  
community  
members and I,  
collectively agree  
that this is OUR  
water scheme.

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

We, my  
community  
members and I,  
collectively feel  
that this water  
scheme belongs  
to US together.

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

<p>How much do you disagree?</p>	<p>5 I agree a little. 2 I disagree a little. 1 I strongly disagree.</p>
<p>We, my community members and I, feel a very high degree of collective (community} ownership for this water scheme.</p>	
<p>How much do you agree?</p>	<p>20 I disagree. 3 I neither agree nor disagree. 4 I strongly agree. 5 I agree a little.</p>
<p>How much do you disagree?</p>	<p>2 I disagree a little. 1 I strongly disagree.</p>
<p>All of the members of the community feel as though we own this water scheme collectively.</p>	
	<p>20 I disagree. 3 I neither agree nor disagree.</p>

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

We as a  
community  
exercise influence  
over what is going  
on with the water  
scheme.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

We as a  
community  
exercise control  
over what is going  
on with the water  
scheme.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

We as a  
community were  
involved in the  
planning of the  
water scheme.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

We as a  
community  
decided where  
the water scheme  
was going to be  
built.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

Without the  
contribution of  
my community  
members and  
myself, the water  
scheme would  
not exist.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

All community  
members and I,  
we invested  
money or land in  
the water  
scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

All community  
members and I,

- 10 I agree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

we invested  
labour in the  
water scheme.

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

All community  
members and I,  
we feel that we  
know the water  
system a lot.

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

All community  
members and I,  
we are informed  
about what is  
going on with the  
water scheme.

- 20 I disagree.

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How much do you agree?	3 I neither agree nor disagree.
	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
All community members and I, we know how this water scheme works.	10 I agree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
In this community it happens a lot, that people defer responsibilities to other community members.	
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.

Supplementary materials to:  
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How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

In this community  
it happens a lot,  
that someone  
does not do his or  
her share of the  
work.

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

In this community  
it happens a lot,  
that someone  
puts forth less  
effort than other  
community  
members.

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.

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4-Step Protocol for Contextual Adaptation of Measurement Instruments

No difficulty related the repairing of the water scheme is too tough for our community.	1 I strongly disagree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
Our community has confidence in itself.	10 I agree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
Our community expects to be known in other communities as highly caretaking	

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

of the water  
scheme.

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

The community's  
contribution to  
the water scheme  
is very valuable.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

Our community  
delivers it  
important  
changes on the  
water scheme.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

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4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

Our community  
works on  
important  
problems related  
to the water  
scheme.

10 I agree.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.



We have now  
halfway  
completed the  
interview. How  
do you feel? In  
the next parts of  
the  
questionnaire, we



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

are interested to  
learn from you  
about your water  
collection  
behaviour. This is,  
because we want  
to learn about the  
use and its  
reasons of water  
infrastructure like  
handpumps and  
community based  
water  
infrastructure.

You help us most,  
with your  
answers to find  
out how people in  
Bhagalpur really  
collect water!

Are you  
caretaker, user or  
non-user of the  
community water  
scheme?

- 1 Caretaker
- 2 User
- 3 Non-User

Why are you the  
caretaker?

What is your  
main source for  
daily drinking and

- 1 private handpump

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

cooking water  
collection?

- 2 shared handpump
- 3 filtration unit
- 4 private borewell or private arrow filter
- 5 public taps of community based piped water
- 6 bottled water
- 7 open well
- 8 household tap of community based piped water scheme

How many times  
did you collect  
water from this  
main source per  
day for drinking  
and cooking  
purpose during  
the last 4 weeks?

What is the  
volume of the  
bucket you collect  
the water with  
(INTERVIEWER:  
please verify the  
answer or  
measure the  
volume)?

What is the main  
alternative source  
for daily drinking  
and cooking  
water collection

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

that you used  
during the last 4  
weeks?

- 2 shared handpump
- 3 filtration unit
- 4 private borewell or private arrow filter
- 5 public taps of piped water
- 6 bottled water
- 7 open well
- 8 household tap of community based piped water scheme

How many times  
did you collect  
water at this  
alternative source  
per day for  
drinking and  
cooking purpose  
during the last 4  
weeks?

What is the  
volume of the  
bucket you collect  
the water with  
(please check  
plausibility of the  
answer or  
measure the  
volume)?

Multiple! Where  
do you collect  
drinking and

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

cooking water  
during the  
monsoon (rainy  
season)?

- 2 shared handpump
- 3 filtration unit
- 4 private borewell or private arrow filter
- 5 public taps of piped water
- 6 bottled water
- 7 open well
- 8 household tap of community based piped water scheme

Do people of  
different castes  
collect drinking  
and cooking  
water at different  
sources?

