



## Monitoring of water supply coverage

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*Monitoring of water supply coverage will help to ensure water supply for the millions of people who still lack convenient access to a 'safe', reliable and affordable water source. According to the WHO/UNICEF Joint Monitoring Programme, more than one in four people in the developing world lack access to water (WHO/UNICEF 2004). Targets have been set in the Millennium Development Goals (MDG) to accelerate the improvement of this situation. Quantifying access through monitoring will be essential to attain such goals, although the **process** to achieve these goals will be **as important** in order to achieve **sustainable coverage**.*

*This fact sheet aims to clarify different steps involved in measuring access to water by water coverage surveys and highlight some of the problems that may affect current monitoring.*

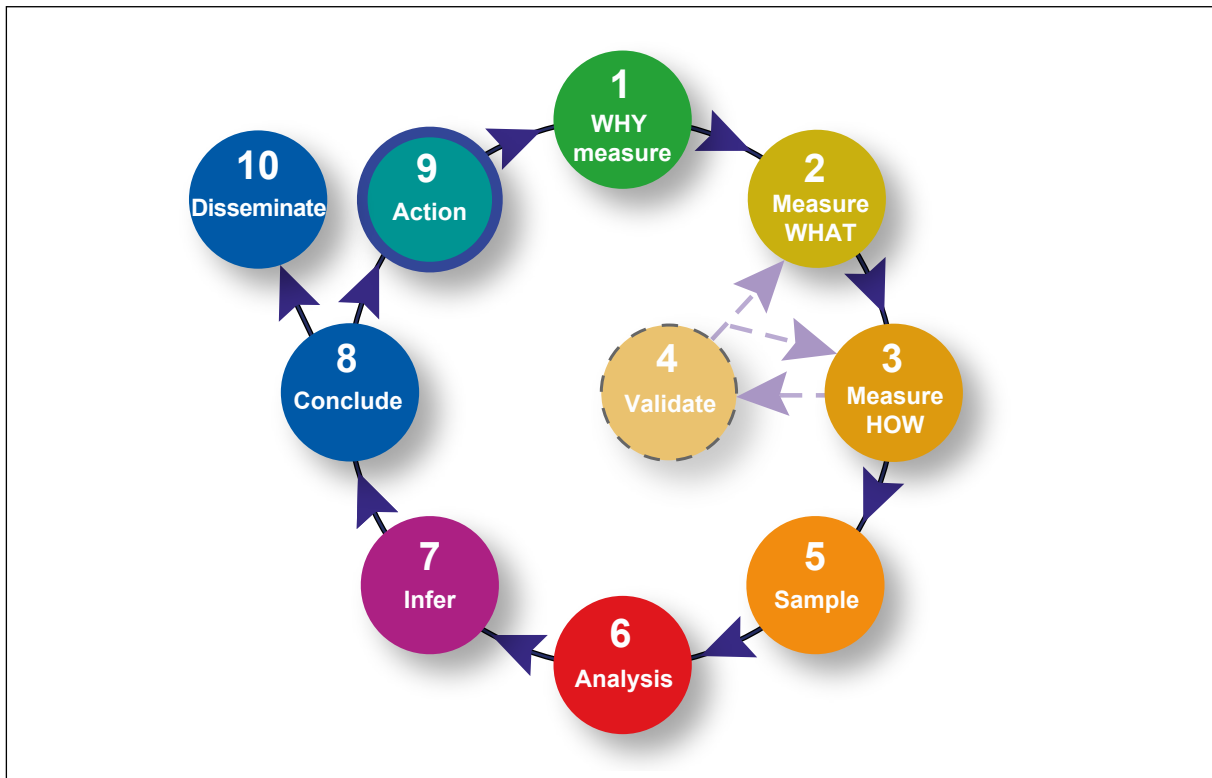
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There is a common misconception that monitoring should only be done by specialised professionals. However, everybody uses similar techniques in their daily lives. When we buy fruit or vegetables we look at them, feel them or even smell them to assess the quality of the product. When all of them cannot be checked individually, we examine a small sample and consider it representative enough to give the buyer confidence in what is being purchased. Monitoring uses a similar process of sampling when a number of households is asked in a survey about their access to water. While, monitoring statistics may often appear daunting, they are in reality only a small part of the monitoring process, as shown below. Despite their small role, the statistics are often given a central place.

### Different steps in the monitoring process cycle

Monitoring is not a stand-alone activity but **a tool** used to feed information into other activities. It can be divided into different steps as shown in Figure 1. The first four steps (Why, . What, f How and .. Validate) relate to the definition and indicators to be measured, while the three following steps (... Sample, † Analyse and ‡ Infer) are about the representative data collection and analysis. Often statistics is seen as the central part of monitoring, but in fact only one step in the whole process, step † (analyse), uses statistical formulae. Steps ^, %o,, and Š follow the data analysis and feed back to the need (Why Measure?) for a future round of data collection.

