

CRANFIELD UNIVERSITY

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Monitoring Global Water and Sanitation

School of Applied Sciences

PhD

Academic Year: 2010 - 2013

Supervisor: Dr Richard Franceys
December 2013

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ABSTRACT

The process of determining outputs and outcomes plays a key role in the setting of global targets, in defining national sector policy and strategic plans and in ensuring a continuous, safe supply of affordable water. Each of these actions, are integrally linked by aggregated data sets generated through an effective monitoring and evaluation (M&E) process. This thesis examines the various components of M&E across three case studies: Global, Kenya and Uganda, including aspects such as whether roles and responsibilities are realistically assigned and whether there is a recurring set of core indicators being monitored and reported. The research has also sought to establish an evidence base of the associated costs and efficacy of use of M&E.

Through purposive and snowball sampling, fieldwork was undertaken across the case studies with 85 key stakeholders. Programme, national and global level data sets were collected through structured literature reviews, document and data archive reviews, key informant and semi-structured interviews. Qualitative and quantitative data analysis methods were applied.

The results demonstrate that despite having a recurring global goal and associated target, the number and variety of indicators reported against has grown over time and at each level. In turn this is placing a burden on already resource constrained countries. Regardless of the various principles of harmonization and alignment, countries are still required to manage internally and externally driven parallel systems. Whilst the research suggests the costs of M&E are escalating, the full extent of this increase remains unknown as does the extent of efficacy of use of M&E.

Despite evidence that country-led M&E processes are at some level achieving their objectives, with the continuing complexities of the sector particularly around the accompanying aid architecture, M&E is not currently 'fit for purpose' for use in the WASH sector and is unlikely to be providing value for money.

Keywords: Fit for purpose, value for money, Kenya, Uganda

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Finally and perhaps most critically, I would like to give thanks to all of the stakeholders whom without, this research would not have been possible.

Dedication

I dedicate this Thesis to my Nan – a lady of strength and inspiration – who sadly died before seeing me complete this work. Her picture has remained on my desk as a motivator and reminder of what it means to have determination.

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LIST OF ABBREVIATIONS

\$	Dollar (US currency unit)
ABC	Activity-based Costing
ABIPRO	Accounting software package
ADB	Asian Development Bank
AfDB	African Development Bank
APWO	Association of Private Water Operators
BC	Before Christ
CASP	Critical Approach Strategy Programme
CCA	Conventional Cost Accounting
CLTS	Community-led Total Sanitation
CSO	Civil Society Organisation
DAC	Development Assistance Committee of the OECD
DEA	Department of Environmental Affairs
DFID	Department of International Development
DoW	Drawers of Water
DWO	District Water Office
DWRM	Department of Water Resource Management
DWSCC	District Water and Sanitation Coordination Committee
E&W	England and Wales
ECD	Evaluation Capacity Development
ENR	Environment and Natural Resources Sub-sector
Eurostat	Statistical Office of the European Union
FEF	Financial Education Fund
FfP	Fit for Purpose
FY	Financial Year
GDP	Gross Domestic Product
GIS	Geographical Information System
GLASS	Global Annual Assessment of Sanitation and Drinking Water
Gov	Government
GWP	Global Water Partnership
HR	Human Rights
IBNET	International Benchmarking Network for Water and Sanitation Utilities
IBRD	International Bank for Reconstruction and Development
IFAD	International Fund for Agricultural Development

IHS	Institute of Health Sciences
IMF	International Monetary Fund
IOCE	International Organisation for Cooperation in Evaluation
IPDET	International Programme for Development Evaluation Training
IRC	International Rescue Committee
ISO	International Organisation for Standardisation
IT	Information Technology
JMP	Joint Monitoring Programme
KBNS	Kenya Basic Needs Strategy
KeWASNET	Association of Kenya Water Service Providers
KJAS	Kenya Joint Assistance Strategy
KShs	Kenya Shillings (currency unit)
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
MEP	Minimum Evaluation Procedures
MEWNR	Ministry of Environment, Water and Natural Resources (Kenya)
MNDP	Ministry of National Development and Planning
MoES	Ministry of Education and Sport
MoF	Ministry of Finance
MoFPED	Ministry of Finance, Planning and Economic Development
MoH	Ministry of Health
MoU	Memorandum of Understanding
MWE	Ministry of Water and Environment
MWI	Ministry of Water and Irrigation
na	Not applicable
n.d.	Not dated
NDP	National Development Plan
NGO	Non-Governmental Organisation
NWSC	National Water and Sewage Corporation
O&M	Operations and Maintenance
OECD	Organisation for Economic Cooperation and Development
PDF	Portable Document Format
Pg/pp	Pages
PhD	Doctor of Philosophy
PHRU	Public Health Resource Unit
PME	Participatory Monitoring and Evaluation

PMF	Performance Monitoring Framework
ProMIS	Management Information Software
RWSN	Rural Water Supply Network
SDGs	Sustainable Development Goals
SEREC	Science and Engineering Research Ethics Committee
SIP	Sector Investment Plan
SSI	Semi-structured Interviews
STEPS	Social, Technological and Environmental Pathways to Sustainability
SWaP	Sector Wide Approach
TBD	To be determined
TMA	Tools, Methods and Approaches
UGX	Ugandan Shillings (currency unit)
UK	United Kingdom
ULGA	Ugandan Local Government Association
UN	United Nations
UNICEF	United Nations Children’s Rights and Emergency Relief Organisation
US	United States
US\$	United States Dollar (currency unit)
UWASNET	Association of Ugandan Water Service Providers
VfM	Value for Money
WAG	Water Action Group
WASH	Water, Sanitation and Hygiene
WASREB	Water Services Regulatory Board
Watsan	Water and Sanitation
WB	World Bank
WEDC	Water Engineering and Development Centre
WHO	World Health Organisation
WPC	Water Policy Committee
WPI	Water Poverty Index
WSB	Water Service Board
WSP	Water Service Provider
WSRB	Water Services Regulatory Board
WSS	Water Supply and Sanitation
WSS-MIS	Water Supply and Sanitation Management Information System
WSTF	Water Services Trust Fund
WWDR	World Water Development Report

GLOSSARY

The terms below are explained in the context of this thesis and not necessarily as defined by a dictionary.

Category	The term is used as a term to define either the sorting of indicators....
Cluster	The term refers to the data reduction technique applied when analysing the extrapolated indicators.
Data record	Refers to any record collected whether using qualitative or quantitative methods.
Gap	Used when referring to a limited number or omission of research, articles, reports available on a certain subject or issue.
Global	In the context of the Global case, the term refers to the international aid architecture rather than a review of all countries around the globe.
M&E	When the acronym of M&E is used, this refers to the collective either as used during interviews, reported in budgets or defined within documents.
On-hold	This term is referring to cases where preliminary research may have been undertaken however for one reason or another has not continued.
Parked	This term is referring to cases where preliminary research may have been undertaken however for one reason or another has not continued.
TBD	To be determined is used when coding or clustering has not been possible.

1 INTRODUCTION

1.1 Background

The last 50 years of global action to reduce poverty has been overtly subjected to an aid architecture explosion with sincere and motivated individuals operating within an increasingly complex structure and environment. The accompanying literature is full of 'eureka' moments and new labels for old paradigms. Articles, in the broadest sense, are also full of personal opinions and first-hand experience setting out the challenges and offering ways to 'do better'. Each new decade seems to bring with it a new set of procedures, new terminology and additional box ticking requirements.

As part of the development upsurge and the increased contribution developed nations were making to lower-income countries, with it came a heightened interest in monitoring and evaluation¹. Over time the emphasis shifted from project-based monitoring during the 1970s as a means to track and report progress, through to sector wide approaches in the 1980s, which by definition sought to re-focus monitoring and evaluation (M&E) from the project level to sector level and bring about a coordinated approach. In the 1990s, as poverty reduction became a headline concern, national household living standards surveys under the auspices of poverty monitoring, emerged. Continuing the journey, with poverty reduction or alleviation becoming increasingly a global responsibility, the 2000s, through the commitment to the MDG's, transported M&E in to an era of raising the visibility of the need for national monitoring systems. For the last fifteen years the increased international support has led to the introduction of a number of other M&E initiatives in an attempt to achieve the little, if at all changed, underlying goal – social and economic progress.

Transparency, accountability, audits and conditionality, quarterly reporting, mid-term reviews and evaluations are all M&E activities associated with donor

¹ Where monitoring is considered as a systematic and continuous data collection and analysis process whereas evaluation, whilst also considered systematic, is an objective assessment of something i.e. piece of work, action or policy, against a set of criteria and at a discrete point in time.

funding and the concept of good governance. With these externally driven or supported ventures come a plethora of indicators, systems and procedures, despite the introduction of the Paris Declaration and signing of the Accra Accord, amongst other statements of intent of simplification. Whilst some approaches to M&E are more rigorous than others, the emphasis appears the same – financial reporting and accountability taking precedence over that of long-term and sustainable technical delivery. Furthermore, the question of whether the stick, carrot or sermon is proven to be more effective in a weakened or newly emerging economy remains.

Experience of working over a period of 15 years with a number of donor and project management companies in the management of international development projects and programmes has highlighted for the author that M&E has the potential for significant duplication and is shrouded by complexity and misconceptions. During this time, two recurrent questions have threaded through these experiences and remained prominent: at what cost is the information being generated from M&E; and is it really being used for its' intended purpose? Furthermore, the experience suggests that appropriate implementation at different levels, when it comes to data collection, practical application and use of the M&E data is questionable.

Amongst the discourse of these new, seemingly innovative ideas, is the activity of performance monitoring. Another new term and concept is that of 'value for money' (VfM) - which until recently, had rarely been seen or heard of outside of an auditors' realm. VfM visibly burst into the development arena as a new consideration for development aid and with it accumulated a variety of questions including those around how it should be defined and measured. The 'fanfare' introduction was quickly followed by concerns around the potential need to realign existing systems and procedure or even run another parallel series. With the fear of the risk of diverting an already overwhelmed sector, in the case of some donors, statements were made to clarify and redress the efforts required of organisations in how to prove they were achieving value for money.

In terms of the evolution and associated challenges and opportunities, none of what is written above is new², except in terms of what it means specifically, for monitoring and evaluation. Seemingly there is a need to demystify the rhetoric, revisit the purpose and stream-line the number of indicators to reduce the burden on local, district and country officials who are expected to collect or oversee the collection of this data.

Alternatively the challenges may be more pressing in terms of stakeholders needing to have a better understanding of the tools, methods and approaches (TMAs) available. To have information available showing that these TMA have been tried and tested, identifying the environment in which they were tested, would seem logical. Knowing the extent to which they are proven to be operationally and cost effective should also go some way to ensuring M&E itself, as activities, are providing value for money. In this age of austerity, the focus could be on cost alone. Alternatively, emphasis could be placed on establishing efficacy of use of the data generated. In the latter case, anecdotal evidence and perception is that the mass of data being collected and notably not all reported, is too unwieldy to be effectively used. In turn, one contributing factor to this perception, before the data is even analysed or interpreted, is the concern and suspicion over quality of the data being collected.

To coin the UK green cross code safety phrase (UK Gov, 2012) maybe it is time to say 'stop' vacillating, 'look' at what has been done before and understand what was successful and what wasn't along with understanding why and 'listen' to country needs at all levels. The possible consequences of not doing so might be a continuing failure in reaching service delivery targets with a resultant cost of unnecessary expense in terms of financial inefficiencies and continuing loss of life.

Perhaps the time has come for reflective thinking through a simplified yet rigorous method. From experience in the development arena, there would

² Most of what has been raised, has been previously argued and justified in academic and grey literature, whether an official journal, country report, newspaper article, book, debate, blog, webinar, annual report or review.

appear to be a need to go back to first principles with a level of independence, or where conceivable, to learn more effectively from other sectors. With the looming era of the 'sustainable development goals' as the next set of global targets, the opportunity exists to put to one-side the creation of new indices and indicators that comprise hundreds of data points. Ideally the vision would allow the different levels of needs count and make them useful, for those collecting the data at a local level. Alongside, would be a mix of incentives and regulation to motivate and maintain efficiencies and effectiveness of data quality. In turn allowing the data to be aggregated with confidence and satisfy the needs of higher level management and policy decision makers, whichever funding agency, government agency or global entity.

According to Norman & Franceys (2011), a disproportionate amount of time, money and other resources are being used on monitoring and evaluation in an attempt to support 'accelerated development'. Whether at a programme level, where the primary stakeholders strive to get consistency across a single programme, or at a global level, whereby attempting to get consistency from those regional and national data sets, the challenge is a shared one. Despite the information deluge there seems to be limited understanding and documented evidence about how much monitoring and evaluation in the WASH sector is costing. Is M&E another 'hidden cost'? Is it fully understood and appreciated? Despite the raft of published research and grey literature available to the sector on M&E purpose, methodology and approach, indicators and targets or benchmarking, there is still limited documented evidence on its use, benefits or whether it is considered value for money.