- 0 no, we all collect water at the same source  
yes, some castes exclusively uses the water scheme, the other caste has to use
- 1 other sources (e.g. open wells, handpumps, ...}
- 2 yes, different castes have it's own water scheme
- 3 yes, there are separate collecting points depending on which caste one belongs to

Has your  
handpump been  
tested on water-  
quality?

- 1 yes
- 0 no
- 999 I don't know

If yes, on what  
components?

- 1 fluoride
- 2 iron

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

	3	bacterial contamination
	4	arsenic
Is it contaminated with arsenic?	1	yes
	0	no
	999	I don't know
How sure are you, that it is contaminated with arsenic?	5	extremely sure
	4	very sure
	3	I don't know
	2	a little sure
	1	not at all sure
How sure are you, that it is not contaminated with arsenic?	5	extremely sure
	4	very sure
	3	I don't know
	2	a little sure
	1	not at all sure
Are you willing or unwilling to help the caretaker to look after the community water scheme?	10	unwilling
	3	neither willing nor unwilling

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How willing are  
you?

- 5 very much willing
- 4 a little willing

How unwilling are  
you?

- 2 a little unwilling
- 1 very much unwilling

Multiple! Which  
of the following  
tasks would you  
be ready to  
support the  
caretaker?

- 2 maintenance
- 3 running
- 4 repairing when broken
- 5 changing the filtermedia
- 6 testing the waterquality



Generally, do you  
think the chance  
that you get skin  
related diseases  
(such as changes  
in colour and  
hard patches on  
the palms & soles  
of the feet} if you  
drink water from

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

the handpump is  
high or low?

- 10 High
- 3 Neither low nor high.

how high do you  
think it is?

- 4 Somewhat high.
- 5 Very high.

How low do you  
think it is?

- 2 Somewhat low.
- 1 Very low.

Do you think the  
risk is high or low  
to get cancer  
when you drink  
water from the  
community water  
scheme only?

- 10 High
- 3 Neither low nor high.

how high do you  
think it is?

- 4 Somewhat high.
- 5 Very high.

How low do you  
think it is?

- 2 Somewhat low.
- 1 Very low.

How good or bad  
is it for you and  
your health to  
drink water from

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

the community  
water scheme?

- 10 Good
- 3 Neither good nor bad
- 4 Somewhat good
- 5 Very good
- 2 Somewhat bad
- 1 Very bad

How good is it?

How bad is it?

How often do you  
think you need to  
drink water from  
the community  
water scheme in  
order to not  
experience any  
illness?

- 2 Most of the times
- 3 Sometimes
- 4 Few
- 5 Never

Imagine you have  
skin related  
diseases (such as  
changes in colour  
and hard patches  
on the palms &  
soles of the feet),  
how severe  
would be the



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

impact on your  
life?

- 2 Not.
- 3 A little.
- 4 Strongly.
- 5 Very.

READ! Arsenic is a naturally existing toxic metal. It is especially present at high levels in the groundwater of gangetic plane (several States in India as well as Bangladesh).

Introduction: The questions and responses will be read to the study participant. The interviewer should circle the number corresponding to the subject's answer. Tell other individuals present during the quiz to not

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

assist the re-  
spondent.

Remind  
respondents that  
it is okay if they  
don't know an  
answer. However  
do not suggest  
that a respondent  
answer "I don't  
know" to any  
particular study  
question.

Can you please  
tell me for each  
of the following  
whether it is a  
major effect of  
peoples exposure  
towards arsenic?

Black dots on the  
skin is an effect of  
arsenic exposure.

1 yes

0 no

999 I don't know

Stomach  
problems and  
problems with  
digestion are  
effects of arsenic  
exposure.

1 yes

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

	0	no
	999	I don't know
Changes in thickness and surface of the skin on hands, feet and the back are effects of arsenic exposure.		
	0	no
	999	I don't know
Diarrhea is an effect of arsenic exposure.	1	yes
	0	no
	999	I don't know
Headache is an effect of arsenic exposure.	1	yes
	0	no
	999	I don't know
Fever is an effect of arsenic exposure.	1	yes
	0	no
	999	I don't know
Cough is an effect of arsenic exposure.	1	yes
	0	no

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

Cancer is an effect of arsenic exposure.	999	I don't know
	1	yes
	0	no
	999	I don't know
High blood pressure is an effect of arsenic exposure.		
	1	yes
	0	no
	999	I don't know
The major health related effects of arsenic exposure can be completely different from day to day.		
	0	no
	999	I don't know
The major effects of arsenic exposure are developed immediately.		
	1	yes
	0	no
	999	I don't know

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

The worst major effect of long-term and constant arsenic exposure is cancer on the lungs, the skin and the bladder. There are signs, that arsenic can foster diabetes, can have neurological effects and can cause problems with the heart and blood pressure. These symptoms are together known as "Arsenicosis". Can you please tell me for each of the following whether it is a preventive action to lower arsenic exposure?

