Guidelines

QIS monitoring guidelines for the sample study 2012




BRAC WASH II Programme

Ensuring sustainable access to sanitation, water and hygiene in hard-to-reach areas and for under-served people in Bangladesh

November 2012

IRC International Water and Sanitation Centre

brac

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Cover photo: Kathleen Shordt, 2011

BRAC is a development organisation dedicated to alleviating poverty by empowering the poor to bring about change in their own lives. We were founded in Bangladesh in 1972 and over the course of our evolution, established ourselves as a pioneer in recognising and tackling the many different realities of poverty.

IRC International Water and Sanitation Centre is an independent knowledge centre in the field of water supply, sanitation, hygiene and integrated water resources management in relation to development cooperation. IRC conducts research, provides training and advisory services, and information products and services. IRC works for both the public and the private sector, for Dutch and international organisations, including UN institutions, development banks, non-governmental organisations and private charities.

MISSION REPORT

SUMMARY

QIS Monitoring Guide

Training and monitoring guidelines for the sample study

November 2012

Summary of guidelines

This Qualitative Information System (QIS) monitoring guide has been prepared as part of the preparation for the annual Monitoring and Learning workshop that will take place in February 2013. In particular, these guidelines will support the collection of the QIS monitoring data.

This guideline consists of the following:

- General introduction to the BRAC WASH II programme and its monitoring system.
- General introduction the QIS methods.
- General sampling strategy for selection of upazilas, unions, and village WASH committees.
- Sampling strategy for field level data collection and data collection forms with consolidated QIS scales with scoring sheets.
- Guidelines for sampling in the field including use of smart phones.
- Indicative planning for data collection.

In total, monitoring data will be collected for a sample of approximately 8,000 households that are within the BRAC WASH II programme funded by DGIS and the Bill and Melinda Gates Foundation (BMGF). The QIS monitoring data will be completed with data from the BRAC Management Information System (MIS) and a first round of data collection with the use of SenseMaker. A first analysis of the data will be presented during the Monitoring and Learning workshop in February. The workshop will be used to identify lessons learnt, successes, and issues that need further study.

Table of Content

Tables

The BRAC WASH II programme

BRAC WASH II aims for a sustained change - measurable leaps - in personal/family hygiene, sanitation and water safety. However, real changes in practices (such as handwashing with soap, continued use and maintenance of latrines, using safe water sources or keeping water safe from source to cup) take time to become habitual. Behaviour change takes time and does not move at the same speed everywhere.

The programme focuses on sustainably improved household and school sanitation and hygiene practices, and safe drinking water use. Improvements are community-based and -managed. Support comes from about 5,000 programme workers, of whom more than 96% are field-based. The BRAC WASH II programme is jointly funded by the Embassy of the Kingdom of The Netherlands (EKN)/DGIS, the Bill and Melinda Gates Foundation (BMGF) and has the following objectives:

DGIS (contribution EKN/DGIS €25 million):

- Targeting 2 million people (sanitation), 4.2 million people (hygiene), and 0.5 million (water safety) in 20 upazilas (new and hard to reach).
- Ensuring sustainable access to sanitation of 25.6 million people and safe hygiene behaviour of 38.8 million people in 150 upazilas (BRAC WASH I).

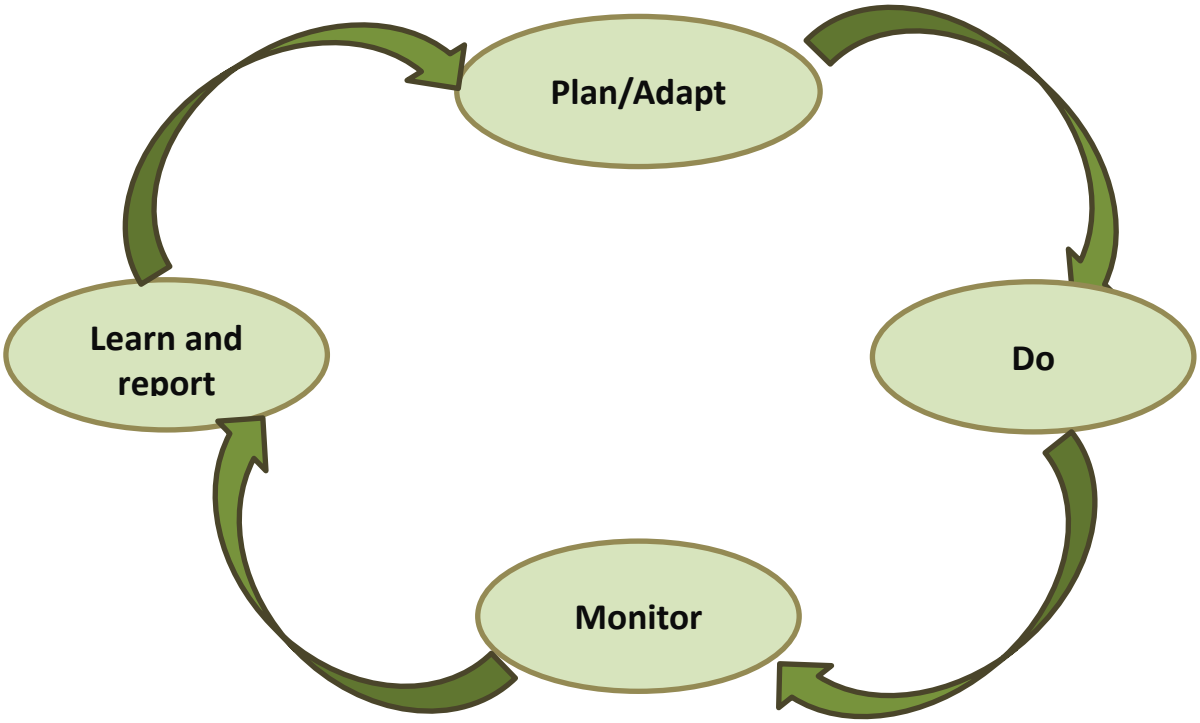
BMGF (contribution BMGF US$ 11 – 17 million):

- Targeting an estimated 624,000 households (HH) in 150 + 5 new upazilas.
- Specific focus on sanitation and composting business.

In August 2011, it was agreed between DGIS, BMGF, BRAC, and IRC to treat the BRAC WASH II programme as one single project as far as possible, and to develop one single monitoring system covering the entire BRAC WASH II project. The monitoring system will be developed by IRC during 2012 and a first learning workshop will be organised in early 2013.

Monitoring

To understand whether progress is moving in the right direction, it is necessary to monitor progress regularly. Monitoring is compared to taking the temperature and the blood pressure of a person. This will tell a doctor whether the person's health is improving and what treatment method should be applied. The monitoring of the BRAC WASH II programme is a bit comparable to what a doctor does to a patient. As a diagram, it looks like this:



Monitoring of the BRAC WASH II programme performance using QIS is done in two different ways:

1. *To get representative programme performance data* at the end of each programme year. This data is gathered by an independent monitoring team from 8,000 randomly sampled households and their associated clusters, schools and Rural Sanitation Centres (RSCs). The sample study covers 50 'old' upazilas from the 150 upazilas of WASH I and 50 'new' unions in the 20 upazilas added under WASH II. The collected data will be analysed, and in combination with MIS data, will be used to reflect on the programme strategies.

2. *As part of implementation* by the Programme Assistants (PAs) and Village WASH Committees (VWCs) to check progress in their own location. This monitoring will start after the completion of the representative sample (see above). This monitoring exercise will be used to get insight into progress at village WASH committee, union, and upazila level.

Qualitative Information Systems (QIS)

The Qualitative Information System (QIS) quantifies qualitative process indicators, such as participation and inclusiveness, and outcome indicators, such as behavioural change, with the help of progressive scales ('ladders'). Each step on the ladder has a short description, called a mini-scenario, which describes the situation for a particular score. Typically, scores are structured as follows:

- The score 0 indicates a situation in which the condition/practice is not present.
- The scores 1 and 2 (the benchmark situation, or minimal scenario that the programme wants to achieve programme-wide).
- The scores 3 and 4 (the ideal, which possibly none or only a few households/schools/clusters can achieve).

QIS scales are thus programme-specific and, to capture the field realities, must be developed together with staff with extensive experience.