Coupled with personal experience in M&E, the researcher has maintained an interest in the water and sanitation (Watsan) sector over the last 20 years. Initially employed within a UK based water utility, the researcher continued the engagement with the sector through the delivery of overseas rural and urban development projects to ensure water and sanitation services are effectively, efficiently and economically available to all.

The bringing together these two areas of interest - M&E and water and sanitation - combined with the first-hand observation within Kenya and Uganda that stakeholders were being challenged by a number of issues related to M&E (real world value), satisfied two out of the five criteria, as suggested by Robson (2002), adapted from Campbell Collaboration (1982), as being "features considered by researchers to characterise the antecedents of their successful...research". The other three criteria, namely: "Activity and involvement"³, "Convergence"⁴ and "Theory"⁵, have also been applied, when and where possible.

1.2 Problem statement

As reported by Norman & Franceys (2011), whether we benchmark, assess or monitor against a set of indices, indicators or selection criteria and whether we use a framework, matrix or personal judgement, everyday life is enveloped by the compelling need for measurement and accountability. Since before the ground-breaking Drawers of Water in 1972 through to the UN-Water GLAAS Report of 2012, society has been monitoring and evaluating a variety of components of water, sanitation and hygiene (WASH) in lower-income (developing) countries. The intention has been to save lives and to achieve economic growth. Throughout this period, the objectives remained largely unchanged and mutually entwined within the concept of poverty reduction. In contrast, this period has seen significant changes in the terminology, methodology and approaches used in planning and monitoring as well as the application of an ever increasing number of related indices and indicators, standards and benchmarks. The complexity and potential for confusion and inefficiencies has been further exacerbated by the differences in interpretation and perception of what it all means against a background of a country's ability to resource or wish to prioritise investment, or both, within the sector.

³ Good and frequent contacts both out in the field and with colleagues

⁴ Coming together of two or more activities or interests

⁵ Concern for theoretical understanding

Decade after decade civil society organisations, the public and private sector seem to continue to create a deluge of information through development of 'new' and 'improved' systems, concepts and processes to monitoring and evaluation (M&E). Despite having their own merits, when coupled with the increasing number of indicators and indices to which the WASH sector is either directly or indirectly linked, diversity and risk of a lack of clarity in what a programme, government or donor should be reporting against is further exacerbated. Furthermore, the changes to 'what' is being monitored make long-term comparisons and evaluation less straight forward.

Without ruminating over the level of sophistication and acknowledging the ancient history of water is not the focus of this research (rather the last 20 years), there is a theory that water management and the concept of M&E have been around for thousands of years (Delaney, 1989; Gupta, 2007; IPDET, 2007). For example, Delaney (1989) references the first known water laws and water use symbols of the Sumerians in Mesopotamia, some 4000BC. Therefore, one could postulate as to what is driving this incessant need for creating the new whilst rarely stopping to learn the lessons from the existing information? Alternatively, perhaps there is a justification to stop re-inventing monitoring tools and reporting frameworks and rather work together in agreeing a core set of data to at least provide a baseline from which the requisite comparative analysis can be undertaken.

In today's current economic climate and at a time when governments are becoming increasingly accountable for public spending (Haider, 2010), the need to ensure 'value for money' is gaining momentum (Davies, 2011). Added to this is the continual failure of the water, sanitation and hygiene sector to achieve global targets despite over fifty years of investment.

To determine progress in the water and sanitation sector, understood to be necessary for global health and economic growth, there is a need for an appropriate level of 'monitoring and evaluation' to answer the questions 'has the service been constructed?', 'is it working?', 'is it being used?' and 'is it having the desired impact?' (WHO, 1985a).

1.3 Significance of the problem

With an estimated annual 8.3 billion US Dollars (in 2009), of development aid invested in water and sanitation service delivery over the last thirty years (OECD, 2012), combined with the multiplicity of countries being supported by some 200 (OECD, 2012) funding agencies the challenge of harmonisation and alignment of not only monitoring requirements, but also associated tools, methods and approaches has been significant. Added to the situation that any number of implementing partners are involved in WASH sector service delivery in any one country in any one year, the scale of the associated challenges are further increased.

However, as we approach the completion of the timeframe for the MDGs and embark on the new era of the 'Sustainable Development Goals', as a sector, effort must be made in maximising the learning from the past fifty years across this vast enabling environment in order to ensure M&E going forward, whether at a global, national, sector, programme or project level, is fit for purpose for use in the WASH sector.

1.4 Research question

The narrowing of the research project and, more specifically defining of preliminary research questions evolved from carrying out an initial literature review, undertaking key informant discussions and through thought and reflection. Subsequently, via scoping field visits a series of other possible questions were identified such as:

- What has driven and what is influencing the need for M&E and why?
- Is there a variance in terms of influences, cost and use based on whether at global, national, programme/project and individual levels?

However, what each of the questions seemed to be encompassed within was the overarching question of: "To what extent is M&E considered 'fit for purpose' (FfP), for use in the WASH sector, in lower-income countries?" In other words what is considered as an appropriate level of M&E to ensure an answer of yes

to the questions of 'has the service been constructed?', 'is it working?', 'is it being used?' and 'is it having the desired impact?' (WHO,1985a).

Through an iterative process of considering the overarching question and associated sub-questions the research aim continued to remain fairly consistently related to having a combined exploratory and examining purpose.

1.5 Aim

The aim of this research, albeit amended from the original concept, focuses on understanding cost and use of M&E (see Box 1-1).

Box 1-1 Original and Final Research Aim

Initial Aim: "to better understand whether WASH sector stakeholders are over-investing in new monitoring approaches and how the data generated is being used, if at all".

Final Aim: "to understand better cost and use of monitoring and evaluation in the WASH sector".

Given the dearth of literature surrounding cost and use of monitoring and evaluation in the WASH sector, the purpose is seeking new insights and perhaps asks more questions than answers questions thus likely to generate ideas and hypotheses for future research (Robson, 2002).

Despite the focus being on 'cost' and 'use', the inevitability of also examining the 'what', 'why' and 'how' became clear early on given the five components are inextricably linked.

Figure 1-1 presents the monitoring flow, a conceptual framework established by the researcher to help guide the research and validate the iterative development of the objectives.

The following overarching questions framed by the 'monitoring flow' were also used to shape the final set of objectives and sub-questions (see Chapter 3).

- **Who:** who is undertaking monitoring and evaluation either directly or indirectly in the sector?
- **What:** what is being monitored and evaluated in the sector?

- **Why:** for what purpose is monitoring and evaluation being undertaken in the sector?
- **How:** how is monitoring and evaluation being carried out in terms of tools, methods and approaches used?
- **Cost:** how much is monitoring and evaluation costing the stakeholder?
- **Use:** to what extent is the data generated from monitoring and evaluation being used and is it having an impact on service delivery?

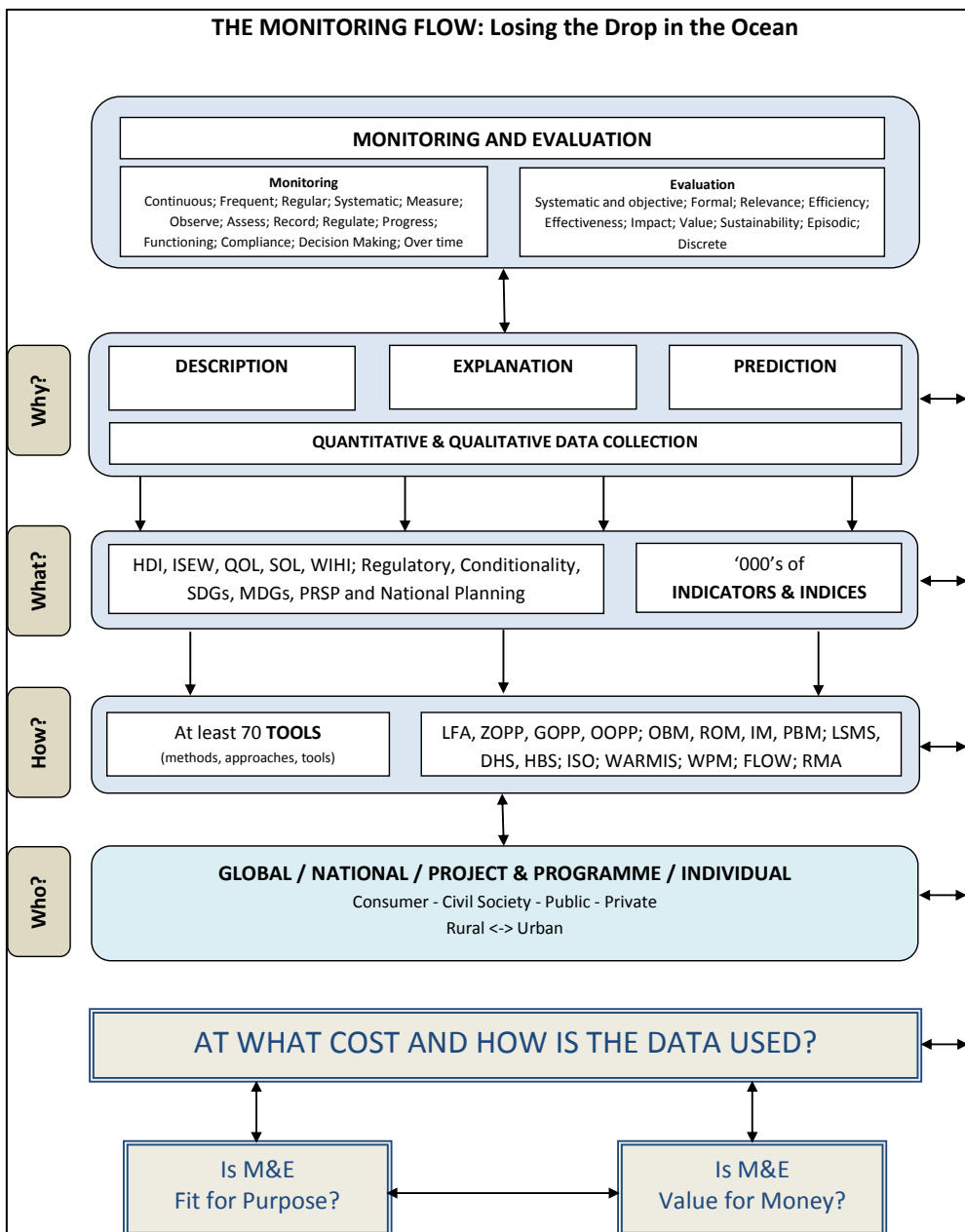


Figure 1-1 Monitoring Flow Conceptual Framework

1.6 Thesis structure

The thesis structure is set out as follows:

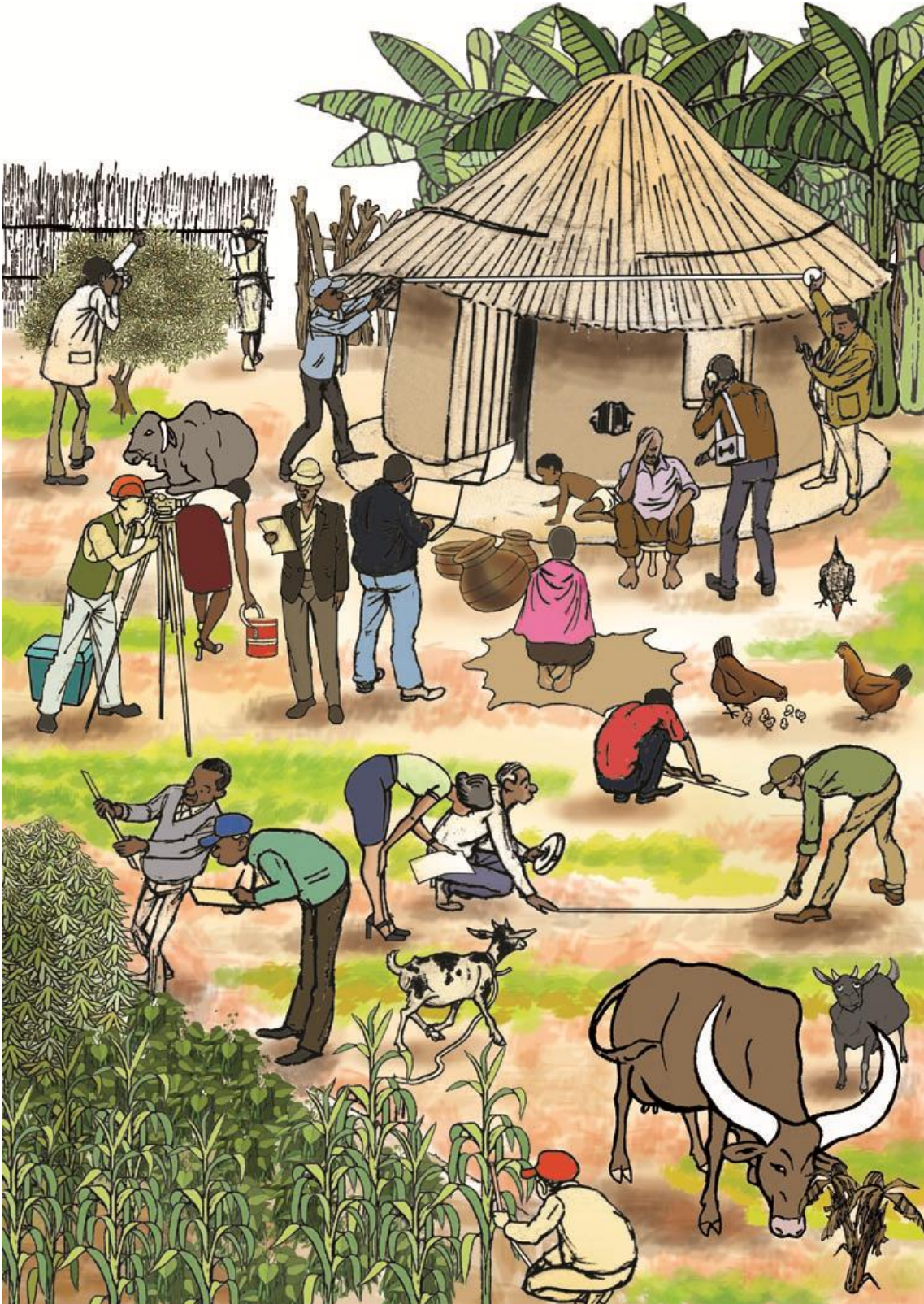
Chapter 2 presents a two part literature review of related topics and other inquiries that have been carried out in the field of monitoring and evaluation in the WASH sector. The first part of the review is used to identify broad research gaps thus demonstrating the potential for contribution to knowledge and to justify the particular approach to the topic and associated selection of methods (applied during the course of the research). The second part of the review updates the initial review and combines academic and grey literature associated with the emerging themes and topics as identified through the research. This ensures the research maintains a current level of contribution to knowledge.

