APPLICATION AND TESTING OF THE WSSCC INDICATOR TOOLKIT FOR WATER AND SANITATION ACHIEVEMENTS

Report to the
WATER RESEARCH COMMISSION

By

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Table of Contents

Reaching WSSCC WASH Goals and Attaining VISION 21

Findings from the development and piloting WSSCC indicators for meeting Vision 21 objectives.

Executive summary

Vision 21 has five targets to be reached by 2015 and 2025. In order for countries around the globe to ascertain where they are placed along the development continuum vis-à-vis these targets, a toolkit was developed to measure where along this line different countries are placed.

In South Africa, these questionnaires were tested and piloted in seven villages in the Kwazulu-Natal province. The toolkit was an extensively researched[1] application tool, designed as a summative assessment instrument, with the aim of measuring a small number of quantitative indicators to determine whether targets are being achieved. The data was concerned with characterisation of a situation only and was not intended to be a more widespread formative evaluation or assessment. It thus does not contain any analysis about the situation, or qualitative diagnosis of problems needing resolutions.

The expected outcome and result of the piloting was simply to emerge with five indicators, compatible and comparable to the five Vision 21 targets.

The methodology was to survey a sample area and to do objective observations of the habits of members of households, and school children. The data was then refined and analysed using a computer-based software application, along the prescriptive guidelines of the developers of the questionnaires.

The study emerged with five very clear indicators, compatible and comparable to the Vision 21 targets.

Looking at the five summative outcomes on their own reduces the value of the information if one expects a formative, qualitative set of outcomes. However, once the five outcomes are read in their correct global context, and balanced against the Vision 21 targets, it is clear that internationally this is a most applicable tool to measure progress.

In terms of the targets set for 2015, the results of the South African pilot testing are as follows:

1. Universal public awareness of hygiene: ***the pilot outcome shows that 43.21% of the households complied with good hygiene practices.***
2. The percentage of people who lack adequate sanitation globally should be halved: ***the pilot shows that 60.08% of households had access to improved sanitation.***
3. The percentage of people who lack safe water should be halved: ***the pilot shows that 42.39% of households had access to improved water sources.***

[1] By the London School for Hygiene and Tropical Medicine

4. Eighty percent of children are educated in hygiene practices: ***the pilot shows that 45.79% of school children had adequate hygiene education at school.***
5. All schools are equipped with adequate sanitation and hand washing facilities: ***the pilot shows that only 8.42% of children had access to improved sanitation and hand washing facilities at their schools.***

It is clear from the above that the targets set for 2025 have not been reached. The targets are:

1. Good hygiene practices are universally applied
2. All people have adequate sanitation
3. All people have access to safe water
4. All primary school children are educated in hygiene practices
5. All schools are equipped with adequate sanitation and hand washing facilities

For targets 1-3 the research had to conclude whether or not the household has:

1. *Good hygiene practices*; meaning that the behaviour of the household is such that it reduces the risk of pathogenic transmission. In the pilot villages the researchers found that what members of the household told the surveyor and what the observer saw was not always compatible.
2. *Access to adequate sanitation*; meaning that excreta are disposed of in such a way that it reduces the risk of faecal-oral transmission to its users and the environment. This target is directly related to the infrastructure provision in the pilot villages.
3. *Access to improved water supply*; meaning that they have access to sufficient drinking water of acceptable quality as well as sufficient quantity of water for hygiene purposes. This target is related to the toolkit questions pertaining to access to water from a tap or handpump and the distances that people have to walk to get to the water.

Assessing properties to the targets for school sanitation requires us to assess whether:

4. *School child knows about hygiene* meaning that primary school children have most likely being taught about hygiene at school, but more important have gained a basic understanding on hygiene practices.
5. *School is equipped with facilities for sanitation and hand-washing*, meaning that primary schools have enough improved excreta disposal and hand washing facilities for students and staff.

Conclusion

In relation to the South African rural population where the service provision backlogs are most prevalent, the sample of 243 households and 190 school children is too small to extract a national pattern. However, for the pilot communities, located in an extremely poor and under-resourced area of Kwazulu-Natal, the results are encouraging, as it clearly shows that at least for that area, the targets are attainable. In the case of target 2 (adequate access to sanitation), the 2015 target has already been surpassed. The only glaring problem in the area is reflected in the outcome of target 5 (all schools should be equipped with adequate sanitation), where only 8.42% of the school children had access to improved sanitation at their school.

This report addresses the circumstances surrounding the testing and piloting of the toolkit. It goes into detail about the conditions under which the researchers conducted the surveys. It furthermore offers comments on the questionnaires as well as the cultural context. As the toolkit was piloted without a backup computer software programme, the latter was specially written with certain adaptations to existing MS Access software. This research emerged with constructive comments, verifiable data, a software analysis and interpretation component and outputs.

However, the research was expensive and very time consuming, considering the relatively small sample. The overwhelming conclusion – taken in the context of the international importance of the Vision 21 targets – is that to do this research on a global scale, the initiators of the toolkit and the international community need to spearhead the follow-up research for the next 12 years and beyond to 2025.

Aims and Objective

The primary objective of this component of the research is the testing and piloting of the WSSCC Monitoring and Evaluation questionnaire for WASH. The questionnaires are linked to the health and hygiene toolkit developed by the London School of Hygiene and Tropical Medicine (LSHTM) and the Water and Sanitation Collaborative Council (WSSCC). This initiative will assist with setting up a framework for monitoring and evaluation of the South African Department of Water Affairs and Forestry's (DWAF) health and hygiene programme.

The aim of the research is to:

- Test and pilot the WSSCC WASH Indicators Toolkit and questionnaire in Kwazulu-Natal
- Apply the questionnaire to projects
- Capture the data generated
- Synthesize the data
- Link the outputs of this exercise the international WSSCC initiative.
- Produce reports and presentation of the results

Scope and Outputs

This report outlines the testing and piloting of the WSSCC toolkit in line with the directives supplied by the London School of Hygiene and Tropical Medicine and presents the synthesised data. It consists of the following segments:

1. A research report outlining the survey methodology, sampling, etc.
2. A critique and applicability report on the toolkit,
3. A description of the computer-based data management mechanisms, including the data storage architecture, programming and technical aspects of the data capturing and analysis instruments,
4. Subjective observations by researchers,
5. Linking the data to Vision 21 and the WSSCC initiative in line with the LSHTM toolkit directives.

Sampling & Mobilisation

Demographics

The information below is fluid as infrastructure provision in this area is an active process and some areas currently without water and sanitation will have full services by the end of 2003.

Name of Village	Population (total)	No of households	Services available
Ndatshana	8,099	1,256	VIP sanitation, water (hand pumps), 0.6% electricity, 0.6% landline telephones
Ndindindi	4,500 est.	644	1.6% landline telephones, 0.5% electricity, no sanitation, limited access to water
Nqutu 4 Cluster	8,300 est.	1248	Approximately 50% VIP sanitation & water (hand pumps), 0.8% landline telephones, 0.9%electricity

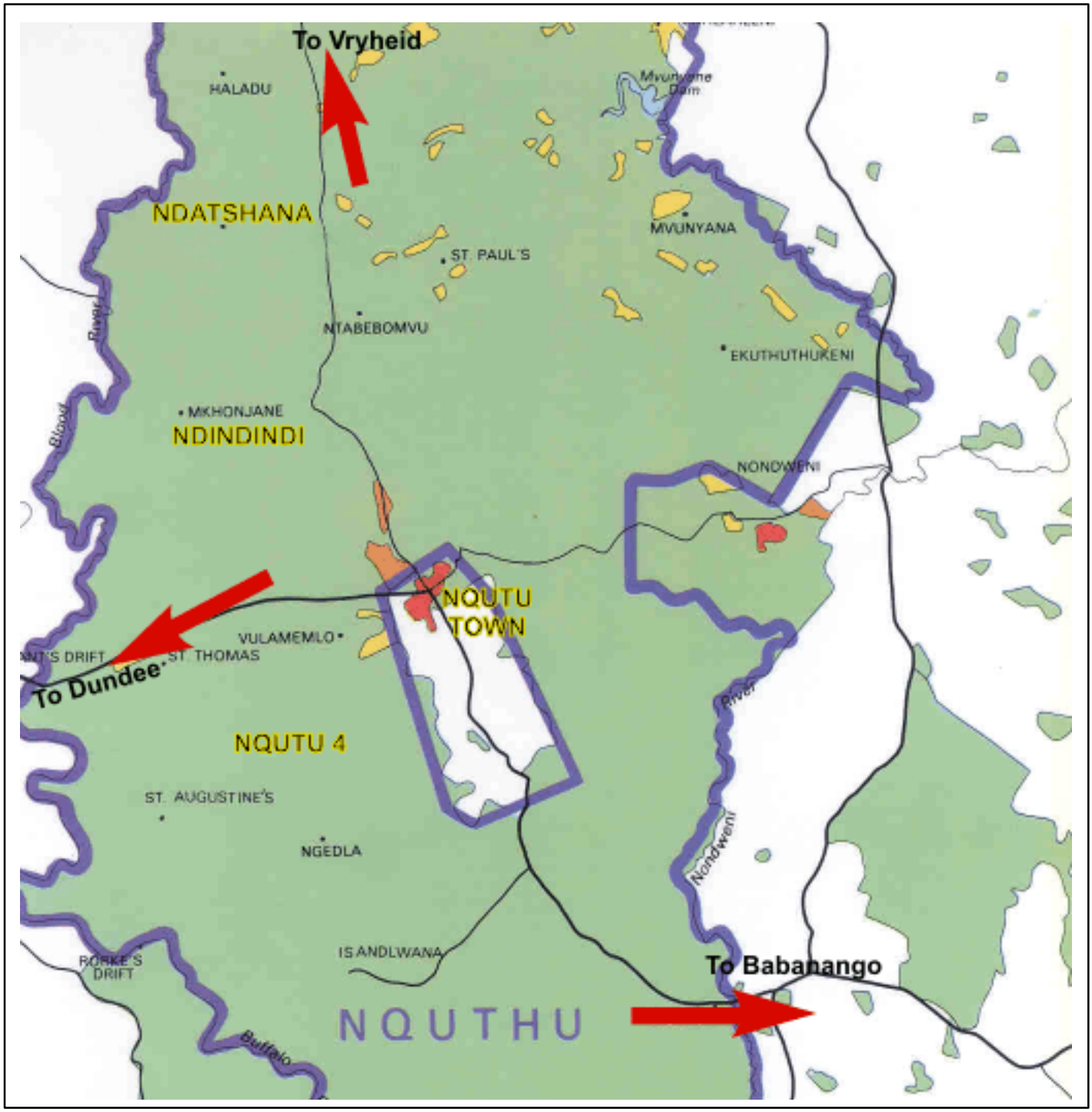
Water and Sanitation Characteristics per Village

As the task at hand did not allow for an in-depth formative and qualitative component, the researchers have summarised a few of the more glaring sanitation and hygiene practices in the sample villages. (Annexure A for full descriptions)

Ndatshana	Some parts of this village had sanitation infrastructure and some parts had none. In the case of the latter area most respondents still went to the bush, field or donga to relieve themselves. Hygiene practices were of a low standard with all the respondent households using a communal container for handwashing. In all the households the water was either dirty or very sparse and there was no evidence of soap. The containers for drinking water was mostly closed but the receptors were uncovered and open to contaminants. The village has communal standpipes and handpumps. The distance between the households and closest water point are not disproportionate to the scattered nature of the village. The area is mountainous and households are very far apart, thus the water points are also at a distance. The same water is used for drinking and washing.

Ndindindi	Most of the households do not have acceptable levels of sanitation. Some badly constructed pit toilets were evident, and many respondents were aware of the danger of these toilets. Most of the toilets were almost full and very unhygienic. The main source of drinking water is piped water to a communal standpipe. Washing is done in the nearby river. The average distance or time to get to the river is approximately 30 minutes. Water from the standpipes is free of charge.
Ngoboti	This is part of the larger village of Masotsheni and is very isolated from the main road. The source of water is the borehole. As the water usually runs out during peak months/hours there is a ration system working in the village. The problem here seems to be that there is one borehole pump, which serves the entire village. All the households have VIP toilets, which seem to have been recently built. People do not pay for water.
Ngobintsimbi	This is located with Bambisanani and forms part of the greater Basotsheni The source of water is the borehole installed in 1983. Villagers do not pay for this water. There is however a tap water that has just been installed. It is not being used, as villagers have to buy the “key” to use it. The village has VIP toilets. However, some are the in the process of the being completed.
Jabavu	This is part of the greater Masotsheni and is isolated from other similar villages. The source of water is the borehole (hand pump). Villagers get water for free. Before this was operational, the villagers used to get water from the river. There is a combination of pit latrines and recently built VIP toilets that are being used. Those that do not have the VIP toilets say their pit latrines are usually water-clogged. It appears that the toilets were built on a waterbed. Washing is done in the rivers.
Ngonini	Like the previous village, the Ngonini households get their water for drinking from a borehole with hand pump in the village. This water is free of charge. They do their washing at a nearby river. Villagers also use the borehole water for hygiene purposes. All the households have VIP toilets, which look as if they have been recently built. Before these were built they used pit latrines or the bush.
Masotsheni	This is a village within the greater Masotsheni area. The source of water for drinking and hygiene purposes is communal tap, which was installed recently. The villagers buy a key to access this water. The key prices range from R10 to R50. The water is regarded as clean and pure. The VIP toilets are still under construction and villagers hope that these would be completed during 2003. They currently use a combination of pit latrines or the bush.

Map of Sample Area



Sampling

A remote rural area in northern Kwazulu Natal province, an identified cholera area[2] was selected for testing the toolkit. The sampling was done with the help of the sanitation contractor (implementing agent) in the Newcastle / Dundee areas. **Three village clusters** – seven villages – were identified within an accessible geographical area, with the following characteristics:

1. **Ndatshana:** A village with a completed sanitation programme (completed meaning Ventilated Pit Toilets were installed at each household in the village and as part of the contractor obligations, health and hygiene training took place.)
2. **Nqutu 4:** A village cluster with partial sanitation facilities provided (partial meaning some homes have VIP toilets, some have pit latrines and some have no toilets at all). According to official documentation health and hygiene training formed part of the contractor obligations in the villages where VIP toilets were being built or completed. This cluster of villages consist of the following communities:
    a. Ngoboti
    b. Ngobintsimbi
    c. Jabavu
    d. Ngonini
    e. Masotsheni
3. **Ndindindi:** A village with no sanitation facilities provided (none meaning that there was no formalised sanitation programme, although a few homes have dug their own pit latrines.)

An additional consideration in **selecting the villages** was the number of primary schools in the village and surrounding areas.

a. In Ndatshana there are five (5) primary schools, of which two (2) were randomly selected.
b. In the Nqutu 4 cluster there are three (3) primary schools, of which one (1) was randomly selected.
c. In Ndindindi there are two (2) primary schools, of which one (1) was sampled.

A peripheral consideration in the sampling process was the accessibility of the villages in terms of a road leading to the village and traceable contacts. The villages can be reached by road accessible by normal motorcar and a 4X4 was not needed to get to the houses. Most households and schools were reached by foot once the car was parked at the end of the accessible road.

Note: Although the target sample for the household surveys were women, most of the role-players that the team interacted with regarding permission and co-operation were men. This note only serves as a confirmation of the entrenched gender discrimination in South Africa's rural environment.

[2] On instruction from the Water Research Commission and the Department of Water Affairs and Forestry (South Africa).

Sample size

- A total of 260 households were surveyed in the seven villages. Of the 260 surveys, 17 survey forms were discarded because of corrupted data.
- 190 school children were surveyed. All the data forms were used. The bulk of the children were surveyed at the schools to ensure that a reasonable size sample was used. 38 of the 190 children were surveyed in their home environments.
- Four schools were surveyed and in each school, the principal or senior teacher in charge was surveyed.
- In all instances the observations took place at the households and schools. In the case of the schools, the children could not be observed going to the toilets, as it was already school holidays. However, the state of the toilets, toilet types, separation between boys and girls toilets, distances between them, and the presence of water points were all observed and noted.
- A total sample of 454 entities were surveyed over a period of 8 weeks.
- A total of 243 households were observed.
- Four schools were observed.

School Children

As the schools in Kwazulu-Natal had already closed for the Christmas holidays by the time the researchers arrived to do the surveys, the principals were contacted to assist us to round up children per school for all the schools, except those located in Ndatshana.

In the case of Ndatshana, the survey took place on the last day of the school year when most of the children were present. Individual children between the ages of 06 and 17 years of age, and two (2) senior teachers were interviewed. Observations were conducted regarding toilets and water points in both schools.

In Ndindindi an appointment with the principal was arranged and she rounded up about 20 children for interviews. All the children were between the ages of 09 and 13 years. Individual interviews were conducted and the toilets and water point was observed.

In Nqutu 4 the interviews were pre-arranged with the principal who rounded up a sample of children. The children and principal were interviewed and toilet and water point observations took place.

Note: During the pre-survey field visit it was found that the school children were not usually at home when the household surveys took place as they were out playing or doing chores. This prompted the team decision to target the children separately. Where children are present at home during the household surveys, they were included in the household surveys and interviewed.