A typical QIS scale looks like the table below:

Table 1: Outline QIS scale

DESCRIPTION	SCORE
IDEAL: all four (key) characteristics are present	4
Easiest + next easiest + then next easiest present	3
BENCHMARK: Easiest + next easiest is present	2
One (easiest) characteristic is present	1
Condition/practice is not present	0

The QIS scales for the WASH II programme were jointly developed by BRAC and IRC in a workshop in January 2012. In March, they were tested on a small scale (40 households). A second testing was done in September with 432 households (144 each for the ultra-poor, poor and non-poor) and 36 VWCs, 12 schools and 12 Rural Sanitation Centres (RSCs). This document contains the consolidated QIS scales and the specified guidelines and training for the sample study.

QIS Sampling Strategy for the BRAC WASH II programme

Introduction

The sampling strategy was developed for the BRAC WASH II programme's Qualitative Information System (QIS) survey. For more information on QIS see: http://www.ircwash.org/blog/bangladeshi-women-catch-sanitation, or consult the BRAC WASH II QIS training manual. The sampling method

described below aims at addressing various issues. Firstly, it aims to be a cost effective, representative sample, determining the prevalence of certain situations within the population[1]. The second objective is allowing purposeful sampling if the prevalence proves to be less favourable than expected from literature. The third aim is to allow disaggregation of data between WASH I and WASH II, as for WASH I the survey serves as a check of progress while for WASH II the survey provides a baseline. Below are the detailed calculations of the sampling strategies with justifications of the choices made.

Within the QIS survey there are four different surveys interwoven, each which will be carried out in upazilas covered by WASH I and added to by WASH II. This means that in reality there are eight surveys on-going, each of which needs a sample strategy. As the household survey is by far the most challenging, it was developed first with all other survey sampling strategies built around the constraints of the household survey. When this was too constraining to achieve the required precision we re-engineered the household sampling strategy. Only the final results are shown below.

Sampling strategy for the household survey

General sampling information

The first step in any survey is the definition of the population of interest. At the same time we need to define the basic sampling unit. In statistical terms the population is the list of all basic sampling units of interest. As basic sampling we choose the households in 175 upazilas covered in the BRAC WASH I and II programmes. Any household living in these upazilas during the BRAC WASH programmes forms the statistical population.

Sampling population and basic sampling unit

The table below shows some information on the sampling population in statistical terms. The basic sampling unit is any household that is living in an upazila that was targeted under the BRAC WASH I programme or any household living in an upazila that will be targeted in the WASH II programme. As both programmes are at a different stage in their development, the survey should allow for disaggregated results for each of the programmes individually.

Households are divided into three groups according to wealth and listed as ultra-poor, poor and non-poor. To ensure that the survey can disaggregate according to wealth the survey will over-sample when some of these groups are underrepresented, which will be corrected by weighting each sample.

[1] Population here is used in its statistical sense of the aggregation of all basic sampling units of interest.

Table 2: Basic information on the population

Description	National Bangladesh	BRAC WASH I&II Programme
Population covered	160 million	38.8 million
Divisions	7	6
Districts	64	60
Upazilas (sub-districts)	508	150 + 20 + 5 #
Unions	±4.500	1.457
Cluster/VWCs	not relevant	3.978

Primary sampling unit

Optimal allocation of available resources in relation to the precision required is a major concern in any survey. In the BRAC WASH programme we are fortunate to have the data to build a reliable sample frame even though the data is not readily available. Two or three-stage survey designs are economic, as for each sampling stage only limited information is required to make selections requiring only further detailed information for the selected clusters. The most important stage is the selection of the number of primary sampling units (PSUs) as too few make obtaining the required precision impossible due to inter cluster correlation, while too many PSUs increase survey costs.

The most optimal survey design is a design based on a known outcome, defeating the purpose of the survey. In reality the survey design has to cater for the range of plausible outcomes. The precision of the sample in a multi-stage cluster survey will depend highly on the design effect of the sampling strategy. However, design effect depends on the clustering of the measure of interest within the population and the actual sample strategy. This makes design effect not "transferable" amongst surveys with a different design. Kish (1965[2]) defined a measure of intra-cluster homogeneity called the rate of homogeneity (ρ). The rate of homogeneity can be seen as a proxy for that clustering property in the population and can form the basis of sampling calculations.

$$C_{min} = lim_{\underline{b}\to\infty} \frac{\frac{z^2\, p(1-p)}{d^2}(1-\rho) + \frac{z^2\, p(1-p)}{d^2}\rho.\underline{b}}{\underline{b}} = 48.96 \simeq 49$$

C_{min} = minimum number of clusters required
z = reliability coefficient 1.96 at 95%;
d = absolute deviation from the mean 0.1 (=10%points)
p = prevalence (proportion) 0.5 as worst case
$\underline{b}$= average take (sample size in cluster)
ρ = rate of homogeneity estimated

Looking at rates of homogeneity based on other surveys such as the DHS[3] surveys, we know that ρ is likely to have a value between 0.3 and 0.6. We also know that sanitation is higher clustered than

[2] Leslie Kish, Survey Sampling, 1965, ISBN 0471109495.
[3] DHS is Demographic and Health Survey.

water (ρ≅0.35). For this study we estimate ρ at 0.51 which results in C_{min} becoming 49 as the minimum number of clusters required for the survey when we round up to the nearest integer.

In practice, 50 primary sampling units were selected[4]. In the 150 upazilas of the WASH I programme 50 upazilas were chosen as PSU. In the 25 upazilas of WASH II programme 50 unions were chosen as a PSU to stick to the basic design of the survey in both programmes. Due to the significant difference in the number of households in upazilas and unions, a sampling proportionate to the number of households in each of the PSUs was preferred.

The take size

The number of households selected in each cluster is often referred to as 'the take' and will determine the sample size together with the number of PSUs. Based only on the number of PSUs and the formula of the take size, no optimum or minimum value can be calculated. Optimising the take size requires an additional factor to obtain a minimum take size.

One of the reasons for which we use cluster surveys is to reduce survey cost. Introducing a cost ratio C_{ratio} as the cost of an extra PSU compared to the cost of an extra sample allows for such optimisation. Including this cost ratio in the equation allows the introduction of one of the primary drivers for designing a survey with multi-stage sampling design. When distinguishing cost per sample and cost per cluster (as much as they can be considered independently from each other), our past experience with previous surveys has shown that the relation C_{ratio} is around 500 and that this value is not very critical before it changes the sample design significantly. Calculations based on some estimation of cost indicate that a C_{ratio} of 500 fits the local circumstances in Bangladesh.

$$\underline{b} = \sqrt{\frac{C_{ratio}(1-\rho)}{\rho}} = \sqrt{\frac{500(1-0.51)}{0.51}} = 21.91 \simeq 22$$

$\underline{b}$ = average take (sample size in cluster)
c_{ratio} = cost ratio between PSU and samples
ρ = rate of homogeneity estimated

In reality, not every household survey will result in the collection of information. Assuming at least a 90% response, the following formula determines the practical take size:

$$\underline{b}_{prac} = \underline{b}\,(1 + (1 - cr)) = 22(1 + (1 - 0.9)) = 24.2 \approx 25$$

$\underline{b}_{\text{pract}}$= practical average take (sample size in cluster)
b= average take (sample size in cluster)
cr = completion rate (estimated above 90%)
The practical take is rounded up although not to a critical minimum value as the minimum number of PSUs calculated above.

To ensure that in the analysis disaggregation can be done according to wealth it was decided that the same number of ultra-poor, poor and non-poor households will be selected in the sampling. The

[4] This was also due to constraints in the sampling of schools, RWSs, VWCs as explained in this document.

first integer is larger than 25 and divisible by three is 27. This means that each wealth category (ultra-poor, poor and non-poor) will have nine households selected randomly in each of the villages in the selected BRAC village WASH cluster.

The samples need to be weighted individually in the analysis to correct for:

- The real number of households in each of the wealth categories.
- For changes in wealth classification between the current wealth status and that measured at the time of the census at the beginning of the WASH projects. The basis of the wealth classification for the 150 WASH I upazilas is based on the 2007 census.
- An extra correction is required if the required nine households are not available in any of the wealth categories for small villages.
- A separate weighting factor has to be calculated for information that needs expressing at the population level rather than at the household level.

Calculating sample weights for household and individuals

Until the household selection was introduced, the household sample strategy was EPSEM[5] and if the household sample at the VWC was selected randomly no weight would be required. However, for some analysis various wealth groups have to be compared. It was decided that equal numbers of households would be selected in each wealth group.

In principle, the consequences of these decisions should be checked for each of the 150 VWCs and each of the wealth groups. Given the work this required and the fact there is still unknown information affecting the weights (for example due to reclassification), this work was not undertaken. In the future, when all sampling data is structured in the geo-referenced database developed under the BRAC WASH II programme, such calculations should become achievable.

