

I. Questionnaire for the household survey

State Code (1-3):

Locality Code (1-10):

Village Code (1-50):

Household Code (1-50):

GPS Coordinates:

Household Member 1 (Main interviewee (target subject): household head/caregiver)

Household Member Code (1)

1.What is the household head full name?

2.What is your name? (If you are not the household head, otherwise just skip this question.)

3.What is your relationship with the household head?

(1) myself (2) wife (3) husband (4) others

4. What is the gender of the household head?

(1) male (2) female

5. How old is the household head?

6. How old are you? (If you are not the household head, otherwise just skip this question.)

7. What is your gender? (If you are not the household head, otherwise just skip this question.)

(1) male (2) female

8. What is the highest level of education you have completed?

(1) no (2) primary school (3) lower secondary school (4) upper secondary school (5) higher

9. How much is the average monthly income of your family?

() SDG

10. How much is the average monthly income of your family?

() SDG

11. Do you have a radio at home?

(1) yes (2) no

12. Do you have a refrigerator at home?

(1) yes (2) no

13. Do you have a television at home?

(1) yes (2) no

14. Do you have a bicycle for your household?

(1) yes (2) no

15. Do you have a motorcycle for your household?

(1) yes (2) no

16. Do you have a car for your household?

(1) yes (2) no

17. What is the occupation of the household head?

(1) farmers (2) fishermen (3) governmental officials (including teachers) (4) businessmen (petty traders/small scale) (5) businessman (large scale) (6) unskilled laborers

(temporarily employed) (7) skilled laborers (permanently employed) (8) other office workers (9) others

18. What is the main source of drinking water for members of your household?

- (1) piped into dwelling**
- (2) piped into compound, yard or plot**
- (3) piped to neighbor**
- (4) public tap/standpipe**
- (5) borehole or tubewell**
- (6) protected well**
- (7) unprotected well**
- (8) protected spring**
- (9) unprotected spring**
- (10) rainwater collection**
- (11) delivered water**
- (12) water kiosk**
- (13) packaged water**
- (14) surface water (river, stream, dam, lake, pond, canal, irrigation channel)**
- (15) others**

19. Do you have a toilet for your household?

- (1) yes (2) no**

20. If you don't have your household latrine, where do you defecate?

- (1) neighbor's latrine**
- (2) communal latrine**
- (3) open defecation (including urination)**

21. If you defecate openly, where do you defecate?

- (1) Near my house compound (within 10 feet) (2) 10 feet or farther from household compound (not in the water body) (3) in the water body

22. If you urinate openly, where do you urinate?

- (1) Near my house compound (within 10 feet) (2) 10 feet or farther from household compound (not in the water body) (3) in the water body

23. If you have a latrine for your household, what kind of toilet do you have?

- (1) Flush to piped sewer system
- (2) Flush to septic tank
- (3) Flush to pit latrine
- (4) Flush to open drain
- (5) Flush to don't know where
- (6) Pit latrine with slab
- (7) Pit latrine without slab / Open pit
- (8) Twin pit with slab
- (9) Twin pit without slab
- (10) Bucket
- (11) Container based sanitation
- (12) Hanging toilet / hanging latrine

24. Have you ever heard of schistosomiasis (bilharzia)?

- (1) yes (2) no

25. Do you know how you could be infected with schistosomiasis (bilharzia)? (Do not prompt.)

- (1) by contacting infested water
- (2) via air
- (3) by touching infected person
- (4) only by drinking infested water
- (5) I don't know

26. Do you know the vector of schistosomiasis (bilharzia)? (Do not prompt.)

- (1) mosquito**
- (2) fly**
- (3) fish**
- (4) snails**
- (5) others**
- (6) I don't know**

27. What are the symptoms of schistosomiasis (bilharzia)? (Multiple answers. Do not prompt.)

- (1) Bloody urine**
- (2) Stomachache**
- (3) Diarrhea**
- (4) Fever**
- (5) Skin rash**
- (6) Cough**
- (7) I don't know**

