

SURVEY ON HOUSEHOLD WATER SECURITY IN HOUT CATCHMENT

<p>Good day, I am Saunak Sinha Ray and I am a Master's Student at UNESCO IHE Institute of Water Education, Netherlands. This survey is being conducted at a household level across your ward/ community. The information obtained from this survey will help individuals, households, communities and planners to better understand water security issues and develop future sustainable measures to address water (in)security. We would like to understand your perception on your household's water problems. You are free to stop the interview at any time at all. Do you agree to conduct this survey interview?</p>	Yes	No
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Questionnaire No			
Interviewer Name	Saunak Sinha Ray/ Resego Mokomela	Survey Date	
Respondent Name		Respondent Telephone Number	
GPS Co-ordinates			
Time Started		Time Ended	

1. SOCIO-ECONOMICS/ GENERAL DEMOGRAPHICS

This section is to understand the general characteristics of your household such as household head, education level, family size, sources of income, monthly income from various sources, household assets (household utilities e.g., tv, fridge, stove, etc. and other assets such as farming plots, livestock, etc.

1. What is your gender?	Male	Female
2. Are you the head of the household?	Yes	No
3. If you are not the head of household, is the head a male or female?	Male	Female
4. What is the age of the household head?	<20 years	20 – 35 years
	35 – 45 years	45 – 55 years
	55 – 65 years	>65 years

5. What is the highest education level of the household head?	Never went school		Primary school		Secondary school (junior level)		Secondary school (further education/ training)		
	Certificate/ Diploma level		Higher Education (Bachelors)		Higher Education (Masters)		Higher Education (Doctorate)		
6. Which is the main language that you speak in your household?	English	Others:							
7. What is the total number of people in your household?									
8. What is the female, male and children (<16 years) ratio in your household?	Female:			Male:			Children:		
9. Do you have access to electricity in your household?	Yes					No			
10. What is your average monthly household income?	<1,000R		1,000 – 5000 R			5000 – 10,000R			
	10,000 – 15,000R		15,000 – 20,000 R			20,000 - 30,000 R			
11. What are the main sources of your household income and how much do you earn from each in Rands?	Agriculture/ Irrigation:					Livestock:			
Other sources of income (non-farming): Please specify all other sources of household income									
12. What are your other sources of income during off-season/ water unavailability times and how much do you earn from them in Rands?									
13. Which are the major crops that you grow?									
14. What are the source of water for your farming?	Irrigated	Rainfed		Homestead		Other: (Please mention, e.g. surface water/ groundwater)			
15. Does your household have any of the following?	Television ()	Fridge ()	Stove ()	Radio ()	Bicycle ()	Motorbike ()	Car ()	Mobile ()	None of these

16.	What kind of assets/plots does your household own?	Livestock (mention type and number of livestock you own, e.g. cows, horse, donkey, goat, etc.)	Homestead plots (rainfed, irrigated, commercial, etc)	Plots at a distance (rainfed, irrigated, commercial, etc). <i>If yes, please choose one of the options below:</i>		
				Plot is at a distance of less than 1km from house		
				Plot is at a distance of less than 2km from house		
				Plot is at a distance of 5km/ more from house		
17. Are the livestock and related products for household consumption/ sold in market?		Exclusively own consumption	Mainly own consumption	Equally own consumption and sale	Mainly sale	Exclusively sale
18. Are the livestock fed water within house/ outside?		At home	Outside home, specify:			

2. WATER QUANTITY

This section is to understand your perceptions on household water quantity – demand and use of water in your household, problems faced in your household in terms of quantity of water, problems faced in terms of water scarce times and situations, season variability of water quantity, if you measure water quantity, your satisfaction with water quantity, etc. *measurement can be in terms of buckets – converted into litres by surveyor

1. Does your household have a water meter to calculate water quantity/usage?

Yes

No

2. What is an approximate reading of your household water meter per month?

3. What are the major concerns around water quantity in your household? (tick all that apply)

I worry a lot about water quantity in my household

I receive less water than I require in a day/ month

I use untreated sources of water during times of water unavailability in my household

Household water availability depends on government bodies

Household water availability depends on local committees

Household water availability changes in times of drought/ flood

- Water for household purpose is difficult to access in our area I do not worry about water quantity for my household

4. How much water (lump-sum quantity*) do you get/ supplied to you in a day/ month for household purposes (drinking, washing, sanitation, etc)?