The rest of this document will cover the various steps of Figure 1 in more detail.



**Figure 1.** Steps in monitoring of coverage

## 1. Why measure water supply coverage

Monitoring can help to do any of the following:

- Set **goals, targets, policies** and **tariffs**;
- **Quantify** how many people or households have access to water;
- Make regional, national or international **comparisons**.
- **Appraise** water supply targets set by public and private authorities;
- Understand **why** people do not have access to water;
- Target those people lacking access by **identifying** and **locating** them;
- Measure **sustainability** of access for people who do have a water supply;
- Plan more effective **targeting** of resources (equity and scaling up);
- Identify coverage **deficiencies**;
- Make better management **decisions**;
- Target **pro-poor and gender-sensitive** policies and actions;
- Engage in sector **advocacy** at regional, national and international level;
- Control costs;
- Plan operation and maintenance

Collecting water coverage information without any clear purpose or failing to use collected data is a waste of resources, money and staff time as well as the other people's time, including the target population.

Despite the importance of collecting information it is surprising how little measuring actually happens and how often monitoring is used only for reporting.

## 2. What do we want to measure?

First of all we need to **define** clearly what to measure. In terms of water coverage, possible definitions could be:

Water in **adequate quantity** for hygiene purposes and of **adequate quality** for human consumption.

or

**Access** to a **reliable source** of water which supplies **adequate quantity** and **adequate quality** of water in a **convenient way**.

Although these definitions seem clear, they still cannot be measured as they lack clear **measurable outcomes**. Terms like *convenient*, *reliable*, *a source*, *adequate quantity* and *adequate quality* need to be defined so they become objectively measurable.

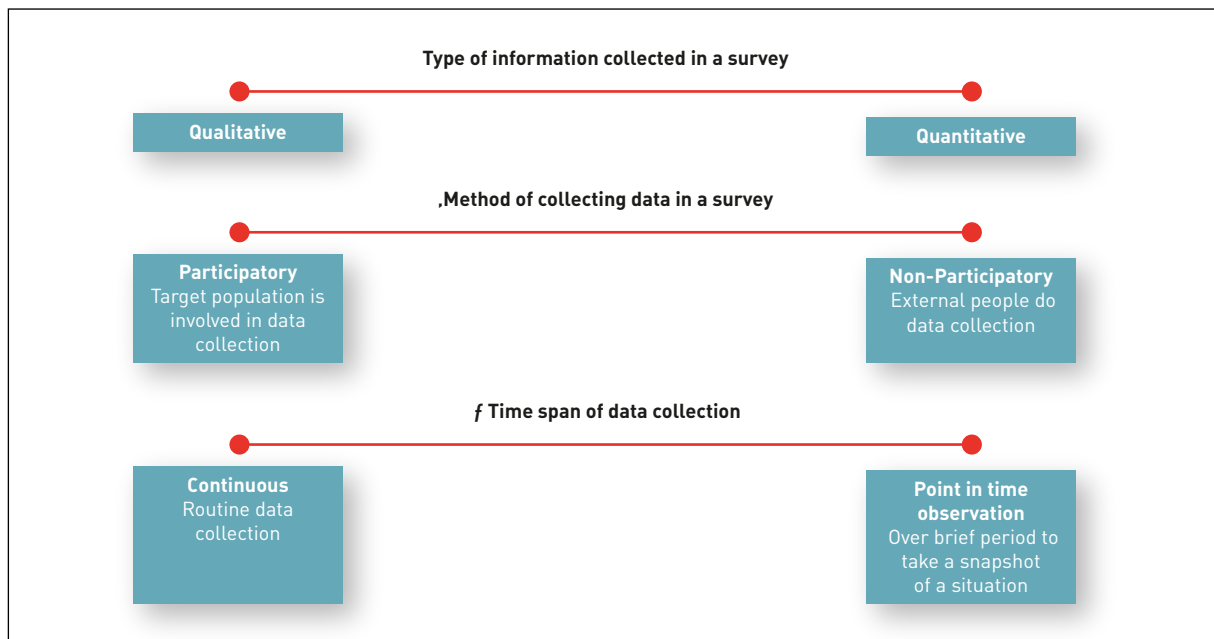
One of the factors of a '*reliable*' source might be that it is not intermittent. A **measurable definition** of '*reliable*' could be a source that is available '*without a day of interrupted supply in the past 7 days*'. This might not be a complete description of a '*reliable*' source, but it is a clear and satisfactory measurable definition for monitoring.

It is often impossible to measure a variable of interest in large household surveys. For instance, to assess water quality might require expensive laboratory tests. The '*type of water source*' such as '*piped water*' (*often good quality*) or '*river water*' (*often bad quality*) could then be used as an indicator being 'close' to the information required. The '*type of water source*' is referred to as a measurable **proxy indicator** for water quality. Although this is not always a perfect proxy it helps to get a better idea of water quality through a **measurable indicator**.