Chapter 3 sets out the research objectives, questions and intended contribution to knowledge, as carved from the literature review, before describing the approach and methodology applied during the course of the research. The chapter also details why the methods were selected as opposed to alternative options.

Chapters 4 to 6 describe findings, analysis and discussion from each of the Case-Studies, in turn: Global; Kenya; Uganda. Given the nature of the methodology is not wholly consistent across each of the three cases, for ease of reference the format of this chapter reflects findings against each of the objectives noting the data collection tools and analysis used. A short introduction and summary of each case precedes the actual results and findings.

Chapter 7, through the use of warrants, claims and acknowledgements, imparts the analysis of the findings and discusses this analysis in light of the associated objective. Reflection against the literature review is also discussed.

Chapter 8 consolidates the threads of the enquiry, assessing the extent to which the research question has been answered, explains the contribution to knowledge as well as acknowledging the limitations of the research and highlights potential areas for further research.



Cartoon – artist (Danny Barongo) interpretation of monitoring, Uganda 2011.

2 LITERATURE REVIEW

2.1 Purpose of the literature review

This chapter presents a two-part literature review on related topics and other inquiries that have been carried out in the field of monitoring and evaluation.

The first part of the review was used to identify broad research gaps, thereby demonstrating the potential for contribution to knowledge and to narrow the series of research questions. The corresponding literature sourced for these activities have a publication date up to and including the year 2010. In addition, the review has been used to identify and rationalise the research approach as well as associated methodology applied during the course of the data collection, analysis and interpretation and writing-up of the research.

The second part of the review updates⁶ the initial review, sourcing academic literature from 2010 onwards (i.e. published during the course of the research). Moreover, the second part of the review combines academic and grey literature associated with the emerging themes and topics as identified through the research project. This ensures the research maintains a current level of contribution to knowledge.

Based on the increased understanding and knowledge of the topics and themes and to maintain a flow of writing, the two parts have been amalgamated within a series of defined topics, as are deemed inextricably linked.

2.2 Approach and methodology

A flexible and structured approach has been applied to the literature review, using a hybrid of methodologies (Table 2-1).

Flexibility: An initial period of one month was used to undertake general reading around the topics of water governance and M&E. Combined with personal experiences of monitoring and evaluation, a series of initial research

⁶ Applying the original search terms and criteria.

questions, aims and objectives were derived and the search strategy was then outlined.

Flexibility was maintained throughout the literature searches with regard to the use of synonymous search terms.

Structured: The identification of a project aim allowed the literature review to continue in a more structured way. A set of search criteria was defined along with a timeline relating to the article dates.

The methodology applied was similar to that suggested by Hart (2003), as set out in Figure 2-1 and assumed an iterative pathway as denoted by the revisiting of stages four to six. A hybrid, of a Critical Appraisal Strategy which uses a series of 10 questions to assess articles (PHRU, 2006; IHS, 2005); a systematic review which follows 7 clear steps when assessing articles (Campbell Collaboration, 1982) - both more commonly associated with the health sector; and an annotated literature review, which some argue as a narrative review can be more subjective, was used for the purposes of this research.

Table 2-1 Literature Review – Hybrid of Methodologies

Method	Description
Critical appraisal strategy	The CASP approach (IHS 2005) was used when reviewing and reading the documentation. For qualitative research the broad issues of 'rigour' 'credibility' and 'relevance' were considered
Systematic review	Consideration was given to whether the study was valid what the results were and whether the results would help locally.
Annotated review	This method was used to provide examples and emphasise the extent to which a particular series of references highlighting certain patterns trends and dichotomies

This combination of methods aided the process in identifying trends, influences, paradigms, dichotomies and potential gaps within the literature.

Thematic and Timeline methodology: During the course of both the flexible and structured review periods key search criteria remained constant. The broad themes, as set out in Table 2-2, provide the main categories to which the articles have been coded. A more detailed list of search terms and criteria used has been set out in Table 2-3.

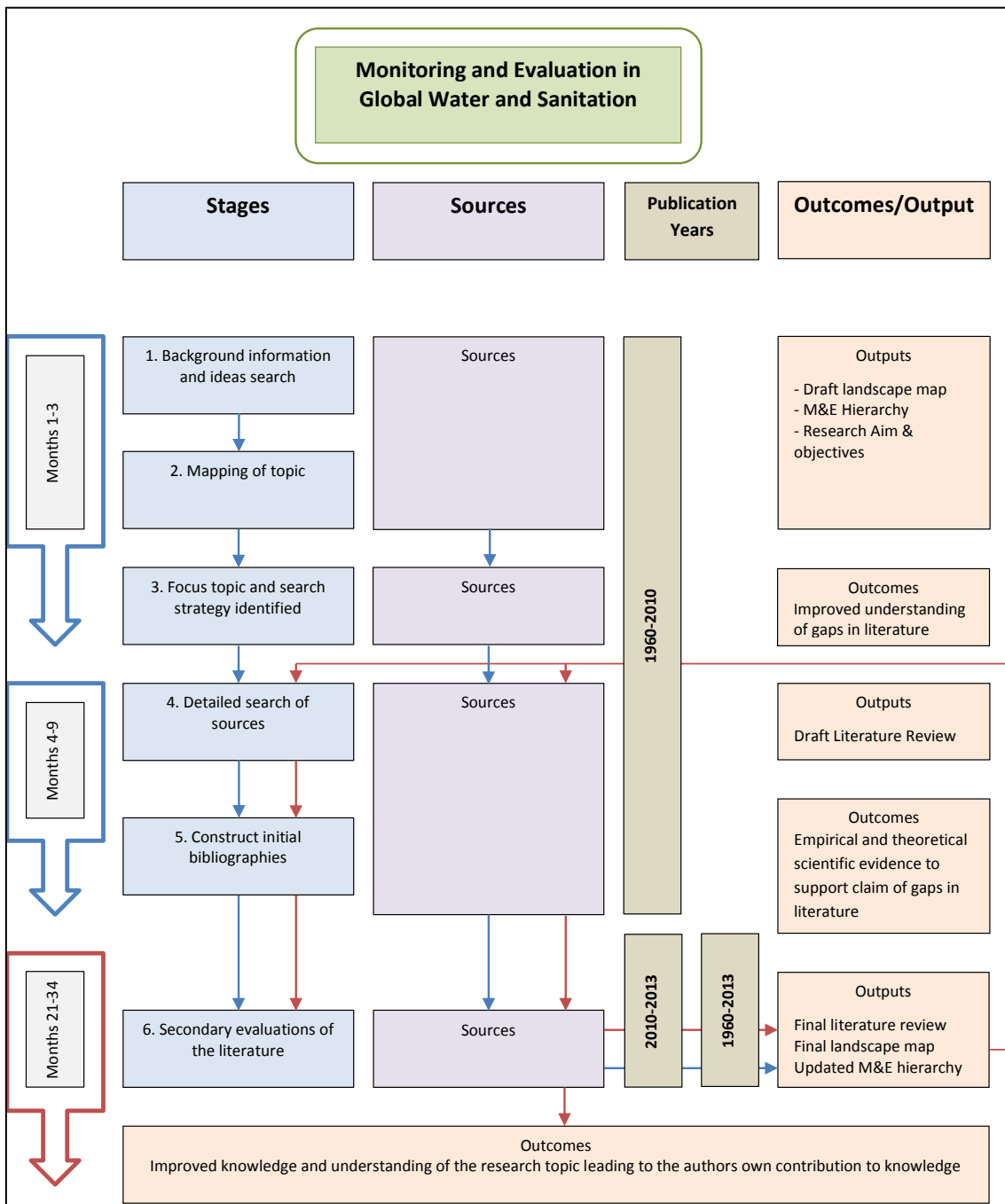


Figure 2-1 Literature Review Process

(Source: adapted from Hart, 2003)

Table 2-2 Broad Search Themes for Literature Review

Theme	Search Strategy
Governance	Definitions and context.
Water governance	Origins, evolution and conceptual frameworks of governance and selected governance types. Water governance at the global, national (Kenya, Uganda) and programme level.
Information governance	Information governance, the relationship with M&E, 'VfM', 'FfP'.
Monitoring & Evaluation	Definitions, origins, evolution and conceptual frameworks of monitoring and evaluation and selected sub-components.
Tools, methods, approaches	General M&E tools, methods and approaches with specific examples in respect of 'cost', 'use', 'VfM' and 'FfP'.
Cost and use of M&E	'Cost' and 'use' related to the WASH sector unless where other examples are deemed key in emphasising a point or finding.
Value for Money (VfM)	Definitions, origins, evolution and conceptual frameworks.
Fit for Purpose (FfP)	Definitions, origins, evolution and conceptual frameworks.

A temporal review covering the period 1960 – 2010 was a secondary consideration when sourcing literature. This timeframe was extended to the first half of 2013 to take in to account recent literature. Although documentation before 1960 was not directly accessed, several articles contained relevant information about the former years. Therefore, where relevant and significant to the project, references have been, cited.

Search criteria: A framework of definitions and keywords was established from which to conduct the search and to accommodate the broad range of evolving phraseology and terminology that has characterised the discipline over past years.

Table 2-3 Search Terms for Literature Review

Group	Search Terms
Group A	Monitor*; Evaluat*; Best practice; water governance; water impoverishment; water availability; value for money (VfM); Management information systems (MIS); Utility / bench-marking; Standards; Compliance; Regulation; Accountability; Conditionality; Institutional reform; Development Decade; MDGs; SDGs; Fit for Purpose; Information governance; Service delivery
Group B	Global; International; Africa; Kenya; Tanzania; Uganda
Group C	Framework; Program*; Causes; Consequence; Cost; Use; Economics; Tool; Process; History; Future; Management; Impacts; Indicators; Stakeholders;
Group D	Water; Sanitation; Hygiene; WASH;

A combination of terms from Group A - D, were put together to search for literature. The literature review focused on the English language publications.

Information sources: Table 2-4 provides an overview of the databases and websites used to source articles. When exploring academic databases, the search function category of title, abstract, keywords, topic or a combination was used. The resultant list was then scanned and a first filter based on appropriateness of the title was applied. A second filter through reading the abstract determined whether the article was considered appropriate for further review. Where the answer was ‘yes’, then the article was subsequently downloaded. All articles were initially speed read to confirm relevancy and in some cases identified as ‘key’ or ‘significant’ pieces of research literature. On successive readings key points were highlighted as possible citations and extracted where applicable. Citations and references were also scanned to validate claims or acknowledgements contained within the articles.

Table 2-4 Search Tools Used for Literature Review

Academic (Journal)	Academic (Other)	Published (Books)	Grey (Published)	Grey (Other)
Scopus, Web of Knowledge, Oxford, ABI Pro Quest databases. Library Catalogue. British Standards.	Library Catalogue. Google Scholar. Google Search.	Library Catalogue. Google Scholar. Supervisor.	Google Search. Various agency websites primarily accessed through Google search.	Google Search. Supervisor. Professional colleagues.