Sample weights are relative to each other and do not have an absolute weight. So, various formulations of the sample weight are possible. Below is the calculated weight of the sampled ultra-poor households. This formula should give a figure lower than one although it can be one in exceptional cases.

$$W_x = \frac{S_{UP} + S_{PP} + S_{NP}}{T_{UP} + T_{PP} + T_{NP}} \times \frac{T_x}{S_x} \times \frac{1}{y}$$

Wx = weight of a HH sample in a given VWC for wealth category x
x = the wealth category of interest UP = ultra-poor, PP = poor, NP = non-poor
Tup = the current total number of ultra-poor households in the VWC of interest
Tpp = the current total number of poor households within the VWC of interest
Tnp = total current number of non-poor households amongst the VWC of interest
Sup = number of ultra-poor households actually sampled
Spp = number of poor households actually sampled
Snp = number of non-poor households actually sampled

[5] EPSEM stands for equal probability of selection method in which each basic sampling unit has equal chances of being selected.

y = the same constant used in all VWC reducing all weight if required

In reality, correction should be introduced based on the total of the households in the original census versus the current number of households to uphold the EPSEM condition at the end of the second stage. Because these are rural areas it is estimated that there will not be any significant changes in the increase or decrease of households in the VWC over the project period. This assumption is being tested during the collection and if it proves incorrect these weights will be added to the analysis.

$$W_z = \frac{HH_z}{\sum_{t=(S_{up}+S_{pp}+S_{np})}^{t=1} HH_t}$$

Wz = weight of a HH (z) sample in a given VWC for analysis on the individual level
HHz = number of household members in the household with number z from the sampled households
Sup = number of ultra-poor households actually sampled
Spp = number of poor households actually sampled
Snp = number of non-poor households actually sampled
y = the same constant used in all VWC reducing all weight if required

Total sample size

In the 150 upazilas of the BRAC WASH I project, 50 upazilas will be selected in which 3 VWCs are selected. In each of the VWCs 27 HHs are selected. Therefore in the BRAC WASH I areas the sample size is:

$$Total\ Sample\ size\ =\ 50\ upazilas\ \times\ 3\ VWCs\ \times 27\ HHs\ =\ \mathbf{4050\ HHs}$$

To achieve the same accuracy in the BRAC WASH II areas the PSUs have to be selected on a lower administrative level. In the WASH II area, unions were selected as PSUs. For the rest the same sampling strategy was used and all the above steps can be maintained simplifying the process. This doubles the total household sample size to 8100 HHs.

Other sampling strategies

The household sampling strategy is the most complex of all four of the strategies. Ideally the school, VWC and RSC should have separate sampling strategies, but for practical and financial reasons this did not prove feasible. Various strategies were considered but in the end the simplest (although rather labour intensive) solution for the surveyors was to sample all schools, and the RSC in the selected VWC. This would turn the sample strategy for the households into a two stage sample for the schools, RSCs and VWCs.

Although we believe the intra-cluster correlation will be higher for schools, RSCs and VWCs compared to sanitation and hence the *rho*[6] will be lower, we have no reference to estimate a clear figure for the purpose of calculating the expected precision of the sample under different conditions.

So depending on the analysis, the desired precision might not be reached but we are confident that the sampling allows a high accuracy which is more important in our case.

The limitation to estimates required will depend on the spread of the variable of interest amongst the schools, RSCs and VWCs but it is expected that there will be little variance, thereby keeping confidence high. When producing a set of mock data, some data for the purpose of checking this, it seems that this assumption can be up-held for now.

Field Level Field Sample Guidelines

Introduction

With the BRAC WASH II QIS survey we will collect information from households, schools and rural sanitation centres. For households we aim at collecting information from 8,100 households in such a way that it is representative of all the households in the BRAC WASH I and II programmes. The way we do this is by a quite complicated survey sampling design. Fortunately, as reader, you will notice little of this complexity. To achieve reliable data collection you are required to stick very rigorously to the instructions below. For schools and rural sanitation centres, some specific rules will need to be followed to achieve the same level of representativeness as for the households.

Household data collection

Practical action
The best way of reading through the next paragraphs is with the **form below.**

Selecting the right Village WASH cluster
You will be given a list of village WASH committees (VWCs) to visit. First of all, ensure that the name of the current village is indeed one of the areas on this list. If so, please start adding this information to your survey form together with the higher administrative levels.

In each VWC, start with the VWC form, as this includes the process of selecting the households to be surveyed. This form needs to be brought to Dhaka with all of the other household forms. This form is particularly important as it is required to calculate and correct the sample weights! Not all information will be added to the phones as this would be too difficult to do.

Selecting the household villages

1. Before you select the households we need to obtain the total number of households in each of the wealth groups (ultra-poor, poor and non-poor). Write the number of households clearly on the survey form.
2. Find three bags to hold the households for each of the groups (ultra-poor, poor and non-poor). For the wealth classification of the households we will rely on the assessment during the census of 2008 and 2012, even though some households might have changed over that

[6] Correlation coefficient.

period. We will note any discrepancies between the information collected during the census and the current situation of the individual household on the survey form during the interview.

3. Once that is done, go through the list of all the households under the VWC and write each "address" on a separate piece of paper. Each piece of paper should clearly identify only one household in all of the villages covered by the VWC. Deposit each of the pieces of paper with an "address" in the right bag. Once all the household addresses are on separate pieces of paper in the bags, shake the bags well so the pages are well mixed up.
4. Select randomly (without looking) nine households out of each of the bags, but make sure you note down the order in which they were selected from each bag, and note them down in the right order on the relevant form for the ultra-poor, poor, non-poor.
5. Once everything is noted down you are ready to start your household visits. You can visit the households in any order you wish. Take the form you just filled in with you and copy the right information into your survey forms. Once your visits have ended, add the attached form to the 27 paper-based household survey forms which need to be sent to Dhaka.
6. If there are not more than nine households in any of the wealth groups, just take all of them and mark on each of the forms that could not be filled in that all households were sampled.

School based data collection

Sampling of the schools is quite straightforward, as the form will be partially filled in and you just have to go to the school mentioned on each of the survey forms. If the school is quite far from the area you are collecting household data, you should contact Dhaka to check whether to include the school or not. This should be an exception and you are not allowed to take that decision yourself. The reason for exclusion should be documented so it can be included in the analysis report.

Rural Sanitation Centre based data collection

In a similar manner to the schools, the information on the RSC is included in the forms for the collection of the RSC. If an RSC is quite far from the area where you are collecting household data, you should contact BRAC WASH in Dhaka to check whether to include the RSC or not. This is an exception and you are not allowed to take that decision yourself. The reason for exclusion should be documented so it can be included in the analysis report.

Some reflections

As you can see, this process is relatively simple, but if you come across problems please contact your survey supervisor. Note down clearly anything which did not work out, such as a household where no one was present during the survey. Have fun collecting data and being part of this exciting data collection.

Form

Information on households at the VWC level

This information is already included in the VWC survey form and is only here for reference as the text refers to this part of the form.

Administrative description of the village WASH cluster

District
>
Upazila
>
Union
>
Village WASH committee
>
In what year/month was this VWC established
year: 2007 08 09 10 11 12 **month**: Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Total number of members
At the start: _____ Currently: _____

Number of households in the VWC per wealth category

Total number of households	Census 2008	At end of 2012
Ultra-poor	_____	_____
Poor	_____	_____
Non-poor	_____	_____

List of *ultra-poor* households selected

Order of selection	Address of household	Done
1st	_____	☐
2nd	_____	☐
3th	_____	☐
4th	_____	☐
5th	_____	☐
6th	_____	☐
7th	_____	☐
8th	_____	☐
9th	_____	☐

List of *poor* households selected

Order of selection	Address of household	Done
1st	_____	☐
2nd	_____	☐
3th	_____	☐
4th	_____	☐
5th	_____	☐
6th	_____	☐
7th	_____	☐
8th	_____	☐
9th	_____	☐

List of *non-poor* households selected

Order of selection	Address of household	Done
1st	_____	☐
2nd	_____	☐
3th	_____	☐
4th	_____	☐
5th	_____	☐
6th	_____	☐
7th	_____	☐
8th	_____	☐
9th	_____	☐

Quality assurance

Because the QIS scales are both a statistical instrument and a tool for development, there are different types of quality aspects to check. The need for relevance and comparability within and between locations and across time to reveal similarities and differences across populations have been met already. This is because we use comparable scales developed together with BRAC staff from field and HQ. In addition, the two tests confirmed the relevance of the instrument in the communities. The table below gives the other reasons for quality assurance along with means of verification and solutions, along with the actors and the means of verification. Because we have two-person teams, who check each other, we left out the 10% check of respondents in the field by the supervisor.