Households do not always use a single source of water. In rural areas in particular, seasonal changes often occur. Where seasonality and multiple sources are relevant to coverage, definitions and measurable indicators might have to take this into account. An indicator can be built up from multiple answers, as often a single question cannot elicit all the critical aspects of access.

Definitions are context-specific. The poor would have a different definition for access from the more affluent, a government or a funding agency. Women, involved in the day-to-day water collection, will define access to water differently from men. Involving the target population in defining access (and how to collect the necessary information) will promote a consensus among the target population and give a better understanding into the local water access problems.

Benefits from water supply can only be achieved if water sources are used. In measuring coverage there is often discussion about whether **use** (which is practice) should be measured, or **access** (Which is more theoretical, but for which providers can more easily be accountable).



**Figure 2.** Aspects of data collection for water coverage monitoring in a survey

### 3. How to measure water coverage

There are different ways of collecting water-related data and the methodology will depend largely on the purpose of the monitoring work and the resources available for it. No single data collection method will be able to provide all the information needed for projects as different types of information will be collected in different ways.

There are two main and complementary methodologies in data collection; qualitative and quantitative methods. **Quantitative** methods aim to measure a small number of quantitative indicators and characterise these in figures. **Quantitative** data such as water coverage are often expressed in percentages of people or households having or not having access. Qualitative methods are more exploratory and analytic, seeking a diagnosis or description of a problem. They are also better able to discover information that was unexpected and therefore not explicitly asked for in the survey.

- Typical *Quantitative* information could be: 35% of people have access to 'improved' water sources. In Urban areas this becomes 52% (+/-10%) while in rural areas the coverage is 27% (+/-15%)
- *Qualitative* information could be: 'households struggle with daily water payments at the beginning of each month after paying the rent, which makes them use river water for drinking at that time'.

Some qualitative approaches have been proposed lately, which aim to quantify qualitative data to facilitate interpretation and comparison (van Wijk 2001) . This blurs the line between the two approaches.

Other aspects of data collection are:

Participatory methods aim for a high involvement of the target population in the process of data collection, while non-participatory methods use mainly professional 'external' people for data collection.

Continuous or **routine** data collection is a continuous process of collecting and updating information, which is in contrast with **point in time** activities such as **surveys** which aim to collect information over a short period.

Survey methodologies often use a mix of approaches to collect data and the way each factor will be used can vary on a scale between the extremes shown in Figure 2. Often coverage data will be collected over a short period to obtain a point estimate. They generally are quantitative, non-participatory cross-sectional survey (as illustrated in the right column of the scale in Figure 2.). This is also the focus of this fact sheet, but it is not the only or preferred way of obtaining accurate data.

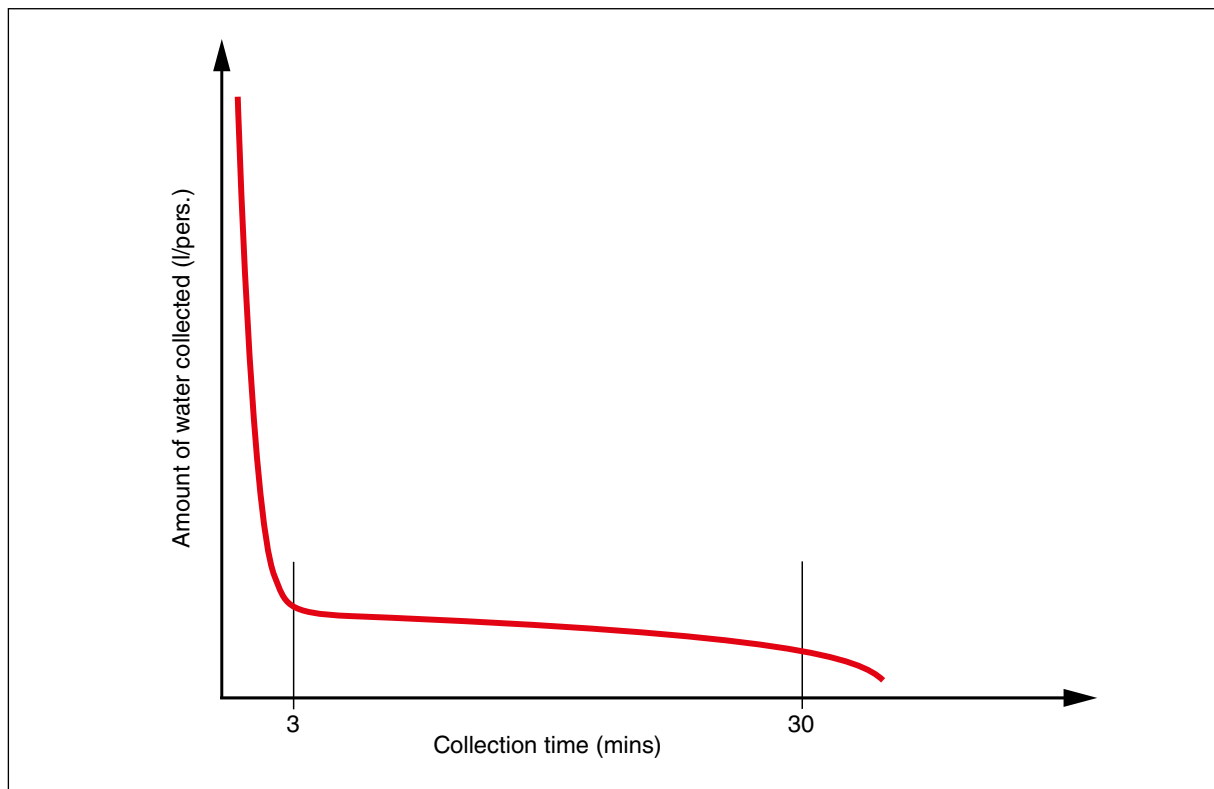
Usually water coverage surveys are done in a non-participatory way by an interviewer asking questions. However people can or do not always answer the **questions** accurately, so other methods of data collection like **spot observations** and **demonstrations**, should be considered. Information collected through different methods can be compared to check its validity. This is called "triangulation".