2.2.1 Outputs and outcomes

The first part of the review not only helped to define a project aim and objectives but also culminated in the drafting of a WASH sector landscape map of M&E capturing key milestone events, targets, indices, monitoring tools, methods and approaches (see Appendix A-1). To guide and structure the selection of search terms and sourcing of articles an M&E hierarchy – ‘The Monitoring Flow’ (see Figure 1-1) - was also sketched and used as an aid to data collection. Both of these documents have since been used as tools to help de-mystify some of the

rhetoric that surrounds both the history of target setting in the WASH sector and procedural nuances associated with M&E.

From thousands of possible articles identified through the broad thematic searches, approximately 840 articles were identified for a more comprehensive review.

2.3 Monitoring and Evaluation

The majority of references identified and reviewed in this section have been derived from grey literature. This finding points towards a gap in academic literature but may also be a consequence inappropriate database selection.

By sampling one comprehensive academic database – Scopus - a search was carried for the phrase “monitor* and evaluat*”. A total of 505 articles were sourced with the oldest article dating back to 1966. Of the 10 dated between 1966 and 1979, half related to the health sector and only a negligible number related to the water sector. By the 1980's a further 80 articles were identified. The health sector accounted for approximately one-third of these additional references with rural development, agriculture and the water sector accounting for another one-third. During the 1990s the numbers seem to remain constant with a two-fold increase being seen in the 2000s and a potential similar increase forecast for the 2010s based on current (2013) listings.

Noting this is only one database and may not be representative of the wider topic or type of monitoring or evaluation, in the case of the introduction to the WASH sector it does however, as with the governance review (see Appendix A-2), provide a snapshot and perspective on the evolution of the subject area within academia - an increasing focus of attention.

2.3.1 Origins and definitions

There are a number of working definitions and much discourse exists on the interpretations of the term monitoring. Whilst the meanings contain different terms the explanations and descriptions within this discourse appear to be synonymous. However, in application of the activity and through verbal

communication and the use of the term there appears to be a level of subjectivity with references often clumping the term evaluation alongside monitoring when only actually discussing monitoring.

For the purposes of this report and continuing research, the OECD/DAC (2006), definition of monitoring will apply (Table 2-5).

Table 2-5 Selection of definitions of the term monitoring

Source	Context	Definition
United Nations (1997)	Environment Statistics	The continuous or frequent standardized measurement and observation of the environment (air, water, land/soil, biota), often used for warning and control.
Oxford English Dictionary (2005)	General	Observe someone or something in order to record or regulate their activity or progress .
IFAD (2010)		The regular collection and analysis of information to assist timely decision making, ensure accountability and provided the basis for evaluation and learning. It is a continuous function that uses methodical collection of data to provide management and the main stakeholders of an ongoing project or programme with early indications of progress and achievement of objectives.
European Commission (n.d.)	IWRM	A combination of observation and measurement for the performance of a plan, programme, or measure and its compliance with environmental policy and legislation and amenity, utilities, rights of way, communications and structures of architectural merit.
OECD/DAC (2001)	Development	A continuous function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of ongoing development interventions with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds.
Water Monitoring Alliance (2010)	Water management	Any kind of acquisition or collection of data on a certain state, activity or process by means of a technical device, an observation system or any other surveying method to assess the current status of the chosen parameters and changes over time.
Casley & Lury (1987) Pg 204	Data collection	A continuous assessment of the functioning of the project in the context of design expectations.
Bartram & Helmer (1996) Pg 2	Water Quality	As defined by ISO “the programmed process of sampling, measurement and subsequent recording or signalling, or both, of various water characteristics often with the aim of assessing conformity to specified objectives”.

As with the term monitoring, there are a number of working definitions of the word evaluation and according to Michael Scriven, an early pioneer of modern evaluation, there are almost sixty different terms for evaluation depending on context (IPDET, 2007). As with the word monitoring, discourse lends itself to the view that the interpretations are synonymous and yet the reality on the ground in both understanding and application suggests otherwise.

For the purposes of this thesis the OECD/DAC (2006), definition of development evaluation will also apply (Table 2-6).

Table 2-6 Selection of definitions of the term evaluation

Source	Context	Definition of Evaluation
OECD/DAC (2006)	Development evaluation - Water management	The systematic and objective assessment of an on-going or completed project, programme or policy, its design, implementation and results. The aim is to determine the relevance and fulfilment of objectives, development, efficiency, effectiveness, impact and sustainability.
European Commission (2004)	Project cycle management	Assessment of the efficiency, effectiveness, impact, relevance and sustainability of aid policies and actions. Glossary Description: A periodic assessment of the efficiency, effectiveness, impact, sustainability and relevance of a project in the context of stated objectives. It is usually undertaken as an independent examination with a view to drawing lessons that may guide future decision-making.
Oxford English Dictionary (2005)	General	Form an idea of the amount or value of.
Gosling & Edwards (2003)	Development	Usually more formal than a review (assessment at one point in time of the progress of a piece of work). It is an assessment at one point in time that concentrates specifically on whether the objectives of the piece of work have been achieved and what impact has been made.
The Global Fund (Year)		Is the episodic assessment of the change in targeted results that can be attributed to the programme or project/project intervention. Evaluation attempts to link a particular output or outcome directly to an intervention after a period of time has passed.

The literature searches undertaken did not provide any comprehensive discussion about the origins of monitoring or evaluation other than the tenuous link of monitoring with governance (see Appendix A-2).

By considering that the concept of water governance has been around for thousands of years (Gupta, 2007 and Delaney, 1989) and that according to Gosling & Edwards (2003) monitoring is a tool used in order to provide stakeholders and those responsible for the management of water sufficient information to make the right decisions at the right time, monitoring too could have been around for thousands of years as a tool to enable good governance. This belief of monitoring having its roots entwined in decision making many years ago, is also supported by the work of IPDET (2007), in that “...*evaluation has ancient traditions...*” and “...*archaeological evidence shows that the ancient Egyptians regularly monitored their countries outputs in grain and livestock production more than 5000 years ago...*”.

Unlike IPDET (2007) who present an origin and history of evaluation dating back thousands of years and the more recent development evaluation⁷, Edmunds and Marchant (2008), only reflect the history of M&E in development (see Table 2-7). This history spans 40 years – the lifespan of what society recognises as ‘international development’. Clear evidence based documentation on 100+ years of M&E is harder to locate and considering the view that the concept of monitoring (and possibly evaluation), has been around for much longer than that, there is an apparent gap in the literature in terms of recording its evolution beyond 40 years.

As in the case of water governance and the theory of Nilsson (2006) and Gupta (2007), that to look back is required to improve the future, the same could be applied to both monitoring and evaluation and would become increasingly pertinent if water governance and M&E are intrinsically linked. However, one could also argue that given the lack of an available evidence base from which to learn the cost-benefit analysis of doing so could be perceived as limited. Furthermore, what is also unclear is what a reasonable historical period from which to make conclusions and subsequent recommendations might be.

⁷ Believed to have “evolved out of the audit and social science tradition” (IPDET, 2007).

Nonetheless, other researchers and academics have been examining the past in order to predict and recommend opportunities for the future such as Weiss (1997) who has written a number of articles on programme and theory-based evaluation or Estrella and Gaventa (1997) who have examined changes within participatory M&E. More recently discourse has been published on the opportunities and challenges relating to performance monitoring (Bird et al (2005), Mugisha et al (2007), Robinson & Scott (2009)) but a reported gap still exists, particularly related to sustainability (Carden, 2013). Over the last 5-10 years significant concern has also been raised over an apparent gap in evaluation literature and considerable effort has been levied towards this gap, in particular impact evaluations. The concerns centre on whether the information generated is being used and in some cases evaluations are purportedly not being undertaken at all.

Table 2-7 History and Evolution of M&E in Development

Decades	Description
1970s	Project based with a focus on monitoring of inputs and outputs. Purpose as a management tool to provide timely feedback and give warning whether a project is on-track. Recognition of need to establish and document the baseline situation. Usually completed through a baseline household survey.
1980s	Sector Wide Approach with a focus on the measurement of results. Purpose as a results based management tool and function of sectoral ministries and appropriate M&E units at Ministry level. Collection of data from beneficiaries themselves. National Statistics Offices contributed through providing data on overall performance of national and sectoral development programmes but not at measuring the outcome of focused sectoral development interventions.
1990s	Poverty monitoring built around the tracking of living standards. NGO capacity to undertake large-scale national household surveys, but limited capacity to analyse. Establishment of national poverty monitoring units – distinct and separate from other M&E units.
2000s	Project and sector combined to centre M&E around Poverty Reduction Strategy. MDGs and poverty alleviation a central concern for majority of countries.

(Source: Edmunds & Marchant (2008) pp19)

Reasons for this apparent failure of use of information generated from either monitoring or evaluation, or in some cases avoidance to carry out such evaluations, ranges from being as a consequence of flawed methodology

through to having been effected by cost of data collection. In some cases responses are given that it is because they (evaluations) are not appropriate for the project or programme they are simply not undertaken (Centre for Global Development, 2006). In considering the work of Weiss (2004) – “that unless you know who is going to use and how they are going to use the information generated from an evaluation, an evaluation should not be carried out due the cost involved” – the link could be made that the reason behind a limited number of evaluations being carried out is due to not knowing who the users are or not believing in the value of the uses or in some cases a combination.

Another, more recent piece of academic writing, focuses not on the reasons why not, rather on what to do about it, proposing that a paradigm shift is required. Carden (2013) has argued that reflection should be given to the scenario that evaluations are restricted to donor driven development partner's project related evaluations and what is needed instead is a “shift from development partner agencies to a permanent field of practice”; “a change of the unit of analysis from a project to the system”; and thirdly, “build a local practice and use of evaluation”.

In reviewing the available grey literature a number of websites promoting events, training (manuals and courses) and general reports were identified. For example there is an evaluation gap working group: an initiative of the Centre for Global Development (2006); and the recent 3ie conference held in Mexico in June 2011, entitled “Mind the Gap: from evidence to policy impact”. These are just two of the many number of available fora and events that run during any one year, however, in most cases the perception is that they are donor funded and driven rather than in response to a sector or country demand.

As previously described, no single classification matrix on how to carry out monitoring or evaluation seems to exist. Neither does an accreditation or quality system, giving guidance on where the most relevant professional information can be sourced. An assumption could be made that the selection criteria is as simple as a recommendation or could quite easily be in response to gut instinct or the first one that looks relevant or is visually interesting. However, in the last

couple of years steps have been taken to address the gap of awareness of evaluations. On 15 July 2011, an invitation letter was posted on "www.mandeneews.co.uk" advising that the "International Organization for Standardization (ISO) has approved the creation of an International Workshop agreement on evaluation capacity development (ECD)". The ECD was proposed by the Evaluation Capacity Development Group and the Joint Committee on Standards for Educational Evaluation, in partnership with the International Organization for Cooperation in Evaluation (IOCE). The consortium, proposed the resolution to "an acute need to develop evaluation capacity" lies in the fact that "there is no agreement on HOW to develop evaluation capacity" (Russon, 2011). Further grey literature on the work of ISO is reported under the Global case study results.

Other people's knowledge and resource bases do exist in the form of anecdotal evidence, such as Horton (1999) who provides information and knowledge through reporting lessons from the field – practical application and experience in an attempt to provide recommendations and improve methods and approaches in the future. But, knowing where these reports can be found and to what extent these reports are reviewed, considered and acted upon to bring about improvements to a prior method and approach remains unclear. An appreciation of how far-reaching the audiences are or at what cost and what benefit the activities have been carried out is also uncertain.

Another facet or influencing factor of M&E is the advent and rapid advancement of the internet, amongst other technologies, over the last 20 years. Accessibility to information in general terms has improved and is deemed by many users to be limitless to the extent of showing no boundary. A very recent example, as reported by John Crowley of the Harvard Humanitarian Initiative, relates to the 2013 Philippines disaster and the availability of emergency telecommunications infrastructure and the context of social media providing an increasing source of information. He states "these days a problem facing relief workers is too much information, in too many places and too many formats". He reflects that only 10-years ago email communication was transmitted via sporadic satellite phones

resulting in a few emails a day, whereas today, “the flood of messages reaches one per second, 24/7”. As a consequence sifting through and making efficient use of this plethora of data is a continual challenge. Furthermore, there is an increasing debate amongst professionals about the use of blogs as an evaluation tool (Davies, 2011). With this extraordinary increase in volume of information and data, there is also a parallel discourse about a growing concern over quality control and validity of information contained on websites.

Much of the vast amount of both monitoring and evaluation literature available today, that can be found through related websites directly and in-directly, is backed, in some cases, by individuals and in other cases by public, private or civil society organisations. Whilst many organizations provide such information for the purposes of transparency and access to information, knowledge transfer and sharing, one should not be naive to think about whether there are sometimes hidden agendas. In contrast, there are other organisations which purposefully do not make such information publically available or withhold certain components of information in which other components are available. There are a number of reasons behind these decisions ranging from issues of time availability through to some more calculated or commercial reasoning.

