Methodology for monitoring and evaluating progress in water supply, sanitation and water resources management in West Africa

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ITAD WATER

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Contents

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Acronyms and abbreviations

CBO	Community Based Organisation
CRS	Catholic Relief Services
EHP	Environmental Health Project
GPS	Global Positioning System
GEF	Global Environment Facility
GWI	Global Water Initiative
GWP	Global Water Partnership
GWI-EA	Global Water Initiative – East Africa
GWI-WA	Global Water Initiative – West Africa
HGBF	Howard G. Buffett Foundation
IIED	International Institute for Environment and Development
IRC	International Water and Sanitation Centre
IUCN	International Union for the Conservation of Nature
ITAD	Environmental consultants assisting GWI-WA
IWRM	Integrated Water Resource Management
JMP	Joint Monitoring Programme
LSHTM	London School of Hygiene and Tropical Medicine
M&E	Monitoring and Evaluation
MPA	Method of Participatory Assessment
NGO	Non Governmental Organisation
PM&E	Participatory Monitoring and Evaluation
SO	Strategic Outcome
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WAWI	West African Water Initiative
WRM	Water Resources Management
WSP	Water and Sanitation Programme

The Global Water Initiative (GWI), supported by the Howard G. Buffett Foundation, addresses the challenge of providing long term access to clean water and sanitation, as well as protecting and managing ecosystem services and watersheds, for the poorest and most vulnerable people dependant on those services.

Water provision under GWI takes place in the context of securing the resource base and developing new or improved approaches to water management, and forms part of a larger framework for addressing poverty, power and inequalities that particularly affect the poorest populations.

This means combining a practical focus on water and sanitation delivery with investments targeted at strengthening institutions, raising awareness and developing effective policies.

The Regional GWI consortium for West Africa includes the following Partners:

- International Union for the Conservation of Nature (IUCN)
- Catholic Relief Services (CRS)
- CARE International
- SOS Sahel (UK)
- International Institute for Environment and Development (IIED)

GWI West Africa covers 5 countries : Senegal, Ghana, Burkina Faso, Mali, and Niger.

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Programme Milestones

May 2008	Agreement to focus on outcomes, not outputs
Sept 2008	Regional workshop to define methodologies and indicators
March 2009	National visions of success
May 2009	Regional discussions of outcome definitions
Dec 2009	Outcomes and methodology validated in regional workshop
Jan- Mar 2010	Baselines undertaken in-country
April 2010	Regional database developed
June 2010	Data entry input and validation using baseline data

Executive Summary

The Global Water Initiative has a ten year time frame for delivering its intended results (2007-2017). Partners of the Global Water Initiative in West Africa (GWI-WA) are therefore committed to gathering appropriate data to inform progress towards the ultimate goal of the initiative which is :

> *"Vulnerable populations have reliable access to clean water in such a way that their dignity, rights, culture and natural environment are respected. This includes pastoralist, nomadic and displaced people."*

An approach is proposed for programme monitoring and evaluation for the Global Water Initiative-West Africa (GWI-WA). A review of the existing documentation and existing project/programme management of the GWI-WA organisations indicates that the Partners have well established planning and project management procedures, and that there is an embedded awareness of logical framework planning and complementary monitoring and evaluation processes. However although these M&E systems are adequate at the project level it is not clear that adequate consideration is given to measurement of the higher level results and outcomes of the projects; and how these contribute to the achievement of the GWI-WA regional strategy.

This document therefore reviews M&E programmes proposed by other actors in the sector over the last ten years or so, and draws on these to lay out a regional GWI M&E strategy. It proposes a focus on outcome based monitoring rather than output based monitoring as an approach to assessing the medium term results of the ten year programme on the behaviour of the people of the project areas. It discusses how a discussion of what "success" means has led to the definition of 11 regional outcomes that the programme intends to deliver in pursuit of the goal. These results have been obtained through an iterative consultative process with Partners in the region.

The document is composed of a methodological review, a proposal for key indicators for GWI in relation to its West Africa regional strategy, and a set of methodological tools laid out in Annex A. The strategy intends to triangulate results from a) measuring project outputs, b) undertaking selected family portraits, and c) measuring outcomes in order to track progress towards the goal. A full Access database allows the compilation and reporting of regional and national data.

In developing this M&E programme, GWI-WA recognises that the science of measuring behaviour change, and attributing it to a particular causal chain, is a complex undertaking. A pragmatic balance is therefore sought between competing methods. It would be desirable to prove that any change is due specifically to the activities of GWI, yet the kind of controlled experimental design that would be required is both prohibitively expensive and morally difficult to justify if some areas are selected as medium term control communities.

GWI-WA recognises that while some of the family and institutional portraits proposed will give some insights, the challenge of attribution remains intact, and that this innovative M&E programme is a necessary balancing act between scientific method, available resources and field practicalities. Only time will tell if that balance proves correct.

Introduction

The Global Water Initiative has a ten year time frame for delivering its intended results (2007-2017). Partners of the Global Water Initiative in West Africa (GWI-WA) are therefore committed to gathering appropriate data to inform progress towards the ultimate goal of the initiative which is :

> *"Vulnerable populations have reliable access to clean water in such a way that their dignity, rights, culture and natural environment are respected. This includes pastoralist, nomadic and displaced people."*

They are also aware that the quality of project design depends upon acting upon accurate data concerning the situations of the communities and areas in which they work, and the progress and outcomes of their projects.

This document describes the M&E methodology and approach that GWI-WA has adopted for the West Africa region with a view to tracking progress across five countries over the lifetime of the initiative. It is a step towards a results-based approach to programme delivery that seeks to go beyond the traditional definitions of progress in terms of access to water supply (often referred to as 1 borehole per 300 people, for example, or coverage of latrines per village or region) and begin to measure changes in behaviour with all the challenges that this implies. To define the regional outcomes each national project sought to define what it meant by "success" as a means to define the GWI intended outcomes that could then be linked back to a chain of project activities and outputs (Box 1).

Box 1. Defining success – distinguishing outputs and outcomes

In common with most programming processes, the GWI partners defined a regional strategy and designed projects with a set of activities and budgets, leading to particular outputs, all of which are managed and controlled by the project management teams. However, there remained a need to define how to measure the wider results of GWI over its ten year life span, both in terms of tracking progress, and being able to assess the overall impact at the end of the programme. Only by achieving the programme-level objectives will there be some measure of success.

Most monitoring systems are designed to measure at the output level and although increasingly there is an awareness of the need to look at results (as opposed to inputs/activities), these are still typically focused on physical or observable indicators. An example of relevance to GWI would be the rehabilitation of a water system, where the **project-level activity** would rehabilitate the system with an end-of-project indicator that the water system is in a better shape.

However at the strategic **programme level** it is more relevant to concentrate on the 'outcomes'. Thus, for example, we may initially be concerned that too much time is being spent in collecting water (often in particular by women); therefore our aim is to reduce this collection time, and to achieve this we take particular note of the demands and requirements of the main persons concerned (i.e. the women collectors). An element of this difference is the focus on behaviour change and in identifying the benefits accruing to users of the water resource in terms of improved well being. The crucial step is to move from assuming that a rehabilitated well provides benefits, towards beginning to quantify whether the improved well has genuinely impacted on people's lives and how.

This M&E strategy therefore adopts the following definitions :

Goal: Substantive, longer-term development change or impact, in terms of the GWI West Africa Regional Strategy achieving its vision and mission.

Outcomes: Expected or actual demand-side behavioural responses by the end users and other stakeholders outside the control of the implementing agency that demonstrate uptake, adoption and use of project outputs.

Outputs: Project deliverables (on the supply-side) that are expected to add value for potential users and are designed to stimulate development outcomes (on the demand-side) based on the causal chain.

Activities: Action taken or work performed by which inputs are converted into specific outputs.

Inputs: The financial, human and material resources made available by projects by the partners initiatives, within the GWI West Africa Cluster Regional Strategy.

It should be noted that project managers can control the lower three levels (inputs, activities and outputs) but not the higher level ones (outcomes and goal).

This strategy lays out below the definitions of success in the form of programme outcomes to be met by 2017 (see Table 4).

GWI-WA therefore adopted a general framework for monitoring and evaluation (M&E) in 2008 (ITAD-Water 2008). The framework proposed that programme M&E be centred on the assessment of *outcomes*, not *outputs* (Box 1). The latter are easier to measure and attribute, and show the results of project activities, but they do not indicate reliably the achievement of the programme goals. Outcomes potentially give a much clearer picture of progress towards the larger aims of the programme; they are however more difficult to measure, as discussed below.

For the GWI programme, an additional reason for pursuing an outcomes based approach has been the desire to transform approaches of field staff who are often very infrastructure oriented, or supply side driven; i.e. they are often very good at planning and measuring inputs such as training courses, or radio programmes, or village meetings, or outputs such as wells, latrines and boreholes, but much less able to determine what effect these have on individual behaviours or on health and well being. There is too often an automatic assumption that because a borehole is built, it is used by everyone, or because a latrine exists in a compound, everyone has access. Yet it is well known, for example, that farmers in the fields continue to drink from open rain fed marshes during the cultivation season, and in some societies children are not allowed to use family latrines, so although theoretically access may be available, in practice this is not the case. Outcome based monitoring is intended to capture these complexities and inform design of appropriate solutions.

In developing this M&E programme, GWI-WA recognises that the science of measuring behaviour change, and attributing it to a particular causal chain, is a complex undertaking. A balance is sought between competing approaches. It would be desirable to prove that any change is due specifically to the activities of GWI, yet the kind of controlled experimental design that would be required is both prohibitively expensive and morally difficult to justify if some areas are selected as medium term control communities. The M&E process is therefore intended to serve three purposes at reasonable cost.

1. Feedback to project managers on the changes underway in their project communities;
2. A regional overview to identify areas of success and failure in stimulating change at scale, on the ground;
3. A statistical probability level of 95% that the observed changes from baseline are real.

GWI-WA recognises that while some of the family and institutional portraits proposed will give insights, the challenge of attribution remains intact, and that this innovative M&E programme can not be the definitive answer in a complex area. It is a balancing act, and data from the field will demonstrate whether or not the programme has met the objectives set for it and whether it should be modified through time.

Review of existing approaches to measuring relevant outcomes

The bibliography in Annex B lists the principle documents collated as part of the brief review of existing approaches to measuring relevant outcomes. Short questions were also sent to relevant organisations and individuals that have had recent experience.

It is clear that the significance of appropriate measurement in the water and sanitation sector[1] has been identified by many others before, and that considerable effort has gone into establishing comparable, effective and efficient measuring mechanisms.

In particular it was found that the work and approaches described by the documents in Table 1 are of relevance to GWI-WA.

Table 1. Key references on M&E in the Water Sector (see Annex B)

Title	Author	Date
Action Monitoring for Effectiveness	IRC (Shordt)	2000
Assessing Sustainability: the Sustainability Snapshot	Sugden	2001
Monitoring and Evaluation Plan, Program Framework and Indicators	EHP (West Africa Water Initiative)	2004
Major Measuring Tools of the GWI East Africa	GWI East Africa	2009
MICS Questionnaire for Households WASH	JMP	undated
Core Questions on Drinking Water and Sanitation for Household Surveys	WHO/UNICEF	2006
Evaluating and Improving the WASH Sector	IRC	2009

A summary of the conclusions of relevance to GWI-WA is given below.

Key challenges in measuring outcomes

Outcomes are difficult to measure directly, because by their nature they are larger and more complex than outputs. *Proxy indicators*, chosen to effectively represent the outcome, but that are more readily measured, are often used for this reason. This can be appropriate provided one remembers and understands their limitations, particularly when interpreting monitoring data.

A good example is provided by hygiene promotion. The desired outcome of hygiene promotion is improved hygiene and therefore improved health, but this is very difficult to measure directly. Therefore a proxy indicator, such as hand washing (which is part of improved hygiene) can be used. Even then, there is no reliable measure of how clean people's hands are at the critical times (before eating, before preparing food, etc.). Approaches have included asking people to repeat taught messages about hand washing (but will they be applied even if people know what they are?); asking people to demonstrate hand washing (but will they do this when there is no observer); asking whether there is soap in the house (but will it be used regularly for hand washing, or are other cleansing agents, such as ash, used instead?).

A further challenge in monitoring outcomes is the question of *how many times* you need to ask the question. If one individual or household from a population is asked on one occasion, the answer is unlikely to represent the whole population, because the response would vary from one household to another and from one time to another. A household living close to a water

1. There appears to be rather less experience of measuring outcomes in programmes that focus on 'water resources management'.

source would spend less time collecting water than one that lives far. The time needed to collect water may vary between wet season and dry season. Therefore it is important to determine an appropriate *sampling strategy*, which gives a reasonably reliable picture, and to determine an appropriate frequency of monitoring. Shordt (2000, chapter 5) gives a good summary on this, and Caldwell and Sprechmann (1997) provides a comprehensive set of handouts (nos 5.5 to 5.10) that discuss the theory and practice of sampling, required sample sizes and different sampling methods.