To drink only clean-looking water.

1 yes  
0 no

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

To let the water have contact with fresh air.	999	I don't know
	1	yes
	0	no
To test the water on arsenic and drink it only if it is classified as safe.	999	I don't know
	0	no
	999	I don't know
To boil the water before drinking it.	1	yes
	0	no
	999	I don't know
To drink the water right after collecting and avoid storage of the water.	1	yes
	0	no
	999	I don't know
To collect water in a special bucket.	1	yes
	0	no
	999	I don't know
To avoid microbial	1	yes

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

contamination of  
the water.

0 no  
999 I don't know

To collect water  
only from the  
special filtration  
unit.

1 yes  
0 no  
999 I don't know

There is no  
prevention  
possible for  
arsenicosis.

1 yes  
0 no  
999 I don't know

To purify the  
water by adding  
chlorine

1 yes  
0 no  
999 I don't know

The only thing  
one can do to  
prevent from  
consequences of  
arsenic exposure  
is neither to drink  
water with  
arsenic pollution  
nor to cook with  
it. As well,

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

contaminated  
food crops pose a  
great threat to  
one's health. For  
washing purpose,  
it doesn't matter  
whether the  
water contains  
arsenic or not.

How many people  
of your household  
do you know that  
suffer from  
effects of arsenic  
exposure?

How many people  
outside of your  
family do you  
know that suffer  
from effects of  
arsenic exposure?

Compared to  
persons your sex  
and age, how  
much higher or  
lower are your  
chances of  
developing  
arsenicosis?

- 20 Lower
- 3 neither higher nor lower



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much higher?	5 Very much higher
	4 a little higher
How much lower?	2 a little lower
	1 Very much lower
Do you think you are more or less respected by your community because you collect water of the community water scheme?	
	20 less respected
	3 neither more nor less respected
How much more respected do you think you are?	5 very much more
	4 a little more
How much less respected do you think you are?	1 a little less
If you collect water at the community water scheme, to what extent do you think people will envy you?	
	2 A little.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

- 3 Somewhat.
- 4 Very.
- 5 Extremely.

Do you feel  
comfortable or  
uncomfortable to  
your community  
when collecting  
water at the  
community water  
scheme?

- 20 uncomfortable
- 3 neither comfortable nor uncomfortable

How  
comfortable?

- 4 somewhat comfortable
- 5 very much comfortable

How  
uncomfortable?

- 2 somewhat uncomfortable
- 1 very much uncomfortable

How safe or  
dangerous is it for  
you to use the  
community water  
scheme for water  
collection?

- 20 dangerous
- 3 neither safe nor dangerous

How safe?

- 4 somewhat safe
- 5 very safe

How dangerous?

- 2 somewhat dangerous

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

Introduction: all of the following can be effortful sometimes when fetching water at the community water scheme. What do you think is effortful?	1	very dangerous
	2	
	3	
	4	
	5	
long distance	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
	5	very effortful
spending time	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
	5	very effortful
waiting time	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
	5	very effortful
walking to the source	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
	5	

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

pumping / collecting the water	5	very effortful
	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
self willingness	5	very effortful
	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
keep in mind where to collect the water	5	very effortful
	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
be patient	5	very effortful
	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
be punctual	5	very effortful
	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

planning to collect the water due to the running times of the water scheme	5	very effortful
	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
pay for using	5	very effortful
	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
share maintenance costs for repairs	5	very effortful
	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
maintain water source and piped scheme	5	very effortful
	1	not effortful at all
	2	a little effortful
	3	rather effortful
	4	effortful
	5	very effortful

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

maintain good  
relationship with  
caretaker

- 1 not effortful at all
- 2 a little effortful
- 3 rather effortful
- 4 effortful
- 5 very effortful

Is there anything  
else you find  
effortful at  
collecting water  
at the community  
water scheme?  
More specifically,  
how difficult is it  
to collect enough  
water as you  
need from the  
community water  
scheme?

- 2 a little difficult
- 3 rather difficult
- 4 somewhat difficult
- 5 very difficult

How sure are you  
that you can  
collect as much  
water as you  
need at the  
community water  
scheme?