Households

Villages in these rural areas are divided into blocks for service provision purposes. The selection process that was followed was to take each block as demarcated by the local authority and selected a number of houses per block. Although this grid was not consistent and uniform, it served as the basis for the random selection process.

As the households are scattered and not in street blocks or straight lines, points (dots) on the grid depicting households, served the random selection process.

After reviewing information obtained from the local municipality, the information for the grid was viewed with scepticism, as it did not add up to the information that the survey team already gathered through the school surveys and having visited the villages. The team thus decided to use the grid only as a guideline and do the sample selection 'on the ground' randomly.

Mobilisation

The team initially contacted the sanitation field worker of the implementing agent to gain access to the villages. This proved insufficient and a different approach had to be adopted. The following persons were contacted in order of priority: (Annexure B provides contact details)

1. The **traditional leadership** first as village protocol determines that this should be the point of departure.
2. The **political counsellors** as they traditionally have a somewhat strained 'turf' relationship with the traditional authorities.
3. The **principals** of all the identified schools to obtain permission and co-operation to enter their premises, interview the sampled school children, and interview them or their representative.

Identifying who the different people were proved the most time consuming, as the team went into the villages 'raw' and without prior knowledge and limited information. The local field worker who was a resident of the area was sent ahead of the rest of the team to get the names and telephone numbers of the different role-players. He obtained most of the basic information from the local shebeen, or from the people at the local grocery store. The team proceeded by phoning those with telephones to make appointments and physically visited those who did not have telephones or where the numbers were unavailable. A local child was asked to show the way around the villages. He was paid a nominal fee for his troubles.

The villages in most of South Africa's rural areas are difficult to define, and in the case of two of the sample villages, the locals were really confused as to where exactly the one village started and the other ended. It appeared that the boundaries were not clear.

All the role-players that the team spoke to showed an intense interest in the project, being enthused by the hope that further development would reach their villages. The discussions were lengthy and the team was cross-questioned on every minute detail of the survey purpose and aims. Most of the role-players were interested in how this exercise would benefit the livelihoods in their villages. It was obvious that water and sanitation is a very high priority in these sample villages and all the role-players had some personal service provision question to ask. This ranged from 'when will we also get latrines', to 'the exploitation of the private bulk water supplier' to 'the children broke the water taps and we don't have money to fix it', etc.

Traditional Leadership

The hierarchy of the area determined that the team first approach the 'Induna'[3] to obtain permission to talk to the 'Nkosi'[4] and for him to introduce the project and the team. As the three sample villages were within the jurisdiction of two different Nkosis, the team needed to see the Induna in Ndindindi and the Induna for Nqutu and Ndatshana.

Without the permission of the Nkosi or his Indunas it would have been impossible to do any work in the villages, including surveying the children or households. Obtaining permission from the traditional leaders consumed a number of days and numerous phone calls and visits.

The Indunas felt that, although the traditional authorities have the respect and esteem of their communities, researchers who approach the political role-players first or without considering the traditional protocol offend them and they feel sidelined[5]. Contrary to the time delays in obtaining permission from the traditional leaders, the political decision was very quick to obtain and the Mayor of Nqutu supported the project without hesitation.

Primary School Principals & Senior Teachers

After discussions with the Ndindindi Induna, the team visited all the principals (or senior teacher in the case of one primary school) to request permission to interview them and some school children and to conduct our observations. The team encountered no resistance and all the principals were co-operative, albeit slightly distrusting to start off with. All interactions were in the local language and where English translation was needed, the local field worker acted as translator.

Councillors

Every village has a political councillor. In Ndatshana, the Induna had been ousted from the village and the councillor is seen as the only authority. Although there is no Induna, the Nkosi is still the uppermost traditional authority. The tension between the political and traditional authorities is very obvious in the sample region.

Field Worker Training & Validation

Fieldworkers and observers were selected for their specific skills. Some criteria included language and territory familiarity, research experience, and data analysis competencies.

The group consisted of six researchers, four of which were in the field (two doing surveys and two acting as independent observers), one desk researcher and one data analyst and programmer.

Field worker training took place over a 4-day period, with 1 day structured training,

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[3] Induna being an elder in the house of the Chief

[4] Chief

[5] Given the delays in approval and a firm decision by the Nkosi, it is no wonder that they are sidelined. Tradition determines that when an Nkosi or Induna is visited, gifts are offered. The team took cognisance of this cultural demand and offered appropriate gifts to the traditional leaders, the principals and the councillors.

including role-playing and 3 days testing the questionnaires before changes were made. The structured training focused on ensuring consistency in the data collection methodology and to minimize potential subjective biases in the observations.

The research team agreed upon the validation schedule once the training was completed. For the first two weeks of the surveys, the survey team followed the sample selection process as outlined in the previous section, while the validation team selected a smaller sample of the chosen clusters. After the first two weeks, the research team changed this because of cultural barriers experienced by the validation team (household members behaved differently towards the survey team and the validation team. The latter obviously influencing household members to display hygiene practices unfamiliar to their daily habits, such as children being sent to the shop to buy soap in order to prove to the observers that they use it to wash their hands, etc.) The survey and validation teams collaborated and both did surveys and observed.

The team found the change to be useful as the observations were done more surreptitiously. The teams would go in 2 at a time, with one member conducting structured observations whilst the other would engage the household member(s) in the survey.

Team members were often invited to share a simple meal or a cup of tea. This afforded the surveyors the opportunity to observe the hygiene behaviour during meal times.

Health and Hygiene Education

As the researchers felt that a formative assessment done simultaneously with the summative assessment would enrich the process, the sanitation implementing agency was contacted to provide baseline information against which to balance the research outcomes. The following was requested:

1. What training methodologies were used?
    a. PRA / PHAST
    b. Child to child
    c. Workshops
    d. Competitions
    e. Charts
    f. Role-playing
    g. Other
2. What training tools were used?
3. Were the following tools used?
    a. Mapping
    b. Flexi Flans
    c. Nurse T
    d. Contamination routes and barriers
    e. Barriers Matrix
    f. Sanitation Concepts
    g. Three-pile Sorting
    h. Water and Sanitation Ladder
    i. Story with the Gap
    j. Diarrhoea Child
4. How often was training conducted in the different villages / sub wards?
5. How many adults were reached with the training?
6. How many children were reached with the training?

The researchers were not able to obtain the information and interviewed the training agent instead. It was evident that little or no formalised training interventions took place. It appears that training interventions were conducted on a sporadic ‘village visit’ basis where unstructured groups were rounded up for informal discussions.

Questionnaires

Question Sequence

Testing the questionnaires led to the team deciding to shuffle some questions around for easier use. The following structural (NOT contextual) changes were made to the questionnaires:

1. The observations were placed at the end of the questionnaires. It was found that the observations and observation questions disrupted the interview flow when placed inside the interview questions.
2. All the questions pertaining to the household was placed at the beginning of the questionnaire.
3. All the questions pertaining to children were placed in one questionnaire and taken out of the household questionnaire. This was done because the team found that the children were not present during the interviews with their mothers. They were out playing or doing chores.
4. The duplicated questions for children – in the household survey and duplicated in the school survey – were collapsed into only one questionnaires for the children.
5. The questions to principals or senior teachers were separated from those of the children.

The team found the questionnaire cluttered and decided to split it into three distinct sections:

1. Household
    a. Survey questions
    b. Observations
2. Children
    c. Survey questions
3. Principals

Discussion

Information Collected versus Toolkit Outputs

The critique is written in the light of the initial expectations of the Toolkit and its application. It is accepted that a 'Toolkit' would mean the large-scale distribution and use of an easy, accessible and relevant evaluation instrument. The research team concluded that the Toolkit would need to be streamlined and simplified before it could fulfill the expectations. Some reasons are:

1. Accepting that the Toolkit is a *summative* and not a *formative* intervention that has the five Vision 21 targets as the end goal, the research team still found that the Toolkit outputs were not concomitant with depth of information collected during the surveys – much of the information is lost in the very rigid interpretation parameters.
2. The questionnaires are cumbersome and the sequencing is impractical.

3. Some of the expected observations proved unrealistic, for instance observing the toilet habits of households: there is a cultural resistance to strangers 'hanging around' to observe the sanitation habits. Similarly, in terms of household hygiene habits, (particularly the absence of soap) caused household members to scramble to find a piece of soap to prove that they have it, or that they use it.

4. In terms of the quality of the data collection, the fieldwork flaws emerged during the data capturing and analysis phase (noted below). The conclusion is that if CBO and NGO-level field workers without tertiary education were used for the research, the academic slant to the whole Toolkit would be inappropriate for broad-base application in South Africa[6]. In the case of the current Toolkit testing the field worker education levels were much higher than the norm and still problems were experienced.

5. The research team concluded that the Toolkit in its present form is an academic exercise that will not find acceptance in the broader developing community.

6. The initial planning was based on between 10 and 15 surveys and between 3 and 6 observations per day. Because the terrain was mostly inaccessible by car and the households far apart, the research team spent double the planned time in the field. The surveys themselves took on average between 15 and 30 minutes to complete, excluding the polite entry and exit from each household.

7. The interpretation and analysis of the data is complex and this was compounded because the questionnaires were tested WITHOUT existing or available data management software.

8. Because no supporting software accompanied the questionnaires, a specialist programmer had to be employed to make the data capturing and analysis user-friendly and accessible.

9. The replicability and broad-base upscaling of the Toolkit as it stands is questionable because of the complexity and concomitant costs involved.

10. The absence of baseline health[7] and hygiene data in villages makes it near impossible to track improvement, impact or habit changes for use beyond the *summative* assessment.

11. Because the Toolkit is meant as a *summative* assessment to measure progress towards reaching the Vision 21 targets, its results render the outputs useless for a follow-up *formative* assessment that can be used to speed up developments in the survey areas. It thus effectively cancels out local evaluation efforts unless a separate data analysis process is entered into.

12. The testing of the Toolkit and piloting was expensive and it is questionable whether it can be afforded on a larger scale. The question then arises as to the size of the research samples.

13. Throughout the Toolkit was designed for international applicability, who or other international organizations should fund global thrust every few years until target dates.

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[6] In the case of the South African surveys the academic qualifications of the four field workers were: Masters Degree & Fullbright Scholar, Honours Degree in Development Studies, Post Graduate Diploma in Rural Planning and a Teachers Diploma.

[7] Improved health in terms of the decline in the incidence of cholera is a substantial indicator.

General Household Sampling Information

A few specific questionnaire issues arose from the surveys:

Question A3: If the respondent answers only one (1) of the choices, which gives a positive (+) outcome, it means that there is a + outcome even if they do not observe good hygiene practices on the other important ones because they were not indicated. This question should address a specific number of answers.

Question A6: The instructions were generally confusing for the field workers, which contaminated the results. However, in the final analysis, this did not make a difference whether a + or – outcome was achieved. It would make the questionnaire less cumbersome if the instructions are clearer.

School Sanitation Questionnaire

Question A8.f: If the respondent's answer is more than 1, but still includes the *correct* answer, then the outcome will be positive, even though bad hygiene practices are prevalent.

Question A8.i: Different answers for the same schools were given. This probably reflects different experiences of the different subjects. The subjectivity gaps should be closed – how accurately can the answers be taken?

Access to improved Sanitation Schools – Principals

Question E.1: This question can be confusing to the respondent as it can be interpreted as 'how many are allowed in a cubicle at a time'?

Data Analysis Methodology

Data Storage Architecture

In order to store data from the questionnaires in a way, which would facilitate optimum analysis, custom relational databases were created in MS Access. MS Access was chosen, as it is a standalone database that can be used on any PC that has MS Office installed. (For analysis purposes the Access database was imported into a MS SQL Server database, so as to take advantage of the additional power inherent in the latter). Households and schools were stored in separate databases.

The School Database contained the following data tables:

Qnaire (questionaire details) comprising of the following fields:

qnid = questionaire table unique identifier

qn_num = questionaire number

qn_name = questionaire name

Questions (question details) comprising of the following fields:

qid = question unique identifier

qnid = questionaire unique identifier (as the foreign key linking to Qnaire table)

q_num = question number

ques = actual question

Options (option details) comprising of the following fields:

optid = option unique identifier

qid = question unique identifier (as the foreign key linking to Questions table)

opt_code = option code as specified in the surveys

opt_letter = option letter as specified in the surveys

option = actual options (possible answers) for the given question

Answers (answer details) comprising of the following fields:

ansid = answer unique identifier

subid = subject unique identifier (as the foreign key linking to Subjects table)

optid = option unique identifier (as the foreign key linking to Options table)

answer = actual answer to the option

Subjects (subject details) comprising of the following fields:

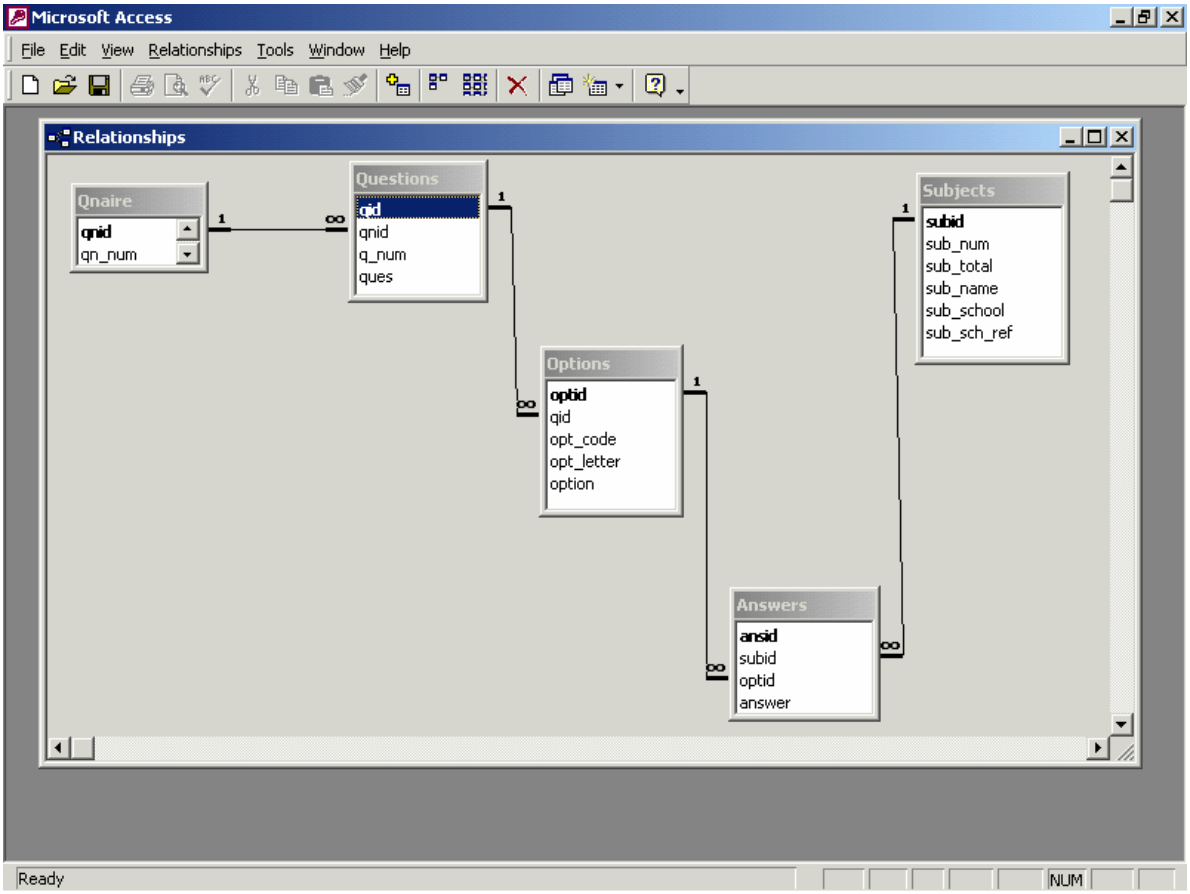
subid = subject identifier

sub_num = subject number (as in Child no **x** of y children)

sub_total = total number (as in Child no x of **y** children)

sub_name = subject name
sub_school = school that child attends
sub_sch_ref = reference number of school

The relationships between these tables are shown below:



The Household database contained the following data tables:
HouseQues (question details) comprising of the following fields:

qid = question unique identifier
q_num = question number
ques = actual question

HouseOptions (option details) comprising of the following fields:

optid = option unique identifier
qid = question unique identifier (as the foreign key linking to Questions table)
opt_code = option code as specified in the surveys
opt_letter = option letter as specified in the surveys
option = actual options (possible answers) for the given question