In short, the true extent of our transparency when it comes to either monitoring or evaluation, such as who is driving or demanding the activity and for what purpose is unclear. Is all of what we are monitoring and reporting against truly necessary and do we have a sufficient appreciation or understanding of the costs and benefits of the various tools, methods and approaches are actually available to carry out monitoring? In turn one could also question the confidence levels of stakeholders about the content and validity of information being generated from evaluations which is likely to have a knock-on effect the extent of use of such data for associated policy level decision-making. Ultimately, what, is the impact of the knowledge and information that is accessible today versus that which is not?

2.3.2 M&E and the relationship to VfM

In recent years the monitoring and evaluation results chain⁸, comprising of inputs or costs, activities or process, outputs, outcomes or purpose and impact as depicted in Figure 2-2, has been integrated in to a series of new conceptual frameworks. The new frameworks have been established (Figure 2-3 and Appendix A-2, A.2.4) for use in the development arena as the basis for assessing the extent of whether something is value for money.

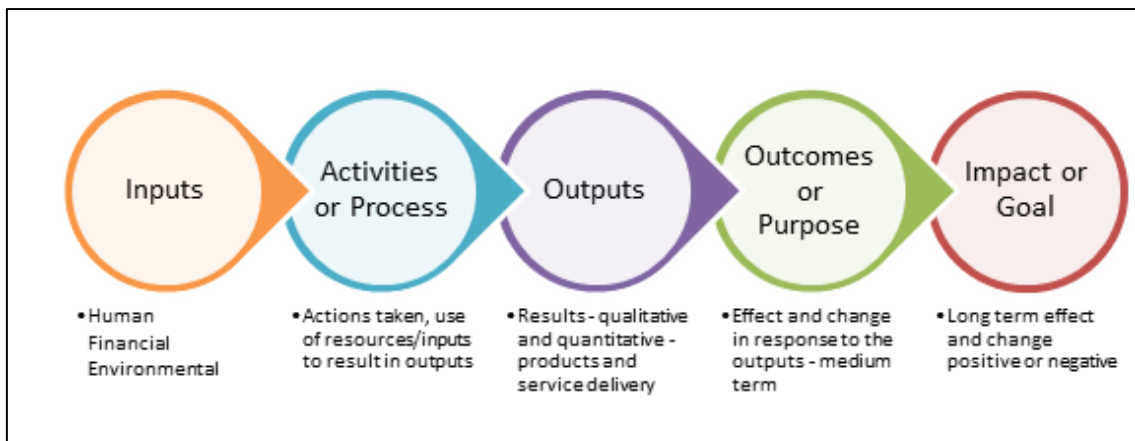


Figure 2-2 M&E results chain

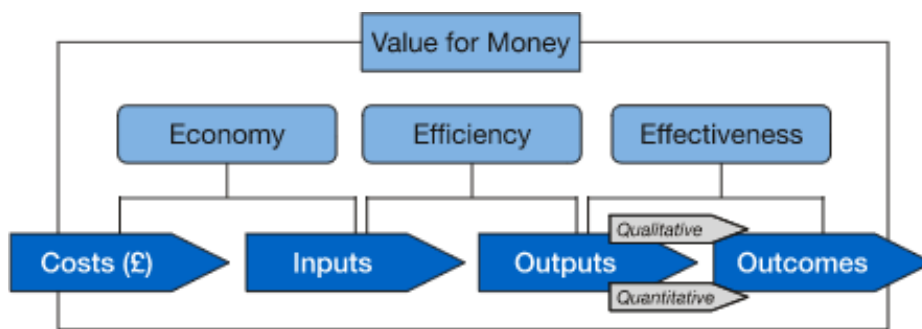


Figure 2-3 NAO/Audit Commission definition of VfM

Originating in the audit profession and according to NAO (n.d.), good value for money is “the optimal use of resources to achieve the intended outcomes”. How to measure and operationalise VfM (Nef consulting, 2010; BOND, 2011) when used in the aid architecture has caused some level of confusion amongst

⁸ The causal sequence to achieve a set of objectives central to results-based-management.

development partners and funders alike. Davies (2011) also asks “is Value for Money becoming anything more than a meaningless mantra? Sounding important, but in practice meaning something different to each and every one who hears it? In response to the confusion the OECD in 2011 published a consultation paper – ‘Value for Money and International Development: Deconstructing some myths to promote more constructive discussion’. The paper recognises the complexity, challenges and limitations and does not attempt to set out how stakeholders, whether government entities or individual organisations should apply ‘VfM’. Furthermore, the paper defines value for money as “the optimum combination of whole-life cost and quality (or fitness for purpose) to meet the user’s requirement. It can be assessed using the criteria of economy, efficiency and effectiveness”.

2.3.3 Purpose and Use

As part of understanding the capability and capacity required to resource M&E systems, both the purpose and use should be sufficiently understood. As suggested by Cotton and Bartram (2008), different purposes, based on a defined ‘level’ for monitoring, result in different schemes being utilised and therefore no single monitoring tool would be able to satisfy all the needs. However, according to Casley & Kumar (1988) the purpose or use of the data gathered from M&E is in response to the stakeholder seeking some description, explanation, prediction or a combination, for a phenomenon or process. Another classification, according to research undertaken by IPDET (2007), is that evaluation itself has four distinct purposes, namely: an ethical purpose (policy performance); a managerial purpose (financial and human resource accountability); a decisional purpose (policy reform); an educative and motivational purpose. IPDET (2007) goes on to examine use of evaluation and references Weiss (2004) who takes the need beyond purpose to use and stresses the point that “...if you cannot identify and articulate the primary intended users and uses of the evaluation you should not conduct the evaluation. Unused evaluation is a waste of precious human and financial resources.” A similar statement can be applied to monitoring.

With an ever increasing number of indicators and indices being devised for which data is being collected, little literature exists providing evidence on what percentage of the data is being analysed, evaluated or verified. Neither does there appear to be documented evidence on how data generated is subsequently used and whether for the intended purpose or otherwise. Logically, use is not mutually exclusive from purpose - purpose being intended use rather than actual use.

In the context of international development when considering purpose as characterised by 'level', four main classifications can be defined namely global, national, programme and individual. Other classifications could equally be considered such as organisation type: donor, private sector, civil society for example; or even a classification by sector. Whichever categorization is considered it is the action of ensuring the classification is made that is the priority so as to lay the foundation and pathway so as to achieve actual use.

During the course of the last 50 years defining purpose and use at each level has tended to be in response to one or more influencing factors. A series of examples are captured in Table 2-8, but should by no means be considered as exhaustive.

Table 2-8 Examples of M&E Purpose at Different Levels

Level	Purpose
Global	Compliance with global commitments such as MDGs (M&E). Creation or assessment of an international standard or best practice.
National	Country progress towards development objectives. Policy and decision making. Mobilise public opinion.
Programme	Conditionality compliance to ensure payment terms satisfied (monitoring). Regulatory compliance to satisfy legislation and potentially linked to payment terms. On-track or off-track programme implementation (monitoring). Lesson learning for replication in other locations, project, programmes (M&E).
Individual	Empowerment or ownership.

(Source: Extracts from Cotton & Bartram (2008); Gosling & Edwards (2003))

2.3.4 Cost and Use of M&E

According to Mackay (2006), a governments aim is, rather than having a supply driven approach to an M&E system where large amounts of information is generated, the system should allow rigorous use of the findings of both monitoring and evaluation and that the system is cost-effective. This view is allied to the political structure of accountability within a government such that, “it would be hard to convince a sceptical finance ministry that it should continue to fund an M&E system whose outputs are not being utilized. Such systems would deservedly be regarded as useless” (Mackay, 2006).

Despite this, the perception is that very little data exists on how much an appropriate M&E system costs in terms of capital investment and ongoing implementation and maintenance. Returning to a previous question – should a system be integrated and within an organisation as a management tool and implemented by all, or be implemented by a technical team, or should a system be outwardly observed - the cost implication no doubt varies significantly and yet again little data exists on either structure. As seen within the discussion on purpose and use some of these questions are inter-dependent to the clarification of what and why an M&E system is being applied and yet do not appear as part of the discussions or debates.

The purpose can be affected by the availability of funds and therefore it is imperative that there is sufficient awareness of how much one type or another M&E system costs.

The literature review found very little data that provides a comprehensive breakdown of the costs of the various M&E systems available across any sector. The World Bank (2004) defines the costs of the tool, method or approach as low, medium or high in terms of application. DFID FEF (n.d.) suggests an investment of between 10-20% of the overall grant value is required to ensure a ‘rigorous approach’ to monitoring is facilitated. Vine & Sathaye (2000) examines costs of M&E in energy efficiency projects, Brands & Rajagopal (2007) discusses the economics of place-based monitoring and Peersman et al (2009) considers whether the investment levels in national M&E

systems is paying off. Due to the lack of academic or grey literature articles available, the search was widened by way of carrying out a general Google search. This resulted in a couple of recorded interviews (see Box 2-1).

Neither did the review find any outline of a conceptual framework of cost of M&E. This potentially has a negative impact for budgetary planning purposes and raises, where the cost of M&E sits in the debate and discussion around transparency and accountability – ostensibly contradictory.

For the purposes of this review and the research itself, the following scenarios of costs were not considered: cost of life consequence; cost of misappropriation of M&E funds; cost of not undertaking M&E. However, they should be recognised as potential costs in the broader scheme of a conceptual framework of cost of M&E.

Charities Evaluation Services (n.d.) stipulate that “it is difficult to give a precise answer to what will an evaluation cost us?” They report that depending on the scope and nature of the evaluation the cost will vary widely. Instead the suggestion is made that in the event of wanting to publish and widely disseminate the findings of any evaluation (to make a good case for refunding) it is likely to affect who is contracted to do the work in turn the level needed to budget. Despite the authors suggesting the guidance paper outlines the possible costs for each of the 7 components of costing an evaluation, the only values outlined are “external consultant fees” and “focus group”. In addition they are defined as a range or banding of values.

An alternative defining or setting out of costs is that presented by David (2008) as part of a newsletter sub-headed “Allocation of Budget for Evaluation” which references various comments and questions re: cost (see Box 2-2).

One of the few academic references to do with the costs of M&E, is that of Rommelmann et al (2003). When examining the costs of complementary information generation activities they concluded that “policy-makers and programme planners should be aware of the many trade-offs with respect to

system costs, coverage, production, representativeness and quality control” when making investment choices for monitoring and evaluation.

Another example of cost breakdown is that of Kisweski et al (2007) who estimate the average global costs of malaria control for a ten year period (2006-2015). They suggest, in respect of Africa, 19% of budget is allocated to programme costs of which an optimistic budgeting of 2.6% is then allocated for operational research and monitoring and evaluation. For Asia, Oceania and the Americas, these values are 14.1% and 2.3% respectively. The analysis for calculating these costs was not included in the paper. Furthermore, international level costs for managing such assistance, including monitoring and evaluation, research and development, were not factored in.

Box 2-1 Selection of recorded interviews

The first interview is talking about M&E, its importance, some of the associated challenges with planning and implementation and advice for successful promotion and strategy with respect to family planning. Despite not being related to the WASH sector, Dr Bertrand* reflected that 10-15% of project/programme budget is a good figure to apply but that there is not a single number. Furthermore, that the question should be "where along the spectrum are we able to invest in M&E?". In turn, she goes on to identify that good programmes seem to attract more funds allowing higher levels of investment in M&E activities which result in better data allowing the glory of the 'excellent programme' to be reflected (Bertrand, 2008).

The second interview is in relation to whether planning, monitoring and evaluation aids learning from past experiences, improves service delivery, planning and allocation of resources. Dr Price** reflected that planning, monitoring and evaluation are expensive activities given they take a lot of time, expertise but it is much more costly not to undertake M&E. She also suggests that PME are not isolated activities (Price, 2009).

“*” Dr Jane Bertrand, Director, John Hopkins Centre for Communication Programs, USA

“**” Dr Lucy Voss Price, Head of Regenesys Public School of Management, South Africa.

Box 2-2 Questions and answers on budget allocations for M&E

Q: "...if there is any internationally accepted standard of budget allocation for M&E....."

A1: "...in the range (minimum) of 2 to 5 percent of the overall budget"

A2: "...Measures Evaluation is proposing (sic) 5-10% ...as a general guide"

A3: "...donors and organisations recommend that between 3-10 percent..."

A4: "...it's important to see M&E activities as just that – activities that need to be costed, spent and reported on like any other budget item."

A5: "...the percentage of the M&E budget is very much dependent on the kind of M&E activities you plan to carry out..."