5. How much water does your household use/ consume* in a day/month?

- For drinking: For gardening
 For washing: For cooking:
 For sanitation: For other uses:

6. Are you satisfied with the amount of water that you receive for household purposes in a day/month? (choose one)

- Highly dissatisfied Dissatisfied Moderately satisfied
 Satisfied Highly Satisfied

7. If not satisfied, why?

8. What do you do when there is water shortage in your household?

9. How often do you face household water quantity issues?

- Once a week Once in six months Do not face water quantity issues
 Once a month Once a year

10. Do you think climate variability leads to household water shortage in your area? (tick all that apply)

- Yes No Maybe I have a good understanding of climate variability I have a limited understanding of climate variability

11. If yes, explain how?

12. Has your household water demand (quantity of water used) increased in the past 10 years? (choose one)

- Yes No Not Sure

13. Has your household water supply (quantity of water delivered) to you increased in the past 10 years? (choose one)

- Yes No Not Sure

14. If Yes, to both questions above, explain what are the changes in household demand and supply that you have observed for your household, in the past 10 years?

15. Does your household water availability vary depending on seasons (Summer: Sep - May and Winter: June - Aug)? (choose one)

- Yes No Not Sure

16. If Yes, when (which seasons) do you get the most and least amount of water and how much water supply do you get in each season?

- Most in summer (Sep – May) Least in summer (Sep – May)
 Most in winter (June – Aug) Least in winter (June – Aug)

How much water do you get in each season?

17. Why do you think water availability changes seasonally in your area?

18. Have you taken any action yourself to address water scarcity in your area? If Yes, explain below

Yes

No

Don't Know

19. Have the government/local committees taken any action to reduce water scarcity in your area? If Yes, explain below

Yes

No

Don't Know

20. Do you measure water quantity in your household/ area (borewells, open wells, rivers, streams) by using my own instruments or community activities?

Yes

No

21. How often do you measure water quantity in your household/ community/ ward area?

22. Where do you measure the water quantity (At household/ community/ ward area)?

23. What devices do you use to measure water quantity? Who owns these devices?

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24. What kind of data do you have and would you share your collected data?

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3. WATER QUALITY

This section is to understand your perceptions on household water quality – source of household water, problems faced in your household in terms of quality of water, problems faced in water quality during water scarce times and situations, household water treatment, if you measure water quality, your satisfaction with water quality, etc.

1. What are the major sources of water for household water usage in your area?

- | | | |
|--|--|---|
| <input type="radio"/> Surface water (from rivers, streams, lakes) | <input type="radio"/> Overhead tank water, if yes tick who owns the tank? Government/ Local committees/ Personal/ NGO/ Others | <input type="radio"/> Bottled water from supermarkets |
| <input type="radio"/> Groundwater (from borewells, handpumps, open wells) | <input type="radio"/> Underground tank water, if yes tick who owns the tank? Government/ Local committees/ Personal/ NGO/ Others | <input type="radio"/> Other, please specify: |
| <input type="radio"/> Communal water (from government taps, hand pumps, etc) | <input type="radio"/> Treated water from waste water treatment plant | |
| <input type="radio"/> Rain water (from rainwater harvesting structures) | | |

2. Which of the above sources of water do you use in your household for each of these purposes?

Purpose	Source	Quantity	Describe quality (smell, colour, toxicity, turbidity, etc)
<input type="radio"/> For drinking			
<input type="radio"/> For washing			
<input type="radio"/> For sanitation			