#### 4. Validate

Validation is the part where **what** is measured and **how** it is measured is scrutinised to make sure that it can give the information for which the data were collected. Validation is often not a part of a survey as it needs far more information and rigour in data collection than the basic data collection. However the collected data and the method of collection have to be based on some type of past validation before being included in a survey. Typically validation would compare the collected data with information which is judged to be as reliable as possible. This can be done during pre-testing, which is essential before any survey and consists of doing a small survey in a similar population under similar conditions. For example, if the type of water source is used as a proxy for water quality, a sub-sample during the survey can be submitted to more rigorous tests such as water quality tests to determine if water quality is related to the type of water source as has been assumed.

Validation should not be limited to **what** is being measured, but **how** it is collected. When data are collected by asking a question, validation involves checking whether the people are able or inclined to give accurate information.

Water collection time is often used as a proxy for water quantity according to the relationship shown in. However, it might be useful to measure both, in order to confirm this relationship for a local context. It is also essential to verify if interviewees estimate correctly the time required for a water collection journey. The question can compare water collection time to the duration of certain day-to-day activities, such as the cooking of certain foods, to obtain more reliable results. Validation feeds back into **what** and **how** to measure until indicators are suitable to be used.



**Figure 3.** Water quantity and collection time

## 5. Representative sampling

The basic sampling unit is the unit on which the data are collected. A practical **basic sampling unit** for water coverage can be 'the **household**' because all people in the household are likely to use the same water source at home. However for some aspects such as 'sustainability of water source' or 'number of beneficiaries per source' the **water source** can be a more suitable basic sampling unit.

Collecting data from every household is often impossible or impractical, so a sample of households is taken from the target population. The conclusion based on the sample can apply to the total **population** if the sample was representative.

To take a representative sample it will be essential to:

- Clearly define the target **population** from which the sample is collected;
- Clearly define the basic sampling unit;
- Make sure each basic sampling unit has an equal or known chance of being included in the sample.

Taking representative samples is often complex, particularly in low income countries. It is seldom straightforward to make a list of households which is needed in traditional sampling methods, because of a lack of addresses or other household locators. Also people who have access to water are usually clustered around a water source. This geographical clustering of people with access to water causes bias in the sample, and even if this bias is controlled, it requires increased sample sizes. To make data collection more accessible for management and evaluation of projects, more suitable sampling methods need to be developed.

## Practical implementation

Although practical implementation of a survey will be crucial to the validity of the collected data, it does not always get the attention it deserves. Practical implementation starts with the decision to do a survey until the data are analysed and made available. At each level the convenience of implementation and the level of training received for the task ahead will determine how valid the outcome will be. Three particular points can be identified:

- If it is difficult to identify each household included in the sample, the interviewer might select an alternative household which can make the sample unrepresentative
- Data that are difficult for the surveyor to collect or which are not properly and promptly noted down can make this information unreliable
- Coding the work from a paper to an electronic format for analysis can be tedious work which can introduce errors in the data and into the analysis

## 6. Analyse

Before any data are collected or even any pilot survey is done, it is important to think how the collected data will be used, what assumptions have to be made (possibly checked) and what analysis will be done. Necessary information is often found to be lacking only during the analysis stage. A complete analysis of the pilot data might help to identify such problems in good time.

Various agencies invest in water and sanitation not because they are a basic right, but to improve public health. Often there is a temptation to measure the health impacts of water and sanitation in such programmes as the outcome. However this has many pitfalls, and often results in meaningless results.

(For more info see <http://www.lboro.ac.uk/well/resources/fact-sheets-htm/mthiws.htm>)

## 7. Infer

Once the sample is analysed, it becomes possible to apply the results to the whole of the target population. This is possible only if the sample was **representative**.