The West Africa Water Initiative (WAWI) is a programme similar to GWI-WA, in that it coordinates work across a number of West Africa countries, with implementation by different partners. WAWI (2004) reviewed the *definition of indicators* including the difficulties involved. It appreciates that there will be some differences between countries in terms of relevance and means of measurement, and leaves some work on this to individual countries and projects, but presents a core set of indicators to be used at the strategic level.

An M&E programme must also consider the issue of *appropriate standards* against which to measure. An example here is the consideration of water quality. Various standards for water quality have been produced. Which standards must be satisfied for water to be considered "good quality", or "safe"?

The Global Environment Facility (GEF) has produced a paper on Water Resources Management indicators (Duda, 2002), which notes that they may be divided between indicators of process, stress reduction and environmental status. Particularly for large and complex systems, changes in environmental status may require many years to achieve, and it is therefore more sensible to monitor process and stress reduction indicators in the short term, looking to environmental indicators in the longer term.

Some examples from a trans-boundary project on the Aral Sea in Asia are shown in Box 2. Although GWI projects are not all trans-boundary, the division of indicator types is conceptually useful. Examples of how the Asian indicators might be adapted for GWI-WA are also provided.

Box 2. Example indicators for Water Resource Management

Examples from Aral Sea (Duda, 2002, Annex 1)	Possible adaptations
Process indicators	
■ Adoption of a regional water and salt management policy ■ Agreement among the five participating nations on interstate water use and environmental sustainability ■ Adoption by the governments of national policy, strategy, and action programs to reduce salinity and reduce irrigation water use by 15 percent	Adaptation of national policies to local level; agreement on how stakeholders will collaborate to achieve policy goals
Stress reduction indicators	
■ Reduction of irrigation water use by 15 percent, which increases effective water flow to wet¬lands ■ Reductions in soil salinity in line with targets ■ Achievement of sustainable levels of investment in the effective management of water resources and salinity from private and public sources	Control of groundwater abstraction; improvement of sanitation systems to reduce contamination
Environmental status indicators	
■ Salinity and dissolved oxygen levels in line with targets ■ Increased water flows to delta lake ■ Increased number of migratory birds	Stable groundwater levels and river flows; improved water quality at source

What to measure

Measures for expected results of water and sanitation sector programmes vary according to particular programme goals. However, at the outcome level most programmes attempt to measure indicators related to **health**, **access** and **use of facilities**. Starting from rather disparate approaches that derived from output monitoring, the most focused discussion in recent years has been led by the Joint Monitoring Programme (JMP) of WHO and UNICEF (www.wssinfo.org). JMP's aim has been to develop comparable statistics to measure progress in water and sanitation in different countries, and its approach has been increasingly adopted for the purpose of sharing and comparing internationally and between programmes. It is used to monitor the Millennium Development Goals and is based on two main indicators:

i> Proportion of population using an improved water source
ii>Proportion of population using an improved sanitation facility

The approach used is limited (by design) but is backed up by expert discussion and research work, much of it done earlier by organisations including IRC and LSHTM – for example the Vision 21 indicators developed by LSHTM.

The questionnaire that LSHTM developed and tested deals with five main issues:

1. Appropriate hygiene practices such as hand washing, child excreta disposal and drawing of drinking water,
2. Access to and use of improved sanitation,
3. Access to and use of improved water sources,
4. Hygiene education in schools,
5. Access to improved sanitation in schools.

WAWI's core indicators are shown in Box 3. Most are closely linked to the issues covered by LSHTM, although the last is a process indicator and there is another that deals specifically with sustainability of the water service.

Box 3. Core Indicators used in the West Africa Water Initiative (WAWI 2004)

- % of target population with access to safe water
- % of households in target communities with access to sanitation
- % of caretakers and food preparers correctly washing hands at appropriate times
- Number of cases of water-related and water-borne diseases (guinea worm, trachoma)
- % of sites that have no more than 10 days per year in which the pump did not operate
- Work plans created and adopted by the respective country teams and annually updated

A further question is whether to measure the efficiency of the programme's implementation processes. These processes are important because there may be alternative or enhanced implementation methods that would produce better or more widespread results. This is further discussed in IRC (2009, chapter 5) as part of the "balanced scorecard" approach, which was developed from monitoring the operation of commercial organisations.

How to measure

There are many methodologies that have been developed for measurement of indicators:

- The method for participatory assessment (MPA), developed by IRC and WSP, considers issues of disaggregation carefully (particularly by gender) and presents a methodology for the use of participatory tools for the design, management and monitoring of programmes (Mukherjee and van Wijk, 2003). The tools that it uses are all suitable for communities to assess their own projects. They are drawn from the work of SARAR (see Srinavasan, 1990) and the World Bank (Narayan, 1993).

- WaterAid developed a useful tool for rapid participatory assessment of sustainability (Sugden, 2001). This is a means to measuring qualitative judgements related to water supply sustainability. Although it focuses on issues that have not been chosen as indicators by GWI-WA, the concept can be adopted for example for sustainable water resources monitoring.

- GWI-EA (2009) has taken a very structured approach, demanding precisely similar M&E on the part of its different country projects. It includes some useful discussion and tools. It has chosen to use a self-evaluation of IWRM approaches/progress at local government level (Tool F). This method is useful, as is its guide for the production of personal stories (Tool C) for triangulation/ qualitative data.

- A number of the larger development agencies have produced their own M&E systems that are publicly available. Good examples include the Monitoring and Evaluation Planning section in Chaplowe (2008, for CRS and American Red Cross). This includes good, clear description of the elements in an M&E system, the log frame and a useful indicator matrix.

- A similar indicator matrix is used by CARE, and CARE's M&E Workshop handouts (Caldwell and Sprechmann, 1997) contain some good, clear descriptions of the tools and methods that they favour, including some very useful pages on sampling.

By categorising the issues into themes it can be seen that certain tools are more suited to particular types of investigation. For example a framework of issues and tools is given in Table 2 (developed from Shordt) which proposes types of tool for types of issue:

- for institutional issues it is appropriate to use qualitative and participatory tools, plus audit forms and reports;
- for access to services use reports, check lists, testing kits;
- to measure the use of services use participatory tools

Table 2. Framework of issues and tools (after Shordt, 2000, p11)

Area of investigation	Institutional capacity and responsibility	Sustained water supply and sanitation	Use of services and benefits
Example themes	Community institutions	Establishment of facilities	Access to water points
	Agency, district, NGOs	Operation and maintenance	Perceptions of water quality
	Training, finance, gender	Condition of latrines	Hygiene behaviours
Suitable tools	Qualitative and participatory tools as well as reporting forms, audits, financial documents	Common tools for monitoring include: reporting forms, checklists, water quality kits and water meters	Participatory tools are relevant for monitoring these topics, including: card sorting, pocket voting, focus group discussions, demonstrations

Significance for GWI

The review of existing practice indicates the following:

- There is a significant body of opinion, experience and methodologies that have been developed to monitor water, sanitation and hygiene (WASH) programmes (though less on WRM).

- There are significant challenges in establishing standard measuring methods, but there are potential benefits from greater coordination and cooperation among existing monitoring initiatives.

- It is appropriate for the GWI-WA to build on these initiatives and approaches and seek to harmonise its approach with that of other actors in the WASH/WRM sector where practical.

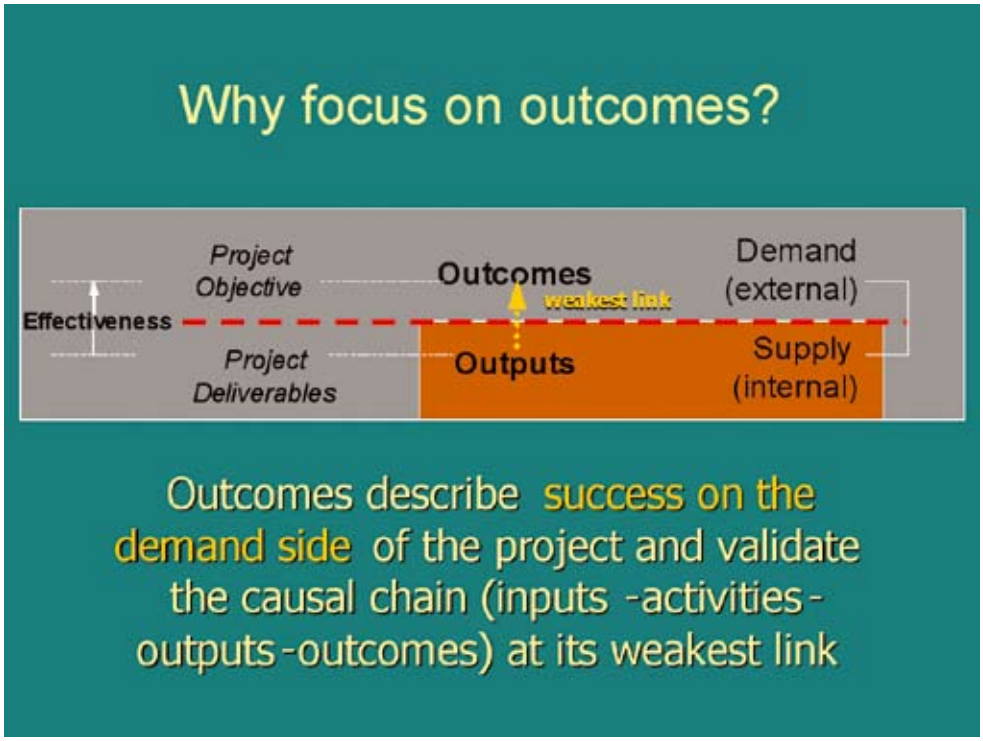
The following sections look at the approach to be adopted by the GWI-WA programme, set out an appropriate framework for measuring success, and then present appropriate methodologies for use. These are adapted from methodologies used and tested by others.

Monitoring and evaluation at GWI-WA

3.1 GWI-WA's approach

GWI-WA's framework for monitoring and evaluation was presented by ITAD (2008), and includes using an outcome-oriented approach to monitoring and evaluation (see Figure 1). This is important because it allows the programme to assess its effectiveness in achieving success with people, processes and institutions that are *external to* (i.e. not directly controlled by) the projects. Significant change depends on this.

Figure 1. Focus on outcomes



The approach recognises that the projects run by different organisations and working in different countries and contexts will have their own M&E systems; but also that there is a need for a group of standardised regional indicators to be used by all projects.

Standardised indicators allow for the GWI-WA programme as a whole to ascertain a coherent picture of its achievements and shortcomings. The programme level monitoring should focus on the strategic level outcomes and demonstrate how the projects contribute to a wider picture of success. ITAD (2008) proposed the use of a Balanced Framework to ensure that M&E measures all the important attributes of the programme. Building on the logic that has been established in the development of the GWI-WA strategy, the Results Hierarchy has previously been determined (see ITAD 2008, Table 13) and can be summarised at the strategic outcome level as described in Table 3.

Table 3. The Strategic Level outcomes of the GWI-WA Results Framework

Goal	Vulnerable populations have reliable access to clean water in such a way that their dignity, rights, culture and natural environment are respected. This includes pastoralist, nomadic and displaced people.		
Strategic outcomes (GWI)	(1) Vulnerable, marginalised groups are actively involved in the design, implementation and evaluation of multiple water use delivery, environmental sustainability, healthy and functioning ecosystem services and strong and equitable governance and equity structure through improved IWRM in West Africa.	(2) A vibrant, cohesive and well-informed water constituency at local, country and regional levels is actively involved in fostering analysis and learning, and strengthening collaborative partnerships to improve delivery on integrated water management projects in West Africa.	(3) Donors, investors and governments are strengthening awareness and support for integrated water management programmes through dissemination of sound analysis of effective water delivery through IWRM and with an emphasis on scaling-up in West Africa.
Summarised version of strategic outcome	1) Vulnerable, marginalised groups actively involved in design, implementation and evaluation of multiple water use service delivery and governance	2) A vibrant, cohesive and well-informed water constituency actively involved in improving delivery of IWRM	3) Donors, investors and governments with greater awareness of and more support for IWRM

It is proposed to measure these with a balanced set of indicators, as shown in Table 4. The approach allows for measurement using different methodologies that are suited to the particular type of issue (as described in Table 2).

The outcomes (taken from Table 3) are divided between different "Performance areas". Each Performance area refers to a different way to view the success of the programme. The first three Performance areas are the achievement of the programme goal, the engagement of vulnerable groups, and the institutional environment and perspective of other stakeholders. These are drawn directly from the stated goals and objectives.

The last Performance area (operational efficiency) is often measured in a balanced scorecard approach (see IRC, 2009), but is a new idea for GWI-WA. We suggest that it would be useful to add an indicator to measure operational efficiency, but this needs to be considered by the GWI-WA management team before it can be adopted in the project log frames.