Table 3: Quality assurance of the QIS as an instrument for monitoring and development

Type	Reason	Source of Error/Gap	Means of verification	Actors
Quality of data	Information is valid (accurate)	Errors in translation	Translate Bangla scales back to English and compare with original on changes of meaning	BRAC
		Errors of concept, measurement or conclusion	Continued critical assessment of in-built misconceptions (example: a water-filled water-seal is not necessarily functional)	All (errors get noted through questions by staff from different disciplines and levels)
	Data are complete	Scores/score scales not entered and transmitted	Cross-check completeness of data sheet at end of session with each type of actor (VWC, HH, SCH, RSC)	One data team member checks and signs off what the other data team member has entered
		Respondents absent or refuse or stop; recalls not successful and no replacement from random list	Regular data sent on # respondents approached, # refusals or stopped interviews, # and outcomes of call backs/replacements from random list	Study teams (collect and send primary data)
				BRAC ICT : monitor response, refusal and non-contact rates and report to BRAC WASH
	Information is reliable	Data collectors give a personal interpretation; respondents influence scores in self-desired direction	Check strict adherence to scale criteria and definitions; call attention to aberrations	The observing 2nd team member checks on avoidance of interpretation and undue influence
		Errors in IDs of respondents	Use of scanners for automatic ID	Data teams

Type	Reason	Source of Error/Gap	Means of verification	Actors
			process	
		Inconsistent score for repeated question	Compare internal consistency on use of toilet. Probing used when risk of ideal instead of real behaviour reports	Data teams for IND on * latrine use who and when. * Data teams on IND boiling DW
				* IC team when cross-checking these latrines use data of the 2 scales
	Data is qualified	No reasons for scores	Respondents asked to give reasons for high/low scores	Data teams note replies open (closed) questions?
Development Quality	Participatory assessment	Extractive use, no discussion of what score means	Observation: no merely asking the questions until answer is given and punched into phone	Team members check each other's interview style
	Progression ('climb the ladder')	No understanding of the ladder scoring system	Interviewer explains, shows scaling system after scoring	Team members check each other's interview style
	Recognition as owner of the knowledge	No opportunity for respondent to explain or no relevance given to explanation (and so also a less valid score)	Interviewer asks for and listens carefully to any explanation, but does not allow that respondent gives biased score	Team members check each other's interview style and reliable scoring
	Get insight in supporting and limiting factors	Not asking or recording why score is high/low	Teams ask and note reasons for high/low score for each indicator	Teams to record (and if coded, submit)
				IC team aggregate (if coded)
				WASH team analyses for major trends and deviances and checks reasons from qualitative data
	Stimulate action	Extractive use	Observation: Interviewer gives no opportunity to respondent to give actions for improvement	Team members check each other's interview style
	Equity	Exclusion of respondents of different sex (this can also affect	Observation	Team members check each other's body language and respondent

Type	Reason	Source of Error/Gap	Means of verification	Actors
		reliability of scores)		preference
		No sharing of smart phone	Data transmitter gives his/her code	IC analysis and report to WASH team
			Separate focus group discussions with male and female team members	Male and female senior WASH staff member

Practical Guidelines Data Collection

Monitoring in the sample study is done by two-person independent and specially trained teams (one male, one female) within BRAC. Each team will have a smart phone to enter and submit the data electronically. To avoid that the team and the participants do not get distracted by the use of the smart phones, the teams will first enter the data on paper, and later submit them by phone. This will give both team members the opportunity to practise e-monitoring and allows spot cross checks of the data by the supervisors.

To carry out the sample study monitoring the teams bring and use the following materials:

- Data collection forms. There are separate forms for the (1) individual households (2) village WASH committees (3) schools (4) rural sanitation centres.
- Writing materials.
- Torch to check the water seals.
- Smart phone.
- Umbrella.

The Field Visit

1. The field visit starts with a meeting with the VWC in each sampled cluster. Start with explaining that that the BRAC WASH II programme will do an annual 'WASH analysis". The purpose is for everyone to know how well all the clusters are doing and where improvements to the programme are needed.
2. First the PA starts with monitoring the performance of the VWCs. How to do that is described in a separate section called Monitoring the Village WASH Committee.
3. After the exercise with the VWC is completed, the team draws the local household sample. This is explained in a previous chapter called "Field Level Field Sample Guidelines".
4. The team carries out the household visits to fill in the household characteristics forms. Some of this information will already be in the form.
5. If any household is not at home, the team returns for a second or third visit.
6. Before leaving the village, the two team members divide the sheets in half and check if all the answers and scores have been filled in and the reasons for scores and planned actions have been entered. If data is missing, the team revisits the household.

Monitoring the Village WASH Committee

1. You start by explaining to the members of the VWC that this visit is part of the annual BRAC WASH monitoring exercise. Emphasise that this is for everybody's learning and will help them and the whole programme to achieve the WASH goals.
2. Explain the steps of the QIS ladder and discuss the scores for the first two QIS scales (VWC indicator 1: Safe and Protected Drinking Water Source (provided by BRAC) and indicator 2: Performance of VWC).
3. After each score the team asks and notes what the reasons are if a score is low or high (according to the VWC).
4. For the third indicator (VWC indicator 3: Women's Participation/Gender Balanced Management) split the VWC into two sub-groups – one male group and one female group. Each team member joins a sub-group: female with the females, male with the males.
5. Each team member asks his/her sub-group to agree on the score for this QIS ladder for the VWC. After this separate session, the sub-groups get together again and the scores are compared. After that, the group is asked to comment on possible differences and to agree on a final score.
6. After each score the team asks and notes what the reasons are if a score is low or high (according to the VWC).
7. The VWC makes the minutes of the meeting.

Monitoring the households

1. After the discussion with the VWC and the drawing of the sample, the team visits the first sample household in the sample cluster.
2. A VWC member or other villager may come along to show the way. Other household members and/or neighbours may also join the household session, but they should not influence the scores.
3. When you enter the household, you sit down with the men or the women of the household and you introduce yourself. Next, you ask the person to introduce him or herself. The respondent can be the male or the female spouse or another adult household member.
4. Once you have noted in the general household form who is your discussion partner, no one else should dictate what she or he says. You have practised how to do this in the role playing during your training.
5. You explain the purpose of your visit and tell them you would like to ask them a number of questions. You start the discussion with the questions from the general household form:
    - What is the name of the head of the household and the ID of the household?
    - Does anyone in the household have a phone to keep in contact if necessary? E.g. if you forget a question. If yes, note the phone number.
    - How many people are in the household?
    - How many children are in the household? And how many elderly people?
    - What do they do for a living? And so on…
    - The information that needs to be collected from the household is included in the Household QIS Scales.

6. Then move on to the scoring of the QIS ladders. It is very important that you observe the following:
    - The cleanliness of the latrine and the presence of soap.
    - Ask the woman of the household to demonstrate how she fetches, stores, collects, and draws water.
    - Inspect the tube well and the platform.
7. Some additional remarks for the indicators of the water source and the management of the drinking water. Ask the lady of the house to show you the water source and together with her score HH indicator 1. Then ask her to show and explain to you how the family collects the drinking water and to show you how they take care of this water in their home:
    - Ask what purposes the family's water source is used for.
    - Ask her to describe or show you how water is collected from the source: in what type(s) of container(s) is the water collected and what activities do they carry out at the source? Observe if and how containers are cleaned and if hands can touch the water during carrying in that/those container(s).
    - Then observe how water is stored in the home. Ask the lady to show or describe what is done when the vessel is (almost) empty.
    - Probe if drinking water from an unprotected source is always boiled.
    - Observe how drinking water is drawn from the storage vessel. If there is no tap or scoop, ask the lady to demonstrate how drinking water is taken out, and see if the hand can touch the water.
    - Observe/ask also if the family uses a communal cup/shared a cup when they drink water, or if everyone uses a separate cup.
    - Use the observations and explanations to score Household indicator 2 (Drinking water management in the home) and explain why you give this score.
    - Make sure that you probe the people about their cleaning, water boiling and cup sharing habits, as they will start by giving positive answers. **Use the probing techniques that you have practised during the training.**
8. When you have filled in the household data sheet and the QIS ladders scoring sheets, thank the family and move to the next sample family in the cluster.