HouseAnswers (answer details) comprising of the following fields:

ansid = answer unique identifier

subid = subject unique identifier (as the foreign key linking to Subjects table)

optid = option unique identifier (as the foreign key linking to Options table)

answer = actual answer to the option

HouseSub (subject details) comprising of the following fields:

subid = subject identifier

surveyref = survey reference number

surveyor ref = surveyor reference number

houseref = household reference number

sub_name = subject name

sub_gender = subject gender

loc_ref = household location reference number

gps_lat = gps latitude

gps_long = gps longitude

date = date of the survey administration

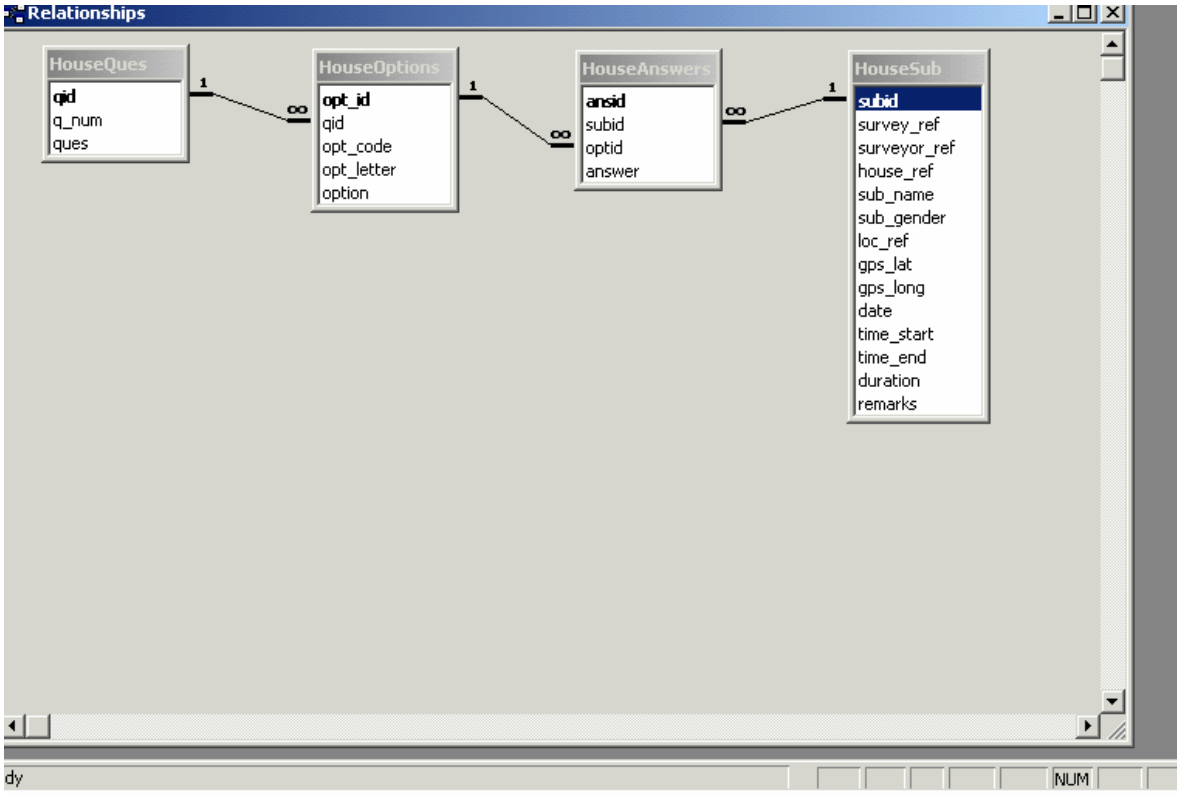
time_start = time at commencement of survey administration

time_end = time at end of survey administration

duration = duration of survey administration

remarks = surveyor remarks

The relationships between these tables are shown below:



Data Capture

To expedite the capturing of the data from the completed questionnaires, a set of web browser-based forms was created, duplicating the actual questionnaires. Tickboxes were provided for answer options, and text fields for open-ended answers.

Data capturers accessed these forms through a standard web browser.

Once data was entered into the forms, the data capturers submitted the information to the database by means of a “Submit” button.

The forms and their database population mechanisms were written in Visual Basic Script, which is the basis of a technology known as Active Server Pages (ASP) – indeed the data capture forms were exactly that.

ASP runs on a Windows server platform, contained in the Windows 2000 Professional operating system (and thus freely available). It was important to ensure that all technology used in the data capture and analysis can easily be duplicated; hence the aforementioned choice.

By making use of networked computers, several data capturers were able to work simultaneously, with one of their standard PCs acting as the database and web server running the necessary technology. This significantly speeded up the data capture process. Database and web form control mechanisms were used to ensure that duplicate data was not entered, and that one data capturer could not over-write another’s input.

Training was given to each data capturer, requiring no more than simply illustrating how to enter the data from the questionnaires into the web-based forms. This took no longer than 15 minutes, as they were essentially duplicates of each other.

All data capture files are available in the accompanying WSH_Input.zip file.

Issues

1. Field Work Errors

In some cases where field questionnaires were incorrectly completed, data capturers were faced with the dilemma of which data was valid. A certain amount of interpretation was thus necessary. Extreme care was taken so as not to allow the data capturer’s subjectivity to influence the results.

As a rule of thumb, where contradictory answers appeared due to field errors, data capturers were instructed to use the first response and to ignore subsequent contradictory responses, rather than to try and interpret what the correct answer should be.

2. Subject’s Subjective Experiences

It was found that different subjects from the same schools were prone to giving contradictory answers, such as whether or not they have to queue to use the sanitation facilities.

Rather than use analysis methods to work around this issue (for example taking the most used response as the valid one and ignoring contradictions), responses were analysed as-is as it was felt that while some people do not queue, the experience of others might well be that there is queuing, which would be a valid indicator of on-the-ground conditions.

Data Analysis

Before the data was analysed, the Access database was imported into a MS SQL database, and cleaned of any "dirty" data that may have slipped through the data capture process. Typically this involved deleting incomplete information where a data capturer had incorrectly entered data, and then re-entered the data for the subject.

MS SQL was used as it allows for complex database scripting necessary to extract the data for further analysis.

Visual Basic Scripting, again in the form of ASP, was used to analyse the data once it had been extracted from the database. Due to the discreet nature of the fields in the database, data manipulation was optimal, allowing for the scripting code to be written in such a way that the data could be analysed exactly as per the flow diagrams contained in the WSH Indicators for Vision 21 instruction document. All answer qualifiers were built into the analysis code, as were all formulas for result calculation.

The results obtained are therefore exactly in line with the requirements of the instruction document.

Results were outputted to web pages for viewing in a standard web browser, allowing them to be saved as MS Word documents for report purposes.

All data analysis code is available in the files contained in the accompanying WSH_Analysis.zip file. (Annexure D)

Data Interpretation

Background to the Interpretation[8]

In alignment with the brief of the task, the following section contains the summative data obtained from the surveys. According to the brief and description of tasks, the following section is underpinned by "the monitoring or surveying for which the Unicef Joint Monitoring Programme (JMP) was established (with a mandate from the UN Secretary General), and which the WSSCC was mandated at Iguaçu to promote, is principally "summative". Its aim is to measure a small number of quantitative indicators to determine whether targets are being achieved. Summative data only are concerned with characterisation of a situation while formative information is more analytic about the situation, seeking a diagnosis of problems needing resolutions.

As the household is the basic sampling unit (BSU), the outcome of the survey is a binomial value by household for targets 1-3. These indicate for example if the household has access to water or not. This means that all indicators we assume important and relevant for each target have to be combined until they reach a *'yes'* or a *'no'* value.

Targets 1-3 need outcomes for each household that can lead to the conclusion whether or not the household has:

1. **Good hygiene practice***:* meaning that the behaviour of the household is such that it reduces the risk of pathogenic transmission.
2. **Access to adequate sanitation:** meaning that excreta are disposed of in such

[8] Quoted from the Toolkit inistructions

a way that it reduces the risk of faecal-oral transmission to its users and the environment.

3. **Access to improved water supply:** meaning that they have access to sufficient drinking water of acceptable quality as well as sufficient quantity of water for hygiene purposes.

Targets 4-5 need outcomes to assess the properties for school sanitation in order to assess whether:

4. **School child knows about hygiene** meaning that primary school children have most likely being taught about hygiene at school, but more important have gained a basic understanding on hygiene practices.

5. **School is equipped with facilities for sanitation and hand washing,** meaning that primary schools have enough improved excreta disposal and handwashing facilities for students and staff.

Mechanisms Used

Annexure C provides the full set of data interpreted in line with the directives of the Toolkit. The following formulas were used to arrive at the *yes* or *no* answers. The data analysis system and programme was based on the formulas[9]:

Separate toilets for boys and girls

	Answers		Question
b=		Boys	E.1
g=		Girls	E.2
q=		Pers./toilet	E.3
tag		toilets	E.7
tab		toilets	E.6

When there were no separate toilets for girls (question E.5) the **tag** was marked = 0. Where the number of toilets for girls was not marked, the following definition was used:

Coverage for girls **cg**	$cg = \frac{tag.q}{g} = \frac{\quad .\quad}{\quad} =$ %	If the percentage is higher than 100% e.g. 120% note down 100% as coverage.
Coverage for boys **cb**	$cb = \frac{tab.q}{b} = \frac{\quad .\quad}{\quad} =$ %	

The two percentages were added up and weighted in relation to the number of boys and girls in the school. The total coverage then became:

Total coverage **ct**	$ct = \frac{cg.g}{g+b} + \frac{cb.b}{g+b} = \frac{\quad .\quad}{\quad +} + \frac{\quad .\quad}{\quad +} =$ %

Where the results were below 100%, it was taken that the school has NO access to improved sanitation.

Access to handwashing facilities

[9] As per the Toolkit instructions

	Answers		Question
***wa*=**		handwashing points available	E.8
***r*=**		max. number cubicles allowed per washing point	E.2

According to vision 21, Target 5, is access to handwashing facilities

If ***r*** is the max. number cubicles allowed per washing point (Question E.4) and ***wa*** is the number of washing points available then the coverage is:

$$= \frac{r.wa}{tag + tab} = \frac{\cdot}{+} = \quad \%$$

If this value is below 100% the school does not have sufficient access to improved sanitation or we use the percentage as being representative for whole of the school.

The lowest value either access to sanitation or hand washing were used as representative for the school and it was taken together with the total amount of registered school children (boys + girls; Question E.1 plus E.2) in brackets.

Survey Results

The outcomes of the surveys show the following results in line with the Vision 21 targets 1 to 5:

General Household Questionnaire			**School Sanitation Questionnaire**	
Target 1:	**Target 2:**	**Target 3:**	**Target 4:**	**Target 5:**
Appropriate Household Practices	**Use/Access to Improved Sanitation**	**Use/Access of Improved Water Sources**	**Hygiene Education in Schools**	**Access to Improved Sanitation in Schools**
Analysis of all Outcomes per Household	Analysis of Facilities per Household	Analysis of Sources per Household	Analysis of Hygiene Education	Analysis of Hygiene Education
Percentage of Households with Good Hygiene Practices = 43.21%	**Percentage of Households with Use/Access To Improved Sanitation = 60.08%**	**Percentage of Households with Use/Access To Improved Water Sources = 42.39%**	**Percentage of Adequate Hygiene Education at School = 45.79%**	**Percentage of Access to Improved Sanitation in School = 8.42%**
105 respondents out of the sample of 243 households had good hygiene practices	**146 respondents out of the sample of 243 households had access to improved sanitation.**	**103 respondents out of 243 households had access to improved water sources**	**87 out of the 190 children interviewed showed signs of adequate hygiene education at school level**	**Only 16 out of the 190 children surveyed perceived their access to sanitation in their school as adequate.**

Vision 21 Targets

	Vision suggested targets for 2015	for 2025

Target 1	Universal public awareness of hygiene	Good hygiene practices universally applied
In line with Target 1, the survey results show that the survey area has a long way to go in order to reach this target.		
	Vision suggested targets for <u>2015</u>	**for <u>2025</u>**
Target 2	Percentage of people who lack *adequate* sanitation halved	*Adequate* sanitation for everyone
Considering the high percentage of people with adequate sanitation in the survey are, Target 2 is attainable.		
	Vision suggested targets for <u>2015</u>	**for <u>2025</u>**
Target 3	Percentages of people who lack *safe* water halved	*Safe* water for everyone
The low percentage of households with adequate access to safe water in the survey area is an indication that Target 3 is a long way from being achieved.		
	Vision suggested targets for <u>2015</u>	**for <u>2025</u>**
Target 4	80% of children educated about hygiene	All primary school children educated about hygiene.
It is clear from the low percentage of children educated about hygiene in the survey area that much still has to be done to achieve Target 4.		
	Vision suggested targets for <u>2015</u>	
Target 5	All schools equipped with facilities for sanitation and hand-washing	
This negligible percentage of schools equipped with hand washing and sanitation facilities in the survey area is an indication that school sanitation has to be stepped up massively if the area is to achieve Target 5.		

Interpretation Explanations[10]

Decision Model: Hygiene at Household Level

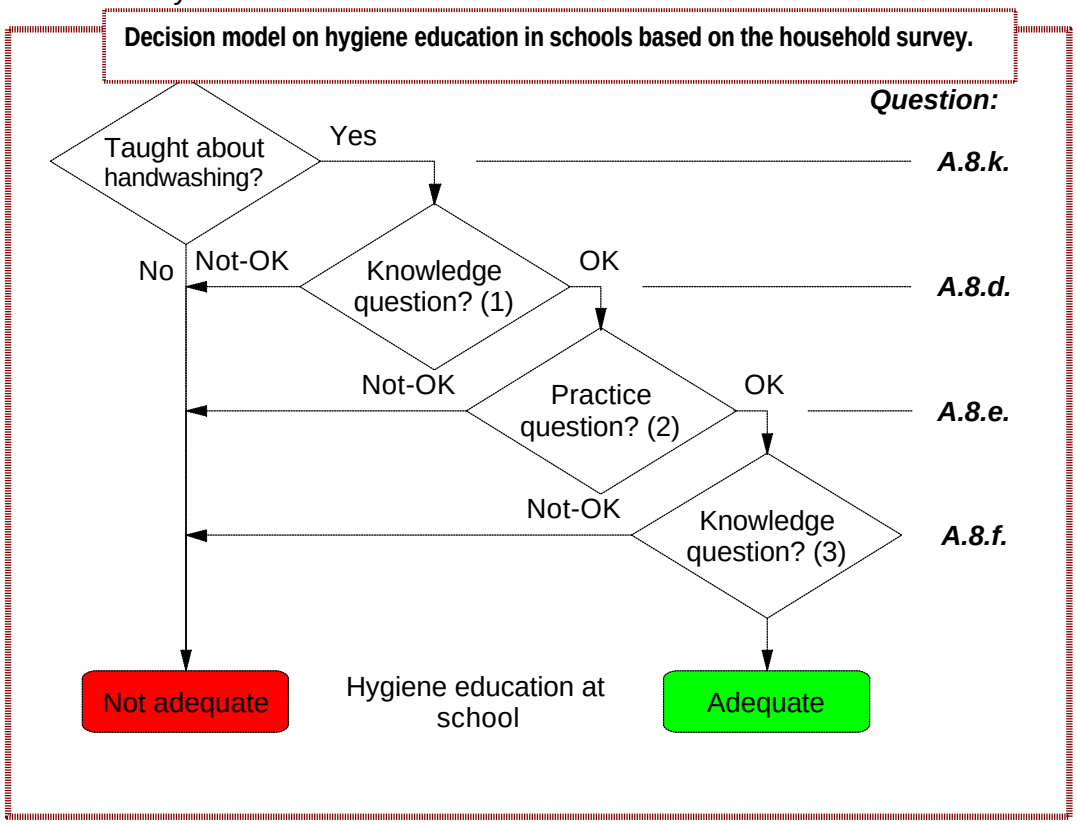
The following decision model was used to ascertain whether a particular household practiced good hygiene at the household level or not.