The Performance indicators have been agreed through a series of regional programme meetings, including national processes to define what "success" will look like in 2017. They are deliberately framed to target 100% of the community for issues related to behaviour change as it was felt inappropriate to say that success was that "only" 75% or 90% of people adopted new hygiene behaviours or drank clean water, not least as the remainder are likely to be the most poor, vulnerable or marginalised groups.

Table 4. Results Framework using a balanced set of indicators for GWI-West Africa

Performance area	Programme outcome	Performance indicators
Achievement of GWI goal	RG*: Vulnerable populations have reliable access to clean water	A. People spend less time collecting water B. People always drink clean water C. Communities show improved hygiene behaviours
Engagement and perspective of vulnerable groups	SO1*) Vulnerable, marginalised groups actively involved in design, implementation and evaluation of multiple water use service delivery and governance	D. Absence of serious water related conflict E. Communities participate in the elaboration and implementation of plans for water resources management
Institutional environment and perspective of other stakeholders	SO2) A vibrant, cohesive and well-informed water constituency actively involved in improving delivery of IWRM	F. Actions to ensure sustained water quality in rivers and groundwater G. Actions to ensure sustained groundwater levels and river flows H. Sector organisations work proactively together across the basin I. Active communication and learning on WRM within the basin
	SO3) Donors, investors and governments with greater awareness of and more support for IWRM	J. Increased level of resourcing for WRM K. Importance and recognition of WRM in policy and strategy
Operational efficiency (proposed)	SO4) Water and sanitation services delivered efficiently, using appropriate and sustainable technology	L. To be further considered by GWI management

Note: * RG = Regional Goal; SO= Strategic Outcome

3.2 The distinction between evaluation and monitoring

M&E workers need to distinguish between *evaluations* (including the baseline evaluation), which are more detailed exercises undertaken less frequently that often ask the 'why' questions about an intervention as well as attempting to attribute results to a specific intervention rather than to other possible causes; and *monitoring*, which is a routine, ongoing internal activity that collects information on a programme's activities, outputs and outcomes to track its performance, and which involves more frequent and routine data collection on a smaller range of questions whose purpose is to ensure that the programme is on track. An example is shown in Box 4.

The standardised indicators are designed for use in both evaluation and monitoring exercises. However the detail provided by the tools should vary. The baseline evaluation needs to cover the whole project area – the chosen basin or sub-basin. It will therefore be carried out on one single occasion in sampled communities across the whole basin. Monitoring will be carried out in communities that are directly affected by ongoing project work.

The tools presented in Annex A have been developed for the Baseline, and may also be used in subsequent evaluations. Monitoring tools (based on Annex A) will be developed and will form a separate Annex. This is part of the subsequent phases of work.

Box 4. Assessing Indicator B: People always drink clean water

The baseline survey will include more detail: what is the result of water quality tests? How do people perceive the water quality? Do they use any other sources for drinking water?

Monitoring is limited to a spot check of whether the water source is protected from contamination, and whether it is functional at the time of the visit.

3.3 Roles and responsibilities

Collection of data in the field is the responsibility of project staff. Each project has appointed a full-time Monitoring and Evaluation Officer, who has the role of coordinating M&E activities and ensuring that the data collected satisfy the requirements of both project and programme. The M&E Officer is therefore charged with designing and supervising the necessary field activities, the collation and analysis of data, and the drafting of reports to the Project Manager. The Project Manager is responsible for ensuring the quality of the M&E work, reviewing the results of surveys and the reports produced, and providing data and reports as requested by the GWI Secretariat. The M&E budget is ring-fenced as 10% of the programme costs.

The GWI Secretariat is responsible for supporting projects where needed with advice and expertise relating to M&E (either through its own information and expertise, by facilitating discussion with other projects, or through external consultants). It is also responsible for collating the data and reports arriving from projects, especially those that relate to programme level indicators, to produce analysis and reports that give the picture across the programme.

Note that this document only discusses *programme level* M&E. Projects need to monitor other indicators, including indicators of *outputs and processes*, as well as outcomes that are not common to the whole programme. The Secretariat, however, does not require this to be done in the same way for all projects, because there are significant differences between them. This document therefore limits itself to discussion of M&E requirements at the programme level, which are required of all projects.

4

Indicator matrix

4.1 Standardised indicators

In support of the Results Framework the GWI-WA will include a standardised set of indicators in their M&E work. These standardised indicators are likely to make up a small part of the M&E that is required for each project and need to link efficiently with the project-specific M&E processes.

This approach should both allow for good comparability between projects and programmes and also encourage efficiency and consistency in its monitoring and evaluation procedures. The list of indicators is purposely kept relatively short. This is partly to avoid over-burdening projects with high demands for data. However, it is also true that the progress made by the programme will be more easily assessed using a small number of well chosen indicators than by attempting to analyse and compare all the detail of the project level monitoring. Inevitably, some elements that are important for some projects are therefore not covered by the programme indicators; however, all elements that are crucial to the success and goals of the programme are represented.

A summary of appropriate indicators, methods and frequencies, as well as responsibilities for collecting data is set out in Table 5. A significant advantage of this approach is that the method of collecting data can be shared for different indicators (for example a household interview can be used to collect information on all of indicators A to E at the same time).

Note that for the same indicator, different methods might be used with different frequencies, e.g. assessing type of water source available is relatively easy (and can therefore be done frequently); more detailed assessment of the use of facilities and equity of access might be done less frequently through interviews, focus groups or case histories.

Waiting times can be significant at busy water points

Table 5. Standardised indicators, including methods and frequency of collection
(see Section 5 for description of methods of collection of information, Section 6 for detailed description of indicators)

Outcome	Definition (see 4.2)	Tools/ methods (** = Main data collection tool; * = Tool for triangulation)					Collected by	Reporting frequency	Use of information
		Household interviews	Participatory mappin/focus groups	Field survey	Key informant interview	Stories of change			
A. People spend less time collecting water	Time and distance for collection at peak usage times in dry season	**	*	*		*	Community facilitators, field workers	Baseline, then annually	Communities, Project management, partners
B. People always drink clean water	Clean water available at source and used for >90% of drinking	**	*	*		*	Community facilitators, field workers	Baseline, then annually	Communities, Project management, partners
C. Communities show improved hygiene behaviours	No open defecation; children's stools safely disposed; hands washed after defecating and after handling children's faeces	**	**	*		*	Community facilitators, field workers	Baseline, then annually	Communities, Project management, partners
D. Absence of serious water-related conflict	Prevalence of lasting argument over water allocation, use and price; means of resolving conflicts	*	**		*	*	Field workers	Baseline, then every 2 years	Project management, partners
E. Communities participate in the elaboration and implementation of plans for water resources management	Qualitative judgement of level of empowerment of grass roots in WRM processes		**		*	*	Field workers, M&E officers	Baseline, then annually	Project management, partners
F. Actions to ensure sustained water quality in groundwater and rivers	Monitoring systems working and data available; improving environmental status			*	**	*	M&E officers, external monitoring agency	Baseline, then every 2 years	Project management, partners

G. Actions to ensure sustained groundwater levels and river flows	Monitoring systems working and data available; improving environmental status			*	**	*	M&E officers, external monitoring agency	Baseline, then every 2 years	Project management, partners
H. Sector organisations work proactively together across the basin	Regular meetings and shared initiatives in WRM				**	*	M&E officers	Baseline, then annually	Project management
I. Active communication and learning on WRM within the basin	Information available and research projects ongoing in WRM				**	*	M&E officers	Baseline, then annually	Project management
J. Increased level of resourcing for WRM	Describes support (from all sources) available for WRM activities				**	*	M&E officers	Baseline, then every 2 years	Project management
K. Importance and recognition of WRM in policy and strategy	Institutions, policy and plans to implement improved WRM				**	*	M&E officers	Baseline, then every 2 years	Project management

4.2 Indicator definitions

This section describes in detail a proposed set of standardised indicators. These indicators and the associated tools were developed in full consultation with GWI field staff and Secretariat, and have been field tested and revised during the first half of 2010.

Indicator A: People spend less time collecting water

This indicator aims to measure the accessibility of improved water sources. Because estimates of time may not be accurate, particularly for those people unused to using clocks, field workers should collect data on both time and distance for water collection.

Time recorded should be the time for one round trip, for the person who most frequently collects water, from home to the water point and back again. It should include waiting time at peak usage (usually early morning or late afternoon).

Distance should be the approximate walking distance – not the shortest (straight line) distance from home to water point. It should be measured in metres.
Data should be collected in the dry season. Times and distances may vary seasonally, but if further information on this variability is needed it will be generated through a specific study, rather than through regular monitoring.

GWI-WA projects should report these results both against national standards (if they exist) and against the programme standard. If national standards exist, projects should report the percentage of the project population meeting that standard (e.g. % of population within 500 m of the water point). Projects should always also report the percentage of the project population that has access to drinking water within 30 minutes (studies have indicated that the quantity of water used does not vary greatly if water is between 3 and 30 minutes of the home. If the source is more distant, the quantity of water used declines, and this is likely to damage health).

Indicator B: People always drink clean water

This indicator includes three separate aspects: the availability of the water at source; the cleanliness of the water; and the exclusive use of the clean source.

For **regular monitoring**, unless there is clear information to the contrary, GWI-WA assumes that certain types of drinking water source provide clean water.[2] These are boreholes, tube wells, protected hand dug wells, piped water systems, protected springs and rainwater. Water sources that are assumed not to provide clean water include unprotected wells and springs, carts, tankers and surface water sources. It is further assumed that, if people have access to the source, they will use it. If the source is not functional *at the time of the monitoring visit*, it cannot be included as a clean source at that time.

For baseline and other evaluation surveys, more detailed information on the quality of water at the source is required. This includes the results of bacteriological and chemical analysis. The parameters that must be assessed are:

- Faecal coliforms (NB number of fecal coliforms; not simply "present/absent")
- Conductivity
- Fluoride
- Arsenic[3]

Project managers must be able to demonstrate to the satisfaction of the Secretariat that water quality meets these standards if it is to be considered clean. If other parameters are known or suspected to be a significant problem in the area, these must also be analysed.

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2. If a borehole source is known to have excessive fluoride concentrations, for example, this should be excluded from the clean water sources.
3. Each project is required to make an initial technical assessment as to whether arsenic is likely to present a problem in the project area. If the project can show that arsenic is known to be absent, testing for this parameter is not required.

Natural watercourses are the easiest place to wash dishes

Evaluations should report in more detail on the continuity of supply; the functionality of the source will be judged as to whether it is: a) always or frequently non-functional; b) usually supplies sufficient water; or c) always or almost always supplies sufficient water.

Evaluations should also assess whether households are always or almost always *using* the clean water source.

In this context, "usually supplies sufficient water" means that a source provides sufficient water at least 6 days per week and at least 11 months of the year (detailed questions on availability of water should be assessed in focus group discussions).

GWI-WA projects should report the percentage of the population that drinks water that meets the relevant standards.

Note that all of the water quality information is based on the source. If additional data on the quality of water consumed at the household are desired, this will be the subject of an additional study.

Indicator C: Communities show improved hygiene behaviours

The criteria for judging improved hygiene behaviours are:

- no open defecation,
- faeces of small children (under three) and infants safely disposed of, and
- hand washing after defecation and after disposing of children's faeces

Most communities have designated areas for open defecation. These should be mapped during a community mapping exercise. The areas should then be surveyed by investigators to find out how actively they appear to be used. The elimination of open defecation has become a popular target of sanitation programmes in recent years (under "total sanitation" campaigns of various designs). It remains a good indicator of progress on hygiene.

The purpose of the question on children's faeces is to determine how the faeces of all children under three years of age in the household were disposed of when they most recently defecated. The safe disposal of children's faeces is of particular importance because children's faeces are the most likely cause of faecal contamination to the immediate household environment.

The preferred disposal method, which is likely to ensure protection of the household environment from faecal contamination, is putting or rinsing stools into a sanitation facility. Investigators will also survey sampled household compounds or surroundings to check for the presence of children's or infants' faeces.

Hand washing will be judged during the household interview. This asks the respondent if there is a specific place where members of the household most often wash their hands – and if so if the interviewer could see that place. No foolproof indicator has been developed for hand washing, which is difficult to measure, but this line of questioning follows the Joint Monitoring Programme (JMP), which has examined available research and concluded that this is a practical way of collecting useful data. In many cultures and crowded slum areas there may not be a specific place for hand-washing. Rather a movable object is used, like a bucket, basin, container or kettle, for people to wash or rinse their hands. Recording such movable objects used for hand washing is important, although research has found that the disease risk is reduced when a fixed place is used and where water and soap are present.

GWI-WA projects should report the number of communities with widespread, very limited and no open defecation; and the number and percentage of households disposing safely of children's faeces and showing good practice on hand washing.

Indicator D: Absence of serious water-related conflict

This qualitative indicator requires judgements to be made about the importance of disagreements or friction between water users, and the degree to which water use is a primary cause. Perceptions of this importance vary from person to person; it is therefore essential to use triangulation to gain several views of the situation. The household interviews will be used to understand the perception of a number of individuals in each community, while focus groups will provide a more considered view and an "institutional" assessment using key informants will provide a picture from the community viewpoint.