28. Do you know the dewormer to prevent and treat schistosomiasis (bilharzia)? (Do not prompt)

- (1) albendazole/mebendazole**
- (2) ivermectin**
- (3) praziquantel**
- (4) others**
- (5) I don't know**

29. Have you taken praziquantel in the past 6 months?

- (1) yes**
- (2) no**

30. If yes, where did you take it?

- (1) I took it from the community (community campaign)**
- (2) I bought it from a local pharmacy**
- (3) I received it from a health facility or hospital**
- (4) others (specify)**

31. If you took it from community campaign, from whom did you take it?

- (1) Community health volunteers**
- (2) Other health professional**
- (3) I don't know**

32. Have you taken praziquantel in the past one year?

- (1) yes**
- (2) no**

33. If yes, where did you take it?

- (1) I took it from the community (community campaign)**
- (2) I bought it from a local pharmacy**
- (3) I received it from a health facility or hospital**
- (4) others (specify)**

34. If you took it from community campaign, from whom did you take it?

- (1) Community health workers**
- (2) Other health professional**
- (3) I don't know**

35. Do you find difficulty in accessing praziquantel when you need it?

(1) Yes (2) No

36. If yes, what is the main reason?

- (1) It is not available in my town**
- (2) It was too expensive to buy it**
- (3) others (specify)**

37. Have you received any test for schistosomiasis (bilharzia) in the last 6 months?

(1) Yes (2) No

38. If yes, who was the provider of the test?

- (1) Health professionals in health center or health post**
- (2) Health professionals in hospital**
- (3) Community health workers**
- (4) Others (specify)**

39. Do you contact water bodies like river, dam, lake, irrigation channel at least 2 times or more per week?

- (1) yes**
- (2) no**

40. If yes, what is the key reason for the contact? (multiple)

- (1) fetching water**
- (2) doing laundry**
- (3) watering livestock**
- (4) fishery**
- (5) farming**
- (6) leisure**
- (7) others (specify:)**

41. How many times have you visited health facilities in the last 6 months?

___ times

42. If you have never visited health facilities in the past 6 months, what is the main reason?

- (1) I did not need any healthcare**
- (2) It was too expensive when I wanted to visit the facilities**
- (3) The facility is too far from my home**
- (4) There is no one in the health facilities**
- (5) There is no medication available**

43. Do you have health insurance?

- (1) Yes (2) No**

44. what type of health insurance do you have?

- (1) only national insurance**
- (2) only private insurance**
- (3) both national and private insurance**
- (4) none of it**

45. How long does it take to get to the nearest health facility?

- (1) less than 30 minutes**
- (2) 30min or more, less than 1hour**
- (3) 1hour or more, less than 2hours**
- (4) 2hours or more**

46. Do you know who the community health workers are in your village?

- (1) Yes (2) No**

Household member 2 (another adult member)

Household Member Code (2)

1.What is your name?

2. How old are you?

3. What is your gender:

(1) male (2) female

4. Have you taken praziquantel in the past 6 months?

(1) yes

(2) no

5. If yes, where did you take it?

(1) I took it from the community (community campaign)

(2) I bought it from a local pharmacy

(3) I received it from a health facility or hospital

(4) others (specify)

6. If you took it from community campaign, from whom did you take it?

(1) Community health volunteers

(2) Other health professional

(3) I don't know

7. Have you taken praziquantel in the past one year?

(1) yes

(2) no

8. If yes, where did you take it?

- (1) I took it from the community (community campaign)**
- (2) I bought it from a local pharmacy**
- (3) I received it from a health facility or hospital**
- (4) others (specify)**

9. Have you received any test for schistosomiasis (bilharzia) in the last 6 months?

- (1) Yes (2) No**

10. If yes, who was the provider of the test?

- (1) Health professionals in health center or health post**
- (2) Health professionals in hospital**
- (3) Community health workers**
- (4) Others (specify)**