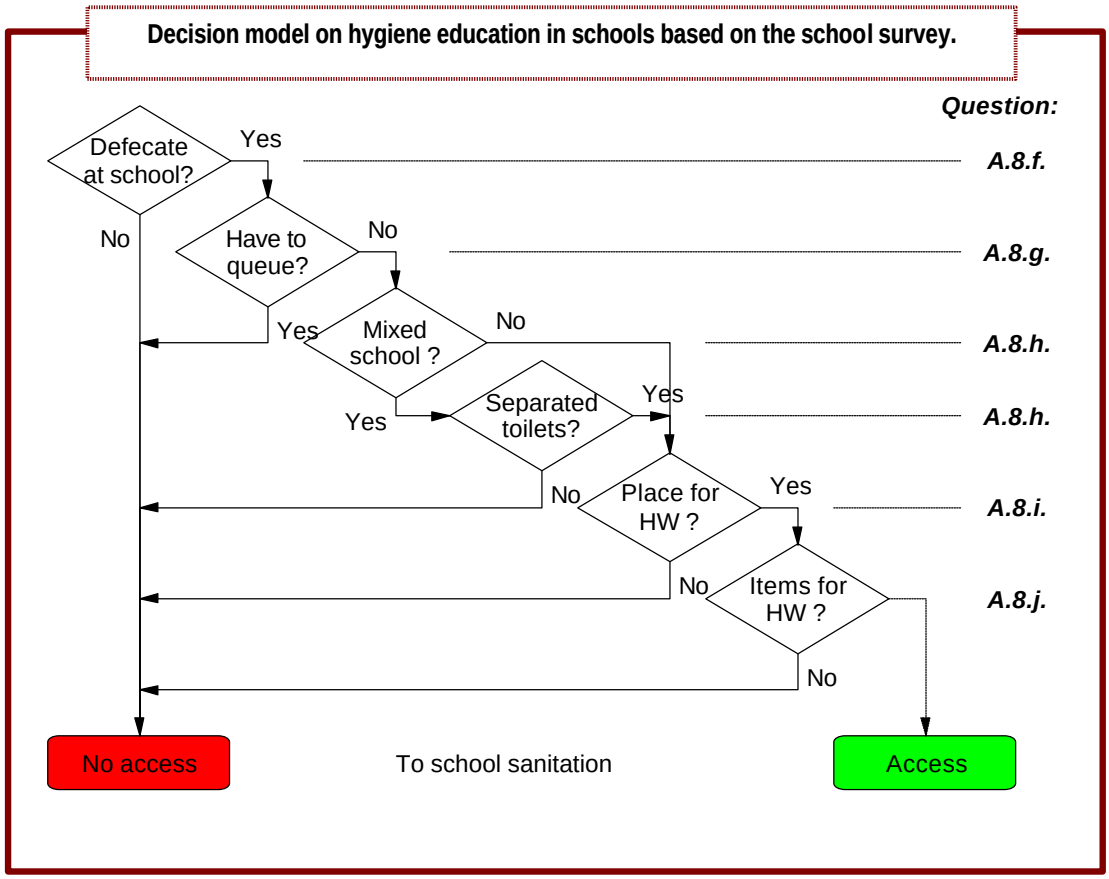
		Q= No of outcome obtained in the HH survey				
		1	2	3	4	5
A = No of outcomes which were positive	1	X	X	N (33%)	N (25%)	N (20%)
	2	X	X	Y (67%)	N (50%)	N (40%)
	3	X	X	Y (100%)	Y (75%)	N (60%)
	4	***X results in non-response*** Y/N means does/doesn't apply hygiene practices (%) "percentage of good practices"			Y (100%)	Y (80%)
	5					Y (100%)
						Good Hygiene Practice
						No Good Hygiene Practice

[10] All the Decision Models used were as per the Toolkit instructions

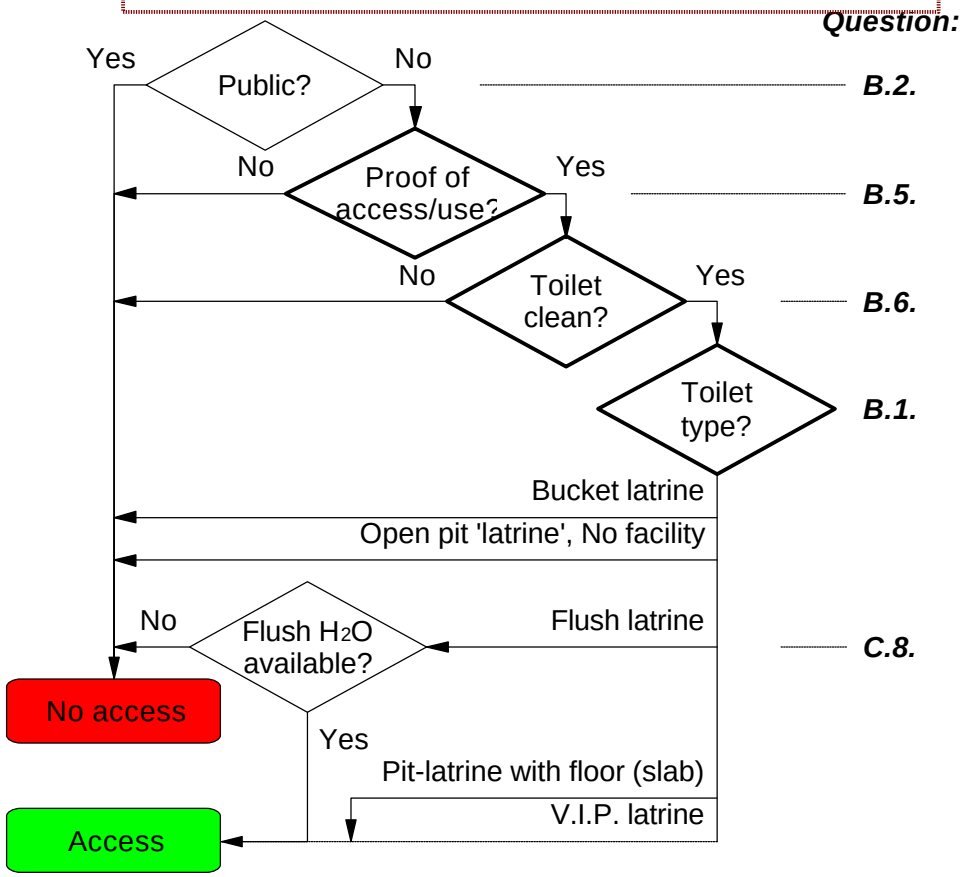
Decision Model: Hygiene Education in Schools

In line with the decision model directives of the Toolkit, the following flow charts formed the basis of the interpretation for hygiene education in schools based on the household survey.

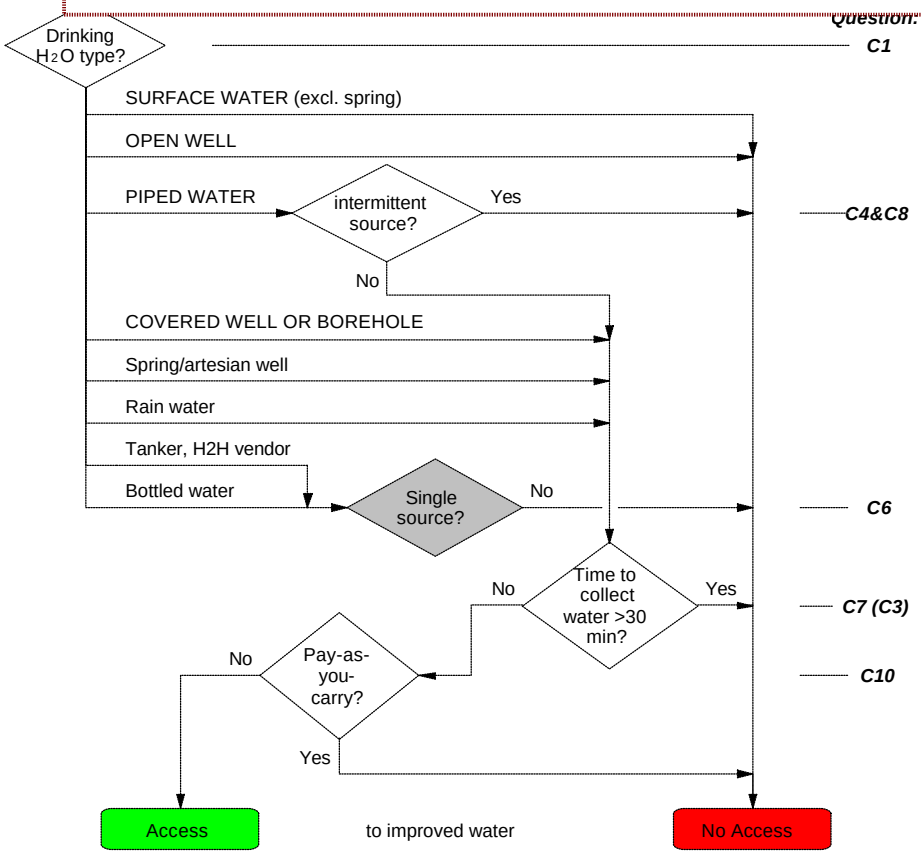




Decision model on household sanitation in flowchart format



Decision model on access to improved water sources at household level.



ANNEXURE A

Village Survey Descriptions

Ndindindi

Narrative Report

The respondent responses towards the interviewees were positive and co-operative. Most people saw the process as an indication that development initiatives would reach their village. Of all the villages surveyed, Ndindindi is the most underdeveloped with very little infrastructure provision and no proper sanitation; some with no sanitation at all and most respondents draw water from the river or nearby stream.

Sanitation

Most of the households did not have acceptable levels of sanitation. Some badly constructed pit toilets were evident, and many respondents were aware of the danger of these toilets. Most of the toilets were almost full and very unhygienic.

Water

The main source of drinking water is piped water to a communal standpipe. Washing is done in the nearby river. The average distance or time to get to the river is approximately 30 minutes. Water from the standpipes is free of charge.

Hygiene Practices

Most of the households had no visible faeces around the household or in the yard and household members generally use washing basin for washing of hands. There was no soap present at any of the households.

Hygiene practices in this village was of a very poor standard and the observations showed that while nearly 50% of the households had a basin of water for washing hands, it was either dirty or had no water in it. In most instances everyone in the household uses the same dirty water.

The stored drinking water was mostly properly closed, although the drawing mechanism is kept on the open, i.e. on top of the container without any cloth to cover or protect it from being contaminated.

Ndatshane

Narrative Report

The interviews were generally good and household members were very co-operative. Only one respondent was negative and discourteous. The distances between houses were substantial and it took the researchers approximately 10 minutes to walk from one house to the next.

This village is highly politicised and the researchers were met by a political councillor who officially welcomed them in the area and also requested for feedback on the problems encountered in the area.

Sanitation

Two remote areas in the village were targeted: one with toilets and one area with no sanitation at all. In the case of the latter area most respondents still went to the bush, field or donga to relieve themselves.

In both instances the hygiene practices were similar with all the respondent households using a communal container for handwashing. In all the households the water was either dirty or very sparse and there was no evidence of soap. The containers for drinking water was mostly dosed but the receptors were uncovered and open to contaminants.

Water

The village has communal standpipes and handpumps. The distance between the households and closest water point are not disproportionate to the scattered nature of the village. The area is mountainous and households are very far apart, thus the water points are also at a distance. The same water is used for drinking and washing. The children interviewed in this village did not seem to think that the distances are too far. There was a general complaint about the quality of the water.

Hygiene Practices

As in Ndindindi, none of the households had dedicated hand-washing facilities and used a washing basin or bucket to wash their hands. In most of the respondent households the water from the general drinking water container is used for hand washing. A few households had a dedicated container for hygiene purposes. In most cases the water was dirty. The use of soap was not evident at any of the households surveyed.

In all the households surveyed, water-drawing mechanisms (cups or jugs) were used. However, they were all left out in the open and prone to contamination. In some instances the cups or jugs were lying in the dirt. There was no evidence that soap was being used.

Nqutu 4: Mashesheleni, Mqhedlana, Ngonini, Jabavu, Masotheni

Narrative Report

Nqutu 4 consists of eight villages of which 5 were selected. The different clusters had different characteristics with Mashesheleni and Mafihleng obviously the poorest of the cluster.

Generally, the respondent responses were positive. There was, however a very clear expectation that the interviewers had influence to speed up the development processes in these remote areas.

Sanitation

The villages had different sanitation profiles:

Mashesheleni and Mqhedlana have no accessible or acceptable sanitation infrastructure. Most respondents used the bushes, field or dongas to relieve themselves. In some areas of these two villages VIPs were in the process of being constructed.

Masotsheni, Jabavu and Ngonini had accessible VIP sanitation. As the toilets were between one and six months old, they were still clean and empty.

Water

All the villages have access to potable, clean water. In Ngonini some respondents still draw water from the river for washing purposes. The villages have communal standpipes or handpumps and they use the same source for both drinking and hygiene purposes. In some villages the water is free and where standpipe water is supplied respondents have to pay for the water. In this instance some preferred to draw water from the river for drinking and washing.

There was discord amongst the respondents regarding the payment or non-payment for water. In Masotsheni and Mqhedlana villagers have to purchase a '"key"" which entitles a household to an amount of water, depending on what they are prepared to pay. In the other villages the water was for free, irrespective of the quantities used.

It was notable that, even though households have access to water, the quality was poor and the water is often dirty. There were very long queues at the water points.

Hygiene Practices

None of the households surveyed in this village cluster had dedicated hand-washing facilities and they used a washing basin or bucket for hygiene purposes. This is the same water from the drinking water container. No water is kept aside for the washing of hands. Where water is poured, immediately after using the toilet, the habit of applying soap was not evident.

In all the households surveyed, water-drawing mechanisms (cups or jugs) were used. However, they were all left out in the open and prone to contamination. In some instances the cups or jugs were lying in the dirt. There was no evidence that soap was being used.

Ngoboti This is part of the larger village of Masotsheni and is very isolated from the main road.	The water source is a borehole. As the water usually runs out during peak months/hours there is a ration system operational in the village. The problem here seems to be that there is one borehole pump, which serves the entire village. All the households have VIP toilets, which seem to have been recently built. People do not pay for water.
Ngobintsimbi This is located with Bambisanani and is part of the greater Masotsheni	The water source is a borehole installed in 1983. Villagers do not pay for this water. Recently, the village got piped water, which they have to pay for. The result is that this water is not used. A "key" payment system is used. Some parts of the village have VIP toilets, while others are still being built.
Jabavu This is part of the greater Masotsheni and is also isolated from other similar villages.	The water source is a borehole with a hand pump and villagers get water for free. Some households still use the nearby river for washing purposes. This village has a combination of pit latrines and recently built VIP toilets. Those that do not have the VIP toilets say they are usually water-clogged. It appears that the pit toilets were built on a waterbed.
Ngonini	Ngonini households get their drinking water from a borehole with a hand pump and the water is free. They do their washing in the nearby river. All the households have VIP toilets, which look as if they have been recently built. Before these were built they used pit latrines or the bush.

Masotsheni This is a village within the greater Masotsheni village	The water source is a communal tap with piped water, which has just been installed. Villagers buy a key to access this water and the key prices range from R10 – R50 and can last up to two months (R50). The water quality is good and respondents said that the water is very clean and pure. The VIP toilets are still under construction and the project will be completed in 2003. They currently use a combination of pit latrines or the bushes.

ANNEXURE B

Mobilisation – Contact Details

The following table provides the contact details of persons contacted to gain access to the different villages:

VILLAGE	ENTITY	CONTACT	CONTACT NUMBER
NDANTSHANE	NDAT LOWER PRIMARY	Mrs Buthelezi	083.959.1110
	LINDUKUHLE PRIMARY	Ms Jean Mdlalose	083.553.3462
NDINDINDI	QEDIPHIKA PRIMARY	Mrs Ngcobo	082.4077.470
NQUTU 4	MASOTSHENI PRIMARY	Mr Mazibuko	083.367.3366 034.2718073
	BUZUBONA PRIMARY	Mr Nathi	072.177.6319
CONTACTS	NQUTU MAYOR:	Mr Mazibuko	082.805. 4529
	COUNCILLOR:	Mrs Zwane	082.805.4673
	COUNCILLOR:	Mr Ngobese	082.805.4822
	COUNCILLOR:	Mr Dhlamini	082.805.4855
	COUNCILLOR:	Mrs Ntuli	082.805.4826
	COUNCILLOR:	Mr Mazubku (same as Mayor)	082.805. 4529
	COUNCILLOR:	Mr Ndatshane	082.805.4855
	NKOSI:	Mr Molefe	
	NKOSI:	Mr Ngobese	
	INDUNA:	Mr Bhengu	082.8633.546

ANNEXURE C

Data Sheets as per Indicator Verification

General Household Questionnaire

Summary On The Y-Axis Per Item

This summary is not in line with the summative assessment as specified in the Toolkit instructions. It is included as an example of a more user-friendly set of results that could feasibly be used in a formative assessment. However, the data analysis system as set up for the Toolkit is not compatible with these outputs and in order to obtain summaries of this nature, a different programme would need to be written.