"Serious" means conflict that is judged to create and maintain tension or bad feeling between two parties over a period of more than one month, and which results in at least one household not drinking clean water. "Conflict" means argument over the appropriate use of water, over the access to or allocation of water, or over the price of water.

The baseline evaluation will be used to explore and understand any existing or potential conflicts, as well as the existing means to anticipate, control or resolve them. Conflict will be examined both with households and with key informants. The principal concerns that are identified in the Baseline will be monitored over time.

Indicator E: Communities participate in the elaboration and implementation of plans for water resources management

This requires a qualitative judgement on the level of empowerment of people in the planning, and decision making process. Tool 3 builds on the experience of GWI-EA (GWI-East Africa) with a modification of their snapshot assessment tools. It facilitates the recording of ranked qualitative judgements. Ranking allows the judgements to be aggregated. The explanations of each ranking on the tool matrix explain how the judgements are to be made in a consistent way.

Indicator F: Actions to ensure sustained water quality in rivers and groundwater

The originally proposed indicator is an environmental status indicator: sustained water quality in rivers and groundwater. This is appropriate as a longer term indicator, but is too optimistic an outcome to be considered in the first phases of the programme and hard to measure. However it would be appropriate to measure intermediate steps that would lead to this longer-term outcome. We therefore propose process indicators as follows:

- The availability of reliable water quality information: this is a pre-requisite to achieving sustained water quality. Each project should make its own judgement as to what range of water quality information is needed to be sure that the quality is good or bad. The project should record what information it considers necessary, so that consistent judgements can be made over time. Specific parameters and standards should be chosen, as is the case for drinking water. These may be prescribed by national or international bodies.

- The existence of an appropriate and sustainable water quality monitoring system: a judgement will need to be recorded as to what is appropriate and sustainable, so that consistent judgements of progress over time can be made.

- The existence and implementation of an action plan to maintain and/or improve the quality of water.

Indicator G: Actions to ensure sustained groundwater levels and river flows

The sustainability of groundwater levels (and associated river flows) is again appropriate as a longer term indicator of environmental status, which should be considered in the later phases of the GWI-WA programmes. It is again appropriate to measure intermediate processes that would facilitate this longer-term outcome. We propose the following list:

- Existence of reliable information on groundwater levels;
- Existence of reliable information on surface water flows;
- Appropriate and sustainable monitoring system in place for water levels and flows;
- Existence of an action plan to maintain and/or improve groundwater levels and river flow;
- Document groundwater levels in new/reconditioned wells on a seasonal basis.

Indicator H: Sector organisations work proactively together across the basin

This indicator requires a qualitative judgement, by project management and peer organisations, of the status of activity and collaboration on water resources management. Appropriate sub-indicators are listed by the monitoring tool (see section 5.3), but will include:

- Frequency of meetings and communications that deal with WRM;
- Range of organisations (government, NGO, CBO, international) that attend meetings;
- Existence of increasing collaboration on projects related to WRM.

Indicator I: Active learning on WRM within the basin

As for Indicator H, this is also a qualitative judgement, and appropriate sub-indicators are listed by the monitoring tool. Sub-indicators will include:

- Range of information available with project partners and government agencies;
- Number and range of research and learning projects.

Indicator J: Increased level of resourcing for WRM

This indicator is a measure of the support provided by governments, planners and funding institutions for WRM, and can be measured by:

- The level of government funding invested in water resources management (budget support) both at district/commune level and at provincial level;
- The number and scale of water resource management projects that non-government agencies are supporting.

We propose that this be measured using institutional process indicators, as proposed by GWP. GWI-WA Tool 3 includes pertinent questions (the format is drawn from GWI-EA Tool F).

Indicator K: Importance and recognition of WRM in policy and strategy

This indicator is a second measure of the importance placed on WRM by governments (at all levels) and funding institutions, and can be measured by:

- The importance accorded to WRM in government policy and sector planning at the national level;
- The existence and authority of national, provincial and district/ commune bodies charged with overseeing WRM.

We propose that this be measured using institutional process indicators, as proposed by GWP. GWI-WA Tool 3 again includes pertinent questions.

Indicator L: Operational efficiency of programme

At the initial stage the operational efficiency and service levels of implemented projects, have not been considered at the strategic level, but it would be appropriate to consider adding this as a measurable indicator of GWI-WA programme success.[4] Thus could be done by measuring the following:

- Cost per capita of water, sanitation and hygiene services delivered;
- Appropriate and sustainable methods and technology used;
- Judgement of peers on sustainability and appropriateness.

4. A suitable tool could be built around GWI-EA Tools D and H.

Data collection methods and tools

This section sets out a brief description of appropriate data collection methods and associated tools; a template for each tool is also included in Annex A. For each data collection tool, a list of the indicators for which it should be used is provided. Note that each indicator has several tools. This is important for validation or triangulation purposes, since the use of one tool alone may not give a complete picture. Table 5 should be used for planning M&E activities.

We have assumed that M&E staff are familiar with the principles and practice of common participatory tools and this section is not intended to be a complete guide to their application. Project managers should ensure that field workers understand the use of each tool for the relevant indicators, as shown in Table 5. In particular the importance of participation not simply in data collection, but also in analysis of data and judgement of results, should not be overlooked. Box 5 underlines this.

Box 5. Use of participatory tools

"The really interesting discussions and interactions around family portraits occurred when we presented them back to the village (after making the portraits shorter and taking out information considered too personal by the household) and in at workshop at Cercle level (after changing names). Portraits can be a powerful tool for communicating with local government and state technical services." Mary Allen, Sahel Eco

5.1 Choosing the communities and households for survey

The choice of communities for an evaluation (including the Baseline) is discussed here. For monitoring work, all communities that have active projects will be included. Definitions of the terms used here are presented in Box 6.

Each country project plans to work in many villages. Activities will be planned in phases of about 3 years each, and in each phase a different group of villages will be the focus. All project villages will be visited as part of the preparation for activities, and this exercise should be linked to the gathering of baseline data and the subsequent sampling.

Box 6. Definition of statistical terms

Population means the set (of households, villages, farms, etc). from which the sample is drawn. (Note that it does not necessarily mean people).
Sample means the set (of households, villages, farms, etc.) that will be interviewed or visited.
Sampling frame means the listing of the population (e.g. list of villages or community map with numbered households).
Strata are groups that the surveyor wishes to compare with each other.

Establishing the sampling frame

All villages to be included in the project will be visited for village plans to be prepared. Part of that visit should include a participatory process by which the households in the village (and village resources) are mapped. It is worth allocating significant resources to this exercise, because poor sampling frames are very damaging to the quality of sample statistics.

The information to be collected should include a full listing of all households in the village. Household data should include basic information such as name and sex of the household head.

Given that the definition of a household varies within West Africa, where extended families often live in shared compounds, projects should adopt the standard national definition, as used by the national statistical and census agency.

Defining strata

The project needs to be able to understand the difference in its outcomes between more and less vulnerable groups. This will allow the project design to be adapted to ensure that the benefits reach the most vulnerable. Data therefore need to distinguish between these groups, or strata.

The criteria for stratification (degrees of wealth and welfare, socio-economic or ethnic grouping, etc.) will be developed in each project area; wherever possible they should use objectively verifiable data such as main occupation or important household assets. Households in each village should then be allocated to strata according to the criteria. Note that for each stratum a similar sample size will be required for statistical reliability.

For programme monitoring, it is sufficient to determine two strata (more vulnerable and less vulnerable).

Total number of households to be sampled

For a statistically reliable result, the sample size depends on the likely level of 'adoption' of promoted behaviours. For any population size, in order to measure a level of adoption of the order of 50% with 95% confidence and an accuracy of plus or minus 5% a sample size of 384[5] is required.

For an adoption % that is much larger or smaller (10% or 90%) the sample size would be 138. In these cases the project would be able to say that the results of its survey would be a fair estimate of the true population value, correct to within plus or minus 5%, in 95% of all possible samples drawn.

From these sample sizes, we can see that it is easier to measure an 'extreme' proportion than one close to 50:50, but the programme needs to allow for the latter, remembering that not all the questions asked will give the same proportions of adopters. The sample size of 384 is therefore appropriate.

Because it may not be possible to interview all households that are chosen (e.g. people may refuse or may not be available), each project should aim for a minimum sample for the whole project area of not less than 400 households.

Strata

The use of different strata may increase the total sample number.

One of the project's interests is to try to decide whether households differ in their adoption according to their level of poverty or marginalisation: hence the need for stratification. Using reasonably modest assumptions of likely outcomes (e.g. 10% of all households already follow the practice the project is advocating; but 30% of households adopt them as a result of project activities) then the number of households in each stratum should be no less than 25.

If we consider the whole project area, 25 per stratum, with two strata, means a total of only 50, which is well below the requirement for 400 households in total. For the population of the whole project area, therefore, the data collected from 400 households should enable the project to draw good conclusions about the differences between the strata. However, if the project wishes to estimate differences in adoption rates by strata within individual villages, more care is needed.

For example, if the project has 8 villages and samples 25 households in each of two strata in each village (sufficient to estimate differences between strata for each village), then 8 villages with 50 sample households in each would give a total sample of 400 – equal to the minimum total sample proposed above.

If the project has fewer than 8 villages, it will need to increase the number of sampled households in each stratum, to achieve the total of 400 overall.

5. The conclusion is not intuitive, but statistical theory tells us that the sample size is not dependent on the population size.

If the project has more than 8 villages, it may decrease the number of households sampled per village, as long as it still provides the total of 400. This is adequate for monitoring at the programme level only. However if the project (for the country-level monitoring) needs to know what the differences are between the strata in each village then it must keep to the rule of 25 households per stratum in each village and will thus need to increase the total number of sample households.

Sampling project intervention villages

For baseline surveying, it is necessary to research all intervention villages, firstly because the data will be required in any case for project planning, and secondly because the participatory investigation process will form part of community mobilization. However, for subsequent surveys it is not necessary to research all villages. Especially after the first phase, there may be many project intervention villages. For the subsequent surveys it will still be important to maintain a minimum total sample of 400 households, but these can be limited to 8 villages (at a minimum). Therefore for later evaluations, it may be necessary to choose the villages for assessment. To do this, projects will use a probability proportional sample. This is done by ensuring that the probability of choosing a village is proportional to its total households. For example, a village with 600 households should be twice as likely to be chosen as a village with 300 households. This ensures that each household in the whole project area still has an equal chance of selection (see Box 7 for an example).

Sampling non-intervention villages

Surveys of non-intervention villages will not be designed to provide statistically reliable results. These villages will be chosen for their proximity to intervention villages, so that changes in knowledge, attitudes and practices in these neighbouring villages can be assessed for any possible impacts of the programme activities. It is not necessary for these villages to be stratified.

Box 7. Probability proportional sampling

The chance of each village being chosen should be proportional to the number of households. For example, suppose that the project needs to sample three villages, and the project area has a total of ten villages, with 100, 200, 300, 400, 500, 600, 700, 800, 900 and 1000 households respectively (5500 households altogether). The last village should be ten times more likely to be chosen than the first one.

One way to do this is to assign numbers to the villages and then to choose numbers at random. In this example we would assign no.1 to the first village, nos 2 and 3 to the second, nos 4, 5 and 6 to the third, and so on up to nos 46 to 55 for the largest village. Then we would draw numbers at random from those assigned until three villages had been selected.

Sampling households

This approach has implications for the selection of households in each stratum. To ensure equal and known chance of selection it is best to rank all households by the characteristic of interest (rather than create two or three groups) and then define the strata as the top half and bottom half. This may not be possible if the criteria do not allow rating on a scale. However it is advantageous if the strata can be defined so that they have a similar size (number of households).

The final selection of households can be done as a simple random sample or a linear systematic sample. Each project can decide which of the two methods it prefers, although the linear systematic sample is often faster to handle in the field (and to document for project records).

The process is summarised in Table 6.

Later phases

As the project develops, the number of intervention villages will increase. It will be important to maintain the survey in some of the original villages, so that the project and programme can assess continuity and sustainability, as well as comparisons over time. Evaluations during phase 2 and phase 3 will therefore include some of the intervention villages from earlier phases (we assume

Table 6. Summary of sampling process

Step	Notes
1. Choose criteria for stratification	Programme requires two strata – more and less vulnerable
2. Choose villages for survey	Baseline requires all intervention villages; Later evaluations require at least 8 intervention villages (or a minimum of 400 households in total), chosen by probability proportional sampling
3. Choose households in each village	Divide households between strata; Choose 25 households in each stratum, using simple random sampling or systematic sampling

that all new intervention villages will be included in baseline surveys when they are added to the programme). How many villages and households are sampled from which phases depend on the comparisons that are of interest; details will be decided towards the end of phase 1.