Monitoring of School Indicators

1. The schools that need to be visited will be sampled through the procedure that has been described in Field Level Field Sample Guidelines.
2. Inform the (sampled) school that you will be visiting them and that you would like to have a short meeting with the headmaster, the school WASH committee, and the student brigade.
3. After arriving at the school, first meet with the headmaster to introduce yourself and explain that this visit is part of the annual WASH learning exercise. Ask the headmaster to show you the latrine that is being used by the teachers.
4. Then have a meeting with the school WASH committee, and with them determine the score for the quality of their performance.
5. Next, have a meeting with the school WASH brigade and score their performance with them.

6. Discuss with the children the quality of the WASH facilities at the school. You need to visit the WASH facilities for both the boys and the girls and score each facility separately.
7. When you discuss menstrual hygiene management it would be good to ask the boys and male teachers to leave as the girls might feel shy.
8. Be aware that the students might feel very hesitant to speak openly in front of their teachers, so it would be good if one team member can check with some children separately if their school latrines are always accessible (not locked) and clean (also at times when the monitoring team is not visiting).

Monitoring of the Enterprise Indicator

1. The monitoring team agrees on a time and visits the first entrepreneur.
2. The team introduces the reason for the visit and explains that this is part of the annual learning visit from the BRAC WASH programme.
3. The team asks the entrepreneur who else participates in the business. If a wife, husband or any other relatives also participate in the business, they ask if these others can join the meeting.
4. The team check what kind of support was received from BRAC (orientation and financial support OR orientation only).
5. The team explains the scale and asks the husband, wife and other relatives to discuss where their business scores, and why the score is high or not so high? There can be more reasons, so probe them as practised during the training.
6. The team discusses the score, asks if the family would like to 'climb the ladder' and asks what they can do themselves.
7. The team can give some advice, if BRAC has given its members some training on business development. Or the team can refer the entrepreneurs to a special BRAC adviser or to visit another entrepreneur in the neighbourhood who has already developed a sanitation and hygiene business. This can be another RSC, but also a general shopkeeper or contractor in the area who works in the sanitation business.
8. The team thanks the entrepreneurs.

Data collection forms

Household Level Data Collection Forms

CLUSTER LEVEL		
Name and code of district		
Name and code of upazila		
Name and code of union/pourashava		
Name and code of village		
Name and sex of interviewer 1		
Name and sex of interviewer 1		
HOUSEHOLD		
Name and sex of the key participant		
Location and ID of household		
Phone number (if present)		XXXXXXXXX
Date & time of 1st visit		
Date & time of 2nd visit		
Member No.	Male	Female
Adult		
Adolescent		
Child		

Household QIS Scales

HH INDICATOR 1: SAFE AND PROTECTED MAIN DRINKING WATER SOURCE	SCORE
IDEAL: (1) Water source is tube well that is known to be arsenic free OR is surface water that is filtered and cooked (2) no stagnant water around tube well (3) tube well has a platform without cracks (4) no latrine within 12 steps	4
(1) Water source is tube well that is known to be arsenic free OR is surface water that is filtered and cooked (2) no stagnant water around tube well (3) tube well has a platform without cracks	3
BENCHMARK: (1) Water source is tube well that is known to be arsenic free OR is surface water that is filtered and cooked (2) no stagnant water around tube well	2
(1) Water source is tube well that is known to be arsenic free OR is surface water that is filtered and cooked	1
Water source is *not functional/not protected*	0
Reason(s) why score is high/not high:	

Guidelines for verification

- Not functional = does not provide water/does not filter.
- Not protected = has no platform or has a platform with cracks through which dirty water can enter the source.
- Know to be free of arsenic = (a) the upazila is known to be free from arsenic (b) in upazila with arsenic problems: Tube well (TW) has been tested in the last five years and the results of test are known.
- Has this TW been tested for arsenic? When (how long ago) was it tested for arsenic? What was the result of the test? How to verify if Pond Sand Filter functions/does not function and is/is not protected?

HH INDICATOR 2: DRINKING WATER MANAGEMENT FROM SOURCE TO CUP	SCORE
IDEAL: (1) Arsenic free Deep Tube Well (DTW)/TW or well-protected handpump with platform, or sand filter pond/river water, or boiled water from open source (always!) + (2) safe collection: cleaning of vessel once a week and hands cannot touch during transport + (3) individual water source is well-protected and has a platform without cracks (4) safe home storage: separate vessel cleaned once a week drawing by pouring, scoop, filter or tap	4
(1) Arsenic free DTW/TW or well-protected handpump with platform, or sand filter pond/river water, or boiled water from open source (always!) + (2) safe collection: cleaning of vessel once a week and hands cannot touch during transport + (3) individual water source is well-protected and has a platform without cracks	3
BENCHMARK: (1) Arsenic free DTW/TW or well-protected handpump with platform, or sand filter pond/river water, or boiled water from open source (always!) + (2) safe collection: cleaning of vessel once a week and hands cannot touch during transport	2
(1) Arsenic free DTW/TW or handpump or sand pond filter/river water, or boiled water from open source (always!)	1
Unsafe drinking water source (arsenic TW or open source without always boiling drinking water)	0
Reason(s) why score is high/not high:	

Questions for verification

- In the guidelines for the data collection from the households there is a detailed description on how this scale needs to be scored.
- Visit or ask about the source and ask the lady of the house to demonstrate what she does when collecting and transporting water. Observe if vessel is washed with soap and rinsed.
- Ask to see drinking water stored in home. Note type of container. Is it covered? Can drinking water be poured or taken out without touching the water with the hands? For example, water is in a kettle, a thermos bottle, a ceramic filter, a jerry can or a covered container with a ladle.
- Ask what she does after bringing water for drinking and cooking into the home.
- If she says water is boiled, ask probing questions in an understanding manner, as practised in role play, for example: “Sometimes boiling takes too much time or the fuel is too expensive. Does that also happen to you?”
- If she uses water from an open source and the answer is yes, you know the score becomes 0.
- Safe collection habit =washing vessel with soap/ash/detergent and rinsing before filling and hands cannot touch during transport.

- Filtering = by commercially bought filter with reservoir and tap.

HH INDICATOR 3: SANITARY AND HYGIENIC HOUSEHOLD LATRINE (Households)	SCORE
IDEAL: Latrine with (1) ring and slab + (2) has *functioning* water seal + (3) no faeces visible in pan, slab, water seal and walls + (4) latrine has *two pits*	4
Latrine with (1) rings and slab + (2) has *functioning* water seal + (3) no faeces visible in pan, slab, water seal and walls	3
BENCHMARK: Latrine with (1) rings and slab + (2) has *functioning* water seal	2
Latrine with (1) rings and slab, but no or broken water seal	1
No latrine or latrine without rings and slab	0
Reason(s) why score is high/not high:	

Guidelines for verification

- VERIFICATION of "two pits" = observe one pit is in use, second pit is empty (when first pit is not yet full) or has composting contents.
- VERIFICATION of "functioning water seal" = check if water in the seal reaches high enough to close the pit opening fully off against bad smells, as done in the training.

HH INDICATOR 4: LATRINE USE BY WHOM?	SCORE
IDEAL: (1) women and adolescent girls + (2) children from age of 6 + (3) men and adolescent boys use the latrine + (4) faeces *of any other members* end up in toilet	4
(1) women and adolescent girls + (2) children from age of 6 + (3) men and adolescent boys use the latrine	3
BENCHMARK: (1) women and adolescent girls + (2) *children from age of 6* use the latrine	2
(1) women and adolescent girls use the latrine	1
Nobody in the household uses the latrine for defecation and urination	0
No other household members – not applicable	
Reason(s) why score is high/not high:	

Guidelines for verification

- VERIFICATION of use by different groups within the households: Use probing questions in an understanding manner, as practised in the role play during training.
- For children from age of 6: Do children aged 6-12 sometimes use the bushes when they are playing or coming from/going to school?
- For adolescent boys: Is it sometimes difficult to get your adolescent son(s) to use the toilet instead of going in the open with friends?
- For husbands/fathers: Is it sometimes difficult/ impossible for the men in this household to use the toilet to defecate?
- If the household has old people: Do they prefer the fresh air when going for defecation?
- If the household has infants aged 2-5: Can you describe what happens when the infant has to pass a stool?
- If the household has babies: Can you describe what happens when the baby has passed a stool?
- If the household has a member with a disability: What does the disabled person do when he or she has to go for defecation?
- If there are no other members in the household score level, then you need to score 8 to indicate that this scale is not applicable.