<input type="radio"/> For gardening			
<input type="radio"/> For other uses			

3. Are you satisfied with the quality of water supplied/ consumed in your household?

- Highly dissatisfied
 Dissatisfied
 Moderately satisfied
 Satisfied
 Highly Satisfied

4. If not satisfied, explain why?

5. What are your major concerns for household water quality (for drinking, washing, sanitation)?

- I worry a lot about my household water quality
 Household water collected from other sources than what is supplied is of bad quality
 I do not care about my household water quality
 Household water supplied is of bad quality (smells bad, has a colour, has sand/sediments in it, is toxic, etc)
 Have to buy bottled drinking water, hence increases my household costs

6. I measure water quality in my household/ area (by using my own instruments or take part in community activities)?

- Yes
 No

7. If yes, what kind of data have you collected? what are the instruments you use? Would you share such collected data?

8. Surface water quality (rivers, ponds, lakes, etc) is good in my area? Elaborate surface water quality in area

- Yes
 No
 Don't Know

9. Groundwater quality (handpumps, borewells, open wells, etc) is good in my area? Elaborate groundwater quality in your area

- Yes
 No
 Don't Know

10. How often do you face household water quality issues?

- Once a week Once in six months Do not face water quality issues
 Once a month Once a year

11. Does your treat supplied/ collected water for household uses (drinking/ cooking/ bathing/washing)?

- Yes No

12. If Yes, what kind of treatment do you use?

- Boiling the water Sieve the water through a filter/ cloth Let it stand and settle
 Add bleach/ chlorine Have a water filter at home (ceramic/ sand/ composite) Others, please mention

13. How often does your household treat water? How much does this cost you?

4. WATER ACCESS AND INFRASTRUCTURE

This section is to understand your perceptions on various water infrastructures available within the household and in the community. Also this section is to understand how your household access those water infrastructure/ facilities. – source of household water, problems faced in your household in terms of quality of water, problems faced in water quality during water scarce times and situations, household water treatment, if you measure water quality, your satisfaction with water quality, etc.

1. Do you have pipeline access for water supply to your household? If Yes, please explain the pipeline supply (who owns it, maintains it, how often maintenance, underground or aboveground, quality of pipe, etc)?

- Yes No

3. With respect to accessed water infrastructures please answer the following:

Type	Source of water ¹	Condition of water infrastructure ²	Mode of transport to access ³	Distance to source (km)	Time to access source (min/hr)	Quantity Abstracted (daily/ monthly in litres)	Cost of maintenance of water infrastructures (average annual in Rands)	Who pays the cost? Your household/ community committee/ government, etc.
<input type="radio"/> Reservoirs (drums, large buckets, barrels, tanks, etc)								
<input type="radio"/> Borewells								
<input type="radio"/> Handpumps								
<input type="radio"/> Tap water								
<input type="radio"/> Open wells								
<input type="radio"/> Rainwater harvesting tanks								
<input type="radio"/> Others (Please specify)								

¹ Groundwater (borewell, handpump, etc), surface water (river, lakes, canals, ponds, etc), rain water, tanker water, government supplied pipe water, etc

² how old, what is it made of, protection factors, physical state of each infrastructure etc

³ bicycle, car, walking with bucket, taxi, etc

4. Who goes to fetch water from community water resources in your household?	Male	Female	Girl child	Boy child	Others
5. Who gives idea/ manages the water infrastructures within your household?	Male	Female	Girl child	Boy child	Others

6. With respect to household sanitation infrastructures please answer the following:

Does your household have sanitation facilities	Yes		No		
Does your community have sanitation facilities	Yes		No		
Describe type of sanitation facility in household and community that you access	Flush toilet	Ventilated pit latrine	Bucket system	Others:	
How satisfied are you with household and communal sanitation facilities?	Adequate		Inadequate		I don't know
Explain condition water quantity, quality, access, right and safety issues to communal and household sanitation facilities					

5. WATER USE

This section is to understand your perceptions on household water use – major water uses within and outside household, re-usage of water sources, if household water supply is used for farming purposes/ not, etc.