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

- 2 a little sure
- 3 rather sure
- 4 somewhat sure
- 5 very sure

How time-consuming is it to collect water at the community water scheme?

- 1 not at all
- 2 a little
- 3 rather
- 4 somewhat
- 5 very

How difficult is it to find the time and effort to collect your water at the community water scheme?

- 2 a little difficult
- 3 rather difficult
- 4 somewhat difficult
- 5 very difficult

How convenient is it for you to use the community water scheme for water collection?

- 2 a little convenient
- 3 rather convenient

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

Considering  
benefits and  
efforts of  
collecting water  
at the community  
water scheme,  
how worthwhile  
do you think it is?

- 4 somewhat convenient
- 5 very convenient

- 2 Not.
- 3 A little.
- 4 Strongly.
- 5 Very.

Multiple! What  
are positive  
things of  
collecting water  
at the community  
water scheme?

- 1 reliable functionality
- 2 removes iron
- 3 removes salinity
- 4 removes arsenic
- 5 removes dirt
- 6 doesn't give diarrhea
- 7 short distance
- 8 time to collect water
- 9 physical effort
- 10 costs
- 11 restriction to collect



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

- 12 meet other people
- 13 others see me
- 14 other

If other, please  
specify:

Multiple! What  
are negative  
things of  
collecting water  
at the community  
water scheme?

- 1 unreliable functionality
- 2 iron
- 3 salinity
- 4 arsenic
- 5 dirt
- 6 gives diarrhea
- 7 distance
- 8 time to collect water
- 9 physical effort
- 10 costs
- 11 restriction to collect
- 12 meet other people
- 13 others see me
- 14 other

If other, please  
specify:

If you do not  
collect the water  
at the community

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

water scheme,  
how do you feel?

How much do you  
like the taste of  
the water  
collected at the  
community water  
scheme?

- 1 Not at all.
- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

How much do you  
like the colour of  
the water  
collected at the  
community water  
scheme?

- 1 Not at all.
- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

How much do you  
like the smell of  
the water  
collected at the  
community water  
scheme?

- 1 Not at all.
- 2 A little.
- 3 Somewhat.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

- 4 Very.
- 5 Extremely.

How many  
members of your  
community  
collect water at  
the community  
water scheme?

- 1 almost nobody
- 2 some of them
- 3 half of them
- 4 most of them
- 5 everyone

How much of  
their drinking and  
cooking water do  
the members of  
your community  
collect from the  
community water  
scheme?

- 2 a little bit
- 3 half of it
- 4 most of it
- 5 all of it

How much of  
their drinking and  
cooking water do  
your relatives  
within your  
community  
collect from the

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

community water  
scheme?

- 2 a little bit
- 3 half of it
- 4 most of it
- 5 all of it

How many of  
your relatives  
within your  
community  
collect water at  
the community  
water scheme?

- 2 some of them
- 3 half of them
- 4 most of them
- 5 everyone

You collect water  
from the  
community water  
scheme. Do  
people who are  
important to you  
rather approve or  
disapprove of  
this?

- 20 Disapprove
- 3 Neither approve nor disapprove

How much do  
they approve?

- 4 Somewhat approve

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do they disapprove?	5 strongly approve 2 somewhat disapprove 1 strongly disapprove
You do not collect water from the community water scheme. Do people who are important to you rather approve or disapprove of this?	
	20 Disapprove 3 Neither approve nor disapprove
How much do they approve?	4 Somewhat approve 5 strongly approve
How much do they disapprove?	2 somewhat disapprove 1 strongly disapprove
Imagine you didn't collect drinking water at the communitiy water scheme - how much would people who are important to you approve that you do not collect	

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

water at the  
community water  
scheme?

- 20 Disapprove
- 3 Neither approve nor disapprove

How much do  
they approve?

- 4 Somewhat approve
- 5 strongly approve

How much do  
they disapprove?

- 2 somewhat disapprove
- 1 strongly disapprove

Imagine you  
collected drinking  
water at the  
communitiy water  
scheme - how  
much would  
people who are  
important to you  
approve that you  
do collect water  
at the community  
water scheme?

- 20 Disapprove
- 3 Neither approve nor disapprove

How much do  
they approve?

- 4 Somewhat approve
- 5 strongly approve

How much do  
they disapprove?

- 2 somewhat disapprove

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

Who is important  
to you?  
People who are  
leaders in the  
community (e.g  
gram panchayat),  
how much do  
they promote  
that you collect  
water at the  
community water  
scheme?

1 strongly disapprove

- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

How much do  
religious leaders  
promote that you  
collect water at  
the community  
water scheme?