11. Do you contact water bodies like river, dam, lake, irrigation channel at least 2 times or more per week?

- (1) yes**
- (2) no**

12. If yes, what is the key reason for the contact? (multiple)

- (1) fetching water**
- (2) doing laundry**
- (3) watering livestock**
- (4) fishery**
- (5) farming**
- (6) leisure**
- (7) others (specify:)**

13. How many times have you visited health facilities in the last 6 months?

___ times

14. If you never visited health facilities in the past 6 months, what is the main reason?

- (1) I did not need any healthcare**
- (2) It was too expensive when I wanted to visit the facilities**
- (3) The facility is too far from my home**
- (4) There is no one in the health facilities**
- (5) There is no medication available**

Household member 3 (school aged child member)

Household Member Code (3)

1.What is your name?

2. How old are you?

3. What is your gender:

(1) male (2) female

4. Are you attending school?

(1) Yes (2) No

5. Have you taken praziquantel in the past 6 months?

(1) yes

(2) no

6. If yes, where did you take it?

- (1) I took it from school**
- (2) I took it from the community (community campaign)**
- (3) I bought it from a local pharmacy**
- (4) I received it from a health facility or hospital**
- (5) others (specify)**

7. If you took it from community campaign, from whom did you take it?

- (1) Community health volunteers**
- (2) Other health professional**
- (3) I don't know**

8. Have you taken praziquantel in the past one year?

- (1) yes**
- (2) no**

9. If yes, where did you take it?

- (1) I took it from school**
- (2) I took it from the community (community campaign)**
- (3) I bought it from a local pharmacy**
- (4) I received it from a health facility or hospital**
- (5) others (specify)**

10. Have you received any test for schistosomiasis (bilharzia) in the last 6 months?

- (1) Yes (2) No**

11. If yes, who was the provider of the test?

(1) Health professionals in health center or health post

(2) Health professionals in hospital

(3) Community health workers

(4) Others (specify)

12. Do you contact water bodies like river, dam, lake, irrigation channel at least 2 times or more per week?

(1) yes

(2) no

13. If yes, what is the key reason for the contact? (multiple)

(1) fetching water

(2) doing laundry

(3) watering livestock

(4) fishery

(5) farming

(6) leisure

(7) others (specify:)

14. How many times have you visited health facilities in the last 6 months?

___ times

15. If you never visited health facilities in the past 6 months, what is the main reason?

(1) I did not need any healthcare

(2) It was too expensive when I wanted to visit the facilities

(3) The facility is too far from my home

(4) There is no one in the health facilities

(5) There is no medication available

Household member 4 (another school aged child member)

Household Member Code (4)

1.What is your name?

2. How old are you?

3. What is your gender:

(1) male (2) female

4. Are you attending school?

(1) Yes (2) No

5. Have you taken praziquantel in the past 6 months?

(1) yes

(2) no

6. If yes, where did you take it?

(1) I took it from school

(2) I took it from the community (community campaign)

(3) I bought it from a local pharmacy

(4) I received it from a health facility or hospital

(5) others (specify)

7. If you took it from community campaign, from whom did you take it?

(1) Community health volunteers

(2) Other health professional

(3) I don't know

8. Have you taken praziquantel in the past one year?

(1) yes

(2) no

9. If yes, where did you take it?

(1) I took it from school

(2) I took it from the community (community campaign)

(3) I bought it from a local pharmacy

(4) I received it from a health facility or hospital

(5) others (specify)

10. Have you received any test for schistosomiasis (bilharzia) in the last 6 months?

(1) Yes (2) No

11. If yes, who was the provider of the test?

(3) Health professionals in health center or health post

(4) Health professionals in hospital

(3) Community health workers

(4) Others (specify)