Questions worth asking include: Do all groups of people, even marginal groups, have an equal chance of being included in the sample? How could excluded groups affect the result? Also those values missing due to non-response are worth analysing when possible. It enables us to document limitations of the methods used and problems encountered, which will add credibility to the analysis.

In statistical jargon, the process of assuming that results from the sample are also true for the population is called **inferring** or **inference**.

Correct analysis of a non-representative sample will give a result that is not representative for the population as a whole. Therefore, no inference or conclusions can be made from it that will be valid for the whole population.

## 8. Conclude 9. Action

There is a difference between analysing sample data (statistical work) and the analysing of results (a managerial responsibility). The conclusions drawn from the statistical results will feed into step 'action'. One action will be to define the information for the next round of data collection which will feed back into step 'why?'. An additional need in a consequent round of data collection could be to make the collected data comparable with data previously collected, in order to measure the extent of progress.

## 10. Storage, documenting and dissemination of data

Surveys are often done by people external to the surveyed population. The collected data are often not used outside the organisation for which they have been collected which makes them *de facto* the sole 'owner' of the data, despite the rights of the target population.

Information is crucial to any decision and advocacy process. Collected information should be documented for possible further use and where possible made accessible to a wider public. Water coverage data should be disseminated vertically, i.e. aggregated (upwards) or disaggregated (downwards) as well as disseminated horizontally among different sectors.

Documenting data and data analysis is essential but requires additional resources such as time and funding which have to be allocated. This is particularly true for data sets and data analysis that are made freely available to the public.

### Cost-benefit of monitoring activities

With resources in short supply, authorities are often reluctant to get involved in data collection, as these activities appear to have no direct impact on beneficiaries. This is particularly true if the authorities are uncomfortable (or unfamiliar) with collecting such data. However, accurate data can allow better targeting of resources and can help to justify further investment. Monitoring can often help to make substantial savings and to avoid redundant activities. It can help to justify actions that are counter-intuitive.

### Useful tools for surveys

Various simple tools are an invaluable help during surveys. For instance, an automatic numbering stamp ensures unique numbering of each questionnaire form.

Free software programs are available for entering data into a computer and for analysis. The most popular programs are:

**EPIDATA** (recommended). Simple but powerful programme not requiring a powerful computer  
<http://www.epidata.dk>

**EPI-info** <http://www.cdc.gov/epiinfo/index.htm>

**CS-Pro** <http://www.census.gov/ipc/www/cspro/index.html>

**Win-IDAMS** <http://www.unesco.org/idams>



## Remarks

The subject – **Monitoring of coverage** – discussed in this fact sheet is just a small part in the monitoring efforts of the water 'sector', which also includes other factors such as user demand, and satisfaction, institutional capacity and responsibilities, operation and maintenance as well as environmentally sustained services.

The challenge ... "is getting the best possible information to the people who need it – and then getting those people to actually use the information in appropriate ways for the intended purpose."

Source: Patton 1990

Further information on assessing hygiene improvements can be found on the Website of the former USAID Environmental Health Project:

[http://www.ehproject.org/PDF/Strategic\\_papers/SR-8-HISGPaperVersion.pdf](http://www.ehproject.org/PDF/Strategic_papers/SR-8-HISGPaperVersion.pdf)

Draft documents on the WaSH survey are available:

[http://www.lshtm.ac.uk/dcvbu/hygiencentre/documentation/QForms\\_full.pdf](http://www.lshtm.ac.uk/dcvbu/hygiencentre/documentation/QForms_full.pdf) is a draft questionnaire while

<http://www.lshtm.ac.uk/dcvbu/hygiencentre/documentation/KDiscussion.pdf> is a discussion document on indicator. Updated documents in the form of a survey manual are expected by mid 2005.

## Bibliography

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WHO/UNICEF (2004). Meeting the MDG drinking water and sanitation target, a mid-term assessment of progress [www.unicef.org/publications/index\\_23223.html](http://www.unicef.org/publications/index_23223.html)

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## Regional annex Ghana

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### Introduction

This fact sheet contains information on monitoring the coverage of water supply in the Ghanaian water sector. It aims at giving a contextual dimension to a WELL Fact Sheet on the same subject. It highlights the **usefulness of monitoring information** in achieving the country's MDGs target. Furthermore, it describes some **monitoring practices available in country** and analyses the **problems and challenges with current monitoring procedures and frameworks**. Finally, the factsheet comes up with key capacity issues on improving current monitoring practices.

### Why monitoring information is important

Monitoring is very important in helping government and stakeholders to track the progress in the achievement of the water and sanitation targets. Monitoring information is also required for the general development of the Sector in the following ways:

#### Uses requiring formative data

- Helps communities to take corrective actions to ensure reliable and sustainable service;
- Serves as key resource for ensuring transparent and accountable development in the sector;
- Helps identify critical weaknesses and potential bottlenecks likely to hinder achievement of goals and objectives of the sector.