(A1-5 are a series of respondents to the original enquiry (Q) as presented in the IMA International, M&E News Summary, 2008)

2.3.5 Reporting, Dissemination and Use

Following the collection of data, subsequent collation, analysis and verification, the resultant information generated is supposedly reported, disseminated and used. Decisions about who is responsible for ensuring consistency at each level and how external verification is undertaken to ensure integrity, transparency and accountability is likely to be unique to each and every organisation, institution or agency in terms of internal systems and procedures. These two questions of who and how need to be understood early on in the decision making process and ideally prior to carrying out any M&E activity. As part of this process, understanding the needs of the reader should ensure that the information reported is actually read and used for its intended purpose, whatever that may have been. There is enough evidence to highlight one word has many meanings within a single language and within a single country, even to the extent of between individuals.

Attributed to many factors, such as a persons' knowledge, understanding, perception or working environment, the intended meaning can quite easily be misinterpreted or misunderstood. Whilst there are mechanisms available to explain the intended meaning within reports, for example glossaries, how many reports actually contain this information? Are certain assumptions made by the writer at the time of writing, about the level of understanding of the reader?

The issue of language differences is not an objective of this research project or literature review, however recognising it as a potential issue is appreciated.

From personal experience a persons' logic like language, varies from one individual to another and 'people' have strengths and weaknesses in almost everything they do. For example, some people have a numeric mind, whilst others are seemingly more linguistic or artistic. Some people and even cultures prefer storytelling or are more intuitively articulate than another person who prefers to, or has a skill in, writing.

In order to ensure the audience or recipient of the information being presented is appropriately reported, the audience or recipient need to be known and purposes for the information understood. Therefore, with aid harmonisation and alignment there is a potential risk that information will not be used as it is not specifically related to the end user, or there is an inherent bias associated with it, or the monitoring activity may be unnecessarily duplicated by a user due to a low level of confidence or inability to access, analysis or verify the raw data.

This is a potential area for a further literature review in its own right – to review reporting types and inter-linkages between type and actual use, including impact and benefit of the use of the information once created and disseminated.

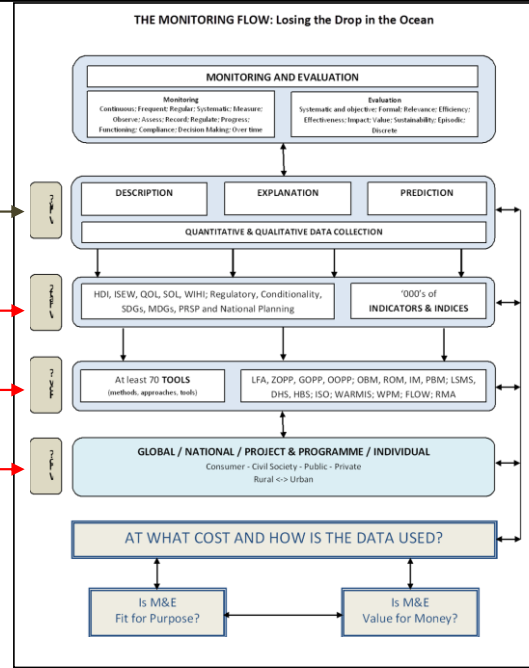
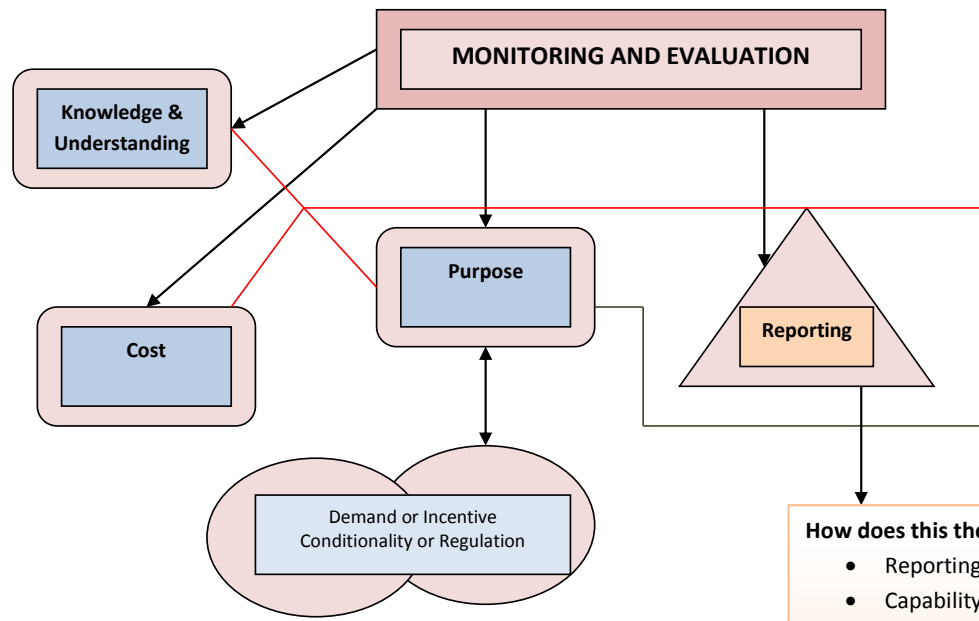
Figure 2-4 below provides an initial framework of some of the linkages and aspects that have been considered during the review.

2.3.6 Monitoring, evaluation and information governance

The review of information governance (see Appendix A-2) was carried out under the second part of the literature review, as evidence of data quality issues such as the 'definition crisis' and challenges around understanding the purpose of monitoring and evaluation became apparent. Two notable references sourced are that of Flowers & Ferguson (2010) and Kooper et al (2011). The former, reflect on challenges of data protection and management and anticipate the next decade will include aspects such as “the right information at the right time; real-time data; barriers to information access; and knowledge transfer”.

The latter authors suggest that information governance “involves establishing an environment and opportunities, rules and decision-making rights for the valuation, creation, collection, analysis, distribution, storage, use and control of information”. They go on to state “it answers the question ‘what information do we need, how do we make use of it and who is responsible for it?’”. Both of these sets of authors raise concepts and questions synonymous to those raised under the framework of M&E.

**What is it that effects the selection of who, what and how in monitoring and evaluation?
[PAST, PRESENT, FUTURE]**



- How does this then translate into the policy and decision making?**
- Reporting formats: hard versus soft copies?
 - Capability: knowledge & understanding?
 - Capacity: resources to act or bring about change?
 - Effected by agendas: political, individual or otherwise?
 - Sense of ownership?
 - Effected by language and culture?
 - Data quality: confidence in what is being reported?

Figure 2-4 Linkages and Influences in M&E

2.3.7 Monitoring and Evaluation in the WASH sector

Over the last 50 years, there appears to be a continuous and repetitive debate around 'what' should be monitored in the WASH sector. Sometimes the discourse identifies the pros and cons of one indicator or index versus another as Fietelson & Chenoweth (2002) report. Alternatively debate centres on rationalising the need to create new indices to address the gaps in what is not being measured (Caplan & Jones, 2002). In other cases acknowledging that different requirements of M&E at different levels in turn influences 'what' is being monitored or evaluated (Cotton & Bartram, 2008) is also reported.

Whether the interest is related to the setting of the post 2015 MDG targets, defining national sector policy and strategic plans, or simply wanting to know when there will be a continuous, safe supply of affordable water, monitoring and evaluation is integral. Pragmatically, each of these three interest areas should be linked via aggregated data sets generated through the activities of monitoring and evaluation: the process of determining outputs and outcomes, ideally relative to inputs.

According to Fietelson & Chenoweth (2002), also recognised by Nelson and Zadek (2000) and Palme & Tillman (2009), "indicators are instruments that are used for communicating key information in a simplified form to policy makers and the general public". They go on to suggest that indicators serve the function of simplification and can be used to reduce the confusion potentially caused by large amounts of environmental and economic data' as well as "galvanize decision makers into action". Gallopin (1997) goes on to recognise that "useful indicators must be measurable and...the data must be either obtainable through measuring and monitoring, or be readily available" (Fietelson & Chenoweth, 2002).

Various articles, guidelines and handbooks, on the new and expanding number of indicators, have continued to be published for many years (Hicks & Streeten, 1979; WHO, 1985b; Mosse & Sontheimer, 1996; EC, 2006; AfDB, 2011), with some of them documenting several hundred indicators from which to choose.

Narrative also continues in terms of acknowledging differences in definitions and interpretations of indicators (Box 2-3).

Box 2-3 References regarding definitions and complexity of indicators

WHO (1984): "...the concept of safe and adequate drinking-water supply and excreta disposal may have different interpretations in different regions and countries. In setting targets, countries may wish to assign more accurate boundaries to safety and adequacy....."

Aiga (The Lancet) (2003): "Of 45 countries jointly reviewed by WHO and UNICEF in 1996, 42 used distance-based definitions, 38 used water quantity-based definitions, and two used time-based definitions, implying that 37 countries defined access with a combination of these three factors". (Referring to the standardisation of the definition of access to safe water)

Dar & Khan (2011): "It is undoubtedly difficult to summarise a complex target such as access to water or safety of water source in a singly quantifiable indicator".

Furthermore, discourse extends to the value of composite indicators – a sort of aggregating of data - as reported by Saisana & Tarantola (2002). However as reported by Dahl (1997), these are sometimes identified as being "fraught with conceptual and practical problems". Despite the challenges of composite or a multi-dimensional index combined with the increasing number of indicators being made available, no-one has yet come up with what could be seen as a proverbial 'silver bullet' index.

As Fietelson & Chenoweth (2002) recognise, when discussing the Water Poverty Index as a new index, the WPI has a limited purpose – to identify the degree to which countries or regions are likely to face problems in addressing their water supply needs, taking into water quality and affordability issues. It will not distinguish between cases where failure to provide service delivery is the result of mismanagement, power structures, lack of technical and administrative capacity amongst other factors. This acknowledgement seems to suggest that monitoring improved and sustained service delivery will need more than one index. This is further supported by the claim of the suggested benefits of having qualitative data in addition to the more frequently reported (traditional) quantitative data (Oakley, 1988; Sijbesma & Postma, 2008).

New indicators or indices, often created or developed to fill a gap – perceived or otherwise – could also be considered as adding to the burden of data collection. Whilst recognising the positive intentions of the creator (Box 2-4), the questions, “who is the creator?” and “to what extent is the creator the user?” coupled with “where is the demand coming from?” should be considered and better understood.

Box 2-4 Suggestions for new indicators and guidelines

Hicks & Streeten (1979): “This new focus on meeting basic human needs requires an indicator or set of indicators, therefore, by which deprivation can be judged and measured, and policies directed at its alleviation and eradication can be initiated and monitored”. (Moving from GDP)

Mosse & Sontheimer (1996): “Without appropriate feedback, none of the parties concerned with project outcomes could make appropriate, informed decision about whether and how to adjust project design or implementation arrangements to better achieve a project’s intended objectives” (Referring to the introduction of Performance monitoring indicators)

AfDB (2011): “The Handbook is intended to serve as a main reference document to guide African countries and regional institutions in collecting standardized and comparable data on infrastructure”.

As suggested by Pybus & Schoeman (2001), part of the problem of the indicators being used, in this case within a performance management framework, is that ‘we’ are looking at what are the data points needed to report against the indicators as set by national and global level, rather than considering what the data points are that are needed at the local level for informed decision making to ensure sustainable service delivery. The concern of where the responsibilities lies in terms of determining what should be monitored is echoed by Lucas et al (2004), Wambulwa (2008) and Edmunds & Marchant (2008).

Acknowledging the claim that different levels need different information the question of how data points can be aggregated up and combined with other sector data, recognising the complex and integrated nature of WASH sector

service delivery⁹, to simplify the messages for management and policy decision making, seemingly remains.

Alternatively is the perception of the burden of data collection – one that is a global phenomenon – compounded through an avoidable set of factors such as improved data confidence, improved knowledge and understanding of the purpose of monitoring and evaluation. Furthermore, could it be allayed by improved partnerships (as argued by Caplan & Jones, 2002) and improving coordination of activities in addition to gaining some perspective in terms of thinking the ‘new’ will overcome the challenges, without having sufficient evidence that it will.

As the research of Palme & Tillman (2009) proposes “there is a mismatch between what the information senders want to convey to the receivers and what the latter actually want in terms of information”. In other words, those who are collecting the data and those receiving the data want different things. Who should lead or champion the dialogue or should there be a dovetailing from both sides, through an iterative process? Moreover, it could be that more effort is needed in understanding what the driver and incentives are for data collection. Alternatively, perhaps we should stop definitively or pause and reflect back to first principles to remind ourselves what an indicator should be – in order to simplify.

Another dimension to consider, in terms of the plethora of information available, is that raised by Berg & Marques (2011) – relevance and importance of the topic. They claim that academic research relating to water and sanitation utility benchmarking for example – performance monitoring approach - is merely ‘dipped into’ and only a few researchers engage in sustained research. As part of their literature review the authors also observe that very few articles relate to quality of service, financial sustainability and determinants of economic sustainability, considered today as a fundamental purpose of benchmarking.