5.2 Participatory methods (changes at community level)

Participatory methods are particularly useful for measuring changes at community level, including changes of behaviour and perception regarding the use of water resources.

Method 1: Household interviews

Household interviews are suitable as a principal method for indicators A, B, C, and as an additional method for D and E. A format for the interview, suitable for covering the GWI-WA standard indicators, is provided by GWI-WA Tool 1.

A household survey will provide information on a range of performance questions and indicators; including the time and distance for water collection, type of source used for drinking water, and hand washing and sanitary behaviour. The chosen households are asked a series of questions, which may be part of a wider study or other household survey that the project carries out (see Section 5.1 for the choice of households). The person who responds should be the person who takes the principal responsibility for water and hygiene in the household – usually this is a woman.

Method 2: Focus group discussions

Focus group discussions and participatory mapping (see below) are important methods for indicators C, D and E, and also useful for A and B.

Focus group discussions allow qualitative information to be gathered by asking a group of people on their attitude towards a service or output that is to be delivered. Questions are asked in an interactive group setting where participants are free to talk with other group members. The approach requires the use of well-trained enumerators to guide the discussions. The ideal group size is between 8 and 12. If several focus group discussions are to be held, each must use the same protocol and questions in order to produce like for like responses that can be extrapolated into an overall analysis. We do not provide a detailed description of this method here, since it is frequently used and commonly understood. However, a checklist for focus group discussions for GWI-WA is provided in Tool 6. A good description of the tool can be found in Rietbergen-McCracken and Narayan (1998), p270.[6]

Choosing the group participants

Focus group discussions should be repeated with different community sub-groups of interest to the project, e.g. men / women, agriculturalists / pastoralists, richer households / poorer households.

6. http://books.google.co.uk/books

Method 3: Participatory mapping

Participatory mapping is an informal method for collating and plotting information on the occurrence, distribution, access and use of resources within the economic and cultural domain of a specific community. It is a simple tool, easily adopted and replicated at community level. It should be carried out with a focus group of selected, well-informed community members who represent a cross-section of the population. Detailed description of the method can be found in Rietbergen-McCracken and Narayan (1998), p145.[6] It should be used, for example, for determining the location of water sources (both clean and unimproved), open defecation areas and discussion of their relative use over time. For the Baseline, the map should then be used to focus discussion around the use of different water sources at different times and for different purposes; also the use of defecation areas and the proportion of the population using them (as opposed to latrines). GWI-WA Tool 5 provides a checklist for programme elements to include in mapping.

5.3 Structured questionnaire for institutions

Method 4: Structured interviews with key informants, using questionnaires at appropriate level

This method is useful as a principal data source for indicators F, G, H, I, J and K, and as a secondary data source for indicators D and E.

The approach is to use a structured questionnaire in which respondents' answers are recorded. A questionnaire with a fixed format allows data entry into a structured database, with a minimum amount of manipulation, so that it is ready for validation and analysis.

This will for example allow for the absence of conflict or the effectiveness of water resource monitoring to be verified by key informants, through structured interview with village-level committees, district/commune or basin committees and provincial government. GWI-WA Tool 2 provides a form for questioning at community level, together with a scoring system for responses. GWI-WA Tool 3 is a similar form for use at district/ commune or higher level. Both of these tools draw heavily on similar tools developed by GWI's East Africa Cluster.

Baseline survey and evaluation should use these tools at different levels: community, commune or district and basin. Monitoring should be carried out at commune or district level.

5.4 Field survey monitoring

These methods are appropriate as secondary tools for indicators A, B, C, F and G.

Method 5: Field survey methodologies

Field surveys and observations are used for indicators that can be directly measured on the ground. They are useful both for independent measurement and to verify information collected in interviews and questionnaires (as described above).

GWI-WA will use field survey and observation as follows.

- **Water collection times:** Direct observation of water collection times at peak usage, to verify the estimates made by householders. At each water source in each community that is assessed, the field worker will spend enough time to measure waiting times during the busiest period of water collection, which is generally the early morning.

- **Distance to water:** If the equipment is available, distances from interviewed households to water source can be measured using a GPS device; if not the distance can be estimated from maps and aerial photographs (e.g. GoogleEarth). Distances should be recorded for each household being surveyed. Unless a large detour is necessary when walking (e.g. to avoid a ravine or a wetland) the straight line distance from household to source is sufficiently accurate.

- **Water quality:** Water samples will be taken from each improved water point to check that it provides good quality water. These samples will be taken and analysed according to appropriate good practice in the country. Water from each improved water point will be analysed for both bacteriological and chemical quality.

- **Open defecation:** In each community the field worker will make a walkover survey to visit designated sites or areas of open defecation and will record the relative cleanliness and prevalence of unburied faeces in these areas.

- **Environmental status:** The field worker will briefly visit any areas where environmental change related to water quality and availability have been identified by the community; these are likely to be significant changes in vegetation or water flow.

- **Groundwater levels:** Wherever possible, field workers will also measure groundwater levels in specified locations. Hand dug wells usually provide relatively easy locations for this purpose. The field worker will record the position of a measuring "datum" (fixed and identifiable reference point) and the depth to water from the datum.

A checklist for field observation and survey is provided in Tool 7.

5.5 Case histories or stories of change

Method 6: Case histories

Case histories are appropriate as secondary data collectors for all indicators.
These are to provide illustrative family portraits – examples of some interesting aspects of change in the project's population. The households should be chosen from among the vulnerable groups and visited annually to understand the changes in their lives that may be attributed to the project activities. Interviews should be written up in short documents (two to three paragraphs only).
In each project community case histories should be provided for at least three families. GWI-WA Tool 4 (which is lightly adapted from GWI-EA's Tool C) provides more detailed guidance on how to record case histories.

Family portraits should include discussion of various issues, and should use a checklist to ensure that they are all covered. The issues should include the use of different water sources, any conflict over water use, the time and distance to collect water, the quality of drinking water, hygiene practices, especially the disposal of children's faeces, latrine usage and hand washing practice. It is important to present the results back to the household to verify the field worker's conclusions; presenting case histories back to the community for discussion (made anonymous if necessary) can also be very useful, as described in Box 5 above.

The selection process for choosing families for interview is important and can be from:

- Field workers who identify, through the baseline survey process, a small number of households believed to represent each community.

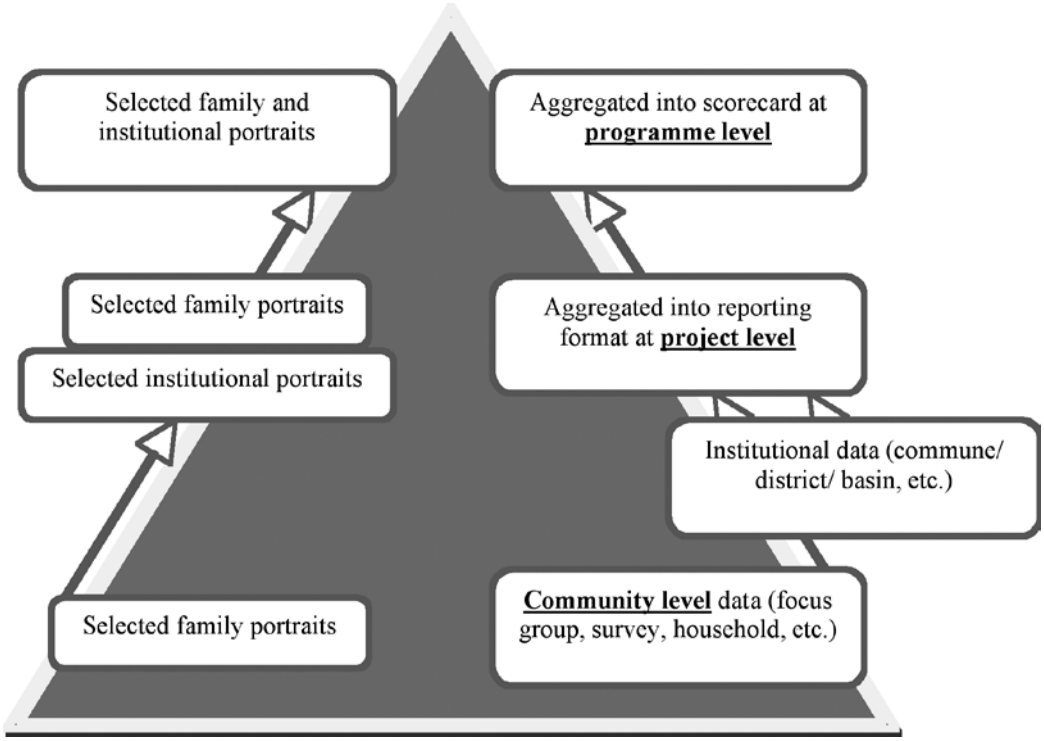
- Project managers who identify a small number of households or individuals who are judged to be of particular interest. For example they may be from a specific marginalised group; or they may be likely to have conflicting water needs or a history of conflicting water use. These households or individuals should then be interviewed to understand their experience of conflict within the community or between communities.

Similarly, case histories for district or basin organisations responsible for water resources management will be made, to understand their development over time and the importance given to them by other departments or authorities. Each country project should provide two or three case histories of relevant organisations.

Reporting and aggregation at programme level

Programme staff need a clear picture of how different projects and basins are performing in terms of environmental and socio-economic change. This requires a clear way of analysing and presenting data collected from monitoring indicators. As part of the data analysis, the programme needs a process for aggregating data at different levels. This is challenging if qualitative data and participatory data are used. Score cards are useful for normalising data across locations and methods.

Figure 2. Aggregation of data at different levels



6.1 Reporting

Reporting should follow the route presented schematically in Figure 2.

- Communities (facilitated by field workers) should document the outcomes from their discussion for each indicator through visual tools (e.g. maps), tables or minutes of meetings.
- Project management should translate those results into (standardised) reporting formats for each indicator and aggregate the results at country level.
- At programme level, the status (progress) of indicators should be displayed as shown below.

Projects should report using the results of their data collection tools. Results will be collated and input to a programme reporting mechanism in the form of a simple database, designed to facilitate entry of data from the tools developed for the programme and to produce reports of regional or national relevance. It will only include data of interest at the programme level (i.e. it will not be designed for M&E at the project level), since different countries and organisations have their own systems and requirements for project level information.

6.2 Aggregation

Aggregation at programme level is relatively simple, as long as the indicators are well defined, the data collection methods are consistent between countries, and the country-level reporting is of high quality. Aggregation then consists of producing a summary table of country-level indicators and an additional column that provides an overall measure of the success of the programme in relation to each indicator. This would take the form of Table 7.

Project and programme level analysis should both discuss the consistency of data collected on the same indicator using different tools (this is the "triangulation" of results), and provide brief commentary on any discrepancies or points of interest. The results of this discussion can be used to determine a score for each indicator, which is used to populate the aggregation table.

The simplest approach is to collate the different data into a format whereby the changes in key indicators can be easily compared. We therefore propose a "traffic-light system" for scoring key performance indicators at the watershed level. This is a well established way to deal with Key Performance Indicators, for example in the Millennium Development Goals. Table 7 shows how indicators should be presented within such a system.

The traffic light is a simple alert icon. The advantage of the traffic light icon is that it is a widely recognised symbol that communicates a "good state" (green – G), "intermediate state" (yellow – Y) or "poor state" (red – R).

Table 7. Example aggregation table for programme-level indicators

Indicator	Country A	Country B	Country C	Country D	Country E	Programme
A	R	Y	R	G	G	Y
B	G	G	G	G	R	G
C	G	Y	G	R	G	Y
D	G	R	Y	Y	Y	Y
E	R	G	R	R	Y	R

Key: low – middle – high values, as scored for each indicator. "Red light" indicates need for immediate management action.

In order to use the traffic light aggregation consistently between projects, indicators have to be scored in a first step. A simple way of doing that is to establish average target values (a benchmark), based on baseline results and expected outcomes, and then to define the values which are considered to be critically low (below an agreed lower threshold figure) or unusually high (successful). Note that these values have not yet been agreed for GWI-WA, and need to be discussed in the light of baseline survey results as well as the expected outcome levels for the programme.

Narrative summaries for each of the programme colours should be provided as part of the programme reporting. For indicator A above, for example, the discussion should explain the differences between the two countries with good progress and the two that have a "red light".

This would be supplemented by a selection of the family portraits that were recorded by projects, which would show something of the range of experience encountered. Family portraits cannot be aggregated in the same way as data on indicators. The procedure for the portraits is for successive rounds of selection at each level of analysis. Thus, if each project community produces two to three portraits, each country project then selects the three most interesting or important portraits (i.e. those that provide important information about project progress or challenges to progress). The West Africa secretariat then again chooses the three portraits that are most interesting or important across the whole programme, for inclusion in its reports.

Annex A Proformas & Guidance for Data Collection Methodologies (Tools 1 to 7)

GWI-WA Tool 1: Household Questionnaire

(Note that sampling is discussed in section 5.1 of the Methodology for monitoring & evaluating GWI progress in West Africa.)