#### Uses requiring summative data

- Provides the baseline for evidence-based local/international advocacy;
- Provides a baseline for the systematic review of the implementation and allows for measuring progress based on such baseline.

### Sector monitoring practices in Ghana

The most reliable source of national monitoring data is in the central Agency for Community Water and Sanitation (CWSA). Systems and processes for monitoring urban services are not well developed. The CWSA has a National Monitoring System (NMS) which it shares with all its regional offices. The system captures implementation data such as the number of facilities, who provided what facility and the names and population of communities served. Information generated from this database is used to compute coverage figures and in the development of a Strategic Investment Plan (SIP).

## Box 1. CWSA Definitions for monitoring

### Definition of access

Access to water facilities is the number of people with:

- All-year-round potable water supply of 20 litres per capita per day for point source services and 45 litres per day for small towns (piped schemes)
- The facility should be within 500 metres walking distance from the farthest house in the community and should serve 300 persons per borehole/standpipe and 150 for hand dug wells

### Coverage

Coverage measures the adequacy of community-based facilities using the standard number of people a facility can serve as shown in the table below.

Population range	Facility
75 - 300	Hand-dug wells
301 - 2000	Borehole
2001 - 5000	Pipe system
Over 5000	Pipe system

The NMS provides data for the annual national coverage reporting. In addition to the NMS, there is the **CWSA InfoSys at the regional level**. This system is intended to be a standard Regional database for CWSA, for capturing detailed data on daily operations/activities e.g. Borehole drilling, Small towns' water supply system, capacity building, O & M activities. Data for the monitoring systems originates from the districts and communities and is assembled by sector staff of the district assembly- the District Water and Sanitation Teams (DWSTs) and presented in district summary reports to Regional Water and Sanitation Teams (RWSTs) of the CWSA. RWST aggregates the district report to obtain a cumulative report for the region and submits the cumulative report to the Management Information System (MIS) Officer within the CWSA Head office. The regional inputs are compiled to obtain national reports and coverage rates at the various levels. CWSA monitoring information is disaggregated from the national to the regional, district and even community levels. This enables the data to be usable in lower level planning activities.

The key problem within the process is limited capacity of the CWSA to monitor the process at the district and sub-district levels. The reliability of the information generated has often been brought into question by members of the Coalition of Non Governmental Organisations in Water and Sanitation (CONIWAS) and its members at sector fora such as the Annual "Mole" Conference and the MDGs workshop organised jointly by TREND and IRC under WELL in February 2004. It is known that District level data is often under-reported and activities of NGOs and Civil Society Organisations (CSOs) for example have often not been included in district reports and are therefore likely to be missing on the NMS. For instance the SIP of CWSA in capturing the achievement of the sector in the past ten years did not contain information on activities of NGOs and CSOs.

[www.cwsagh.org/documents/sip\\_2005-2015.pdf](http://www.cwsagh.org/documents/sip_2005-2015.pdf)

Another major constraint is the cumulative reporting of new facilities without taking into account breakdowns, failures and unsustainable supply systems. This would lead to an over estimation of access by the CWSA.

## Monitoring activities at project level

A lot of donor-sponsored Projects and local/international NGOs also maintain their own (stand-alone) Management Information Systems. These mostly capture data on the implementation progress. Little effort has been made in the past to harmonise these different project systems. For both the national system and the project databases, the emphasis is on issues that relate to project efficiency. The MIS systems mostly capture quantitative aspects that relate to numbers of facilities, number of project staff trained, costs of various aspects of the projects etc. There is little information on the non- infrastructural aspects that describe the functioning and performance and use of facilities.

The Danish International Development Agency (DANIDA) is a sponsor of one of the large sector programmes. In its project, it places much emphasis on monitoring and is pioneering efforts at developing monitoring systems that include elements of effectiveness of systems. It places much emphasis on promoting maintenance and repair.

### Box 2. Monitoring of Operation and Maintenance (MOM) in the DANIDA sponsored Water and Sanitation Project in the Volta Region of Ghana

#### Brief description

- MOM basically consists of quarterly auditing of water facilities and watsan activities. It is part of MIS database based on access at the regional / district offices.
- MOM audits are carried out by District Water and Sanitation Teams. Data collection for on-going monitoring in the field is carried out by environmental health officers (EHAs) using standardised checklists.
- Data analysis, reporting and storage of data in an MIS are carried out at the district level and the collated information is submitted to the regional office on diskettes. DWSTs and EHAs provide feedback to communities on outcomes of the quarterly audits.

#### Advantages:

- On-site verification / assessment of the operational situation; EHAs can advise communities on how to do repairs; and EHAs already visit the communities on a regular basis.

#### Disadvantages:

- A high work load is imposed on the EHAs; risk of "form filling" fatigue; and District Assemblies may fail to provide the funds and resources.