⁹ Complex in terms of often mandated as the responsibility of multi-sectorial government ministries coupled with, in lower-income countries especially, multiple funding streams via donor and development partners.

The issues are linked to data availability levels and the need for closer links between empirical researchers, policy analysts and theorists as also referred to by von Neumann, (1947).

These latter two aspects alone raise questions over the purpose of research, roles and responsibilities and whether it is demand driven as well as the extent of reporting and use of data, once collected. A similar set of questions are evident within the context of monitoring and evaluation in the WASH sector.

A body of literature seemingly exists on framing the purposes ('why') behind, or reasons for monitoring and evaluation (Casley & Kumar, 1988, IPDET 2007, Weiss 2004) and yet conversely discourse asking questions about efficacy of use of M&E data is somewhat opaque.

Equally perverse is despite a corpus of literature on preferred methods and approaches ('how') such as that reported by Garfi & Ferrer-Marti (2011) and Nardo et al (2005), including claims that new and emerging technological solutions are improving and easing the burden of data acquisition discourse simply asking, let alone answering, questions about how much M&E is costing and the cost-benefit analysis of the tools, methods and approaches used, is scarce.

Within the UK as part of a recent study into future priority research (Brown et al, 2010), in response to the increasing emphasis being placed over the last 10-years on 'evidence-based policy', a reference was provided from the House of Commons Science and Technology Committee, dating back 2006. The reference, more broadly suggests the necessity of investment in "research to underpin policy making and embed 'horizon scanning' into the process to combat the short-term nature of the political cycle".

The questions of 'how much is M&E costing?' and 'what is the efficacy of use of M&E data?' are also two seemingly fundamental questions that need to be asked and in turn answered, in a day of austerity, where 'value for money' is increasingly demanded.

Within the previous paragraphs some of the challenges faced in terms of monitoring and evaluation in the WASH sector have been identified, however, in terms of global monitoring and the shift from water rights to the Human Right to Water and Sanitation adds another dimension. As reported in UN (2007) explicitly and implicitly water and sanitation has been referenced in human rights treaties, principles and guidelines, declarations and resolutions. In turn obligations for monitoring the Human Rights agenda are set out, allowing specifics to be determined at a country level. However, in 2010, two significant resolutions were made by the UN General Assembly and the Human Rights Council.

The first¹⁰, was the formal recognition for the right to water and sanitation acknowledging “that clean drinking water and sanitation are essential to the realisation of all human rights” (UN-Water, n.d). The second¹¹ “affirms that the rights to water and sanitation are part of existing international law and confirms that these rights are legally binding upon States” (UN-Water, n.d). Furthermore, the resolution “calls upon States to develop appropriate tools and mechanisms to achieve progressively the full realization of human rights obligations related to access to safe drinking water and sanitation, including in currently un-served and under-served areas” (UN-Water, n.d). Implicitly this includes monitoring and evaluation tools. It is with this in mind that the discussions around post-2015 and the sustainable development goals, also include the progressive realisation of the human right to water and sanitation.

2.4 Fit for Purpose (FfP)

The review of ‘fitness for purpose’ was carried out under the second part of the literature review, as the emphasis of the research shifted from considering whether monitoring and evaluation was providing value for money (see Appendix A-2) in the WASH sector, to, what extent monitoring and evaluation is ‘fit for purpose’ in the WASH sector. The rationale for completing this review

¹⁰ UN General Assembly Resolution A/RES/64/292

¹¹ Human Rights Council Resolution A/HRC/RES/15/9

was in response to preliminary findings in respect to data quality issues, definition crises and challenges around understanding the purpose of monitoring and evaluation. In addition, the visibility of the potential link of 'FfP', was heightened when the OECD definition of 'VfM' making reference to quality as 'fit for purpose', was sourced. A review of the following four aspects of 'fit for purpose', as reported through academic literature, was considered necessary: What is 'fitness for purpose'?; How does the term link to M&E?; How does the term link to information governance?; How does the term feature in the water and sanitation sector?

2.4.1 Origins and Definitions

According to Ayto (2010), the origin of the term 'fit for purpose', within the English language, was centred in 'consumer protection law' and manufactured goods, stating that the product "should do what it was designed to do".

However, another source suggests a much earlier reference to the term 'fit for purpose' – 1863 - when Florence Nightingale wrote "In attempting to arrive at the truth, I have applied everywhere for information, but in scarcely an instance have I been able to obtain hospital records fit for any purposes of comparison. If they could be obtained they would enable us to decide many other questions besides the one alluded to". (Nightingale,1863). The additional questions referred to within the quotation, included questions on expenditure levels and benefits, sanitary state and extent of use of facilities, operational aspects. Nightingale goes on to suggest that the resultant truth from such findings would enable (us) to save lives and suffering as well as improve operational implementation. These questions and goals resonate with those questions being asked within the WASH sector today through the application of M&E.

The definitions for 'fit for purpose' or 'fitness for purpose' sourced, include the Oxford Dictionaries (2013): "(of an institution, facility, etc.) well equipped or well suited for its designated role or purpose"; and two other on-line sources, both defining 'fit for purpose' as "appropriate and of a necessary standard, for its intended use" (Wiktionary, 2012; Definitions.net, 2013).

The article of Wood (nd) references the work of Strong, Lee and Wang (1997) and Redman (2001), who agree with the definition of Juran (1999) that “data are of high quality if they are fit for their intended uses in operations, decision-making and planning. Data are fit for purpose if they are free from defects and possess desired features”.

In terms of other academic references, Thompson & Ramsey (1995) similarly define ‘fit for purpose’ as “the extent to which data produced by a measurement process enables a user to make technically (and administratively) correct decisions for a stated purpose”. The authors also suggest that ‘fitness for purpose’ can be considered the “fundamental operational criterion in data quality”.

Based on this latter definition, for M&E to be fit for purpose, the components of What, Why, How and Use need to be satisfied. Furthermore, taking the OECD (2011), definition of ‘VfM’ and the relationship between ‘VfM’ and ‘FfP’, the 3E’s also need to be satisfied if M&E is to be considered ‘FfP’ (Figure 2-5).

2.4.2 Roles and Responsibilities

According to Harvey & Green (1993), assessment of ‘FfP’ can take two alternative pathways – “the first puts the onus on the customer” (consumer), “the second locates it on the provider” (service provider or donor).

However, even with defined roles and responsibilities, as reported by Winter (2009), “data requirementneeds of policy making vary across time and space as policy challenges change”. His research looks in to agricultural land use in the era of climate change and the challenge of finding ‘fit for purpose’ data. He suggests that changes for new types of data may compromise traditional methods of research such as ‘time series analysis’. More specifically, he reflects on the changing face of data collection and ‘new land science’ concluding that despite the enormous effort and positives associated with the exciting new ‘science’, there remain certain challenges. These include a limitation around understanding and analysing ‘real-world changes’ and a

certain number of problems and risks around combining of data sets such as ‘incompatibility and discordance’.

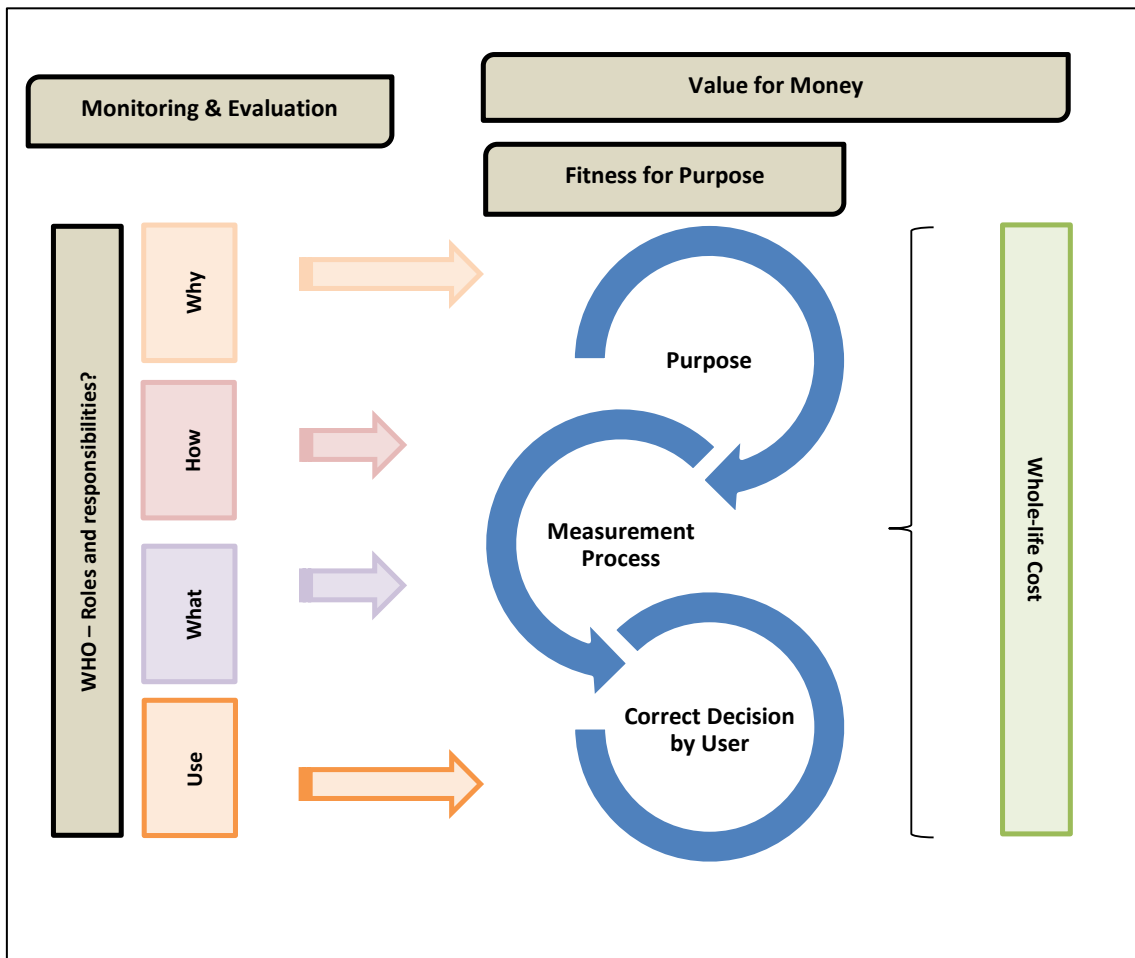


Figure 2-5 Interrelationship between M&E, ‘VfM’ and ‘FfP’

2.4.3 Fit for Purpose and M&E

Rijke et al (2012) reporting on “Fit-for-purpose governance” draws on an extensive critical literature review of adaptive governance, network management and institutional analysis. In turn they raise many issues mirrored by those associated with both monitoring and evaluation such as:

- “Continuous learning being a critical component in order to be able to take into account often complex dynamics and uncertainty”; and
- “Leadership of individuals or organisations may serve as a catalyst for emergent processes by strategically bringing together people, resources and knowledge”.

The authors further suggest that identifying the purpose of governance is not straightforward – again M&E stakeholders have different needs, mandates and agenda’s thereby potentially adding a number of layers or duplication to the activity. The authors go on to report that in many developed countries a paradigm shift is currently taking place in water governance from “a prediction and control to a management as learning approach”.

Again this is mirrored by the direction evaluation is seemingly moving - from the age of Casley & Kumar (1988), description, explanation and prediction to a more systematic qualitative approach adding to it, learning and knowledge products. However, with integrated nature of M&E, the question of the extent to which data is collected, analysed and information produced, is used remains open. Also evident is the opacity of available literature in terms of operationalization of the concept of fit-for-purpose governance.

In recent years there are references made to the work of ISO considering associated aspects of quality assurance and water. The research and review of such literature is set out under the Global Results chapter.

2.4.4 Fit for Purpose in the WASH sector

The review of literature strongly suggests that the language of ‘fit for purpose’ is not commonly referred to when discussing the water and sanitation sector. Instead the term quality is more frequently used and when considering the OECD definition of value for money, which stipulates ‘quality’ to mean ‘fitness for purpose’, an assumption could be the two are synonymous.

An interesting report by Faures (2006) also refers to the term quality, using the ISO definition of quality (ISO 8402 – 1986) as “the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs”.

Faures (2006), identifies a series of proposed and considered criteria for ‘quality’ through referencing a sample of organisations (Table 2-9). Even with just this small sample of literature, diversity in implementation of the term quality and its assessment, is evident. Moreover, despite this report relating to water

and sanitation, given the organisations and literature, has the potential to have a wider implication than just the WASH sector.