Appropriate Household Practices

Analysis of all Households per Outcome

1. A1 - Where Do You Usually Wash Your Hands? + A2 - Items Present	
No Of Households	243
No Of Households With Positive Outcomes	68
% Of Positive Outcomes	**27.98 %**
Decision Across Households	**No Good** Hygiene Practice
2. A3 - When Do You Usually Wash Your Hands?	
No Of Households	242
No Of Households With Positive Outcomes	195
% Of Positive Outcomes	**80.58 %**
Decision Across Households	**Good** Hygiene Practice
3. A4 - Are There Children's Faeces Around Household?	
No Of Households	237
No Of Households With Positive Outcomes	234
% Of Positive Outcomes	**98.73 %**
Decision Across Households	**Good** Hygiene Practice

4. A5 - Disposal Of Child's Stools/Diapers	
No Of Households	117
No Of Households With Young Children	117
No Of Households With Positive Outcomes	92
% Of Positive Outcomes	**78.63 %**
Decision Across Households	**Good** Hygiene Practice

5. A6 - Household Water Drawing Mechanism + A7 - Manner In Which Drawn	
No Of Households	236
No Of Households With Positive Outcomes	80
% Of Positive Outcomes	**33.9 %**
Decision Across Households	**No Good** Hygiene Practice

General Household Questionnaire

Target 1: Appropriate Household Practices

Analysis of all Outcomes per Household

Percentage Of Households With Good Hygiene Practices = 43.21% (105 / 243)

ID	OUTCOME 1 Hand wash - where	OUTCOME 2 Hand wash - when	OUTCOME 3 Visible faeces	OUTCOME 4 Faeces disposal	OUTCOME 5 Drinking water drawing	GOOD HYGIENE PRACTICES
11	NEG	NEG	POS	NEG	POS	**NO** (40%)
12	NEG	NEG	POS	POS	POS	**NO** (60%)
13	NEG	NEG	POS	NEG	POS	**NO** (40%)
14	NEG	NEG	POS	NEG	POS	**NO** (40%)
15	NEG	POS	POS	POS	POS	**YES** (80%)
16	NEG	POS	POS	POS	POS	**YES** (80%)
17	NEG	POS	POS	NEG	POS	**NO** (60%)
18	NEG	POS	POS	NEG	POS	**NO** (60%)
19	NEG	POS	POS	POS	POS	**YES** (80%)
20	NEG	POS	POS	NEG	POS	**NO** (60%)
22	NEG	POS	POS	NEG	POS	**NO** (60%)

23	POS	NEG	POS	POS	POS	**YES** (80%)
24	POS	POS	POS	NEG	NEG	**NO** (60%)
25	POS	NEG	POS	POS	POS	**YES** (80%)
26	POS	POS	POS	NEG	NEG	**NO** (60%)
27	NEG	POS	POS	POS	POS	**YES** (80%)
28	POS	POS	POS	NEG	POS	**YES** (80%)
29	POS	POS	POS	NEG	POS	**YES** (80%)
31	NEG	POS	NEG	POS	POS	**NO** (60%)
32	NEG	POS	POS	POS	NEG	**NO** (60%)
33	POS	POS	POS	NEG	POS	**YES** (80%)
35	POS	POS	POS	POS	POS	**YES** (100%)
36	POS	POS	POS	POS	POS	**YES** (100%)
39	POS	POS	POS	POS	POS	**YES** (100%)
40	NEG	NEG	POS	NEG	NEG	**NO** (20%)
41	POS	NEG	POS	POS	POS	**YES** (80%)
44	POS	POS	POS	POS	NEG	**YES** (80%)
46	NEG	POS	POS	POS	POS	**YES** (80%)
47	NEG	POS	POS	POS	POS	**YES** (80%)
48	POS	NEG	POS	NEG	POS	**NO** (60%)
49	NEG	POS	NEG	POS	POS	**NO** (60%)
50	NEG	NEG	POS	POS	POS	**NO** (60%)
51	NEG	POS	POS	NEG	NEG	**NO** (40%)
52	NEG	POS	POS	POS	POS	**YES** (80%)
53	NEG	POS	POS	NEG	NEG	**NO** (40%)
54	NEG	POS	POS	POS	POS	**YES** (80%)
55	NEG	POS	POS	POS	POS	**YES** (80%)
56	NEG	POS	POS	POS	NEG	**NO** (60%)
57	NEG	POS	POS	NEG	POS	**NO** (60%)
58	NEG	NEG	POS	NEG	POS	**NO** (40%)
59	NEG	POS	POS	POS	POS	**YES** (80%)
60	NEG	POS	POS	POS	POS	**YES** (80%)
61	NEG	POS	POS	POS	POS	**YES** (80%)
62	NEG	POS	POS	POS	POS	**YES** (80%)
63	NEG	POS	POS	POS	NEG	**NO** (60%)
64	POS	NEG	POS	NEG	NEG	**NO** (40%)
66	NEG	POS	POS	POS	NEG	**NO** (60%)
67	POS	POS	POS	POS	POS	**YES** (100%)
68	POS	POS	POS	POS	POS	**YES** (100%)

69	NEG	POS	POS	NEG	POS	**NO** (60%)
70	NEG	POS	POS	POS	POS	**YES** (80%)
71	NEG	POS	POS	POS	NEG	**NO** (60%)
72	NEG	NEG	POS	POS	POS	**NO** (60%)
73	NEG	POS	POS	NEG	POS	**NO** (60%)
75	NEG	POS	POS	NEG	POS	**NO** (60%)
76	NEG	POS	POS	POS	POS	**YES** (80%)
77	NEG	NEG	POS	POS	POS	**NO** (60%)
78	POS	POS	POS	POS	POS	**YES** (100%)
79	NEG	NEG	POS	NEG	POS	**NO** (40%)
80	NEG	NEG	POS	NEG	POS	**NO** (40%)
81	NEG	POS	POS	NEG	POS	**NO** (60%)
82	NEG	POS	POS	NEG	NEG	**NO** (40%)
83	NEG	POS	POS	NEG	POS	**NO** (60%)
84	NEG	POS	NEG	NEG	POS	**NO** (40%)
85	NEG	NEG	POS	POS	POS	**NO** (60%)
86	NEG	NEG	POS	POS	POS	**NO** (60%)
87	NEG	POS	POS	NEG	POS	**NO** (60%)
88	NEG	POS	POS	POS	POS	**YES** (80%)
89	NEG	POS	POS	POS	POS	**YES** (80%)
90	NEG	NEG	POS	NEG	NEG	**NO** (20%)
91	NEG	POS	POS	NEG	POS	**NO** (60%)
92	NEG	POS	POS	POS	POS	**YES** (80%)
93	NEG	POS	POS	NEG	NEG	**NO** (40%)
94	NEG	POS	POS	POS	POS	**YES** (80%)
95	NEG	NEG	POS	NEG	POS	**NO** (40%)
96	NEG	NEG	POS	NEG	POS	**NO** (40%)
97	NEG	POS	POS	POS	POS	**YES** (80%)
98	NEG	POS	POS	NEG	POS	**NO** (60%)
99	NEG	POS	POS	NEG	POS	**NO** (60%)
100	NEG	POS	POS	POS	POS	**YES** (80%)
101	NEG	POS	POS	POS	POS	**YES** (80%)
102	POS	POS	POS	POS	POS	**YES** (100%)
104	NEG	NEG	POS	NEG	POS	**NO** (40%)
105	NEG	POS	POS	POS	POS	**YES** (80%)
106	NEG	POS	POS	POS	POS	**YES** (80%)
107	NEG	POS	POS	NEG	POS	**NO** (60%)
108	POS	NEG	POS	POS	NEG	**NO** (60%)

109	NEG	POS	POS	NEG	POS	**NO** (60%)
110	NEG	POS	POS	POS	NEG	**NO** (60%)
111	NEG	POS	POS	NEG	NEG	**NO** (40%)
112	NEG	POS	POS	POS	POS	**YES** (80%)
113	NEG	NEG	POS	NEG	POS	**NO** (40%)
114	NEG	POS	POS	NEG	NEG	**NO** (40%)
115	NEG	POS	POS	POS	NEG	**NO** (60%)
116	NEG	POS	POS	POS	NEG	**NO** (60%)
117	NEG	POS	NEG	POS	NEG	**NO** (40%)
118	NEG	POS	POS	NEG	POS	**NO** (60%)
119	NEG	POS	POS	NEG	POS	**NO** (60%)
120	NEG	POS	POS	NEG	POS	**NO** (60%)
122	NEG	POS	POS	NEG	NEG	**NO** (40%)
123	NEG	NEG	POS	POS	NEG	**NO** (40%)
124	NEG	POS	POS	POS	POS	**YES** (80%)
125	NEG	POS	POS	NEG	NEG	**NO** (40%)
126	NEG	NEG	POS	POS	POS	**NO** (60%)
128	NEG	NEG	POS	POS	POS	**NO** (60%)
129	NEG	POS	POS	NEG	NEG	**NO** (40%)
130	NEG	POS	POS	NEG	POS	**NO** (60%)
131	POS	POS	POS	NEG	POS	**YES** (80%)
132	POS	POS	POS	NEG	POS	**YES** (80%)
133	NEG	NEG	POS	NEG	POS	**NO** (40%)
134	NEG	POS	POS	POS	POS	**YES** (80%)
135	NEG	POS	POS	NEG	NEG	**NO** (40%)
136	NEG	POS	POS	NEG	POS	**NO** (60%)
137	NEG	POS	POS	NEG	POS	**NO** (60%)
138	NEG	POS	POS	NEG	POS	**NO** (60%)
140	NEG	POS	POS	NEG	POS	**NO** (60%)
141	NEG	NEG	POS	NEG	NEG	**NO** (20%)
142	NEG	POS	POS	POS	POS	**YES** (80%)
143	POS	POS	POS	NEG	NEG	**NO** (60%)
144	POS	POS	POS	NEG	NEG	**NO** (60%)
146	POS	POS	POS	NEG	POS	**YES** (80%)
150	NEG	NEG	POS	NEG	POS	**NO** (40%)
151	POS	POS	POS	POS	POS	**YES** (100%)
152	POS	POS	POS	POS	POS	**YES** (100%)
153	NEG	POS	POS	NEG	POS	**NO** (60%)

154	NEG	NEG	POS	POS	POS	**NO** (60%)
155	NEG	POS	POS	NEG	POS	**NO** (60%)
156	NEG	NEG	POS	NEG	POS	**NO** (40%)
157	NEG	NEG	POS	NEG	NEG	**NO** (20%)
158	NEG	POS	POS	POS	POS	**YES** (80%)
159	NEG	NEG	POS	NEG	POS	**NO** (40%)
161	NEG	POS	NEG	POS	NEG	**NO** (40%)
162	NEG	NEG	POS	POS	NEG	**NO** (40%)
163	NEG	POS	POS	NEG	POS	**NO** (60%)
164	NEG	POS	POS	POS	POS	**YES** (80%)
165	NEG	POS	POS	NEG	POS	**NO** (60%)
166	POS	POS	POS	NEG	POS	**YES** (80%)
167	NEG	POS	POS	NEG	POS	**NO** (60%)
168	NEG	POS	POS	NEG	POS	**NO** (60%)
169	NEG	POS	POS	POS	POS	**YES** (80%)
170	NEG	POS	POS	NEG	POS	**NO** (60%)
171	NEG	POS	POS	NEG	POS	**NO** (60%)
172	POS	POS	POS	POS	NEG	**YES** (80%)
173	POS	POS	POS	POS	POS	**YES** (100%)
174	NEG	POS	POS	NEG	POS	**NO** (60%)
175	NEG	POS	POS	NEG	POS	**NO** (60%)
176	POS	POS	POS	POS	POS	**YES** (100%)
177	POS	POS	POS	POS	POS	**YES** (100%)
178	POS	POS	POS	NEG	POS	**YES** (80%)
179	POS	POS	POS	POS	NEG	**YES** (80%)
180	NEG	POS	POS	NEG	POS	**NO** (60%)
181	NEG	NEG	POS	NEG	POS	**NO** (40%)
182	NEG	POS	POS	NEG	POS	**NO** (60%)
183	NEG	POS	POS	NEG	POS	**NO** (60%)
184	NEG	POS	POS	POS	POS	**YES** (80%)
185	NEG	POS	POS	NEG	POS	**NO** (60%)
186	NEG	NEG	POS	NEG	POS	**NO** (40%)
187	NEG	POS	POS	POS	POS	**YES** (80%)
188	POS	POS	POS	NEG	POS	**YES** (80%)
190	POS	POS	POS	POS	POS	**YES** (100%)
191	NEG	POS	POS	NEG	POS	**NO** (60%)
192	NEG	POS	POS	NEG	POS	**NO** (60%)
193	NEG	POS	POS	NEG	POS	**NO** (60%)

194	POS	POS	POS	NEG	POS	**YES** (80%)
195	NEG	POS	POS	NEG	POS	**NO** (60%)
196	NEG	NEG	POS	POS	NEG	**NO** (40%)
198	NEG	POS	POS	POS	POS	**YES** (80%)
199	POS	POS	POS	NEG	POS	**YES** (80%)
200	NEG	POS	POS	POS	POS	**YES** (80%)
201	POS	POS	POS	POS	NEG	**YES** (80%)
202	POS	POS	POS	NEG	POS	**YES** (80%)
203	POS	NEG	POS	POS	POS	**YES** (80%)
204	NEG	POS	POS	POS	POS	**YES** (80%)
205	NEG	POS	POS	POS	POS	**YES** (80%)
206	POS	POS	POS	NEG	POS	**YES** (80%)
207	NEG	POS	POS	NEG	POS	**NO** (60%)
208	NEG	POS	POS	NEG	POS	**NO** (60%)
209	NEG	POS	POS	NEG	POS	**NO** (60%)
210	POS	NEG	POS	POS	NEG	**NO** (60%)
211	POS	POS	POS	POS	NEG	**YES** (80%)
212	POS	NEG	POS	POS	POS	**YES** (80%)
213	NEG	POS	POS	NEG	POS	**NO** (60%)
214	NEG	POS	POS	POS	POS	**YES** (80%)
215	NEG	POS	POS	NEG	POS	**NO** (60%)
216	NEG	POS	POS	POS	POS	**YES** (80%)
217	NEG	POS	POS	NEG	NEG	**NO** (40%)
218	NEG	POS	POS	POS	POS	**YES** (80%)
219	POS	POS	POS	NEG	POS	**YES** (80%)
220	NEG	POS	POS	NEG	NEG	**NO** (40%)
221	POS	POS	POS	POS	NEG	**YES** (80%)
222	POS	POS	POS	NEG	NEG	**NO** (60%)
223	NEG	POS	POS	POS	NEG	**NO** (60%)
224	NEG	POS	POS	POS	POS	**YES** (80%)
225	NEG	POS	POS	NEG	POS	**NO** (60%)
226	POS	POS	POS	POS	NEG	**YES** (80%)
227	POS	POS	POS	POS	NEG	**YES** (80%)
228	POS	POS	POS	NEG	POS	**YES** (80%)
229	POS	POS	POS	POS	POS	**YES** (100%)
230	POS	NEG	POS	POS	POS	**YES** (80%)
231	POS	POS	POS	POS	POS	**YES** (100%)
232	POS	POS	POS	NEG	POS	**YES** (80%)

233	POS	POS	POS	NEG	NEG	**NO** (60%)
234	NEG	NEG	POS	POS	POS	**NO** (60%)
235	NEG	POS	POS	POS	POS	**YES** (80%)
236	NEG	POS	POS	POS	POS	**YES** (80%)
237	NEG	NEG	POS	NEG	POS	**NO** (40%)
238	POS	NEG	POS	NEG	POS	**NO** (60%)
239	NEG	NEG	POS	POS	POS	**NO** (60%)
240	NEG	POS	POS	POS	POS	**YES** (80%)
241	NEG	POS	POS	NEG	POS	**NO** (60%)
242	NEG	POS	POS	POS	POS	**YES** (80%)
243	POS	POS	POS	NEG	POS	**YES** (80%)
244	NEG	POS	NEG	POS	POS	**NO** (60%)
246	NEG	POS	POS	NEG	POS	**NO** (60%)
247	POS	POS	POS	POS	POS	**YES** (100%)
248	POS	POS	POS	POS	NEG	**YES** (80%)
249	NEG	POS	POS	NEG	NEG	**NO** (40%)
250	POS	POS	POS	NEG	NEG	**NO** (60%)
251	NEG	POS	POS	NEG	POS	**NO** (60%)
252	NEG	POS	POS	NEG	POS	**NO** (60%)
253	NEG	POS	POS	POS	POS	**YES** (80%)
254	NEG	POS	POS	NEG	POS	**NO** (60%)
255	NEG	NEG	POS	POS	POS	**NO** (60%)
256	NEG	POS	POS	NEG	POS	**NO** (60%)
257	NEG	POS	POS	NEG	POS	**NO** (60%)
258	POS	POS	POS	POS	NEG	**YES** (80%)
259	POS	POS	POS	POS	POS	**YES** (100%)
260	POS	POS	POS	NEG	NEG	**NO** (60%)
261	POS	POS	POS	NEG	POS	**YES** (80%)
262	POS	POS	POS	NEG	NEG	**NO** (60%)
263	NEG	POS	POS	POS	POS	**YES** (80%)
264	NEG	POS	POS	POS	POS	**YES** (80%)
265	NEG	POS	POS	NEG	POS	**NO** (60%)
266	POS	POS	POS	POS	POS	**YES** (100%)
267	POS	NEG	POS	NEG	NEG	**NO** (40%)
268	POS	POS	POS	NEG	POS	**YES** (80%)
269	NEG	POS	POS	POS	POS	**YES** (80%)
270	NEG	POS	POS	NEG	POS	**NO** (60%)
271	NEG	POS	POS	POS	POS	**YES** (80%)

272	NEG	POS	POS	POS	POS	**YES** (80%)
273	NEG	POS	POS	POS	POS	**YES** (80%)
274	NEG	POS	POS	NEG	POS	**NO** (60%)
275	NEG	POS	POS	NEG	POS	**NO** (60%)

General Household Questionnaire

Target 2: Use/Access To Improved Sanitation
Analysis Of Facilities Per Household

Percentage Of Households With Use/Access To Improved Sanitation = 60.08% (146 / 243)