- 1 Not at all.
- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

Multiple! In your  
opinion, what do  
the people that  
are important to

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

you dislike about  
you collecting  
water at the  
community water  
scheme?

- 2 They think the water tastes badly
- 3 They think it takes too much time
- 4 They think it is too effortful
- 5 They think it is shameful
- 6 They don't want me to talk to the caretaker
- 7 They think it is too expensive
- 8 They think the water quality is bad
- 9 Other

Multiple! In your  
opinion, what do  
these people like  
about you  
collecting water  
at the community  
water scheme?

- 2 they like the taste of the water
- 3 iron free water is important to them
- 4 arsenic free water is important to them
- 5 they think it is healthy
- 6 they like the colour of the water
- 7 they like the clear water
- 8 other

How strongly do  
you feel a  
personal



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

obligation to  
collect all the  
water at the  
community  
water-filter?

- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

How strongly  
does the head of  
household  
support that you  
collect water at  
the water  
scheme?

- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

How strongly  
does the head of  
household  
support that you  
don't collect  
water at the  
water scheme?

- 2 A little.
- 3 Somewhat.
- 4 Very.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

5 Extremely.

How confident  
are you that you  
can collect water  
at the community  
water scheme  
even if your  
relatives continue  
to consume water  
from other  
sources?

2 A little.

3 Somewhat.

4 Very.

5 Extremely.

How confident  
are you that you  
can collect  
sufficient water  
from the  
community  
water-filter for  
your family?

2 A little.

3 Somewhat.

4 Very.

5 Extremely.

How confident  
are you that you  
can collect  
drinking water at

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

the community  
water scheme  
even if the  
caretaker is rude  
to you?

- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

How confident  
are you that you  
can continue to  
collect drinking  
water all the  
time, even if  
problems arise  
(e.g. some people  
question your  
water collection},  
at the community  
water scheme?

- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

How confident  
are you that you  
can always collect  
your drinking  
water from the  
community water

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

scheme, even  
though this may  
be difficult  
sometimes (e.g.  
because it is  
broken, you have  
little time to go  
there}?

- 2 Not.
- 3 A little.
- 4 Strongly.
- 5 Very.

Imagine that the  
water collection is  
not possible at  
some point at the  
community water  
scheme. How  
confident are you  
that you will be  
able to re-start  
collecting  
drinking water at  
the community  
water scheme  
again after a  
couple of days?

- 2 Not.
- 3 A little.
- 4 Strongly.
- 5 Very.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

Imagine that the  
water collection is  
not possible  
during monsoon  
(rainy season) at  
the community  
water scheme.  
How confident  
are you that you  
will be able to re-  
start collecting  
drinking water at  
the community  
water scheme  
again after?

- 2 Not.
- 3 A little.
- 4 Strongly.
- 5 Very.

Imagine you  
occasionally do  
not go to collect  
water from the  
community water  
scheme. How  
confident are you  
about collecting  
water from the  
community  
water-filter  
regularly again?

Supplementary materials to:

#### 4-Step Protocol for Contextual Adaptation of Measurement Instruments

- 2 Not.
- 3 A little.
- 4 Strongly.
- 5 Very.

How often does it happen that you want to collect water at the community water scheme but you cannot use it because it is not working?

- 2 Seldom.
- 3 From time to time
- 4 Frequently
- 5 Very often

What is the main reason it is not working?

How often does it happen that these reasons prevent you from collecting water at the community water scheme?

Bad relationship with caretaker

- 1 Never
- 2 Seldom.
- 3 From time to time

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

water collection frequency is restricted	4	Frequently
	5	Very often
collecting water there is shameful	1	Never
	2	Seldom.
	3	From time to time
	4	Frequently
	5	Very often
going outside the house is bad	1	Never
	2	Seldom.
	3	From time to time
	4	Frequently
	5	Very often
fee for water collection	1	Never
	2	Seldom.
	3	From time to time
	4	Frequently
	5	Very often
water scheme is broken	1	Never
	2	Seldom.

Supplementary materials to:

#### 4-Step Protocol for Contextual Adaptation of Measurement Instruments

long distance	3	From time to time
	4	Frequently
	5	Very often
	1	Never
	2	Seldom.
much time to walk	3	From time to time
	4	Frequently
	5	Very often
	1	Never
	2	Seldom.
long waiting time	3	From time to time
	4	Frequently
	5	Very often
	1	Never
	2	Seldom.
much physical effort	3	From time to time
	4	Frequently
	5	Very often
	1	Never
	2	Seldom.
salinity problem	3	From time to time
	4	Frequently
	5	Very often
	1	Never
	2	Seldom.