This tool can be integrated into other household survey activities that the project may wish to carry out; the questions listed here are essential for M&E at the programme level. They cover the programme's standard indicators A, B, C and D. For programme level M&E the questions should be asked in the dry season.

Bold text indicates questions to be asked of a female in the household. (Normal text in brackets indicates explanation for the field worker.)

The interviewer should circle the given response for each question.

	General information					
G1	Name of the district					⇨G2
G2	Name of the community					⇨G3
G3	Name of the interviewer					⇨G4
G4	Date of the interview					⇨G5
G5	Reference number for the household (mark the position on your sketch map of the community so that you can later judge the distance to the water source)					⇨G6
G6	Sex of the person interviewed	Female.....1 Male.....2				⇨G7
G7	Name of the head of household					⇨G8
G8	Stratum (more vulnerable or less vulnerable)					⇨G9
G9	GPS coordinates (if available)	Deg	Min	Sec		⇨TW1
					North	
					West/East	

	Indicator A: Time to collect water (for distance to water source see field observation checklist)		
TW1	**What is your normal source of drinking water in the dry season?** (If the household uses more than one source, please note the most commonly used source when water is scarce.)	Private tap.....11 Public tap.....12 Borehole.....13 Protected dug well.....14 Protected spring.....15 Rainwater.....16 Unprotected dug well.....U1 Unprotected spring.....U2 Cart or truck.....U3 River or stream.....U4 Lake or dam.....U5 Scoop well in ephermeral river bed.....U6 Bottled water.....U7 Other (specify).....U8 Don't know.....U9	⇨TW2
TW2	**Where is the source?** (Record the reference number of the source [e.g. "Well 1"], which should be marked on the community map.)		⇨TW3
TW3	**Consider the time needed to make one round trip, from your home to the water source and back again. How many minutes does this take, including the waiting time when the water source is busy.** (The response should not include socialising time if this is not needed for queuing.)	< 3 minutes.....1 4-10 minutes.....2 11-30 minutes.....3 31-60 minutes.....4 61-120 minutes.....5 >120 minutes.....6 Don't know.....9	⇨TW4
TW4	**Is the source giving enough drinking water for your household at this time?** (This question is about the functionality of the source at the time of your visit.)	Yes.....1 No.....2 Don't know.....9	⇨TW5
TW5	**Think about the availability of water at different seasons, and about breakdowns or interruptions to supply of water. Does the source always give enough drinking water for your household?** (If the answer is "not always", probe to find out how much of the time she cannot get water at that source.)	Always.....1 Not always.....2 Don't know.....9	⇨WQ1

	Indicator B: Water quality		
WQ1	**Do you consider that the water source provides water of good quality?**	Yes.....1 Not always.....2 No.....3 Don't know.....4	⇨HB1 ⇨WQ2 ⇨WQ2 ⇨HB1
WQ2	**What problems do you have with water quality?** (Record any specific notes, such as "salty water", "iron staining", etc. as well as any other observations on water quality.)	Taste/smell.....1 Colour.....2 Mud/sand.....3 Other (specify).....4	⇨HB1
	Indicator C: Hygiene behaviour		
HB1	**We would like to see the place where members of your household most often wash their hands after defecation? May I see this place?**	Place for hand washing observed.....1	⇨HB2
		Movable object used for hand washing (kettle, bucket, basin, container).....2	⇨HB2
		No specific place or movable object for hand washing.....3	⇨HB4
		No permission to see.....7	⇨HB4
HB2	(Is water present at the place for hand washing? If there is a tap or pump at the specific place for hand washing, open the tap or operate the pump to see if water is coming out. If there is a bucket, basin or other type of water container, examine to see whether water is present in the container. Record observation.)	Water available.....1 Water not available.....2	⇨HB3
HB3	(Is soap or detergent present at the specific place for hand washing? Record observation. Circle all that apply.)	Bar of soap.....1	⇨HB6
		Detergent (powder/liquid/ paste).....2	⇨HB6
		Liquid soap.....3	⇨HB6
		Ash, mud, sand.....4	⇨HB6
		Other (describe).....5	⇨HB6
		None.....6	⇨HB4
HB4	**Do you have any soap or detergent** (or other locally used cleansing agent) **in your household for washing hands?**	Yes.....1	⇨HB5
		No.....2	⇨HB6
HB5	**Can you please show it to me?** (Record observation. Circle all that apply.)	Bar of soap.....1 Detergent (powder/liquid/ paste).....2 Liquid soap.....3 Ash, mud, sand.....4 Other (describe).....5 Not able/does not want to show.....9	⇨HB6

HB6	**Is there a child under 3 years old in the household?**	Yes	⇨HB6
		No	⇨CO1
HB7	**The last time that the youngest child defecated, what was done to dispose of the faeces?**	Child used latrine.....1 Put/rinsed into latrine.....2 Put/rinsed into drain/ditch.....3 Thrown into rubbish.....4 Buried.....5 Left in the open.....6 Other (specify).....7 Don't know.....9	⇨CO1

Note: HB2 and HB3 are observations only. The interviewer is required to note what is observed at the specific place for hand washing

	Indicator D: Disagreements over the use of water		
CO1	**During the last 12 months, have you experienced any disagreement or conflict over the use of the water – either by yourself or by others?**	Yes.....1	⇨CO2
		No.....2	⇨end
		Don't know.....9	⇨end
CO2	**Was the conflict between domestic water users within the community, or did it involve other uses or people outside the community?** (Domestic water use includes drinking, cooking and washing; it does not include animal watering, beer making or other small industries, or irrigation.)	Domestic use within the community.....1	⇨CO4
		Other uses within the community.....2	⇨CO3
		Outside the community.....3	⇨CO3
		Don't know.....9	⇨CO4
CO3	**What other uses conflict (or conflicted) with domestic use?**	Irrigation.....1	⇨CO4
		Animal watering.....2	⇨CO4
		Other (specify).....3	⇨CO4
		Don't know.....9	⇨CO4
CO4	**What do you think was the underlying cause of the conflict?**	Not enough water.....1	
		Right to access.....2	⇨CO5
		Payment for water.....3	⇨CO5
		Waste water disposal.....4	⇨CO5
		Other (specify).....5	⇨CO5
		Don't know.....9	⇨CO5
CO5	**Has the conflict been resolved?**	Yes.....1	⇨CO6
		No.....2	⇨end
		Don't know.....9	⇨end
CO6	**How was the conflict resolved?** (Circle all that apply.)	By community members.....1	⇨end
		With help of village leaders.....2	⇨end
		With the help of government officals.....3	⇨end
		Other (specify).....4	⇨end
		Don't know.....9	⇨end

GWI-WA Tool 2: Community Level Snapshot Assessment

A snapshot of water resource management at community level

Tool 2 looks into the issue of water resource management (WRM) at community level, and has been designed to allow aggregation of data in a simple and systematic way. It addresses issues covered by Strategic Outcomes 2 and 3.

At district level, we suggest that completed tools should be summarised and analysed by partner staff and discussed with district or basin representatives; at country level this should be done by project M&E staff.

What is a snapshot at community level?

The snapshot asks a set of questions that reveal issues linked to WRM, e.g. conflicts over water use, involvement in WRM planning and the availability of information.

Why is it useful?

The snapshot provides a quantitative and simple way of looking from a local viewpoint at WRM, an area of work which is pivotal to long term sustainability. The findings can alert implementers to any patterns of weaknesses which need addressing in the future and provide a mechanism to identify community systems which are facing problems. There is also room for qualitative comments/feedback on the quantitative scores given.

How will the data be collected and used?

The data can be recorded on the form itself and ideally translated into a local language. Sets of forms from each district should be analysed using Excel, from which graphs can be produced. The tool includes a simple report card format to aggregate the quantitative findings from different communities to the district level.

The findings of the snapshot should be discussed internally and the district summaries shared in mid-year or annual reports.

For accountability and transparency purposes, it is best if the snapshot is done openly. For example, each of the 10 questions could be translated and laminated on an A4-size paper that is displayed as people decide which of the three scores they will give to that question. The scoring could be done with pebbles or in some other visual participatory way, as well as recorded on paper. A copy of the scores given should also be left in the community where other written documentation of the initiative is kept.

How many community systems should be reviewed?

We would recommend that all supported communities are assessed once every three years and that partners set up a system to ensure this in a way that is relatively easy for them to administer. For example, districts could be divided into three sub-districts and one sub-district (a third of the district) could be examined each year.

Who should collect this data?

Partners (ideally not just field staff but with headquarters or monitoring staff) should periodically undertake their own assessments. We would also encourage third party assessments of findings, e.g. by partners in each other's areas of work, to increase the external validity of the findings. We would also recommend that local government be involved in the assessments; ultimately it would be a great success if this becomes a role that they take on and follow up with through support to communities experiencing problems.

Who should be interviewed?

The data are to be collected by mixed interest groups, including community members and committee leaders. We recommend that at least five people are involved in each interview. The interview process should ensure that the discussion is as participatory, transparent, and as inclusive as possible.

Analysis and follow up

Each team in each of the GWI countries should identify a system for undertaking, analysing and then acting on these snapshots. There are three loops required to ensure effective use of this data:

1 A loop which ensures that communities visited which are experiencing problems are followed up on by staff and local government;
2 A loop which ensures that data are aggregated and then discussed within the wider team and fed back into changes to programming focus or methods (a simple excel table is provided to support this);
3 A loop that ensures that the aggregate data is forwarded for compilation in the reporting process.

GWI-WA Tool 2: Community Level Snapshot Assessment

Description of group interviewed _____

_____ Date _____

Community _____ District _____

Interviewer _____

GPS Coordinates of Community Centre

North: Deg Min Sec

West/East: Deg Min Sec

Type of water project being assessed _____

_____ Country _____

Where respondents do not know the answer or the answer is not applicable, score 0. Answers to be provided in the shaded boxes.

Use the community map to review, with the group, the different sources of water available to the community and the main uses of each water source.

Note Second column shows the relevant indicator number

No.		Score	0	1	2	
1	E	**Is there a plan and series of actions to manage water resources in the area that includes the community?**	The community has no knowledge of any plan or actions	There is a plan but the community is not aware of any actions being taken and is unsure of who is responsible to do what	The community can explain a plan and describe some actions that have been taken	
2	E	**Was the community involved in drawing up the plan?**	There is no plan; or the community played no part in developing the plan	The community was informed or asked for information, but did not participate in the production of the plan	Community representatives participated in the production of the plan	
3	E	**Is the community involved in implementation of water resource management in the area?**	There is no active management; or the community plays no part in management	Community representatives are sometimes informed or consulted but do not participate in decision making	Community representatives participate in decision making about water resources	
4	F	**What information do you have about the quality of the water you use?**	We only know what we can see and taste; we have no records and no information from the project or government	Community shows some understanding of chemical and bacteriological quality	Community can show information from water quality assessment and explain what it means	
5	F	**How is water quality monitored?**	Community is unaware of any monitoring	Community is aware that monitoring takes place but unsure of details or responsibilities	Community can explain who is responsible for monitoring and what actions are taken	
6	G	**What information do you have about groundwater levels and river flows in the area?**	We only know what we can see; we have no records and no information from the project or government	Community shows some understanding of groundwater levels and/or river flows (1)	Community can show information from groundwater level or river flow assessment and explain what it means	
7	G	**How are groundwater levels and river flows monitored?**	Community is unaware of any monitoring	Community is aware that monitoring takes place but unsure of details or responsibilities	Community can explain who is responsible for monitoring and what actions are taken	
8	D	**Is there any conflict or disagreement within the community over the use of drinking water?**	Disagreements result in some community members not using the drinking water source	There are sometimes disagreements but these are resolved and everyone has access to drinking water	There are no disagreements about the use of drinking water	

9	D	**Is there any conflict or disagreement within the community over the use of water for other purposes?**	Disagreements result in some community members not using water for other purposes	There are sometimes disagreements but these are resolved and everyone has access to the water they need	There are no disagreements about the use of water for other purposes	
10	D	**Is there any conflict or disagreement with others outside the community over access to and use of water?**	Disagreements result in the community not having access to all the water it needs	There are sometimes disagreements but these are resolved and the community has access to the water it needs	There are no disagreements about the use of water	

(1) For example, they know about seasonal or long-term changes in the water resource, but cannot explain how this is affected by different factors such as weather, climate and water use.

Results

Summarise the results individual results and then calculate the total in the shaded boxes of the table below

Indicator	Total score	
Indicator D (3 questions) 8, 9 ,10	Maximum 6	
Indicator E (3 questions) 1, 2, 3	Maximum 6	
Indicator F (2 questions) 4, 5	Maximum 4	
Indicator G (2 questions) 6, 7	Maximum 4	
TOTAL	Maximum 20	

Question	Additional comments
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

GWI-WA Tool 3: District or Province Level Snapshot Assessment

A snapshot of water resources management in a District or Province

Tool 3 examines water resources management (WRM) activities at District or Province level, and has been designed to allow aggregation of data in a simple and systematic way.