ID	Improved Type?	H2O Or Not Needed?	Shared?	Public?	Use & Access?	Excreta Free?	IMPROVED SANITATION ACCESS?	Paid For? (If Public)
11	YES	YES	YES	YES	N/A	N/A	**NO**	NO
12	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
13	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
14	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
15	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
16	YES	YES	NO	N/A	YES	YES	**YES**	N/A
17	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
18	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
19	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
20	YES	YES	NO	N/A	YES	YES	**YES**	N/A
22	YES	YES	NO	N/A	YES	NO	**NO**	N/A
23	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
24	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
25	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
26	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
27	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
28	YES	YES	NO	N/A	YES	NO	**NO**	N/A
29	YES	YES	NO	N/A	YES	YES	**YES**	N/A
31	YES	YES	NO	N/A	YES	YES	**YES**	N/A
32	YES	YES	YES	YES	N/A	N/A	**NO**	NO
33	YES	YES	NO	N/A	YES	YES	**YES**	N/A
35	YES	YES	NO	N/A	YES	YES	**YES**	N/A
36	YES	YES	NO	N/A	YES	YES	**YES**	N/A

39	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
40	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
41	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
44	YES	YES	NO	N/A	YES	YES	**YES**	N/A
46	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
47	YES	YES	NO	N/A	YES	YES	**YES**	N/A
48	YES	YES	NO	N/A	YES	NO	**NO**	N/A
49	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
50	YES	YES	NO	N/A	YES	YES	**YES**	N/A
51	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
52	YES	YES	NO	N/A	YES	YES	**YES**	N/A
53	YES	YES	NO	N/A	YES	NO	**NO**	N/A
54	YES	YES	NO	N/A	YES	NO	**NO**	N/A
55	YES	YES	NO	N/A	YES	YES	**YES**	N/A
56	YES	YES	NO	N/A	YES	YES	**YES**	N/A
57	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
58	YES	YES	NO	N/A	YES	NO	**NO**	N/A
59	YES	YES	NO	N/A	YES	NO	**NO**	N/A
60	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
61	YES	YES	NO	N/A	YES	YES	**YES**	N/A
62	YES	YES	YES	YES	N/A	N/A	**NO**	NO
63	YES	YES	YES	NO	YES	YES	**YES**	N/A
64	YES	YES	NO	N/A	YES	YES	**YES**	N/A
66	YES	YES	NO	N/A	YES	YES	**YES**	N/A
67	YES	YES	NO	N/A	YES	YES	**YES**	N/A
68	YES	YES	NO	N/A	YES	YES	**YES**	N/A
69	YES	YES	NO	N/A	YES	YES	**YES**	N/A
70	YES	YES	NO	N/A	YES	YES	**YES**	N/A
71	YES	YES	NO	N/A	YES	YES	**YES**	N/A
72	YES	YES	NO	N/A	YES	YES	**YES**	N/A
73	YES	YES	NO	N/A	YES	YES	**YES**	N/A
75	YES	YES	NO	N/A	YES	YES	**YES**	N/A
76	YES	YES	NO	N/A	YES	YES	**YES**	N/A
77	YES	YES	NO	N/A	YES	YES	**YES**	N/A
78	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
79	YES	YES	NO	N/A	YES	YES	**YES**	N/A
80	YES	YES	NO	N/A	YES	YES	**YES**	N/A
81	YES	YES	NO	N/A	YES	YES	**YES**	N/A

82	YES	YES	NO	N/A	YES	YES	**YES**	N/A
83	YES	YES	NO	N/A	YES	YES	**YES**	N/A
84	YES	YES	NO	N/A	YES	YES	**YES**	N/A
85	YES	YES	NO	N/A	YES	YES	**YES**	N/A
86	YES	YES	NO	N/A	YES	YES	**YES**	N/A
87	YES	YES	NO	N/A	YES	YES	**YES**	N/A
88	YES	YES	YES	NO	NO	N/A	**NO**	N/A
89	YES	YES	NO	N/A	YES	YES	**YES**	N/A
90	YES	YES	NO	N/A	YES	YES	**YES**	N/A
91	YES	YES	NO	N/A	YES	YES	**YES**	N/A
92	YES	YES	NO	N/A	YES	YES	**YES**	N/A
93	YES	YES	NO	N/A	YES	YES	**YES**	N/A
94	YES	YES	NO	N/A	YES	YES	**YES**	N/A
95	YES	YES	NO	N/A	YES	YES	**YES**	N/A
96	YES	YES	NO	N/A	YES	YES	**YES**	N/A
97	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
98	YES	YES	NO	N/A	YES	YES	**YES**	N/A
99	YES	YES	NO	N/A	YES	YES	**YES**	N/A
100	YES	YES	NO	N/A	YES	YES	**YES**	N/A
101	YES	YES	NO	N/A	YES	YES	**YES**	N/A
102	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
104	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
105	YES	YES	NO	N/A	YES	YES	**YES**	N/A
106	YES	YES	NO	N/A	YES	YES	**YES**	N/A
107	YES	YES	NO	N/A	YES	YES	**YES**	N/A
108	YES	YES	NO	N/A	YES	YES	**YES**	N/A
109	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
110	YES	YES	NO	N/A	YES	YES	**YES**	N/A
111	YES	YES	NO	N/A	YES	YES	**YES**	N/A
112	YES	YES	NO	N/A	YES	YES	**YES**	N/A
113	YES	YES	NO	N/A	YES	YES	**YES**	N/A
114	YES	YES	NO	N/A	YES	YES	**YES**	N/A
115	YES	YES	NO	N/A	YES	YES	**YES**	N/A
116	YES	YES	NO	N/A	YES	YES	**YES**	N/A
117	YES	YES	YES	YES	N/A	N/A	**NO**	NO
118	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
119	YES	YES	NO	N/A	YES	YES	**YES**	N/A
120	YES	YES	NO	N/A	YES	YES	**YES**	N/A

122	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
123	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
124	YES	YES	NO	N/A	YES	YES	**YES**	N/A
125	YES	YES	NO	N/A	YES	YES	**YES**	N/A
126	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
128	YES	YES	NO	N/A	YES	YES	**YES**	N/A
129	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
130	YES	YES	NO	N/A	YES	YES	**YES**	N/A
131	YES	YES	NO	N/A	YES	YES	**YES**	N/A
132	YES	YES	NO	N/A	YES	YES	**YES**	N/A
133	YES	YES	NO	N/A	YES	YES	**YES**	N/A
134	YES	YES	NO	N/A	YES	YES	**YES**	N/A
135	YES	YES	NO	N/A	YES	YES	**YES**	N/A
136	YES	YES	NO	N/A	YES	YES	**YES**	N/A
137	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
138	YES	YES	NO	N/A	YES	YES	**YES**	N/A
140	YES	YES	NO	N/A	YES	YES	**YES**	N/A
141	YES	YES	NO	N/A	YES	YES	**YES**	N/A
142	YES	YES	NO	N/A	YES	YES	**YES**	N/A
143	YES	YES	NO	N/A	YES	YES	**YES**	N/A
144	YES	YES	NO	N/A	YES	YES	**YES**	N/A
146	YES	YES	NO	N/A	YES	YES	**YES**	N/A
150	YES	YES	NO	N/A	YES	YES	**YES**	N/A
151	YES	YES	NO	N/A	YES	YES	**YES**	N/A
152	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
153	YES	YES	NO	N/A	YES	YES	**YES**	N/A
154	YES	YES	NO	N/A	YES	YES	**YES**	N/A
155	YES	YES	NO	N/A	YES	YES	**YES**	N/A
156	YES	YES	NO	N/A	YES	YES	**YES**	N/A
157	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
158	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
159	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
161	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
162	YES	YES	NO	N/A	YES	YES	**YES**	N/A
163	YES	YES	NO	N/A	YES	YES	**YES**	N/A
164	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
165	YES	YES	NO	N/A	YES	YES	**YES**	N/A
166	YES	YES	NO	N/A	YES	YES	**YES**	N/A

167	YES	YES	NO	N/A	YES	NO	**NO**	N/A
168	YES	YES	NO	N/A	YES	YES	**YES**	N/A
169	YES	YES	NO	N/A	YES	NO	**NO**	N/A
170	YES	YES	NO	N/A	YES	YES	**YES**	N/A
171	YES	YES	YES	NO	YES	NO	**NO**	N/A
172	YES	YES	NO	N/A	YES	YES	**YES**	N/A
173	YES	YES	NO	N/A	YES	YES	**YES**	N/A
174	YES	YES	NO	N/A	YES	NO	**NO**	N/A
175	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
176	YES	YES	NO	N/A	YES	YES	**YES**	N/A
177	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
178	YES	YES	NO	N/A	YES	YES	**YES**	N/A
179	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
180	YES	YES	NO	N/A	YES	YES	**YES**	N/A
181	YES	YES	NO	N/A	YES	YES	**YES**	N/A
182	YES	YES	NO	N/A	YES	YES	**YES**	N/A
183	YES	YES	NO	N/A	YES	YES	**YES**	N/A
184	YES	YES	NO	N/A	YES	YES	**YES**	N/A
185	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
186	YES	YES	NO	N/A	YES	YES	**YES**	N/A
187	YES	YES	NO	N/A	YES	YES	**YES**	N/A
188	YES	YES	NO	N/A	YES	YES	**YES**	N/A
190	YES	YES	NO	N/A	YES	YES	**YES**	N/A
191	YES	YES	NO	N/A	YES	NO	**NO**	N/A
192	YES	YES	NO	N/A	YES	NO	**NO**	N/A
193	YES	YES	YES	NO	YES	YES	**YES**	N/A
194	YES	YES	NO	N/A	YES	YES	**YES**	N/A
195	YES	YES	YES	NO	YES	YES	**YES**	N/A
196	YES	YES	NO	N/A	YES	YES	**YES**	N/A
198	YES	YES	NO	N/A	YES	YES	**YES**	N/A
199	YES	YES	NO	N/A	YES	YES	**YES**	N/A
200	YES	YES	NO	N/A	YES	YES	**YES**	N/A
201	YES	YES	NO	N/A	YES	YES	**YES**	N/A
202	YES	YES	NO	N/A	YES	YES	**YES**	N/A
203	YES	YES	NO	N/A	YES	YES	**YES**	N/A
204	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
205	YES	YES	NO	N/A	YES	YES	**YES**	N/A
206	YES	YES	NO	N/A	YES	NO	**NO**	N/A

207	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
208	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
209	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
210	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
211	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
212	YES	YES	YES	NO	YES	NO	**NO**	N/A
213	YES	YES	YES	NO	YES	NO	**NO**	N/A
214	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
215	YES	YES	NO	N/A	YES	YES	**YES**	N/A
216	YES	YES	NO	N/A	YES	YES	**YES**	N/A
217	YES	YES	NO	N/A	YES	YES	**YES**	N/A
218	YES	YES	NO	N/A	YES	YES	**YES**	N/A
219	YES	YES	NO	N/A	YES	YES	**YES**	N/A
220	YES	YES	NO	N/A	YES	NO	**NO**	N/A
221	YES	YES	NO	N/A	YES	YES	**YES**	N/A
222	YES	YES	NO	N/A	YES	YES	**YES**	N/A
223	YES	YES	NO	N/A	YES	NO	**NO**	N/A
224	YES	YES	YES	NO	YES	YES	**YES**	N/A
225	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
226	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
227	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
228	YES	YES	YES	YES	N/A	N/A	**NO**	NO
229	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
230	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
231	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
232	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
233	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
234	YES	YES	NO	N/A	YES	NO	**NO**	N/A
235	YES	YES	NO	N/A	YES	YES	**YES**	N/A
236	YES	YES	NO	N/A	YES	YES	**YES**	N/A
237	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
238	YES	YES	NO	N/A	YES	NO	**NO**	N/A
239	YES	YES	NO	N/A	YES	YES	**YES**	N/A
240	YES	YES	NO	N/A	YES	NO	**NO**	N/A
241	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
242	YES	YES	NO	N/A	YES	NO	**NO**	N/A
243	YES	YES	YES	NO	YES	YES	**YES**	N/A
244	YES	YES	NO	N/A	NO	N/A	**NO**	N/A

246	YES	YES	NO	N/A	YES	YES	**YES**	N/A
247	NO	N/A	N/A	N/A	N/A	N/A	**NO**	N/A
248	YES	YES	YES	YES	N/A	N/A	**NO**	NO
249	YES	YES	NO	N/A	YES	YES	**YES**	N/A
250	YES	YES	NO	N/A	YES	YES	**YES**	N/A
251	YES	YES	NO	N/A	YES	NO	**NO**	N/A
252	YES	YES	NO	N/A	YES	NO	**NO**	N/A
253	YES	YES	NO	N/A	YES	YES	**YES**	N/A
254	YES	YES	NO	N/A	YES	YES	**YES**	N/A
255	YES	YES	NO	N/A	YES	YES	**YES**	N/A
256	YES	YES	YES	NO	YES	NO	**NO**	N/A
257	YES	YES	NO	N/A	YES	NO	**NO**	N/A
258	YES	YES	NO	N/A	YES	YES	**YES**	N/A
259	YES	YES	NO	N/A	YES	YES	**YES**	N/A
260	YES	YES	NO	N/A	YES	YES	**YES**	N/A
261	YES	YES	NO	N/A	YES	NO	**NO**	N/A
262	YES	YES	NO	N/A	YES	YES	**YES**	N/A
263	YES	YES	NO	N/A	YES	NO	**NO**	N/A
264	YES	YES	NO	N/A	YES	YES	**YES**	N/A
265	YES	YES	NO	N/A	YES	YES	**YES**	N/A
266	YES	YES	NO	N/A	YES	YES	**YES**	N/A
267	YES	YES	NO	N/A	YES	YES	**YES**	N/A
268	YES	YES	NO	N/A	YES	YES	**YES**	N/A
269	YES	YES	NO	N/A	YES	YES	**YES**	N/A
270	YES	YES	NO	N/A	YES	YES	**YES**	N/A
271	YES	YES	NO	N/A	YES	YES	**YES**	N/A
272	YES	YES	NO	N/A	NO	N/A	**NO**	N/A
273	YES	YES	NO	N/A	YES	YES	**YES**	N/A
274	YES	YES	YES	NO	YES	NO	**NO**	N/A
275	YES	YES	YES	NO	YES	YES	**YES**	N/A

General Household Questionnaire

Target 3: Use/Access Of Improved Water Sources

Analysis Of Sources Per Household

Percentage Of Households With Use/Access To Improved Sanitation = 42.39%
(103 / 243)

ID	Improved Type?	Piped?	If Piped, Intermittent?	Tanker/H2H or Bottled?	If Tanker/H2H or Bottled, Separate Sources?	Collection Time > 30 min?	Pay As Carry?	IMPROVED WATER ACCESS?
11	NO	N/A	N/A	N/A	N/A	N/A	N/A	NO
12	NO	N/A	N/A	N/A	N/A	N/A	N/A	NO
13	NO	N/A	N/A	N/A	N/A	N/A	N/A	NO
14	NO	N/A	N/A	N/A	N/A	N/A	N/A	NO
15	NO	N/A	N/A	N/A	N/A	N/A	N/A	NO
16	YES	NO	N/A	NO	N/A	YES	N/A	NO
17	NO	N/A	N/A	N/A	N/A	N/A	N/A	NO
18	NO	N/A	N/A	N/A	N/A	N/A	N/A	NO
19	YES	NO	N/A	NO	N/A	NO	NO	YES
20	YES	NO	N/A	NO	N/A	NO	NO	YES
22	YES	NO	N/A	NO	N/A	YES	N/A	NO
23	YES	NO	N/A	NO	N/A	YES	N/A	NO
24	YES	NO	N/A	NO	N/A	YES	N/A	NO
25	YES	NO	N/A	NO	N/A	NO	NO	YES
26	NO	N/A	N/A	N/A	N/A	N/A	N/A	NO
27	YES	NO	N/A	NO	N/A	NO	NO	YES
28	YES	NO	N/A	NO	N/A	NO	NO	YES
29	YES	NO	N/A	NO	N/A	YES	N/A	NO
31	YES	NO	N/A	NO	N/A	YES	N/A	NO
32	YES	NO	N/A	NO	N/A	YES	N/A	NO
33	YES	NO	N/A	NO	N/A	NO	NO	YES
35	YES	NO	N/A	NO	N/A	NO	NO	YES
36	YES	NO	N/A	NO	N/A	NO	NO	YES
39	YES	NO	N/A	NO	N/A	NO	NO	YES
40	NO	N/A	N/A	N/A	N/A	N/A	N/A	NO
41	YES	NO	N/A	NO	N/A	NO	NO	YES
44	YES	NO	N/A	NO	N/A	NO	NO	YES
46	NO	N/A	N/A	N/A	N/A	N/A	N/A	NO

47	YES	NO	N/A	NO	N/A	NO	NO	**YES**
48	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
49	YES	NO	N/A	NO	N/A	NO	NO	**YES**
50	YES	NO	N/A	NO	N/A	NO	NO	**YES**
51	YES	NO	N/A	NO	N/A	NO	NO	**YES**
52	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
53	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
54	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
55	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
56	YES	NO	N/A	NO	N/A	NO	NO	**YES**
57	YES	NO	N/A	NO	N/A	NO	NO	**YES**
58	YES	YES	NO	N/A	N/A	NO	NO	**YES**
59	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
60	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
61	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
62	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
63	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
64	YES	YES	NO	N/A	N/A	NO	NO	**YES**
66	YES	YES	NO	N/A	N/A	NO	NO	**YES**
67	YES	YES	NO	N/A	N/A	NO	NO	**YES**
68	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
69	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
70	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
71	YES	NO	N/A	NO	N/A	NO	NO	**YES**
72	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
73	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
75	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
76	YES	YES	NO	N/A	N/A	NO	NO	**YES**
77	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
78	YES	YES	NO	N/A	N/A	NO	NO	**YES**
79	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
80	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
81	YES	NO	N/A	NO	N/A	NO	NO	**YES**
82	YES	YES	NO	N/A	N/A	NO	NO	**YES**
83	YES	YES	NO	N/A	N/A	NO	NO	**YES**
84	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
85	YES	YES	NO	N/A	N/A	NO	NO	**YES**
86	YES	YES	NO	N/A	N/A	YES	N/A	**NO**