Supplementary materials to:

#### 4-Step Protocol for Contextual Adaptation of Measurement Instruments

microbial contamination	5	Very often
	1	Never
	2	Seldom.
	3	From time to time
	4	Frequently
forgetting to collect water there	5	Very often
	1	Never
	2	Seldom.
	3	From time to time
	4	Frequently
other	5	Very often
	1	Never
	2	Seldom.
	3	From time to time
	4	Frequently
How easy or difficult do you find it to overcome these difficulties? Bad relationship with caretaker	5	Very often
	10	difficult
	20	easy
	3	neither difficult nor easy
	4	somewhat difficult?
How difficult?	5	very

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How easy?	2	somewhat easy?
	1	very
water collection frequency is restricted	10	difficult
	20	easy
	3	neither difficult nor easy
How difficult?	4	somewhat difficult?
	5	very
How easy?	2	somewhat easy?
	1	very
collecting water there is shameful	10	difficult
	20	easy
	3	neither difficult nor easy
How difficult?	4	somewhat difficult?
	5	very
How easy?	2	somewhat easy?
	1	very
going outside the house is bad	10	difficult
	20	easy
	3	neither difficult nor easy
How difficult?	4	somewhat difficult?
	5	very
How easy?	2	somewhat easy?
	1	very
fee for water collection	10	difficult

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

	20	easy
	3	neither difficult nor easy
How difficult?	4	somewhat difficult?
	5	very
How easy?	2	somewhat easy?
	1	very
water scheme is broken	10	difficult
	20	easy
	3	neither difficult nor easy
How difficult?	4	somewhat difficult?
	5	very
How easy?	2	somewhat easy?
	1	very
long distance	10	difficult
	20	easy
	3	neither difficult nor easy
How difficult?	4	somewhat difficult?
	5	very
How easy?	2	somewhat easy?
	1	very
much time to walk	10	difficult
	20	easy
	3	neither difficult nor easy
How difficult?	4	somewhat difficult?
	5	very
How easy?	2	somewhat easy?
	1	very

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

long waiting time	10	difficult
	20	easy
	3	neither difficult nor easy
	4	somewhat difficult?
	5	very
How difficult?	2	somewhat easy?
How easy?	1	very
much physical effort	10	difficult
	20	easy
	3	neither difficult nor easy
	4	somewhat difficult?
	5	very
How difficult?	2	somewhat easy?
How easy?	1	very
salinity problem	10	difficult
	20	easy
	3	neither difficult nor easy
	4	somewhat difficult?
	5	very
How difficult?	2	somewhat easy?
How easy?	1	very
microbial contamination	10	difficult
	20	easy
	3	neither difficult nor easy
	4	somewhat difficult?
	5	very
How difficult?	2	somewhat easy?
How easy?		

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

forgetting to collect water there	1	very
	10	difficult
	20	easy
How difficult?	3	neither difficult nor easy
	4	somewhat difficult?
	5	very
How easy?	2	somewhat easy?
	1	very
other	10	difficult
	20	easy
	3	neither difficult nor easy
How difficult?	4	somewhat difficult?
	5	very
How easy?	2	somewhat easy?
	1	very
How often during the last 4 weeks did it happen that you wanted to collect water at the community water scheme but you didn't feel like doing it?		
	2	Seldom.
	3	From time to time
	4	Frequently
	5	Very often

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How often during  
the last 4 weeks  
did it happen that  
you wanted to  
collect water at  
the community  
water scheme but  
you didn't  
because you were  
in a hurry?

- 2 Seldom.
- 3 From time to time
- 4 Frequently
- 5 Very often

How often during  
the last 4 weeks  
did it happen that  
you wanted to  
collect water at  
the community  
water scheme but  
you didn't  
because you  
thought it is too  
effortful?

- 2 Seldom.
- 3 From time to time
- 4 Frequently
- 5 Very often

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

What are other  
habits that hinder  
you?

How much do  
they hinder you  
to collect water  
from the  
community water  
scheme?

- 1 Not at all
- 2 Not so much
- 3 Somewhat
- 4 Strongly.
- 5 Very.

Who in your  
household takes  
the final decision  
to collect water at  
the community  
water scheme?

Do you have a  
plan who helps  
you to collect  
water from the  
community based  
water scheme?

- 2 I disagree a little bit
- 3 I neither disagree nor agree
- 4 I agree a little bit
- 5 I agree very much

Do you have a  
plan when to

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

collect sufficient  
water for your  
family for an  
entire day at the  
water scheme?

- 2 I disagree a little bit
- 3 I neither disagree nor agree
- 4 I agree a little bit
- 5 I agree very much

Do you have a  
plan where you  
can store the  
water collected at  
the water scheme  
safely in your  
home?