1. What are the major water uses at your household?	Drinking	Cooking	Other household uses:
	Washing clothes	Bathing	
	Sanitation	Washing utensils	
2. What are the major water uses outside of household purposes?	Farming/ Irrigation	Other uses:	

		Livestock	
3. Do you re-use water within your household? If yes, explain how and what for purposes? If not, explain why you do not re-use?			
4. Do you use household water supplied to you for farming/ irrigation/ livestock/ homestead?		Yes	No
5. If yes, describe the supply system and quantity of average household water supply used per day/ month in field?			
6. Describe your source of water for purposes other than household?		Irrigation:	
		Livestock:	
		Homestead:	
		Others:	
7. Who manages each of these enterprises in your family?	Household	Male	Female
	Irrigation	Male	Female
	Livestock	Male	Female
	Homestead	Male	Female
	Others:	Male	Female

6. RIGHTS AND GOVERNANCE

This section is to understand your perceptions on rights to household water use and access – if your family is part of any household/ farming schemes, rights to water resources in community, help from local committee and government with regards to household water supply and demand, financial help obtained, etc.

1. Is your family a part of household/ irrigation scheme? If yes, explain	Yes	No	<u>Explain:</u>
2. Does your household receive social grant? If yes, how much amount in Rands?	Yes	No	<u>Explain:</u>
3. Does your household have rights to access water infrastructures available in the community?	Yes	No	<u>Explain:</u>

4. Who owns the water infrastructure within your household?		
5. Who owns the water infrastructure in the community?		
6. Is there a local committee (farmers/ non farmers association) in your community?	Yes	No
7. Are you a member of the local committee?	Yes	No
8. What advantages/ disadvantages do you get being a member?		
9. Does the local committee help your household financially/ during times of water shortage?		
10. What is the role of the local committee in the community?		
11. What is your role in the committee?		
12. Does the government take actions during times of water shortage? Explain		
13. Are there water tariffs you need to pay for household water supply? If Yes how much amount in Rands?		
14. Does the government share climate and water forecasting data with you? If yes, how do you access such data?		

7. CLIMATE VARIABILITY, ADAPTATION AND MANAGEMENT OF WATER

This section is to understand your perceptions on household water quality – source of household water, problems faced in your household in terms of quality of water, problems faced in water quality during water scarce times and situations, household water treatment, if you measure water quality, your satisfaction with water quality, etc

1. Does climate variability affect groundwater levels in your area?	Yes	No
2. Has your household noticed any change in temperature in last 10 years?	Yes	No
3. Has your household noticed any change in rainfall in last 10 years?	Yes	No

4. Has your household noticed any change in land use in last ten years?	Yes	No	
5. If yes, what impacts have you experienced?			
6. How quickly does groundwater level rise after a drought?	Within a day	Within 3 months	More than 1 year, specify:
	Within a week	Within 6 months	
	Within a month	Within 1 year	
7. How quickly does groundwater level rise after a flood?	Within a day	Within 3 months	More than 1 year, specify:
	Within a week	Within 6 months	
	Within a month	Within 1 year	
8. What changes have you noticed in groundwater levels in last 10 years?			
9. If groundwater levels are low, what are your triggers to stop pumping?			
10. Is groundwater in your area monitored? If yes, who monitors it?	Yes	No	Who monitors it?
11. When was the last severe drought/ flood in your area?			
12. Did it affect your household water supply and demand? If yes, how?	Yes	No	How?
13. What strategies did you adopt since last drought/ flood in your area for household water maintenance?			
14. Did you get assistance from government/ local committee during water shortage? How?	Yes	No	How?
15. Do you take part in monitoring/ training activities by government or local committee?	Yes	No	
16. How often are monitoring/ training activities conducted in your area?			
17. Define two most important actions you think shall ensure household water security for your family?	1.	2.	

THANK YOU