87	YES	YES	NO	N/A	N/A	NO	NO	**YES**
88	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
89	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
90	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
91	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
92	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
93	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
94	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
95	YES	YES	NO	N/A	N/A	NO	NO	**YES**
96	YES	NO	N/A	NO	N/A	NO	NO	**YES**
97	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
98	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
99	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
100	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
101	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
102	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
104	YES	NO	N/A	NO	N/A	NO	NO	**YES**
105	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
106	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
107	YES	YES	NO	N/A	N/A	NO	NO	**YES**
108	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
109	YES	YES	NO	N/A	N/A	NO	NO	**YES**
110	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
111	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
112	YES	YES	NO	N/A	N/A	NO	NO	**YES**
113	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
114	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
115	YES	NO	N/A	NO	N/A	NO	NO	**YES**
116	YES	YES	NO	N/A	N/A	NO	NO	**YES**
117	YES	YES	NO	N/A	N/A	NO	NO	**YES**
118	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
119	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
120	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
122	YES	YES	NO	N/A	N/A	NO	NO	**YES**
123	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
124	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
125	NO	N/A	N/A	N/A	N/A	N/A	N/A	**NO**
126	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**

128	YES	NO	N/A	NO	N/A	NO	NO	**YES**
129	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
130	YES	NO	N/A	NO	N/A	NO	NO	**YES**
131	NO	N/A	N/A	N/A	N/A	N/A	N/A	**NO**
132	YES	NO	N/A	NO	N/A	NO	NO	**YES**
133	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
134	NO	N/A	N/A	N/A	N/A	N/A	N/A	**NO**
135	NO	N/A	N/A	N/A	N/A	N/A	N/A	**NO**
136	NO	N/A	N/A	N/A	N/A	N/A	N/A	**NO**
137	YES	NO	N/A	NO	N/A	NO	NO	**YES**
138	YES	NO	N/A	NO	N/A	NO	NO	**YES**
140	YES	NO	N/A	NO	N/A	NO	NO	**YES**
141	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
142	YES	YES	NO	N/A	N/A	NO	NO	**YES**
143	YES	NO	N/A	NO	N/A	NO	NO	**YES**
144	YES	NO	N/A	NO	N/A	NO	NO	**YES**
146	YES	NO	N/A	NO	N/A	NO	NO	**YES**
150	YES	NO	N/A	NO	N/A	NO	NO	**YES**
151	YES	NO	N/A	NO	N/A	NO	NO	**YES**
152	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
153	YES	NO	N/A	NO	N/A	NO	NO	**YES**
154	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
155	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
156	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
157	YES	NO	N/A	NO	N/A	NO	NO	**YES**
158	YES	YES	NO	N/A	N/A	NO	NO	**YES**
159	YES	YES	NO	N/A	N/A	NO	NO	**YES**
161	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
162	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
163	YES	NO	N/A	NO	N/A	NO	NO	**YES**
164	YES	NO	N/A	NO	N/A	NO	NO	**YES**
165	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
166	YES	NO	N/A	NO	N/A	NO	NO	**YES**
167	YES	YES	NO	N/A	N/A	NO	NO	**YES**
168	YES	YES	NO	N/A	N/A	NO	NO	**YES**
169	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
170	YES	YES	NO	N/A	N/A	NO	NO	**YES**
171	YES	YES	NO	N/A	N/A	YES	N/A	**NO**

172	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
173	YES	NO	N/A	NO	N/A	NO	YES	**NO**
174	YES	NO	N/A	NO	N/A	NO	NO	**YES**
175	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
176	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
177	YES	NO	N/A	NO	N/A	NO	NO	**YES**
178	YES	NO	N/A	NO	N/A	NO	NO	**YES**
179	YES	YES	NO	N/A	N/A	NO	YES	**NO**
180	YES	YES	NO	N/A	N/A	NO	YES	**NO**
181	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
182	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
183	YES	YES	NO	N/A	N/A	NO	NO	**YES**
184	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
185	YES	YES	NO	N/A	N/A	NO	NO	**YES**
186	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
187	YES	NO	N/A	NO	N/A	NO	NO	**YES**
188	YES	NO	N/A	NO	N/A	NO	YES	**NO**
190	NO	N/A	N/A	N/A	N/A	N/A	N/A	**NO**
191	YES	YES	NO	N/A	N/A	NO	NO	**YES**
192	YES	YES	NO	N/A	N/A	NO	NO	**YES**
193	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
194	YES	YES	NO	N/A	N/A	NO	NO	**YES**
195	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
196	YES	NO	N/A	NO	N/A	NO	NO	**YES**
198	YES	YES	NO	N/A	N/A	NO	NO	**YES**
199	YES	NO	N/A	NO	N/A	NO	NO	**YES**
200	NO	N/A	N/A	N/A	N/A	N/A	N/A	**NO**
201	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
202	YES	NO	N/A	NO	N/A	NO	NO	**YES**
203	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
204	YES	YES	NO	N/A	N/A	NO	NO	**YES**
205	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
206	YES	YES	NO	N/A	N/A	NO	NO	**YES**
207	YES	YES	NO	N/A	N/A	NO	NO	**YES**
208	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
209	YES	YES	NO	N/A	N/A	NO	NO	**YES**
210	YES	NO	N/A	NO	N/A	NO	NO	**YES**
211	YES	NO	N/A	NO	N/A	YES	N/A	**NO**

212	YES	NO	N/A	NO	N/A	NO	NO	**YES**
213	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
214	YES	YES	NO	N/A	N/A	NO	NO	**YES**
215	YES	YES	NO	N/A	N/A	NO	NO	**YES**
216	YES	YES	NO	N/A	N/A	NO	NO	**YES**
217	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
218	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
219	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
220	YES	YES	NO	N/A	N/A	NO	NO	**YES**
221	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
222	YES	YES	NO	N/A	N/A	NO	YES	**NO**
223	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
224	YES	YES	NO	N/A	N/A	NO	NO	**YES**
225	NO	N/A	N/A	N/A	N/A	N/A	N/A	**NO**
226	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
227	YES	YES	NO	N/A	N/A	NO	NO	**YES**
228	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
229	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
230	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
231	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
232	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
233	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
234	YES	YES	NO	N/A	N/A	NO	NO	**YES**
235	YES	YES	NO	N/A	N/A	NO	NO	**YES**
236	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
237	YES	YES	NO	N/A	N/A	NO	NO	**YES**
238	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
239	YES	YES	NO	N/A	N/A	YES	N/A	**NO**
240	NO	N/A	N/A	N/A	N/A	N/A	N/A	**NO**
241	YES	YES	NO	N/A	N/A	NO	NO	**YES**
242	YES	YES	NO	N/A	N/A	NO	NO	**YES**
243	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
244	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
246	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
247	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
248	YES	YES	YES	N/A	N/A	N/A	N/A	**NO**
249	YES	NO	N/A	NO	N/A	YES	N/A	**NO**
250	YES	NO	N/A	NO	N/A	YES	N/A	**NO**

251	YES	YES	NO	N/A	N/A	YES	N/A	NO
252	YES	NO	N/A	NO	N/A	YES	N/A	NO
253	YES	YES	NO	N/A	N/A	NO	NO	YES
254	YES	YES	NO	N/A	N/A	YES	N/A	NO
255	YES	YES	NO	N/A	N/A	NO	NO	YES
256	YES	YES	NO	N/A	N/A	NO	NO	YES
257	YES	YES	NO	N/A	N/A	NO	NO	YES
258	YES	YES	YES	N/A	N/A	N/A	N/A	NO
259	YES	YES	NO	N/A	N/A	NO	NO	YES
260	YES	YES	NO	N/A	N/A	YES	N/A	NO
261	YES	NO	N/A	NO	N/A	NO	NO	YES
262	YES	NO	N/A	NO	N/A	NO	NO	YES
263	YES	YES	NO	N/A	N/A	NO	YES	NO
264	YES	YES	NO	N/A	N/A	NO	YES	NO
265	YES	YES	NO	N/A	N/A	NO	NO	YES
266	YES	NO	N/A	NO	N/A	YES	N/A	NO
267	YES	NO	N/A	NO	N/A	YES	N/A	NO
268	YES	NO	N/A	NO	N/A	YES	N/A	NO
269	YES	YES	NO	N/A	N/A	YES	N/A	NO
270	YES	YES	NO	N/A	N/A	YES	N/A	NO
271	YES	YES	NO	N/A	N/A	NO	NO	YES
272	YES	YES	NO	N/A	N/A	NO	NO	YES
273	YES	NO	N/A	NO	N/A	NO	NO	YES
274	YES	NO	N/A	NO	N/A	YES	N/A	NO
275	YES	NO	N/A	NO	N/A	NO	NO	YES

School Sanitation Questionnaire At Household

Target 4: Hygiene Education In Schools

Analysis Of Hygiene Education

Percentage Of Adequate Hygiene Education At School = 45.79% (87 / 190)

ID	Taught Handwashing At School?	Diseases Caught From Excreta	When Wash Hands	Where Friends Defecate	ADEQUATE HYGIENE EDUCATION?
216	YES	NEG	N/A	N/A	NO
217	YES	POS	POS	POS	YES

218	YES	POS	POS	POS	YES
219	YES	POS	POS	POS	YES
220	YES	POS	POS	POS	YES
221	YES	POS	POS	POS	YES
222	YES	POS	POS	POS	YES
223	YES	POS	POS	POS	YES
224	YES	POS	POS	POS	YES
225	YES	POS	POS	POS	YES
226	YES	POS	NEG	N/A	NO
227	YES	POS	POS	POS	YES
228	YES	POS	POS	POS	YES
229	YES	POS	POS	POS	YES
230	YES	POS	NEG	N/A	NO
231	YES	POS	POS	POS	YES
232	YES	POS	POS	POS	YES
233	YES	POS	POS	POS	YES
234	YES	POS	POS	POS	YES
236	YES	POS	NEG	N/A	NO
237	YES	NEG	N/A	N/A	NO
238	YES	POS	POS	POS	YES
239	YES	POS	POS	POS	YES
240	YES	POS	NEG	N/A	NO
241	YES	POS	POS	POS	YES
242	YES	POS	POS	POS	YES
243	YES	POS	POS	POS	YES
244	YES	POS	POS	POS	YES
245	YES	POS	POS	POS	YES
246	NO	N/A	N/A	N/A	NO
247	YES	POS	POS	NEG	NO
248	YES	POS	POS	POS	YES
249	YES	POS	POS	POS	YES
250	YES	POS	POS	POS	YES
251	YES	POS	POS	POS	YES
252	YES	NEG	N/A	N/A	NO
253	YES	NEG	N/A	N/A	NO
254	YES	POS	POS	POS	YES
255	YES	POS	NEG	N/A	NO
256	YES	POS	POS	POS	YES

257	YES	NEG	N/A	N/A	NO
258	YES	NEG	N/A	N/A	NO
259	YES	POS	POS	POS	YES
260	YES	POS	NEG	N/A	NO
261	YES	POS	POS	POS	YES
262	YES	POS	POS	POS	YES
263	YES	NEG	N/A	N/A	NO
264	YES	POS	POS	POS	YES
266	YES	NEG	N/A	N/A	NO
267	YES	POS	POS	POS	YES
268	NO	N/A	N/A	N/A	NO
269	YES	NEG	N/A	N/A	NO
270	YES	POS	NEG	N/A	NO
272	YES	POS	POS	POS	YES
273	NO	N/A	N/A	N/A	NO
274	YES	NEG	N/A	N/A	NO
275	NO	N/A	N/A	N/A	NO
276	NO	N/A	N/A	N/A	NO
277	YES	NEG	N/A	N/A	NO
278	NO	N/A	N/A	N/A	NO
279	YES	NEG	N/A	N/A	NO
280	YES	NEG	N/A	N/A	NO
281	YES	POS	POS	POS	YES
282	NO	N/A	N/A	N/A	NO
284	NO	N/A	N/A	N/A	NO
285	YES	NEG	N/A	N/A	NO
286	YES	NEG	N/A	N/A	NO
287	YES	NEG	N/A	N/A	NO
288	YES	NEG	N/A	N/A	NO
289	NO	N/A	N/A	N/A	NO
290	YES	POS	NEG	N/A	NO
291	NO	N/A	N/A	N/A	NO
292	YES	NEG	N/A	N/A	NO
293	YES	NEG	N/A	N/A	NO
294	YES	NEG	N/A	N/A	NO
295	YES	NEG	N/A	N/A	NO
296	YES	NEG	N/A	N/A	NO
297	YES	NEG	N/A	N/A	NO

299	YES	POS	POS	POS	**YES**
300	YES	POS	POS	POS	**YES**
301	YES	NEG	N/A	N/A	**NO**
302	YES	POS	NEG	N/A	**NO**
303	YES	NEG	N/A	N/A	**NO**
304	YES	POS	NEG	N/A	**NO**
305	YES	POS	POS	POS	**YES**
306	YES	POS	POS	POS	**YES**
307	YES	POS	POS	POS	**YES**
308	YES	POS	POS	POS	**YES**
309	YES	POS	POS	POS	**YES**
310	YES	POS	POS	POS	**YES**
311	YES	POS	POS	POS	**YES**
312	YES	POS	POS	POS	**YES**
313	YES	NEG	N/A	N/A	**NO**
314	NO	N/A	N/A	N/A	**NO**
315	YES	POS	NEG	N/A	**NO**
316	YES	NEG	N/A	N/A	**NO**
317	YES	POS	POS	POS	**YES**
318	YES	POS	POS	POS	**YES**
319	YES	POS	POS	POS	**YES**
320	YES	POS	NEG	N/A	**NO**
321	YES	POS	POS	POS	**YES**
322	YES	POS	NEG	N/A	**NO**
323	NO	N/A	N/A	N/A	**NO**
324	YES	NEG	N/A	N/A	**NO**
325	YES	NEG	N/A	N/A	**NO**
326	YES	POS	NEG	N/A	**NO**
327	YES	NEG	N/A	N/A	**NO**
328	YES	POS	POS	POS	**YES**
329	YES	POS	POS	POS	**YES**
330	NO	N/A	N/A	N/A	**NO**
332	YES	POS	POS	POS	**YES**
333	YES	NEG	N/A	N/A	**NO**
334	YES	NEG	N/A	N/A	**NO**
335	YES	POS	POS	POS	**YES**
336	YES	NEG	N/A	N/A	**NO**
337	YES	POS	POS	POS	**YES**

338	YES	NEG	N/A	N/A	NO
339	YES	NEG	N/A	N/A	NO
340	YES	NEG	N/A	N/A	NO
341	YES	POS	POS	POS	YES
342	YES	NEG	N/A	N/A	NO
343	YES	POS	NEG	N/A	NO
344	YES	NEG	N/A	N/A	NO
345	YES	NEG	N/A	N/A	NO
346	YES	NEG	N/A	N/A	NO
347	YES	NEG	N/A	N/A	NO
348	YES	POS	POS	POS	YES
349	YES	NEG	N/A	N/A	NO
350	YES	POS	POS	POS	YES
351	YES	NEG	N/A	N/A	NO
352	YES	NEG	N/A	N/A	NO
353	NO	N/A	N/A	N/A	NO
354	YES	NEG	N/A	N/A	NO
355	YES	POS	POS	POS	YES
356	YES	POS	NEG	N/A	NO
357	YES	POS	NEG	N/A	NO
358	YES	POS	POS	POS	YES
359	YES	POS	POS	POS	YES
360	YES	POS	POS	POS	YES
361	YES	POS	POS	POS	YES
362	YES	POS	POS	POS	YES
363	YES	POS	POS	POS	YES
364	YES	POS	POS	POS	YES
365	YES	POS	NEG	N/A	NO
366	YES	POS	POS	POS	YES
367	YES	POS	NEG	N/A	NO
368	YES	POS	NEG	N/A	NO
369	YES	NEG	N/A	N/A	NO
370	YES	POS	POS	POS	YES
371	YES	POS	POS	POS	YES
372	YES	POS	POS	POS	YES
373	NO	N/A	N/A	N/A	NO
374	YES	NEG	N/A	N/A	NO
375	NO	N/A	N/A	N/A	NO