Completed tools will be summarised and analysed by the programme M&E staff and results should be fed back to the interviewed organisation(s).

What is a WRM snapshot?

The WRM snapshot asks a set of questions that reveal issues linked to WRM, e.g. water-related conflict, the availability of information on water resources, activities to collaborate and manage water use, etc.

Why is it useful?

The snapshot provides a quantitative and simple way of looking at local water resource governance and is pivotal to long term sustainability. The findings can alert implementers to any patterns of weaknesses which need addressing in the future and provide a mechanism to identify districts that are facing problems. There is also room for qualitative comments/feedback on the quantitative scores given.

How will the data be collected and used?

The data can be recorded on the form itself and ideally translated into a local language. Sets of forms from each basin or province should be analysed using Excel, from which graphs can be produced. The tool includes a simple report card format to aggregate the quantitative findings from different districts.

The findings of the snapshot should be discussed internally and the summaries shared in mid-year or annual reports.

For accountability and transparency purposes, it is best if the snapshot is done openly. For example, each of the 20 questions could be translated and laminated on an A4-size paper that is displayed as people decide which of the three scores they will give to that question. The scoring could be done on flipchart or in some other visual participatory way, as well as recorded on the form. A copy of the scores given should also be left with the interviewees.

How many districts should be reviewed?

We recommend that all supported districts are assessed annually.

Who should collect this data?

Partners (ideally not just field staff but with headquarters or monitoring staff) should periodically undertake their own assessments. We would also encourage third party assessments of findings, e.g. by partners in each other's areas of work, to increase the external validity of the findings. We would also recommend that government bodies with responsibility for WRM be involved in the assessments; ultimately it would be a great success if this becomes a role that they take on and follow up with through support to districts experiencing problems.

Who should be interviewed?

The data are to be collected by mixed interest groups, including technical staff, managers at district or provincial level, and where appropriate elected leaders. We recommend that at least five people are involved in each interview. The interview process should ensure that the discussion is as participatory, transparent, and as inclusive as possible.

Analysis and follow up

Each team in each of the GWI countries should identify a system for undertaking, analysing and then acting on these snapshots. There are three loops required to ensure effective use of this data:

1 A loop which ensures that districts that are experiencing problems are followed up on by staff and government;
2 A loop which ensures that data are aggregated and then discussed within the wider team and fed back into changes to programming focus or methods;
3 A loop that ensures that the aggregated data are forwarded for compilation in the reporting process;

GWI-WA Tool 3: District or Province Level Snapshot Assessment

Description of group interviewed _____

_____

Date _____ District _____

Interviewer _____ Country _____

Where respondents do not know the answer or the answer is not applicable score 0. Answers should be provided in the shaded boxes on the right.

Note Second column shows the relevant indicator (letter)
The "area" referred to in some questions means the geographical area of activity of the organisation being interviewed

No.		Score	0	1	2	
1	E	**Is there a plan and series of actions to manage water resources in the area?**	There is no knowledge of any plan or actions	There is a plan but the interviewees are not aware of any actions being taken	The interviewees can explain a plan and describe some actions that have been taken	
2	E	**Were communities involved in drawing up the plan?**	There is no plan; or **communities** played no part in developing the plan	**Communities** were informed or asked for information, but did not participate in the production of the plan	Community representatives participated in the production of the plan	
3	E	**Are communities involved in implementation of water resource management in the area?**	There is no active management; or the communities plays no part in management	Community representatives are sometimes informed or consulted but do not participate in decision making	Community representatives participate in decision making about water resources	
4	F	**What information do you have about the quality of the water in the area?**	Interviewees have no records and no information from the project or government	Interviewees show some understanding of chemical and bacteriological quality in the area	Interviewees can show information from water quality assessment and explain what it means	

5	F	**How is water quality monitored?**	Interviewees are unaware of any monitoring	Interviewees are aware that monitoring takes place but unsure of details or responsibilities	Interviewees can explain who is responsible for monitoring and what actions are taken	
6	G	**What information do you have about groundwater levels and river flows in the area?**	Interviewees have no records and no information from the project or government	Interviewees show some understanding of groundwater levels and/or river flows (1)	Interviewees can show information from groundwater level or river flow assessment and explain what it means	
7	G	**How are groundwater levels and river flows monitored?**	Interviewees are unaware of any monitoring	Interviewees are aware that monitoring takes place but unsure of details or responsibilities	Interviewees can explain who is responsible for monitoring and what actions are taken	
8	H	**How frequently are there meetings that focus on WRM in the area?**	There are no regular meetings or communications about WRM	There have been some meetings but there is no regular meeting; communications are *ad hoc*	There is a regular meeting at least once every year that deals specifically with WRM	
9	H	**What range of organisations is involved in meetings?**	There are no regular meetings	Only a few organisations are represented	At least three of the following:CBOs, NGOs, local government, national government, donors	
10	H	**Who do you collaborate with on WRM actions?**	We have no collaborative actions	We work with one type of partner (CBO, NGO, government, etc.)	We work with at least four organisations of more than one type	
11	I	**What information on the water resource situation is available to you?**	No information, or only anecdotal information, is available (good information does not exist or is difficult to access)	Limited information is available to us (2); within a few days we can have information from other sources	Good information is available to us, for rainfall, water levels, river flows and water quality (2)	
12	I	**What research and/ or learning projects on WRM exist within the area?**	There are no research and learning projects	Few research and learning projects are active and the results have not been applied widely	Strong research and learning projects exist in the area and we can describe the results	
13	J	**What is the level of government funding for WRM?**	WRM budgets cover salary costs only; nothing for operational costs or capital expenditure	WRM budgets cover salary and operational costs, but operational cost budget is insufficient or not fully utilised	WRM budgets cover salary, operational and some capital costs and are generally fully utilised	

14	J	**What is the level of government staffing for WRM?**	Technical staff for WRM are not assigned (positions not filled or do not exist)	Technical staff for WRM are assigned but are insufficient for planned or desired activities	Technical staff for WRM are assigned and sufficient for all planned or desired activities	
15	J	**Number and scale of NGO projects in WRM**	No significant NGO activities	Some activities, usually as "add-ons" to water and sanitation, agricultural or other projects	NGO activity in WRM is widespread and WRM forms an important component of several projects	
16	K	**How do water, sanitation and water resources appear in policies and activity plans for the area?**	The policies and activity plans are separate, or there are no policies or plans for WRM	Water and sanitation are planned together; water resources is separate	Water resources, water and sanitation projects are integrated in policy and planned together	
17	K	**Is there an organisation in the area to oversee WRM?**	There is no basin or district organisation with the mandate to oversee water resources	There is a basin or district organisation with the mandate to oversee water resources, but it is not effective	There is an effective basin or district organisation with the mandate to oversee water resources	
18	D	**Are you aware of any conflict or disagreement within communities over access to and use of water?**	Disagreements result in some community members not using drinking water sources	There are sometimes disagreements but these are resolved and everyone has access to drinking water	There are no disagreements about the use of water	

(1) **For example, they know about seasonal or long-term changes in the water resource, but cannot explain how this is affected by different factors such as weather, climate and water use.**
(2) Ask them to show you the data that they have.

Results

Summarise the individual results and then calculate the total in the shaded boxes of the table below

Indicator	Total score	
Indicator D (3 questions) 18, 19, 20	Maximum 6	
Indicator E (3 questions) 1, 2, 3	Maximum 6	
Indicator F (2 questions) 4, 5	Maximum 4	
Indicator G (2 questions) 6, 7	Maximum 4	
Indicator H (3 questions) 8, 9, 10	Maximum 6	
Indicator I (2 questions) 11, 12	Maximum 4	
Indicator J (3 questions) 1 3, 14, 15	Maximum 6	
Indicator K (2 questions) 16, 17	Maximum 4	
TOTAL	Maximum 40	

Question	Additional comments
1	
2	
3	
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GWI-WA Tool 4: Case histories

Introduction

Most of the monitoring processes in the GWI-WA have been designed to allow aggregation in a simple and systematic way. They are therefore either primarily quantitative in nature, or they allow for quantitative values to be placed on qualitative judgements. This tool is entirely qualitative.

What is a case history?

A case history is a short narrative, ideally told in the first person, ideally accompanied with a photo, about the experiences and reflections of a named individual.

Why is it useful?

The tool should help us to answer the following questions:

- In what simple or complex ways did this community, this environment or this partner change as a result of this project?
- What were the main factors that caused/influenced the change?
- What were the lessons learned for better programming/best practices of this project?

For example:

- How have households changed their water use and hygiene behaviours?
- What are the changes in local government in planning and implementation processes and what are the changes in community inclusion in decision-making?
- At a personal level, what do these changes mean for the people involved?

It would be useful to ensure that these anecdotes are not just describing things going well, or people that are happy with the changes, but that they also delve into the problems and constraints that are obstacles to progress.

What is the expected content?

A case history would be particularly useful where it sheds light on the relationship over time between the environment, local government, and the community, and within the community, on issues such as gender relations and other hierarchies that affect access and rights to benefits or facilities. We would like to be able to tell a story and provide a flavour of reality which numbers or even third party anecdotes cannot achieve.

Preparing the interview

Who should collect these testimonies?

Ideally a range of people should collect these stories: women and men who have different roles within the NGO. Ideally all staff members could be trained to record the stories and could undertake some of these as they go about their work. Such a process would encourage all to put aside time to listen.

Over time, partners should look at the quality of the testimonies being generated and see if additional support and training of staff would be useful to generate improved stories.

What kind of questions could we ask?

Overall it is useful to bear in mind the results framework of the GWI and seek experiences relating to the regional outcomes and standard indicators.

It might also be useful to discuss with the field workers and to look at the data generated by the household survey (Tool 1), community snapshots (Tool 2) and the local government reviews (Tool 3) and to choose questions that will deepen understanding and validate interesting aspects of the responses.

Who should be interviewed?

The personal stories should aim to tell the stories of a wide selection of the community to give a flavour of different people's experiences: women, men, young and old, those without physical handicap and the disabled, rich and poor, people of different ethnic and religious backgrounds, etc. It is also useful to come back to the same people over time to capture changes.

Community stories and partner stories should likewise try to give a flavour of collective experiences. They could be event-focused, e.g. people who came together for a particular purpose or because of a particular event, or look into the development of attitudes and practice at a particular partner (such as local government).

Once again, it may be interesting to review the results from other Tools and interview those who from the quantitative data generated clearly have a story to tell. The choice of voices should also be considered in advance.

Some examples of different voices

- Ask different women questions on knowledge, attitude, practices and conditions relating to water, health, sanitation, the environment, household dynamics, community dynamics, issues related to power and violence, issues related to voice, relationships with local government and external agencies, challenges and aspirations.
- Ask different men similar questions.
- Compare differences in perception between men and women.
- Talk to a group of young boys and girls or other groups and ask the question about how they see the future. Probe further on environmental and WASH-related issues.
- Talk to elders and ask what are the significant events over the last 20-30 years. Using this as a timeline, narrow down to ask about changes related to water resources and WASH issues over time.
- Talk to people facing unique problems, e.g. the disabled, those living with HIV/AIDS, about their WASH experiences and the impact of these on their lives.
- Talk to local government officials about their experience of water resources development and management in the basin.

Carrying out the interview

What is the expected length?

There is no prescribed length for this process, save to suggest that **extracts or shorter pieces of half a page in length or less are often most useful.**

In what language should they be?

Interviews should be carried out in the local language, in order to allow the interviewee to express themselves freely, and to capture exact expressions and feelings.

Note to interviewer

Ensure that all stories are dated, authored, that there are no confidentiality issues, that the person is named and located for future follow-up questions, and that good quality photographic information is included. It might also be possible to take short video clips. **With photos of individuals, focus on positive images wherever possible. Ensure that the person is happy that their information/story and picture are used.**

In conducting the interview, you will find that some people are very forthcoming with information that makes for a good story, others are more reticent and are not used to, or don't like talking about themselves. Sometimes it takes several probing questions before a story pattern emerges. It helps to make people comfortable, communicate through words and body language that you want to connect to them on a personal level and understand why this topic is important to them, what pain and what victories it has brought. Ask specifically about problems and difficulties to

get beyond rosy reports. Try and identify what was the turning point in the situation. Ask what are the hopes and the inspirational lessons to come out of this experience. Share your thoughts if appropriate to encourage them in their telling of the story. Storytelling in itself can lead both the teller and the listener through a process of analysis of events and outcomes that they had never pieced together or reviewed internally before.

The following bullet points provide some ideas for questions. Note that only a few of these questions are expected to be covered by any single story.