HH INDICATOR 5: LATRINE USE WHEN?	SCORE
(1) During the day during dry season + (2) during night during dry season + (3) during rainy season (night and day) + (4) during *abnormal situations*	4
(1) During the day during dry season + (2) during night during dry season + (3) during rainy season	3
(1) During the day during dry season + (2) during night during dry season	2
(1) During the day during dry season	1
Open defecation (latrine not used)	0
Reason(s) why score is high/not high:	

Process of verification

- Abnormal situations = when the toilet, or the path to the toilet is flooded; after the household is evacuated during a flood or a cyclone.
- VERIFICATION: Ask probing questions in an understanding manner, as practised by role plays during the training, such as:
  1. Is your latrine, or the path to it, ever flooded? If yes, what do you when you need to defecate?
  2. In this year, has your household had to leave this home because of storms or floods? In that case, where did you go when you had to defecate? And the men? And the children? In case of a baby/infant: What happened when the baby/infant passed a stool?

HH INDICATOR 6: HANDWASHING PROVISIONS AFTER DEFECATION	**SCORE**
IDEAL: (1) Enough water to wash hands carried or available in or near latrine + (2) soap/soap solution in plastic bottle at latrine + (3) water for handwashing is from safe source + (4) there is a special *handwashing station*	4
(1) Enough water to wash hands *carried* or available in or near latrine + (2) soap/soap solution in plastic bottle at latrine + (3) water for handwashing is from *safe source*	3
BENCHMARK: (1) Enough water to wash hands carried or available in or near latrine + (2) soap/soap solution in plastic bottle at latrine	2
(1) Enough water to wash hands *carried* or available in or near latrine	1
No provisions for handwashing *carried* or available in or near latrine	0
Reason(s) why score is high/not high:	

Process of verification

- Handwashing station = plastic container with water and tap, or tippy tap, and soap in/or near the toilet.
- Safe source = shallow or deep tube well with uncracked platform and no pit latrine within 12 steps OR sand filter pond OR chlorination in piped water OR other form of proper water treatment.
- VERIFICATION: by observation as practised during training.

HH INDICATOR 7: SLUDGE MANAGEMENT WHEN LATRINE PIT IS FULL	**GIVEN SCORE**	
	As actually done already	As planned for future
IDEAL: (1) Owners/farmers/service empty full pit + (2) first let sludge *fully compost* in pit for 12 months or *fully compost* it after removal from pit + (3) use compost for trees/crops + (4) use after checking that composting is 100% complete		
(1) Owners empty full pit or get others to empty it + (2) first let sludge *fully compost* in pit or *fully compost* it after removal from pit + (3) use compost for trees/crops OR owner makes new latrine over new pit and covers old pit with soil and (4) when sludge has fully composted plants a *useful tree* in the spot of the old pit		
BENCHMARK: (1) Owners empty full pit or get others to empty it and reuse latrine + (2) after depositing sludge in a hole in garden/field, cover hole OR owner makes new latrine over new pit and (3) covers old pit with soil		
(1) Owners empty full pit or get others to empty it and reuse latrine, but sludge is disposed *in open environment* OR owner makes new latrine over new pit, but leaves old pit uncovered		
No emptying: household returns to open defecation		
Reasons for score		

Verification

- In open environment = on waste land, on a field, in a ditch, in a pond or other type of water course.
- Fully compost = sludge is composted for 12 months before using the compost on a crop or planting a tree in the spot of the old pit.
- VERIFICATION: Ask if the household has ever had a filled up latrine pit. If yes, ask them to describe what they have done next and encircle answer. If they have not yet had a filled pit, ask them to think when the pit may fill and what they would do in such case, and circle that answer.

Village WASH Committee Data Collection Form

CLUSTER LEVEL		
Name and code of district		
Name and code of upazila		
Name and code of union/ pourashava		
Name and code of village		
Name and sex of interviewer 1		
Name and sex of interviewer 1		
In what year was the VWC established?		
Year that the Social Map was made		
Total no. of households (HH) in sample cluster		
Total no. of ultra-poor HH in map and now		
Total no. of poor HH in map and now		
Total no. of non-poor HH in map and now		
Total no. of male and female members at start?		
Total no. of male and female members now?		
Is the area arsenic prone?	Yes/NO	
Type of BRAC support for water in this cluster, and year of construction	Tube well platform	
	Deep Tube well	
	Sand Pond Filter	
	Sand Pond Filter	
	Not Applicable	

The QIS Ladders and Scoring Sheets

VWC INDICATOR 1: SAFE AND PROTECTED DRINKING WATER SOURCE (PROVIDED BY BRAC)	SCORE
IDEAL: (1) Water source is tube well, deep tube well with platform without cracks + (2) source is arsenic free water for drinking and cooking + (3) no stagnant water around tube well + (4) no latrine within 12 steps	4
(1) Water source is tube well, deep tube well with platform without cracks + (2) source is arsenic free water for drinking and cooking + (3) no stagnant water around tube well	3
BENCHMARK: (1) Water source is tube well, deep tube well with platform without cracks + (2) source is arsenic-free water for drinking and cooking	2
(1) Water source is tube well, deep tube well with platform without cracks, but *arsenic unknown*	1
Water source is *not functional/not protected*	0
Reason(s) why score is high/not high:	

Verification by observation and probing questions:

- Not functional = does not provide water/is clogged (happens when not cleaned often enough).
- Not protected = has no platform or has a platform with cracks through which dirty water can enter the source.
- Arsenic unknown =tube well has not been tested at all OR result of test is not known OR test was longer than 5 years ago.
- "Has this tube well been tested for arsenic?" "When (or how long ago) was the tube well tested for arsenic? What was the result of the test?" You can help the VWC by asking them if the testing was before or after a certain date.
- Add a well-known national event here such as the last national election. : If the Department of Public Health Engineering standard is max. 5 years before retesting, pick a memorable event such as the last elections to find out when the last testing has taken place.

VWC INDICATOR 2: PERFORMANCE OF VWC	SCORE
IDEAL: (1) Committee (male and female members) meets every 2 months + (2) maintains list of decisions and meeting minutes + (3) identifies gaps and *takes action* + (4) *mobilizes Annual Development Programme funds* for ultra-poor	4
(1) Committee (male and female members) meets every 2 months + (2) maintains list of decisions and meeting minutes + (3) identifies gaps and *takes action*	3
BENCHMARK: (1) Committee (male and female members) meets every 2 months + (2) *maintains list of decisions and meeting minutes*	2
(1) Committee (male and female members) *meets every 2 months*	1
No full VWC OR VWC exists but does not meet	0
Reason(s) why score is high/not high:	

Verification by observation and probing questions:

- Full VWC = 5 male and 6 female members.
- Takes action = If a problem is noted in one meeting, it is solved in the next meeting. Verification method: review minutes of last three meetings. Was a problem noted down one or two meetings ago recorded as solved at the following meeting?
- Mobilization of ADP funds = evidence that the VWC could successfully access government funds meant for the poor. If the village mobilized their own funds or funds from another NGO, the score remains at level 3.
- VERIFICATION of “meets every two months” by checking current date and dates of minutes of the last two meetings.
- VERIFICATION of “maintains list of decisions and meeting minutes” by checking the minutes of the previous two meetings.

VWC INDICATOR 3: WOMEN'S PARTICIPATION /GENDER BALANCED MANAGEMENT	Score men	Score Women	Agreed Score
IDEAL: Women registered on VWC + (1) *come to the meetings* + (2) *speak out* + (3) influence some decisions in last 1 year + (4) all decisions taken jointly	4		
Women registered on VWC + (1) *come to the meeting* + (2) *speak out* + (3) influence some decisions in last 1 year	3		
BENCHMARK: Women registered on VWC + (1) *come to the meetings* + (2) *speak out*	2		
Women registered on VWC + (1) *come to the meetings*	1		
No women on VWC/women registered, but don't come to the meetings	0		
Reason(s) why score is high/not high:			

Verification

- Women come to the meetings: VERIFICATION: by counting number of members of this meeting and checking the minutes of two previous meetings: at all three meetings minimal eight members present (this means balance of women and men).
- Women speak out = ask questions and/or make suggestions at this and two previous meetings.
- VERIFICATION: Ask sub-groups of female and male members separately and note the two given scores (1 for female, 1 for male). Thereafter, women and men decide together the 'Agreed score'. If no agreement is reached, the study team enters the score of the women into the 'Agreed score' cell.