- 2 I disagree a little bit
- 3 I neither disagree nor agree
- 4 I agree a little bit
- 5 I agree very much

Do you have a  
plan how you can  
collect water at  
the community  
water scheme if  
the water scheme  
is not running at  
that point in  
time?

- 2 I disagree a little bit
- 3 I neither disagree nor agree



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

- 4 I agree a little bit
- 5 I agree very much

Do you have a  
detailed plan  
what to do when  
the community  
water scheme  
gets broken?

- 2 I disagree a little bit
- 3 I neither disagree nor agree
- 4 I agree a little bit
- 5 I agree very much

Do you have a  
detailed plan how  
to avoid  
forgetting to  
collect water  
from the  
community water  
scheme?

- 2 I disagree a little bit
- 3 I neither disagree nor agree
- 4 I agree a little bit
- 5 I agree very much

Do you have a  
detailed plan  
what to do when  
other urgent  
tasks arise and  
impair my going  
to collect water

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

from the  
community water  
schemes?

- 2 I disagree a little bit
- 3 I neither disagree nor agree
- 4 I agree a little bit
- 5 I agree very much

Do you try to  
comply with your  
intention to  
always collect  
your drinking  
water at the  
community water  
scheme?

- 2 a little true
- 3 somewhat true
- 4 very true
- 5 extremely true

During the last  
week...  
... How much did  
you pay attention  
so you don't  
forget to collect  
water from the  
community water  
scheme?

- 2 a little true
- 3 somewhat true

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

... How much did  
you watch  
yourself to collect  
sufficient water  
from the  
community water  
scheme for  
drinking and  
cooking for your  
family?

- 4 very true
- 5 extremely true

... How often did  
you remember  
your good  
intentions to  
collect water  
from the  
community water  
scheme?

- 2 a little true
- 3 somewhat true
- 4 very true
- 5 extremely true

... How aware  
were you of your  
goal to collect

- 2 seldom
- 3 half of the times
- 4 most of the times
- 5 everytime

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

water from the  
community water  
scheme?

- 2 a little
- 3 rather
- 4 very
- 5 Extremely.

... How strongly  
did you try to to  
collect all of our  
drinking water  
from the  
community water  
scheme?

- 2 a little
- 3 rather
- 4 very
- 5 Extremely.

... How strongly  
did you try to  
make time to  
collect water  
from the  
community water  
scheme every  
day?

- 2 a little
- 3 rather
- 4 very
- 5 Extremely.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How often did  
you forget to  
collect water  
from the  
community water  
scheme in the last  
four weeks?

- 2 seldom
- 3 half of the times
- 4 most of the times
- 5 everytime

Multiple! Is there  
something that  
helps you to  
remember to  
collect water at  
the community  
water scheme?

- 2 head of household
- 3 other household member
- 4 relatives
- 5 neighbour
- 6 religious leader
- 7 empty bucket
- 8 before eating
- 9 before cooking
- 10 seeing the position of the sun
- 11 daily routines
- 12 others

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

If other, please

specify:

How much does it  
bother you when  
you cannot  
collect your water  
at the community  
water scheme  
even if you want  
to for example  
because the  
water scheme is  
not running?

- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

How important is  
it for you to  
collect water  
from the  
community water  
scheme?

- 1 Not at all.
- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

Do you feel guilty  
if you don't  
collect the water

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

at the community  
water scheme?

- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

How annoyed do  
you feel if you  
forget to collect  
water at the  
community water  
scheme?

- 2 A little.
- 3 Somewhat.
- 4 Very.
- 5 Extremely.

How strongly do  
you intend to  
collect all your  
water at the  
community based  
water scheme?

- 2 somewhat high intention
- 3 rather high intention
- 4 quite high intention
- 5 very high intention

How strongly do  
you intend to  
collect always  
your water from

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

the community  
water scheme?

- 2 Not.
- 3 A little.
- 4 Strongly.
- 5 Very.



The following  
questions are  
related to your  
water-collection  
at the taps of the  
community water  
scheme in your  
village. Water  
collection at the  
water scheme is  
something...

... I do frequently.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

... I do automatically.	10 I agree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
... I do without having to remember actively.	10 I agree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
... that makes me feel weird, if I don't collect water there.	10 I agree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you disagree?	5	I agree a little.
	2	I disagree a little.
	1	I strongly disagree.
... I do without thinking.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
... that would require an effort NOT to do.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
... that belongs to my daily routine.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

... I start doing  
before I realize I  
am doing it.