376	YES	POS	POS	POS	**YES**
377	YES	POS	NEG	N/A	**NO**
379	YES	NEG	N/A	N/A	**NO**
380	YES	POS	POS	POS	**YES**
381	YES	POS	NEG	N/A	**NO**
382	YES	POS	POS	POS	**YES**
383	YES	POS	POS	POS	**YES**
384	YES	POS	POS	POS	**YES**
385	YES	POS	NEG	N/A	**NO**
386	YES	NEG	N/A	N/A	**NO**
387	NO	N/A	N/A	N/A	**NO**
388	YES	POS	POS	POS	**YES**
389	YES	POS	POS	POS	**YES**
390	NO	N/A	N/A	N/A	**NO**
391	YES	POS	POS	POS	**YES**
392	YES	POS	POS	POS	**YES**
393	YES	POS	POS	POS	**YES**
394	NO	N/A	N/A	N/A	**NO**
395	YES	POS	POS	POS	**YES**
396	YES	POS	NEG	N/A	**NO**
397	YES	NEG	N/A	N/A	**NO**
398	NO	N/A	N/A	N/A	**NO**
399	YES	POS	POS	POS	**YES**
400	YES	POS	POS	POS	**YES**
401	YES	POS	POS	POS	**YES**
402	YES	POS	POS	POS	**YES**
403	YES	POS	POS	POS	**YES**
404	YES	NEG	N/A	N/A	**NO**
405	YES	POS	POS	POS	**YES**
406	YES	NEG	N/A	N/A	**NO**
407	YES	NEG	N/A	N/A	**NO**
408	YES	POS	NEG	N/A	**NO**
409	YES	POS	NEG	N/A	**NO**
410	YES	NEG	N/A	N/A	**NO**
411	NO	N/A	N/A	N/A	**NO**
412	YES	POS	NEG	N/A	**NO**

School Sanitation Questionnaire At Household

Target 5: Access To Improved Sanitation In Schools

Analysis of Hygiene Education

Percentage Of Access To Improved Sanitation In School = 8.42% (16 / 190)

ID	Defecate At School?	Have To Queue?	Mixed School?	If Mixed, Sep Toilets?	Place For HW?	Items For HW?	IMPROVED SANITATION ACCESS?
216	POS	NO	YES	YES	NO	N/A	NO
217	POS	NO	YES	YES	NO	N/A	NO
218	POS	NO	YES	YES	YES	YES	YES
219	POS	NO	YES	YES	NO	N/A	NO
220	POS	NO	YES	NO	N/A	N/A	NO
221	POS	NO	YES	YES	NO	N/A	NO
222	POS	NO	YES	YES	YES	YES	YES
223	POS	NO	YES	YES	YES	YES	YES
224	POS	YES	N/A	N/A	N/A	N/A	NO
225	POS	NO	YES	YES	YES	NO	NO
226	POS	NO	YES	YES	YES	NO	NO
227	POS	NO	YES	YES	YES	NO	NO
228	POS	NO	YES	YES	YES	YES	YES
229	POS	NO	YES	YES	YES	NO	NO
230	POS	YES	N/A	N/A	N/A	N/A	NO
231	POS	NO	YES	YES	YES	YES	YES
232	POS	NO	YES	YES	YES	NO	NO
233	POS	NO	YES	NO	N/A	N/A	NO
234	POS	YES	N/A	N/A	N/A	N/A	NO
236	POS	NO	YES	YES	NO	N/A	NO
237	POS	NO	YES	YES	NO	N/A	NO
238	POS	NO	YES	YES	YES	NO	NO
239	POS	NO	YES	YES	YES	NO	NO
240	POS	NO	YES	YES	NO	N/A	NO
241	POS	NO	YES	YES	YES	YES	YES
242	POS	NO	YES	YES	NO	N/A	NO
243	POS	NO	YES	YES	YES	NO	NO
244	POS	YES	N/A	N/A	N/A	N/A	NO
245	POS	NO	YES	YES	YES	NO	NO
246	NEG	N/A	N/A	N/A	N/A	N/A	NO

247	NEG	N/A	N/A	N/A	N/A	N/A	NO
248	POS	NO	YES	YES	NO	N/A	NO
249	POS	YES	N/A	N/A	N/A	N/A	NO
250	POS	YES	N/A	N/A	N/A	N/A	NO
251	POS	NO	YES	YES	YES	YES	YES
252	POS	YES	N/A	N/A	N/A	N/A	NO
253	POS	NO	YES	YES	YES	NO	NO
254	POS	NO	YES	YES	YES	NO	NO
255	POS	NO	YES	YES	YES	YES	YES
256	POS	YES	N/A	N/A	N/A	N/A	NO
257	POS	YES	N/A	N/A	N/A	N/A	NO
258	POS	YES	N/A	N/A	N/A	N/A	NO
259	POS	YES	N/A	N/A	N/A	N/A	NO
260	POS	YES	N/A	N/A	N/A	N/A	NO
261	POS	YES	N/A	N/A	N/A	N/A	NO
262	POS	NO	YES	YES	NO	N/A	NO
263	POS	YES	N/A	N/A	N/A	N/A	NO
264	POS	NO	YES	YES	NO	N/A	NO
266	POS	NO	YES	YES	NO	N/A	NO
267	POS	NO	YES	YES	NO	N/A	NO
268	POS	NO	YES	YES	NO	N/A	NO
269	POS	NO	YES	YES	NO	N/A	NO
270	POS	NO	YES	YES	NO	N/A	NO
272	POS	NO	YES	YES	NO	N/A	NO
273	POS	NO	YES	YES	NO	N/A	NO
274	POS	NO	YES	NO	N/A	N/A	NO
275	POS	NO	YES	YES	NO	N/A	NO
276	POS	NO	YES	YES	NO	N/A	NO
277	POS	YES	N/A	N/A	N/A	N/A	NO
278	POS	YES	N/A	N/A	N/A	N/A	NO
279	POS	YES	N/A	N/A	N/A	N/A	NO
280	NEG	N/A	N/A	N/A	N/A	N/A	NO
281	POS	NO	YES	YES	NO	N/A	NO
282	POS	NO	YES	YES	NO	N/A	NO
284	NEG	N/A	N/A	N/A	N/A	N/A	NO
285	POS	NO	YES	YES	NO	N/A	NO
286	POS	NO	YES	YES	NO	N/A	NO
287	POS	NO	YES	YES	NO	N/A	NO

288	POS	NO	YES	YES	NO	N/A	NO
289	NEG	N/A	N/A	N/A	N/A	N/A	NO
290	POS	NO	YES	NO	N/A	N/A	NO
291	NEG	N/A	N/A	N/A	N/A	N/A	NO
292	POS	NO	YES	YES	NO	N/A	NO
293	POS	NO	YES	YES	YES	NO	NO
294	POS	YES	N/A	N/A	N/A	N/A	NO
295	POS	NO	YES	YES	YES	NO	NO
296	POS	NO	YES	YES	NO	N/A	NO
297	POS	NO	YES	YES	NO	N/A	NO
299	POS	YES	N/A	N/A	N/A	N/A	NO
300	POS	YES	N/A	N/A	N/A	N/A	NO
301	POS	YES	N/A	N/A	N/A	N/A	NO
302	POS	YES	N/A	N/A	N/A	N/A	NO
303	POS	YES	N/A	N/A	N/A	N/A	NO
304	POS	NO	YES	YES	NO	N/A	NO
305	POS	YES	N/A	N/A	N/A	N/A	NO
306	POS	YES	N/A	N/A	N/A	N/A	NO
307	POS	YES	N/A	N/A	N/A	N/A	NO
308	POS	YES	N/A	N/A	N/A	N/A	NO
309	POS	YES	N/A	N/A	N/A	N/A	NO
310	POS	YES	N/A	N/A	N/A	N/A	NO
311	POS	YES	N/A	N/A	N/A	N/A	NO
312	POS	NO	YES	YES	YES	YES	YES
313	POS	NO	YES	YES	NO	N/A	NO
314	POS	NO	YES	YES	NO	N/A	NO
315	POS	YES	N/A	N/A	N/A	N/A	NO
316	POS	YES	N/A	N/A	N/A	N/A	NO
317	POS	YES	N/A	N/A	N/A	N/A	NO
318	POS	YES	N/A	N/A	N/A	N/A	NO
319	POS	YES	N/A	N/A	N/A	N/A	NO
320	POS	NO	YES	YES	NO	N/A	NO
321	POS	NO	YES	YES	NO	N/A	NO
322	POS	NO	YES	YES	YES	NO	NO
323	POS	NO	YES	YES	YES	NO	NO
324	POS	NO	YES	YES	YES	YES	YES
325	POS	NO	YES	YES	YES	NO	NO
326	POS	YES	N/A	N/A	N/A	N/A	NO

327	POS	NO	YES	NO	N/A	N/A	NO
328	POS	NO	YES	NO	N/A	N/A	NO
329	POS	NO	YES	YES	YES	NO	NO
330	NEG	N/A	N/A	N/A	N/A	N/A	NO
332	POS	NO	YES	YES	YES	YES	YES
333	POS	NO	YES	YES	YES	YES	YES
334	POS	NO	YES	YES	YES	NO	NO
335	POS	NO	YES	YES	YES	YES	YES
336	POS	NO	YES	YES	NO	N/A	NO
337	POS	NO	YES	YES	YES	NO	NO
338	POS	NO	YES	YES	YES	NO	NO
339	POS	NO	YES	YES	YES	NO	NO
340	POS	YES	N/A	N/A	N/A	N/A	NO
341	POS	YES	N/A	N/A	N/A	N/A	NO
342	POS	NO	YES	YES	YES	NO	NO
343	POS	NO	YES	NO	N/A	N/A	NO
344	POS	NO	YES	YES	YES	NO	NO
345	POS	YES	N/A	N/A	N/A	N/A	NO
346	POS	NO	YES	YES	YES	NO	NO
347	POS	YES	N/A	N/A	N/A	N/A	NO
348	POS	NO	YES	YES	YES	YES	YES
349	POS	NO	YES	YES	NO	N/A	NO
350	POS	NO	YES	NO	N/A	N/A	NO
351	POS	NO	YES	NO	N/A	N/A	NO
352	POS	NO	YES	YES	NO	N/A	NO
353	NEG	N/A	N/A	N/A	N/A	N/A	NO
354	POS	NO	YES	YES	NO	N/A	NO
355	POS	NO	YES	YES	NO	N/A	NO
356	POS	NO	YES	YES	NO	N/A	NO
357	POS	NO	YES	YES	NO	N/A	NO
358	POS	NO	YES	YES	NO	N/A	NO
359	POS	NO	YES	YES	NO	N/A	NO
360	POS	NO	YES	YES	NO	N/A	NO
361	POS	NO	YES	NO	N/A	N/A	NO
362	POS	NO	YES	YES	NO	N/A	NO
363	POS	NO	YES	YES	NO	N/A	NO
364	POS	NO	YES	NO	N/A	N/A	NO
365	POS	NO	YES	NO	N/A	N/A	NO

366	POS	NO	YES	NO	N/A	N/A	NO
367	POS	NO	YES	YES	NO	N/A	NO
368	POS	NO	YES	NO	N/A	N/A	NO
369	POS	NO	YES	YES	NO	N/A	NO
370	POS	NO	YES	YES	NO	N/A	NO
371	POS	YES	N/A	N/A	N/A	N/A	NO
372	POS	NO	YES	YES	NO	N/A	NO
373	POS	YES	N/A	N/A	N/A	N/A	NO
374	POS	NO	YES	YES	YES	NO	NO
375	POS	NO	YES	YES	NO	N/A	NO
376	POS	YES	N/A	N/A	N/A	N/A	NO
377	POS	NO	YES	YES	NO	N/A	NO
379	POS	NO	YES	YES	NO	N/A	NO
380	POS	NO	YES	YES	YES	NO	NO
381	POS	NO	YES	YES	YES	NO	NO
382	POS	NO	YES	YES	NO	N/A	NO
383	POS	NO	YES	YES	NO	N/A	NO
384	POS	NO	YES	YES	YES	NO	NO
385	POS	NO	YES	YES	NO	N/A	NO
386	POS	NO	YES	NO	N/A	N/A	NO
387	POS	NO	YES	YES	NO	N/A	NO
388	POS	YES	N/A	N/A	N/A	N/A	NO
389	POS	NO	YES	NO	N/A	N/A	NO
390	POS	NO	YES	YES	NO	N/A	NO
391	POS	NO	YES	YES	YES	YES	YES
392	POS	NO	YES	YES	YES	NO	NO
393	POS	YES	N/A	N/A	N/A	N/A	NO
394	NEG	N/A	N/A	N/A	N/A	N/A	NO
395	POS	NO	YES	YES	YES	YES	YES
396	POS	YES	N/A	N/A	N/A	N/A	NO
397	POS	YES	N/A	N/A	N/A	N/A	NO
398	POS	NO	YES	YES	NO	N/A	NO
399	POS	NO	YES	YES	YES	NO	NO
400	POS	NO	YES	YES	NO	N/A	NO
401	POS	NO	YES	YES	NO	N/A	NO
402	POS	YES	N/A	N/A	N/A	N/A	NO
403	POS	NO	YES	YES	NO	N/A	NO
404	POS	YES	N/A	N/A	N/A	N/A	NO

405	POS	NO	YES	YES	NO	N/A	**NO**
406	POS	YES	N/A	N/A	N/A	N/A	**NO**
407	POS	NO	YES	YES	NO	N/A	**NO**
408	POS	NO	YES	YES	YES	NO	**NO**
409	POS	YES	N/A	N/A	N/A	N/A	**NO**
410	POS	YES	N/A	N/A	N/A	N/A	**NO**
411	POS	NO	YES	YES	YES	NO	**NO**
412	POS	NO	YES	YES	YES	NO	**NO**

School Sanitation Measured At School

Number Of Schools Surveyed = 4

Access to Sanitation

School ID	Number of Boys Registered At the School (b)	Number of Girls Registered At the School (g)	Max Number of School Children Allowed Per Cubicle (q)*	Amount of Latrines Available For Boys	Amount of Latrines Available For Girls	Total Latrines Available	Amount of ACCEPTABLE Latrines Available For Boys (tab)*	Amount of ACCEPTABLE Latrines Available For Girls (tag)*	COVERAGE FOR GIRLS (cg)	COVERAGE FOR BOYS (cb)	TOTAL COVERAGE (ct)	ACCESS TO IMPROVED SANITATION*
284	193	198	25	4	4	8	4	4	50.51%	50.51%	**50.51%**	**NO / 391**
289	144	142	25	3	0	3	0	0	0.00%	0.00%	**0.00%**	**NO / 286**
330	252	234	25	5	0	5	0	0	0.00%	0.00%	**0.00%**	**NO / 486**
353	257	250	25	10	10	20	0	0	0.00%	0.00%	**0.00%**	**NO / 507**

- Note: No national standard set, therefore 25 used as per WSH Indicators criteria
- Note: Requires that they be separated **AND** conform to hygiene criteria
- Note: 100% coverage is required to indicate ACCESS to improved sanitation.

Access to Handwashing Facilities

School ID	Number of Boys Registered At the School (b)	Number of Girls Registered At the School (g)	Handwashing Points Available (wa)	Max No Of Cubicles Allowed Per Washing Point (r)*	TOTAL COVERAGE (c)	ACCESS TO IMPROVED HW FACILITIES*
284	193	198	0	4	0.00%	**NO / 391**
289	144	142	0	4	0.00%	**NO / 286**
330	252	234	0	4	0.00%	**NO / 486**
353	257	250	0	4	0.00%	**NO / 507**

- Note: No national standard set, therefore 4 used as per WSH Indicators criteria
- Note: 100% coverage is required to indicate ACCESS to improved sanitation.

ANNEXURE D

Installing and Using the Data Capture and Analysis Files

A. Data Capture

1. Recreate the MS Access databases as per Figures 1 & 2
2. Extract the zip file WSH_Input.zip into a folder on the PC
3. Open Internet Services Manager – Start | Programs | Administrative Tools | Internet Services Manager
   Note: Internet Information Service (IIS) is part of the Windows 2000 Professional installation, but is not always installed. If you do not see Internet Services Manager in the Start menu, install IIS from the Windows 2000 CD.
4. Right-click “Default Web Site” and select “New | Virtual Directory”
5. Follow the wizard and point the virtual directory to the file you extracted the zip file to.
6. Open your web browser (Internet Explorer) and type the following in the address field:
   http://localhost/thenameofthevirtualdirectoryyoucreated/
7. You will see the first page of the input forms – follow the page instructions.

B. Data Analysis

1. This requires that you have MS SQL Server installed on the PC. Import the two Access database into SQL.
2. Extract the zip file WSH_Input.zip into a folder on the PC
3. Open Internet Services Manager – Start | Programs | Administrative Tools | Internet Services Manager
4. Note: Internet Information Service (IIS) is part of the Windows 2000 Professional installation, but is not always installed. If you do not see Internet Services Manager in the Start menu, install IIS from the Windows 2000 CD.
5. Right-click “Default Web Site” and select “New | Virtual Directory”
6. Follow the wizard and point the virtual directory to the file you extracted the zip file to
7. Open your web browser (Internet Explorer) and type the following in the address field for each questionnaire analysis: **http://localhost/thenameoftherelevant page/**
8. As soon as the page is loaded the analysis code will run, and you will see the results – allow some time for this.
9. Right-click to copy the results and paste them into a Word document.