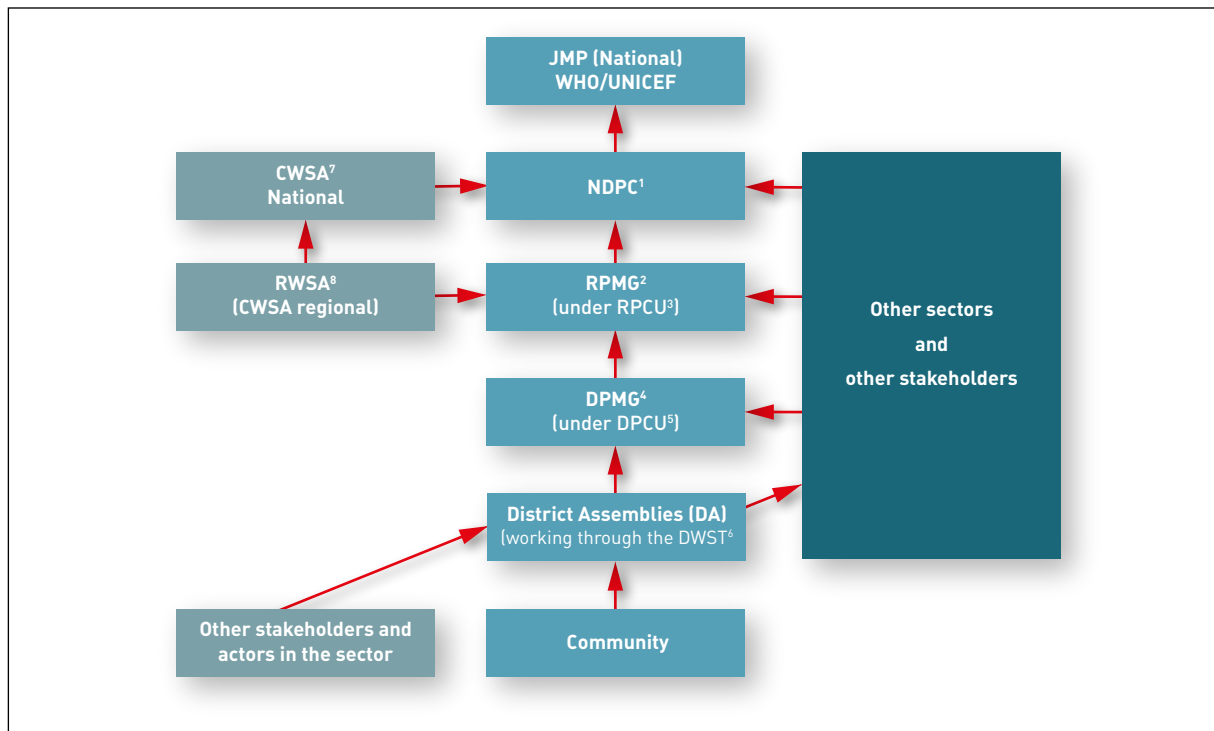
## Monitoring of MDG Progress in Ghana

In recent years monitoring has become a much discussed issue at the sector level largely due to the problems regarding progress monitoring for MDGs. A recent sector study confirmed that knowledge about the MDGs is very low at the decentralised level (regional and district levels). Most of the discussions on MDGs have been concentrated at the national level. Generally MDG monitoring and reporting occurs at two levels:

- National reports by the National Development Planning Commission (NDPC);
- The joint Monitoring Programme (JMP) of UNICEF and WHO which reports on national level progress towards the MDG targets.

## NDPC monitoring system

In the case of the NDPC, MDG reporting is carried out as part of the general effort to monitor progress of the Ghana Poverty Reduction Strategy (GPRS). Monitoring of the progress in the water and sanitation sector relies heavily on data from the National Monitoring system of the CWSA. The outcomes thus depend on the strengths and weaknesses of the CWSA system.



**Figure 4.** National (NDPC) Framework for reporting on MDG

1. National Development Planning Commission
2. Regional Poverty Monitoring Group
3. Regional Planning Coordinating Unit
4. District Poverty Monitoring Group
5. District Planning Coordinating Unit
6. District Water and Sanitation Team
7. Community Water and Sanitation Agency
8. Regional Water and Sanitation Team

## The JMP Monitoring System

JMP data collection comes from two main sources:

1. Assessment questionnaires sent to WHO country representatives, to be completed in liaison with local UNICEF staff and national agencies involved in the sector;
2. Household survey results collected from several sources, including Demographic Health Surveys (DHS), UNICEF's Multiple Indicator Cluster Surveys (MICS), World Health Surveys (WHS) and national demographic censuses.