Village School Data Collection Form

SCHOOL		
Name and Code of School in cluster		
Total no. of male teachers		
Total no. of female teachers		
Total no. of male students		
Total no. of female students		
Type of water source in school		
No own water source		
Shallow tube well without platform		
Deep tube well without platform		
Shallow tube well with platform		
Deep tube well with platform		
Other, specify _____		
Type of BRAC support for sanitation in this school, and year of construction	Number of separate toilet seats for girls	

The QIS Ladders and Scoring Sheets

INDICATOR: SANITARY AND HYGIENIC SCHOOL TOILETS	**Girls latrine**	**Boys latrine**
IDEAL: (1) separate toilets for boys and girls are present + (2) always used by students + (3) have no faecal matter in pan, water seal, floor or walls, and no puddles of urine (4) provisions for cleaning and handwashing available in the latrine	4	
(1) separate toilets for boys and girls are present + (2) always used by students + (3) have no faecal matter in pan, water seal, floor or walls, and no puddles of urine	3	
BENCHMARK: (1) separate toilets for boys and girls are present + (2) always used by students	2	
Toilets are there and are always used by the students, but not separate for boys and girls	1	
No toilets for boys and girls available in the school OR toilets are not separate OR are not used	0	
Reason(s) why score is high/not high:		

Verification

- Visit both the latrine for the girls and the boys.
- Check with the students whether this latrine is always open and accessible during school days.
- Check whether the soap looks old and used or whether it looks like it has been put there a day ago. When the soap looks new, check with students whether soap is normally available.

INDICATOR: STUDENT BRIGADE	SCORE
IDEAL: (1) student brigade with 12 boys and 12 girls have been formed + (2) work plan and monitoring format present + (3) register and work plan updated regularly + (4) school brigade has implemented at least one action/solved at least one problem in the last year	4
(1) student brigade with 12 boys and 12 girls have been formed + (2) work plan and monitoring format present + (3) register and work plan updated regularly	3
BENCHMARK: (1) student brigade with 12 boys and 12 girls have been formed+ (2) work plan and monitoring format present	2
(1) student brigade with 12 boys and 12 girls have been formed	1
No student brigade in the school	0
Reason(s) why score is high/not high:	

Verification

- Check the register and work plan to see whether they actually exist and are regularly updated.
- Ask the students to give an example of a problem that they have identified and solved together.

INDICATOR: MENSTRUAL HYGIENE MANAGEMENT	SCORE
IDEAL (1) dumping facilities in the latrine and end-disposal provisions are available + (2) water is available within the latrine + (3) napkins are available within the school + (4) girls can use the latrine without being observed while entering the latrine	4
(1) dumping facilities in the latrine and end-disposal provisions are available + (2) water is available within the latrine + (3) napkins are available within the school	3
BENCHMARK: (1) dumping facilities in the latrine and incinerator are available + (2) water is available within the school	2
(1) dumping facilities in the latrine and end-disposal provisions are available in the school	1
No facilities for menstrual hygiene management are available in the school	0
Reason(s) why score is high/not high:	

Verification

- Visit the latrine for the girls to check whether the different facilities (dumping facilities, water, end disposal facilities) are actually available.
- Make sure that you can talk with the girls separately and check whether they can visit the latrines without any problems. Are the boys still teasing them or not.
- Ask them whether they visit the school continuously or whether they prefer to stay home during their menstruation.

INDICATOR: Performance of School WASH Committee	SCORE
IDEAL: (1) Committee (male and female members) is functional + (2) has documents and meeting minutes and financial accounts list + (3) has funds to maintain school WASH provisions + (4) fund for maintenance of WASH provisions is updated in register	4
(1) Committee (male and female members) is functional + (2) has documents and meeting minutes and financial accounts list + (3) has funds to maintain school WASH provisions	3
BENCHMARK: (1) Committee (male and female members) is functional + (2) has documents, meeting minutes and financial accounts list.	2
(1) Committee (male and female members) is present and functional	1
No committee OR committee exists, but is not functional	0
Reason(s) why score is high/not high:	

Verification

- Check the register and work plan to see whether they actually exist and are regularly updated.
- Check the cash book of the school WASH committee to ensure that it is properly maintained and that there is sufficient balance.

Data Collection Form: Rural Sanitation Centre

RURAL SANITATION CENTRE		
Location of RSC (village and union)		
Farthest distance to RSC in upazila in km and estimated travel time for ultra-poor		
Support received from BRAC		
Orientation and financial support		
Orientation only		

INDICATOR: PERFORMANCE OF SANITATION CENTRE/ENTERPRISE	SCORE
IDEAL: (1) Sanitation centre/enterprise within reach of union + (2) has range of goods, materials, services and will to serve all + (3) markets sanitation to all customers who visit their business + (4) markets goods and services to customers in surrounding villages	4
(1) Sanitation centre/enterprise within reach of union + (2) has at least 3 or 4 types of sanitary products + (3) provides other services to customers on their demand	3
BENCHMARK: (1) Sanitation centre/enterprise within reach of union + (2) has at least 4 types of sanitary products	2
(1) Sanitation centre/enterprise within reach of union	1
No Sanitation centre/enterprise within reach of union	0
Reason(s) why score is high/not high:	

Process of verification

- Check the yard of the rural production centre and check what kinds of sanitation products are being sold. The products can include rings, slabs, water seal, siphon or pan.
- Check whether the entrepreneur ever visited a customer to install a latrine or provided the customer with advice.
- Ask the entrepreneur to give examples of recent marketing efforts.

Outline of Training Programme

The training of the monitoring teams is estimated to take five days including two days in the field: (the field practice should cover all scales and also practise the HH and if needed school sampling). Before the training, all trainees should receive a translated copy of the monitoring guidelines.

Day 1: Introduction into QIS and asking questions

Morning:

- Introduction to monitoring (chapter Monitoring).
- Asking questions (chapter Practical guidelines data collection).
- Understanding the QIS-scales (chapter

- Data collection forms).

Afternoon:
- Review of each QIS-scale (chapter Monitoring).
- Role play on avoiding influencing and on probing questions (chapter Practical guidelines data collection).

Day 2: Data collection in the field

Morning:
- Technical training on latrine quality.
- Quality assurance of monitoring - process and data (chapter Quality assurance).

Afternoon:
- Sampling – understanding and practice (chapter Field Level Field Sample Guidelines).
- Data entry in forms and smart phone (the smart phone training is continued after field visit).
- Travel to field.

Day 3 and 4: Hands on practice
- Sampling.
- Data forms and QIS scale practice for full round (all indicators and groups).
- Practising QA in teams.

Day 5: Review and preparation in the field

Morning:
- Evaluation of field work.
- Refresher of sampling procedures, data collection and entry procedures.

Afternoon:
- Problem solving in sampling and data sharing.
- Planning for the actual work.

Day 6

Training on the use of the smart phones.

Day 1

Morning

Introduction monitoring

This section will briefly introduce the following topics:

- The monitoring cycle on the basis of the picture mentioned at the beginning of this document
- The need to all monitor the same things in the same way – we all need to speak one language
- Climbing the ladder – change happens step-by-step and not all at once
- Differences between a normal survey and participatory monitoring with the QIS.

Asking questions

For many of the questions, the teams need to probe and make sure that they avoid asking leading questions.

Probing is trying to get the *true* practice and not what people *know is correct, but in reality do not do*. Probing can be done by saying things like: “Sometimes men/adolescent boys/old people/children do not use the latrine. I know that it sometimes happens in my family. Does that also happen in your household? Who in your family do sometimes not use the latrine? And what about your daughters? And you yourself, do you sometimes face problems?”

OR

“This tube well is painted red because it has arsenic. People should not use it to collect drinking water. But sometimes it takes too long to collect drinking water from a green pump, or the owners do not like families from another cluster to use their pump. So then people do sometimes use the water from the red pump for drinking. Does that also happen in your household? What are the reasons that you sometimes use the red pump for drinking water?

A leading question is a question that leads the respondent to think and answer in a certain way. For instance, the question “you are washing your hands or not” makes a positive answer very likely. Instead the question could be: “what do you before you eat”? The PAs should be trained to avoid leading questions. Open questions usually begin with what, why, how. An open question asks the respondent for his or her knowledge, opinion or feelings. "Tell me" and "describe" can also be used in the same way as open questions. Here are some examples:

- What happened at the meeting?
- Why did he react that way?
- How was the party?
- Tell me what happened next.

In the session, demonstrations/role plays will be showcasing false answers and leading questions as well as probing techniques and open questions. Afterwards the participants will be asked to discuss what happened with the quality of the information in the demonstration/role play. In the afternoon they will practise this themselves.