Significant change: problems and successes

- Ask people about the most significant change in their lives and probe for lessons to be learned from this.
- Ask people what problems they have faced by not having access to clean safe water, or sanitation to meet their needs. Get them to describe what this is like on a daily basis. Was there a particularly troubling time when they hit a low point? How did this affect their mood, their ability to carry on with other activities?
- Ask what interventions have made a difference? What changes or internal resolutions did they initiate to change the situation? Try and understand what the trigger(s) for change was (were). NB: It is usually a set of circumstances which brings about change not one organisation
- What has been the outcome of the changes made? If it was an NGO intervention, what immediate and ripple effects has this had? How have these effects been different from what they anticipated? What have other people said to them about these changes? What do they think personally? If the changes were internal (e.g. they decided to change their behavior regarding hygiene, or they decided to speak out within a community governance structure) how do they feel about their decisions? What effect has this had on them?

Reflections and lessons learned

- What have they learnt from the experience they describe? How will they approach future events differently? What would they like others to learn from their experience?
- Ask questions related to stagnation and transformation; how do problems surface in households and communities? How are they resolved? What are the catalysts and obstacles to change?
- Ask for anecdotes, funny stories, sad stories, sayings, poems, etc. that might shed light on transformation.

Although the stories may talk about problems, the interviewer should be clear in the interview process that the prime function of the stories is to record experiences rather than provide an avenue for problems to be addressed.

As well as the consent form which needs to be filled in, make sure that the stories being told are wherever possible checked by a number of people including the interviewee and that sensitive issues are dealt with in a way which is not going to cause problems for the interviewee, interviewer and the wider community and partnership.

Writing up and using the results

In what language should they be?

We would encourage these to be first written in the local language to capture exact expressions, with the most interesting of these being translated for wider circulation in a way that wherever possible retains the flavour of expressions used.

In transcribing the interview, some clustering of themes or omission of repetitions is often useful, however it is important that the transcriber retain the spirit of the process, which is all about hearing the voice of the person interviewed as directly as possible.

How do the stories get used?

Partners are encouraged to think about ways in which these narratives can influence implementation in the short and longer term, however our suggestion is that the most interesting, thought-provoking stories be used as a springboard for discussions at all levels from the community level, focal area level, and country level to the regional level and some time be given to this process as a regular slot in meetings. Partners could take turns initiating this process.

In addition, any story that identifies problems that require action should be copied to those able to address the problem.

The mid-term and annual reports for each project should include three half-page stories and ideally most documentation should include examples. The choice of stories for the reports should depend on their relevance in relation to the regional indicators and programme objectives.

Are there any examples we could look at?

In the Annex below are a couple of examples of stories that were collected by the GWI Kenya team (part of GWI-East Africa Cluster) as part of their training session in the use of the GWI tools. Note that the stories should be linked to the project log frame, and we hope that other examples drawn from the experiences of GWI-WA will be added here.

Case histories: Examples of personal stories

Stories developed during GWI Kenya training group session

My work experience

I have worked serving communities in Arid/Semi Arid areas which more often than not experience water shortages. I have from time to time mobilized and sensitized the communities on the importance of participation and contribution (in kind) to the construction of water/sanitation facilities at least for sustainability and ownership of the project. At the beginning, they agree in principle but during implementation (actual construction works), the community members rarely give full support to what they have agreed to. The most interesting aspect is that when the project is finally completed, everyone is quick in using the project facilities. These are some of our challenges which are not about to go away.

Agonies of a girl child

Look over there at that Toyota *Prado* rolling over the hill. That's Nasenyana, my former classmate.

I wish my daughters were able to go to school but I do not have money. I was born in a small village in Masaai land and I was the best performing girl in our makeshift, primary school. Thereafter I went to Alliance High School but was pulled out in Form 2 and forced to get married to an old crotchety rich man in a neighbouring village. My father received several cows as dowry, the women ululated 'atitititititiiiii' twice. Here I am, poverty surrounds me like flies on fresh faeces, and I have no person to cry to. However, I will stand by my daughters, no matter what. They must go to school, and they must become role models to other girls in this village.

GWI-WA Tool 5: Checklist for community mapping

Participatory community mapping is a commonly used tool for many kinds of community mobilisation and participatory planning. We assume that the technique is familiar to GWI-WA partners and their staff. If further guidance is needed on the tool and how to use it, this can be found in texts that describe participatory rural appraisal, PHAST and similar approaches.

This checklist is provided to ensure that some elements that are important for GWI-WA's regional outcome monitoring are included in any application of community mapping by partners in their M&E work.

Who draws community maps?

Community maps should be produced by the whole community or a sample of the community, facilitated by the field worker. If you are working with a sample of the community, make sure that the sample includes representatives of all the sub-groups of interest (women and men, different ethnic groups, rich and poor, etc.); and make sure that all of these contribute to the discussion that produces the map.

What is the key information to include on the map (for programme M+E)?

Defecation areas

Because one of the objectives of GWI-WA is the reduction or elimination of open defecation, field staff need to know where open defecation is traditionally practised, so that they can inspect these places. Most communities have specific areas that are used for defecation. These may be areas of bush, river banks, or simply designated fields. There may be different areas for men and women.

Latrines

Equally, field staff need to know the number and placement of latrines in the community, so that latrine use can be documented, and so that the results of household interviews and focus group discussions can be verified. Because of this it is useful for each household to be shown on the map, so that it is also possible to identify and localise the households that have latrines.

Water sources

The community map should show the sources of water used by the village including where possible sources used for other purposes as well as those used for domestic water. But it is the domestic sources that are most important for GWI-WA objectives. Therefore the map must as a minimum, indicate all sources used for domestic water. Where there is more than one source of domestic water the map should indicate which parts of the village generally use which of the sources.

What happens to the map after it is drawn?

The map must be kept for future reference. One copy should remain with the community and the project should keep a copy. The field worker should take a photograph of the map or copy it carefully into a notebook so that it can be reproduced as part of the evaluation report. If the map is produced on paper, this may be left with the community. If it is not possible to leave the original paper map with the community or if the map was produced on the ground, the field worker should leave behind a copy on paper or provide one at the next opportunity.

The map will be used in subsequent assessments to review any changes that may have occurred.

Documentation of process – Notes to the field worker

The map must be accompanied by a detailed key to any symbols used and short notes to describe the process. These will include the date, name of the field worker and a summary of those who participated in the mapping. The notes should also record any additional comments or analysis made by the participants during the process which cannot be easily recorded on the map.

GWI-WA Tool 6: Checklist for focus group discussions

Focus group discussions are frequently used in generating discussion with participants or stakeholders in a project, and with target audiences for messages or advocacy of different kinds. We assume that the technique is familiar to GWI-WA partners and their staff. If further guidance is needed on the tool and how to use it in development projects, this can be found in texts that describe participatory rural appraisal, PHAST and similar approaches.

This checklist is provided to ensure that some elements that are important for GWI-WA regional outcome monitoring are included in focus group discussions included by partners in their M&E work.

Focus groups should be chosen to reflect and as far as possible represent the views of the target group(s) in which you are interested. It is useful to define interest groups that may have different views, and to conduct separate discussions with each. For GWI-WA this may mean separate groups of men and women, different ethnic groups, rich and poor, etc. Make sure that you record the number of men and women attending each focus group.

Focus group discussions should be conducted after the use of Tools 1, 2 and 3 (household and key informant interviews). In this way, the checklist of questions to cover can then be revised to take into account any interesting or unusual points arising from these tools.

Key subjects

Whatever additional questions are added, focus groups must always be used to verify information collected using other tools on a small number of key subjects for programme-level monitoring. These are listed below. Discussion on these key subjects is expected to take between 30 minutes and 1 hour.

Water quality

What is your perception of the quality of water provided by your drinking water source(s)?

- Is its appearance good?
- Does it taste and smell good?

Availability of water

Is drinking water always available to you? Are there interruptions in supply because of:

- Seasonal variation in water levels or flows?
- Breakdowns in infrastructure (e.g. pumps or pipes)?
- Difficulty in accessing the source at certain times (because you cannot use the path or because there are too many people waiting to get water)?

If there are interruptions, how frequent are they and how long do they last?

Use of different water sources

If there is more than one water source used, which families use water from which sources? Why do they choose to use these sources, and for what purposes?

Sharing of water use within the community and between communities

Is there always enough water for everyone in the community? Do you ever have any difficulty in getting the water that you need? Are there any disagreements over:

- access to or allocation of water?
- the appropriate use of water?
- the price of water?

Do families from other communities use any of the water sources? If they do, is there always enough water for them? How do you agree on how to share the water?

Water management processes, including planning and management of water use and protection

What arrangements are made for managing the water and ensuring that water is always available?

Does your community work with other communities and/or with local government to monitor and improve local water resources? (Ask whether there is any work to control soil erosion, conserve forest or control water use.)

Documenting the process and the results – Notes to the field worker

The field worker must take notes of the discussions including the questions asked. It is easier if one field person leads the discussion and another takes notes. The notes must include the date and the name of the field worker(s). They should also briefly describe the group that participated in the discussion and the reasons for their choice as participants, together with their names.

The report should be arranged using the headings in this checklist. Add new headings if necessary for additional points.

GWI-WA Tool 7: Checklist for field surveys and observations

Field surveys and observation should be used to verify information collected using Tools 1 to 3 (household and key informant interviews), and Tools 5 and 6 (community mapping and focus group discussions).

Personnel with different skills are needed for the points listed below; field surveys may therefore not all be covered at the same time. The project manager should manage the survey process carefully to make sure that all points are addressed.

Functionality of water points

The field worker should observe the following directly, by visit(s) to the water point(s).

- Is water available at the water point at the time of the visit?
- Does the water point appear to be functioning as designed?
- If the water point is not functional, how long has it been out of use and for what reasons?

Time and distance for water collection

For all households interviewed using Tool A (household interview), the field worker must measure the distance from the household to the water source, and must also measure the time for water collection.

To measure the distance, the field worker should either:

- If GPS is available: take a GPS position on each household interviewed and on the water source; and take some positions at suitable points along the main paths to the water source, so that the distances can be calculated by computer using the GPS results.
- If aerial photos, satellite photos or detailed maps are available: mark the position of the households and the water sources on copies of the photos or maps; mark the main paths to the water sources; and measure the distances to walk.
- If neither GPS nor photos and maps are available: use a pedometer to measure while walking the main paths to different groups of houses.

Time measurement should be done at the time of peak demand, when queues are most likely. Usually this is early in the morning. To measure the time, the field worker should:

- Divide the households interviewed into groups that are close together (and take a single measurement for each group of households).
- Walk the route from each group of households to the (main) water source they use, measuring the time from leaving the households to arriving at the source.
- Stay at the source and record the times taken by at least ten people to fill with water a standard container (whatever is usually used in the community). Use these times to calculate the average time taken per person to take water at the source.
- Measure the time taken to walk back again to the group of households, with a container of water.
- Add the three times together and report a total time for each of the households.

Quality of water

Water quality samples should be taken, transported and analysed according to good laboratory practice. Each country is expected to have its own approved methods for this and guidance is not provided here. For programme monitoring each water source must be analysed for:

- faecal coliforms per 100 ml
- electrical conductivity (µS/cm)
- fluoride (mg/l)
- arsenic (µg/l)[7]

7. Each project is required to make an initial technical assessment as to whether arsenic is likely to present a problem in the project area. If the project can show that arsenic is known to be absent, testing for this parameter is not required.

All GWI water points must be sampled for water quality testing. If any pre-existing (non-GWI) water point is to be relied upon for future potable water provision in a project community (i.e. if it will not be replaced by a new GWI water point) it must also be sampled for water quality testing.

Defecation areas

Site used for open defecation will be identified on community maps (Tool 5) and in focus group discussions (Tool 6). Field workers must visit defecation sites and make observations on their usage. The first purpose is to confirm that the sites are being used. Field workers must also make an outline survey of the defecation area or part of it (if it is large). For this survey the field worker should make a sketch map of the defecation area, including permanent features that can be identified at the next visit, and estimate the number of human faeces visible in the area by means of a quick walk through it. This number can be compared in subsequent surveys to find out whether the use of the open defecation area is changing.

Latrine checks

Field workers should observe a selection of latrines in the community to verify that they are being used. The latrines should be marked on the community map (Tool 5). The field worker should observe latrines in at least five households in the community. Wherever possible, choose households with different socio-economic status (richer/ poorer; different ethnic groups; pastoral/ agricultural). The intention is to check a small sample of latrines to find out whether they are being used and therefore to verify information generated using other tools. Each latrine must be checked for the following:

- Is the pathway to the latrine clear of vegetation and obstructions? Does it look as though it is used continually?

- Is there evidence inside the latrine superstructure that the latrine is or is not being used? Indicators for this will differ from one type of latrine to another, but they may include:
  - The presence of ash, water, paper or cleaning materials in or close to the latrine
  - Evidence of fresh faeces in the pit
  - Cleanliness of the slab and squat hole
  - The absence of faeces in the open area immediately around the latrine

Groundwater levels, river flows, and environments (such as wetlands) sensitive to the availability of water

These must also be monitored; however, it is beyond the scope of this checklist to provide technical guidance on these subjects.

Technical staff of the project and/or government should advise on what to monitor as this will be very specific to each project and community.

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