The reports generated by the JMP have a key shortcoming and limitation:

- The MDG monitoring reports by the JMP only disaggregates by rural and urban but does not disaggregate to a sub national level. It is therefore not very suitable for decentralised planning purposes;
- JMP data based on assessment questionnaires contain more information than coverage only. However, it is not clear what happens with all that information after all the efforts that go in to filling these forms.

The efforts at these two levels (JMP and National) are not coordinated and experience shows that reports from these JMP and National Surveys are often different. Table 1 below illustrates the marked differences between the coverage levels projected from the different levels:

Source	WHO/UNICEF <sup>1</sup>	WB <sup>2</sup>	Gov of Ghana/MF <sup>3</sup>		UN Millenium Project <sup>4</sup>
Document title or project	JMP	GLSS	CWIQ		Interim report and case studies
Year to which data applies	Estimates for 2000	1998/99	1997/99	2003	2000
Access to improved/safe water sources (total %)			61	48	
Rural %	62	48	40	46	40
Urban %	92	79	63		70
Access to improved sanitation (total %)		78			
Rural %	44	70	46	55	44
Urban %	71	91			71

<sup>1</sup> [http://www.wssinfo.org/pdf/country/GHA\\_san.pdf](http://www.wssinfo.org/pdf/country/GHA_san.pdf) (July 2004 update) Access 12/11/05)

<sup>2</sup> [http://www4.worldbank.org/afr/stats/StdFiles/bulletin01\\_gha\\_1998.pdf](http://www4.worldbank.org/afr/stats/StdFiles/bulletin01_gha_1998.pdf)

<sup>3</sup> <http://www.imf.org/external/pubs/ft/scr/2004/cr04207.pdf> and <http://poverty.worldbank.org/files/ghana%20iprsp.pdf>

<sup>4</sup> [http://www.unmillenniumproject.org/documents/mp\\_ccspaper\\_jan1704.pdf](http://www.unmillenniumproject.org/documents/mp_ccspaper_jan1704.pdf)

The difference in coverage levels arises from variations in:

- the sources of the data;
- the methodology for evaluating coverage and;
- definition of what constitutes access by the various agencies involved

## Summary of problems, challenges with monitoring of the MDG

### Inconsistencies in data

A notable problem with the monitoring process in Ghana has been the variations and inconsistencies in monitoring data from different sources as shown in Table 1. The inconsistencies are directly attributable to the problems in the monitoring process. Such inconsistencies reduce the credibility of JMP data towards governments, data provided by governments towards the JMP and are confusing for third parties who are not sure which of the data is more reliable. It also provides challenges for feeding the figures back into policy.

**Lack of nation wide framework for monitoring**

The Water Directorate at the Ministry of Water Resources, Works and Housing is the sector ministry for water and sanitation. They recognise the need to collaborate with data gathering institutions such as the Ghana Statistical Service, CWSA, GWCL, databases of the various projects in the sector to harmonise various M&E systems into a comprehensive national system to be managed by the Water Directorate of the Ministry to serve as one stop centre for information on water and sanitation.

**Limited community involvement and feedback**

There is little room for community involvement in monitoring. According to Shordt et al (2000) this contravenes a key monitoring principle that requires monitoring information be collected by those with a vested interest in the information and be acted upon at the lowest level possible with the opportunity to refer to higher management levels. Even though the degree to which communities should be involved in monitoring could differ according to the purpose of the monitoring, third party monitoring is an important principle to avoid biases which can occur through self reporting because of vested interests. There is also limited feedback on monitoring to the communities for taking corrective actions. A lot of the monitoring information is unlikely to be acted upon at the local level..

**Limited involvement of Civil society and NGOs**

Civil society organisations are important stakeholders for validation and quality assurance of data. However, their involvement so far has been minimal and there is no elaborate process in place to involve them. This, associated with wide variations in coverage figures, may in part account for the discrepancies within the present coverage figures.

## Other key capacity issues

- for the establishment of a technical committee at the national level to review existing good practices at the project level and the harmonisation of definitions of the national monitoring system with existing survey efforts for the purpose of monitoring. This will make it easier to validate data from the various sources and for the JMP data to be used as a validation of national efforts;
- for education and capacity building especially at the district level and sub-district levels. This will raise the level of and appreciation for monitoring as a means to achieve more effective projects;
- to synergise all the relevant experiences at the various project levels, to identify the best practices for replication;
- to improve the institutional framework and collaboration between players in the sector. Stronger civil society/NGO involvement in the monitoring process with a view to harnessing their potential in areas like validation of monitoring data and capacity building to communities is required;
- to improve capacities and resources at the decentralised level for gathering of primary monitoring data. Facilities should be improved to ensure that all primary data resides with the District Assemblies.

## Conclusion

It is important that the present focus of monitoring on the collection of implementation data gives way to a more comprehensive system involving the collection of data on sustainability issues such as water quality and functionality among others. Emphasis must also be placed on the use of monitoring information at all levels to ensure that sound and reliable strategies are formulated to address the challenges in meeting the MDGs.

## References

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