Understanding the QIS ladders

To train the monitoring teams in understanding the QIS ladders the following training method could be used:

1. Prepare set of five separate cards, with on each card the written description of indicator 9, “Performance of village WASH committee” and another set of small cards, each with a score value 0-4.
2. The trainer lays out the descriptions on the ground in no specific order. He or she asks any member to stand near one card and read out what is on it, a second person to read out a second card, etc. until all cards have been read. If nobody can read, the PA reads the cards himself or herself.
3. The PA now asks the PAs and FOs to order the cards in a scale, with the worst description at the bottom and the best at the top. When they have completed the scale, the PA checks the order and if necessary makes and explains the corrections.
4. The PA checks if each participant understands each thing observed: rings, slab, intact water seal, visible faeces and how to recognize them, safe excreta management: what is composting and when are composting and end disposal safe?
5. The trainer now does the same training activities for all scales.

Afternoon

The afternoon of the first day is meant to get acquainted with the contents and use of the QIS ladders in the field. As the trainees are not yet familiar with the ladders, the exercise will focus on the ladders themselves and not on scoring.

After this exercise the trainees will take part in a role play. Divide the trainees in small groups of maximum three or four. Each group will role play two or three indicators. For household indicators, they will also be told if the household is ultra-poor, poor, or non-poor. Each trainee will get an opportunity to lead the discussion. The others will observe, focusing on:

1. Do the trainees follow the correct procedures exactly? Remember: it is very important that all steps are followed correctly so you need to be strict.
2. How do the trainees interact with the local communities? Do they take time to introduce themselves?
3. How do they ask the questions? Are they using open questions (neutral) or are their questions leading to certain answers?
4. How do they probe the answers? Do you feel that they get close to reality or do they accept anything that is being told by the respondents?

When the group has done its indicators, sit down and analyse how the exercise went. Ask the trainees first and then add your own comments.

Day 2

The second day of training will focus on a number of issues that are important for proper monitoring. These issues will be:

- Refresher on the QIS scales.

- Sampling in the field.
- Data collection procedures in the field.
- Data entry forms.
- Preparing and getting ready for the field visit.
- Testing the water seal.

Many of these topics are described in detail in the monitoring guidelines such as sampling in the field, data collection procedures in the field etc.

Refresher on the QIS scales

The first exercise in the morning will be used to refresh the QIS scales that were discussed during the first day. For this purpose, ask each of the participants to explain one QIS scale to the group and check whether everything is clear. Make sure that you also include the methods of verification in the refresher session.

Sampling in the field

Within a village, the data collection team have to sample households within each union they visit. The chapter on Field Level Field Sample Guidelines describes in detail how households should be sampled in each cluster. It is very important that the trainees understand this process very well and strictly follow the procedure.

To train the sampling, make sure that you have a copy from a cluster of one of the VWCs. Now start practising the sampling procedure in small groups of four trainees.

You will note that the table of contents of the training programme refers to the practical field level sampling guidelines only. The sampling strategy can be skipped for the training as it is rather complicated and not relevant for field staff.

Testing of water seal

A technician will come to train the trainees on how they can observe the quality of the water seal. Using a pan and a seal as well as drawings, he will explain when the seal is connected correctly and when incorrectly. The participants will discuss - with explanations and demo from the technician - what it means for the functioning of the toilet if the water seal is not connected correctly. Finally the participants will be tested blind (one by one) if they can recognize the correct or incorrect connection (The idea is that all leave the room and enter one by one to take the “test” then overall results are discussed).

Quality assurance and control

In order to start the discussion on quality assurance, trainees are asked to mention the potential risk to the quality of their data collection effort. In the table in the chapter on **Quality assurance** a number of issues are listed that are important for the field staff taking part in the training. Issues that need to be observed in the field are shown in Table 4:

Table 4: Quality assurance check list

Type	Reason	Source of Error/Gap	Means of verification	Actors
	Data are complete	Scores/score scales not entered and	Cross-check completeness of	One data team member checks

Type	Reason	Source of Error/Gap	Means of verification	Actors
		transmitted	data sheet at end of session with each type of actor (VWC, HH, SCH, RSC)	and signs off what the other data team member has entered
		Respondents absent or refuse or stop; recalls of past events not successful and no replacement for these respondents from random list	Regular data sent on • # respondents approached • # refusals or stopped interviews, • # and outcomes of call backs/ replacements from random list	Study teams (collect and send primary data)
				BRAC ICT : monitor response, refusal and non-contact rates and report to BRAC WASH
	Information is reliable	Data collectors give a personal interpretation; respondents influence scores in self-desired direction	Check strict adherence to scale criteria and definitions; call attention to aberrations	The observing 2nd team member checks on avoidance of interpretation and undue influence
		Errors in IDs of respondents	Use of scanners for automatic ID process	Data teams
		Inconsistent score for repeated question	Compare internal consistency on use of toilet. Probing used when risk of ideal instead of real behaviour reports	Data teams for IND on * latrine use who and when. * Data teams on IND boiling DW
				* IC team when cross-checking these latrine use data of the 2 scales
Development Quality	Participatory assessment	Extractive use, no discussion of what score means	Observation: no merely asking the questions until answer is given and punched into phone	Team members check each other's interview style
	Progression ('climb the ladder')	No understanding of the ladder scoring system	Interviewer explains, shows scaling system after scoring	Team members check each other's interview style
	No recognition as owner of the knowledge by respondents	No opportunity for respondent to explain or no relevance given to explanation (and so also a less valid score)	Interviewer asks for and listens carefully to any explanation, but does not allow that respondent gives biased score	Team members check each other's interview style and reliable scoring

Type	Reason	Source of Error/Gap	Means of verification	Actors
	Get insight in supporting and limiting factors	Not asking or recording why score is high/low	Teams ask and note reasons for high/low score for each indicator	Teams to record (and if coded, submit)
				IC team aggregate (if coded)
				WASH team analyses for major trends and deviancies and checks reasons from qualitative data
	Equity	Exclusion of respondents of different sex (this can also affect reliability of scores)	Observation	Team members check each other's body language and respondent preference
		No sharing of smart phone	Data transmitter gives his/her code	IC analysis and report to WASH team
			Separate Focus Group Discussions with male and female team members	Male and female senior WASH staff member

Refresher data collection procedures in the field

The exercise on data collection should be repeated. This time it should include the use of data sheets. It is important that the trainees themselves observe and provide feedback to other trainees. This will also help them to get prepared for the field visit tomorrow.

Preparing and getting ready for the field visit

It is important to prepare well for the field visit and provide the participants with clear information. So before you leave for the field agree with the participants on the following:

- There will be groups of four trainees. Two people will collect data and two people will observe. After a first practice round you will change roles.
- Who will collect which data? Who will talk to the VWC? Who will do the sample? Who will visit the household? Who will visit the school? Who will visit the rural sanitation centre?
- Instruct participants to behave respectfully during the visit.

Day 3 & 4

Hands on practice

During the practice there are a number of important things to observe:

- Make sure that everybody gets a turn in asking questions and scoring.
- Make sure that there is always an observer who can give feedback on what goes right and what goes wrong.
- After each round of data collection you need to come together and discuss the feedback.

- Not only the data collection is important, but also the data entry. Is the data entered in such a way that someone else can understand it?
- The trainers need to be very critical but will give feedback only after the exercise has ended.

Day 5

Morning

This day of the training programme will be used to:

- Do a final evaluation of the field work.
- Do a final refresher of sampling procedures and data collection and entry procedures.

Afternoon

- Discuss specific problems.
- Plan for the actual data collection.

Day 6

On the last day staff will be trained on using the smart phones.

References

Bostoen, K., 2005. *Measuring Access and Practices*, PhD Thesis. London: London School of Hygiene and Tropical Medicine.

Levy, P.S., and Lemeshow, S., 1999. *Sampling of Populations: Methods and Applications,* Wiley Series in Survey Methodology. ISBN 0471155756.

Reilly, M., 1996. *Optimal Sampling Strategies for Two-Stage Studies* in American Journal of Epidemiology, 143(1): 92-100. Baltimore: The Johns Hopkins University School of Hygiene and Public Health.

Some useful links:

- http://ocw.jhsph.edu/courses/statmethodsforsamplesurveys/PDFs/Lecture5.pdf
- http://aje.oxfordjournals.org/content/165/11/1314.full.pdf
- http://www.estadisticas.gobierno.pr/iepr/LinkClick.aspx?fileticket=NODuX1Xe0yw%3D&tabid=100
- http://www.isr.umich.edu/src/smp/asda/first_stage_ve_new.pdf
- http://faculty.washington.edu/tlumley/survey/