12. Do you contact water bodies like river, dam, lake, irrigation channel at least 2 times or more per week?

(1) yes

(2) no

13. If yes, what is the key reason for the contact? (multiple)

(1) fetching water

- (2) doing laundry**
- (3) watering livestock**
- (4) fishery**
- (5) farming**
- (6) leisure**
- (7) others (specify:)**

14. How many times have you visited health facilities in the last 6 months?

___ times

15. If you never visited health facilities in the past 6 months, what is the main reason?

- (1) I did not need any healthcare**
- (2) It was too expensive when I wanted to visit the facilities**
- (3) The facility is too far from my home**
- (4) There is no one in the health facilities**
- (5) There is no medication available**

Laboratory test results

Household Member Code 1

- 1. schistosomiasis hematobium test result (centrifugation results)**
 - (1) negative**
 - (2) positive**
- 2. schistosomiasis hematobium test result (dipstick results, only 10% samples)**
 - (1) negative**
 - (2) positive**
- 3. schistosomiasis hematobium test result (eggs count)**

4. schistosomiasis mansoni test result (KK results)

(1) negative

(2) positive

5. schistosomiasis mansoni test result (CCA results, only 10% samples)

(1) negative

(2) positive: weak (+)

(3) positive: medium (++)

(4) positive: strong (+++)

6. schistosomiasis mansoni test result (eggs count)

7. soil transmitted helminths test result (Ascaris)

(1) negative

(2) positive

8. soil transmitted helminths test result (Ascaris, eggs count)

9. soil transmitted helminths test result (Trichuris trichiura)

(1) negative

(2) positive

10. soil transmitted helminths test result (Trichuris trichiura, eggs count)

11. soil transmitted helminths test result (hookworm)

(1) negative

(2) positive

12. soil transmitted helminths test result (hookworm, eggs count)

13. H.nana test result

(1) negative

(2) positive

Household Member Code 2

Household Member Code 1

- 1. schistosomiasis hematobium test result (centrifugation results)**
 - (3) negative**
 - (4) positive**
- 2. schistosomiasis hematobium test result (dipstick results, only 10% samples)**
 - (3) negative**
 - (4) positive**
- 3. schistosomiasis hematobium test result (eggs count)**

- 4. schistosomiasis mansoni test result (KK results)**
 - (3) negative**
 - (4) positive**
- 5. schistosomiasis mansoni test result (CCA results, only 10% samples)**
 - (5) negative**
 - (6) positive: weak (+)**
 - (7) positive: medium (++)**
 - (8) positive: strong (+++)**
- 6. schistosomiasis mansoni test result (eggs count)**

- 7. soil transmitted helminths test result (Ascaris)**
 - (3) negative**
 - (4) positive**
- 8. soil transmitted helminths test result (Ascaris, eggs count)**

- 9. soil transmitted helminths test result (Trichuris trichiura)**

(3) negative

(4) positive

10. soil transmitted helminths test result (Trichuris trichiura, eggs count)

11. soil transmitted helminths test result (hookworm)

(3) negative

(4) positive

12. soil transmitted helminths test result (hookworm, eggs count)

13. H.nana test result

(3) negative

(4) positive

Household Member Code 3

Household Member Code 1

1. schistosomiasis hematobium test result (centrifugation results)

(5) negative

(6) positive

2. schistosomiasis hematobium test result (dipstick results, only 10% samples)

(5) negative

(6) positive

3. schistosomiasis hematobium test result (eggs count)

4. schistosomiasis mansoni test result (KK results)

(5) negative

(6) positive

5. schistosomiasis mansoni test result (CCA results, only 10% samples)

(9) negative

- (10) positive: weak (+)
- (11) positive: medium (++)
- (12) positive: strong (+++)
6. schistosomiasis mansoni test result (eggs count)
-
7. soil transmitted helminths test result (Ascaris)
- (5) negative
- (6) positive
8. soil transmitted helminths test result (Ascaris, eggs count)
-
9. soil transmitted helminths test result (Trichuris trichiura)
- (5) negative
- (6) positive
10. soil transmitted helminths test result (Trichuris trichiura, eggs count)
-
11. soil transmitted helminths test result (hookworm)
- (5) negative
- (6) positive
12. soil transmitted helminths test result (hookworm, eggs count)
-
13. H.nana test result
- (5) negative
- (6) positive