10 I agree.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

... I would find  
hard not to  
collect water  
there.

10 I agree.

20 I disagree.

3 I neither agree nor disagree.

How much do you  
agree?

4 I strongly agree.

5 I agree a little.

How much do you  
disagree?

2 I disagree a little.

1 I strongly disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

... I have no need  
to think about  
doing.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

... that is typically  
"me".

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

... I have been  
doing for a long  
time.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

How much do you  
agree or disagree  
with the following  
statement:

"Drinking water  
collection at the  
community water  
scheme is a  
matter of habit  
for me."

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

How often do you  
go to collect  
water at the  
water scheme as  
needed?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How often do you  
go to collect  
water at the  
water scheme  
before cooking?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
water scheme  
after cooking?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
water scheme  
before breakfast?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the

- 1 almost never

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

water scheme  
after waking up?

- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
water scheme  
before lunch?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
water scheme in  
the afternoon?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
water scheme in  
the evening?

- 1 almost never
- 2 seldom

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
water scheme in  
the night?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
water scheme  
around midday?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
water scheme in  
the morning?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How often do you  
go to collect  
water at the  
water scheme  
when you see the  
storage is empty?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always



The following  
questions are  
related to your  
water-collection  
at your  
handpump.  
Water collection  
at the handpump  
is something...

... I do frequently.

- 10 I agree.
- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

... I do automatically.	1	I strongly disagree.
	10	I agree.
	20	I disagree.
How much do you agree?	3	I neither agree nor disagree.
	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
... I do without having to remember actively.	10	I agree.
	20	I disagree.
	3	I neither agree nor disagree.
How much do you agree?	4	I strongly agree.
	5	I agree a little.
How much do you disagree?	2	I disagree a little.
	1	I strongly disagree.
... that makes me feel weird, if I don't collect water there.	20	I disagree.
	3	I neither agree nor disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
... I do without thinking.	10 I agree.
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
... that would require an effort NOT to do.	
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
... that belongs to my daily routine.	10 I agree.
	20 I disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you agree?	3 I neither agree nor disagree.
	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
... I start doing before I realize I am doing it.	
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.
... I would find hard not to collect water there.	
	20 I disagree.
	3 I neither agree nor disagree.
How much do you agree?	4 I strongly agree.
	5 I agree a little.
How much do you disagree?	2 I disagree a little.
	1 I strongly disagree.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

... I have no need  
to think about  
doing.

- 20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

... that is typically  
"me".

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

How much do you  
disagree?

- 2 I disagree a little.  
1 I strongly disagree.

... I have been  
doing for a long  
time.

- 10 I agree.  
20 I disagree.  
3 I neither agree nor disagree.

How much do you  
agree?

- 4 I strongly agree.  
5 I agree a little.

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How much do you disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

Do you agree or disagree with the following statement:

"Water collection at the handpump is a matter of habit for me."

- 20 I disagree.
- 3 I neither agree nor disagree.

How much do you agree?

- 4 I strongly agree.
- 5 I agree a little.

How much do you disagree?

- 2 I disagree a little.
- 1 I strongly disagree.

How often do you go to collect water at the handpump as needed?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you go to collect water at the

- 1 almost never

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

handpump before  
cooking?

- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
handpump after  
cooking?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
handpump before  
breakfast?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
handpump after  
waking up?

- 1 almost never
- 2 seldom

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
handpump before  
lunch?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
handpump in the  
afternoon?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
handpump in the  
evening?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always



Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

How often do you  
go to collect  
water at the  
handpump in the  
night?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
handpump  
around midday?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the  
handpump in the  
morning?

- 1 almost never
- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always

How often do you  
go to collect  
water at the

- 1 almost never

Supplementary materials to:  
4-Step Protocol for Contextual Adaptation of Measurement Instruments

handpump when  
you see the  
storage is empty?

- 2 seldom
- 3 sometimes
- 4 often
- 5 almost always



**Supplementary materials S4:**

**Fit indices of three dimensional psychological ownership scale**

The three-dimensional measurement scale showed acceptable fit indices: a significant chi-square ( $\chi^2 = 187.699$ , 77 d.f.,  $p < .001$ ), low RMSEA = 0.077 [.063; .091], and moderate CFI = 0.865. Completely standardized factor loadings ranged from 0.305 to 0.725.

After one step of modifications, the shortened three-dimensional measurement scale showed good fit indices: a significant chi-square ( $\chi^2 = 67.419$ , 27 d.f.,  $p < .001$ ), low RMSEA = 0.082 [.058; .106], and moderate to high CFI = 0.93. Completely standardized factor loadings ranged from 0.454 to 0.769.