Household Member Code 4

Household Member Code 1

1. schistosomiasis hematobium test result (centrifugation results)
- (7) negative

- (8) positive
2. schistosomiasis hematobium test result (dipstick results, only 10% samples)
- (7) negative
- (8) positive
3. schistosomiasis hematobium test result (eggs count)
-
4. schistosomiasis mansoni test result (KK results)
- (7) negative
- (8) positive
5. schistosomiasis mansoni test result (CCA results, only 10% samples)
- (13) negative
- (14) positive: weak (+)
- (15) positive: medium (++)
- (16) positive: strong (+++)
6. schistosomiasis mansoni test result (eggs count)
-
7. soil transmitted helminths test result (Ascaris)
- (7) negative
- (8) positive
8. soil transmitted helminths test result (Ascaris, eggs count)
-
9. soil transmitted helminths test result (Trichuris trichiura)
- (7) negative
- (8) positive
10. soil transmitted helminths test result (Trichuris trichiura, eggs count)
-
11. soil transmitted helminths test result (hookworm)
- (7) negative

(8) positive

12. soil transmitted helminths test result (hookworm, eggs count)

13. H.nana test result

(7) negative

(8) positive

II. Informed Consent for household head/caregiver

Hello, my name is _____.

I am currently working as a data collector for the survey of the SENSE project (Schistosomiasis Elimination along the Nile river in Sudan with Empowered people, which is being conducted under the guidance of Federal and State Ministry of Health, Sudan. The SENSE project is undertaking an integrated intervention of the community-led total sanitation, vector (snail) control, mass drug administration, and primary health care strengthening. Sudan has enormous burden of schistosomiasis, however there is considerable uncertainty about the number of people infected with schistosomiasis and evidence is scarce with regards to the effect of single intervention and also combined intervention of the community-led total sanitation, vector (snail) control, mass drug administration, and primary health care strengthening. This hinders FMOH to deliver effective interventions to Sudanese people. Therefore, we are conducting this survey to determine the effect of single intervention of each sub-component and also combined intervention of the SENSE project. If you agree to enroll in this study, we will ask some questions about the demographic, socio-economic, water and sanitation, hygiene and other characteristics of your household and household members. In addition, we will humbly ask you to provide urine and stools from you and some of the household members. After collecting specimens (urine and stools), we will examine the infection status of schistosomiasis and/or soil-transmitted helminthiasis (STH). If found positive, dewormers (praziquantel and/or albendazole) will be provided. If the prevalence proved to be higher at the district level, praziquantel and/or albendazole will be provided to all the people in the district including all the children in your household. Your cooperation will substantially contribute to developing effective interventions to eliminate schistosomiasis

and STH in Sudan including your villages.

If you agree to enroll in this study, we may visit you again to conduct two more rounds of survey.

The information that you will give us will be used only in anonymous form. Interview and diagnosis results will be treated as confidential. I expect that it will take approximately 20-30 minutes to complete the interview. You and your household members should feel free not to provide any information that you or they do not wish to share with me or feel free to end the interview at any time with no need to explain the reason. Do you have any questions about the purpose or process? Is there anything else you would like me to clarify?

Thank you for your cooperation!

Informed Consent (to be signed by household head or caregiver)

I have been informed on all the details about the survey including the objectives and specimens that I and some of the household members have to provide, if we agree. I have been explained that I can stop answering the questionnaire at any time I want and we can decide by ourselves whether we (I and household members) would provide our stools and urine without any coercion. I consent that I and my household members have the rights to decide to participate or not.

Village_____ /Name_____ (sign)_____ /Date_____