Table 2-9 Comparison of ‘quality’ criteria

Criteria for quality	Eurostat	IMF	OECD	Statistics Canada	Statistics Sweden
Relevance	✓		✓	✓	
Accuracy	✓		✓	✓	✓
Timeliness	✓		✓	✓	✓
Accessibility & clarity	✓				
Comparability	✓				
Coherence	✓		✓	✓	
Integrity		✓			
Methodological soundness		✓			
Accuracy & reliability		✓			
Serviceability		✓			
Accessibility		✓	✓	✓	
Prerequisites of quality		✓			
Credibility			✓		
Interpretability			✓	✓	
Cost efficiency			✓		
Comparability/coherence					✓
Availability/clarity					✓

2.5 Conclusions

In carrying out the literature review, using Figure 1-1 as a conceptual framework for monitoring and evaluation, understanding what signifies a good M&E design remains unclear.

The literature related to project level M&E acknowledges influencing factors should not prevent having “clear statements of measurable objectives; structured indicators, provision for data collection and management records at reasonable cost; institutionalisation to the extent of data gathering and proposals for following through findings to decision making” (Poate, 1996) – all deemed as imperative to satisfy good design. One could associate this in a

broader context than just project monitoring and evaluation adding to it a label of whether M&E is 'fit for purpose'.

Critical analysis of what is being monitored and reported at each level is seemingly highlighting the need to increase visibility of participation and inclusivity, accountability, sustainability and equity which in turn appears to be resulting in a plethora of indicators and indices.

The review has also acknowledged the vast range of methodologies and approaches available today to carry out monitoring or evaluation and that it has sometimes developed simply through a change of associated terminology. For example there is the collection of participatory monitoring and evaluation terms whereby participatory assessment, monitoring and evaluation; participatory impact monitoring, process monitoring, self-evaluation and community or citizen monitoring amongst others are all using the basis of PME in their approach (Estrella & Gaventa, 1997). In other cases there has been a more significant evolution by means of a change of emphasis or in the case of performance monitoring, using a more comprehensive and inclusive approach by measuring impact, outcomes, outputs and inputs (Mosse & Sontheimer, 1996).

What is not readily available is any literature providing an assessment of the impact of this diversity. Neither are there any findings on the cost-benefit of each approach, methodology or tool even where, for discrete activities associated with an evaluation, the data should be more straightforward to account for.

Furthermore, there is a remarkable omission of literature relating to utilization of the data generated from either monitoring or evaluation.

Similarly whether at global, national or programme level, available literature on actual costs of M&E activities is sparse.

Perhaps as sector stakeholders are driven to developing a new approach or methodology to more 'accurately' account or highlight the 'inadequacy', 'exclusion' or 'inappropriateness' there is a risk of masking other factors that may be causing failures to reach targets. For example without sufficient

understanding of the additional components of what the actual cost of what has been done in the past, on-going or currently planned for the future and how has, is or will the information be used may result in squandering resources on more theoretical solutions rather than tangible practical solutions. How much more theory do we in fact need to understand about either monitoring or evaluation processes, or resource requirements to ensure good water governance: to get water to people and waste away from people; to have a positive impact on a person's health and the economy of a country? Is this continual investment in theory development, associated research and reporting really achieving value for money?

Ultimately is there not a risk that the pendulum swung too far in an attempt to find the perfect solution.

3 APPROACH AND METHODOLOGY

3.1 Objectives and Research Questions

Taking into account the findings from the literature review, six original objectives were identified (Table 3-1). Over time, they were slightly amended to respond to an emphasis change from considering whether M&E was providing ‘value for money’ (VfM) to whether M&E was considered ‘fit for purpose’ (FfP). The reason for the emphasis change was rooted in the education and background of the researcher: focused on quality assurance rather than economics¹².

Table 3-1 Changes in Research Objectives

Original Objectives	Final Objectives
To identify the evolution of M&E approaches and associated indicators within the WASH sector over the last 20-years and map them against what has initiated the change.	No change
To examine the conceptual framework of ‘cost’ of M&E, within the WASH sector.	No change
To examine the costs budgeted and expensed by global, national and programme level stakeholders, on M&E of service delivery, over the last 20-years.	No change
To explore, the underlying purpose and use of each of the data sets.	No change
To examine the conceptual framework of ‘VfM’ in terms of M&E in the WASH sector and explore stakeholders’ perception of the extent to which ‘VfM’ is being achieved specifically in terms of the case studies selected.	Combined with number six and emphasis change: To examine the conceptual framework of VfM and identify if M&E is fit for purpose for use in the WASH sector.
To identify whether there are any generic beliefs, perceptions, trends or dichotomy’s which could lead toward the development of a core priority set of associated indicators to ensure ‘VfM’ in WASH sector service delivery.	Replaced with: To understand the potential for harmonization and alignment with the Sustainable Development Goals and Human Rights frameworks.

Both lenses from which to approach the research are considered of interest and relevance by the author. The potential for further research in this area remains an opportunity for someone with the requisite capability.

¹² The researchers’ perception at the time was that VFM research requires an economic background.

A number of research questions were also identified and set out during the course of the research, some of which were 'parked' and again remain opportunities for future research¹³. In total a core 46 questions were developed with the final number being reduced to 27. Given the relatively large number of remaining questions, acknowledgement needs to be made that the depth and breadth of evidence supporting the claims associated with each of the research questions and in turn objectives, varies.

Objective 1

To identify/explore the evolution of M&E approaches and associated indicators within the water, sanitation and hygiene (WASH) sector over the last 20-years and map them against what has initiated the change.

RQ1.1 What are the definitions of M&E and is M&E terminology synonymous?

Research questions relating to the 'what' of M&E

RQ1.2 Is there a recurring set of core indicators?

RQ1.3 How do indicators change over time – by stakeholder type, by data type, by indicator type, by cluster level?

RQ1.4 Is there consistency between indicator values across stakeholders?

RQ1.5 What influences the change(s) in indicators?

Research questions relating to the 'how' of M&E

RQ1.6 How many different types of tools, methods and approaches (TMAs) exist for M&E and have any rigorous cost benefit analysis been undertaken on any of the M&E TMA's?

RQ1.7 How does an organisation, programme or project decide which TMA to use?

¹³ The opportunities for further research are referred to in Chapter Eight.

Objective 2

To examine the conceptual framework of 'cost' of M&E, within the WASH sector.

Research questions relating to the 'cost' of M&E

RQ2.1 What are the different ways in which academic literature present cost of M&E?

RQ2.2 What are the different ways in which grey literature present cost of M&E?

RQ2.3 What are the different ways in which stakeholders understand cost?

Objective 3

To examine the costs budgeted and expensed by global, national and programme level stakeholders, on M&E of service delivery, over the last 20-years.

Research questions relating to the 'cost' of M&E

RQ3.1 What is influencing the levels of budgeting and actual expenditure?

RQ3.2 Are there any case study examples of costs of M&E in the WASH sector?

RQ3.3 How do costs of M&E differ depending on stakeholder type?

RQ3.4 What is an appropriate baseline % cost within a programme, to be spent on M&E?

Objective 4

To explore, the underlying purpose and use of each of the data sets.

Research questions relating to 'why' and 'use' of M&E.

RQ4.1 What is the purpose of M&E?

RQ4.2 What type of data is being analysed, reported, disseminated and shared?

RQ4.3 How is the M&E data being used?

RQ4.4 Are there any examples where data used for either policy and / or decision making are then implemented and have had an impact on WASH service delivery?

Objective 5

To examine the conceptual framework of value for money (VfM) and identify whether M&E is fit for purpose (FfP) for use in the WASH sector.

Research questions relating to 'VfM'

RQ5.1 What are the different ways in which stakeholders understand 'VfM'?

RQ5.2 Are there any case study examples that report 'VfM' of M&E?

RQ5.3 Is M&E in the WASH sector providing 'VfM'?

Research questions relating to 'FfP'

RQ5.4 What are the different ways in which stakeholders understand 'FfP'?

RQ5.5 Are there any case study examples that report 'FfP' of M&E?

RQ5.6 Is M&E in the WASH sector 'FfP'?

Objective 6

To understand better the potential for harmonization and alignment of country level frameworks, with the Sustainable Development Goals (SDGs) and Human Rights (HR) frameworks.

Research questions relating to the 'what' of M&E

RQ6.1 How do past and current indicators relate to those being proposed for the post-2015 Sustainable Development Goals (SDGs)?

RQ6.2 What is the extent to which key stakeholders are being consulted about the proposed SDG targets and indicators?

RQ6.3 Are the SDGs simply going to add to the burden of what stakeholders are going to be monitoring and reporting against at national, regional, programme, consumer level?

In support of the original research question a working hypothesis was also formulated: M&E in the WASH sector in lower-income countries is not 'Value for Money' because the information generated is not being used. Despite the emphasis change, this 'working' hypothesis has remained, purely as a guide, to provoke thought and discussion with stakeholders, as opposed to being a fixed hypothesis required to be proven or disproven as part of the Thesis and Viva.

3.2 Intended Contribution to Knowledge

The aim to 'understand better cost and use of M&E in the WASH sector', intends to contribute to knowledge in several ways, namely:

- Identifying latent causes of target failures potentially linked to the state of M&E and efficacy of use of resultant data.
- Improve stakeholder investment decisions through an evidence based understanding of cost of monitoring and evaluation activities.
- Enhance the way in which data and information generated from M&E activities is used, particularly for purposes of implementing management and policy decision making.

In terms of contribution to the sector and benefit of the work, the researcher envisages a greater contribution to the sector at a national level, rather than global or programme level, purely by the nature of the research methodology and stakeholders engaged with. However, one should not underestimate the potential for future research opportunities to replicate this research and carry out similar studies in other countries, which could in turn contribute more significantly at a global as well as programme level.

In broad terms, the findings of this research are intended to increase awareness amongst sector stakeholders of what is being monitored by who, at what cost and for what purpose as well as how the data collected is being analysed and used – ultimately whether M&E is currently fit for purpose for use in the WASH sector.

3.3 Approach

Ensuring integrity, flexibility, informed, insightful and objectivity have been vital components of the research design as have adherence to cultural, ethical and risk assessment issues.

Integrity – being true to oneself is a personal core value as well as being true to the research as a research ethic.

Flexibility – maintaining a reflexive review process is a crucial component of developing and implementing any research plan in order to capture unexpected results and respond quickly and efficiently to any associated risk.

Informed – implying a thorough understanding of monitoring and evaluation and how it relates to the water sector as well as the implications for the case study locations. This required building upon the first-hand experience and understanding of the researcher.

Insightful – to ensure the approach is insightful, research has drawn on known methodologies for undertaking research combined with personal project experience and networks. In turn, this should ensure an awareness and ability to respond to risks and limitations that may have applied in carrying out the research.

Objectivity – in order to minimise the risk of subjectivity and influencing or leading of data responses, a rigorous pilot and review process was applied to development, use and analysis of key-informant interviews, semi-structured interviews and literature review. This has been further supported through peer review by the supervisors and subject advisors and testing of ideas through presenting at international conferences and symposia.

In addition to adhering to the above, cultural, ethical and risk assessments were prepared as part of the research plan and fieldwork.

3.3.1 Philosophical and Theoretical Approach

The research approach and method selected is influenced not only by the research topic but also swayed by a number of other factors such as the experience and world-view beliefs of the researcher. The statements outlined in Box 3-1 highlight the researchers' perspectives and beliefs, subsequently recognised as shaping not only the approach and method of the research design but also the selection of the topic in general.

Taking note of the literature of Crotty (n.d), Robson (2002) and Smith, (1998), the labels most appropriate for the personal philosophical perspective and theoretical approach are an epistemology of constructivism and theoretical perspective of pragmatism. To complete the circle, the researchers' ontological position is based on having a nature of seeking multiple perspectives to be as objective as possible in reaching conclusions. The most noticeable impact, as evident during the course of the development of the research design, has been in regard to the number of objectives, case studies, stakeholders and sub-research questions attempted to answer.

Box 3-1 Statements of personal beliefs

Statement One

"Life and the world we live in is strongly influenced by the surrounding environment at that precise moment in time, and reality is continually evolving based on the interactions taking place within an ever changing environment. Whether the change is based on interpretation, by practice, or by behaviour is not critical. What is critical is to continue to find solutions to problems rather than over analysing the why's & wherefores".

Statement Two

"Despite historical perspectives and actions having had a significant role in shaping the world we live in today, society, in the main, seems to prefer to 'reinvent the wheel' and puts less emphasis on the past in terms of decision making today and for the future. My preference is to be reflective (taking note of not over-analysing), in that to look back and learn is paramount in moving forward efficiently and effectively".

3.3.2 Ethical Considerations

In response to submitting the required application form to carry out research, the Science and Engineering Research Ethics Committee (SEREC) confirmed the research project as low risk in terms of research ethics. The Committee granted approval on 16 May 2011 to continue with research activities as proposed within the application form (available on request).

During the course of the research, letters of introduction, setting out the aim, objectives and likely benefit to the stakeholder organisation, were requested from some of the stakeholders. When requested, such letters were provided with the signature of the supervisor.

Adhering to recommendations on research ethics, information for interviewees and agreement forms were signed by the interviewee prior to the recording of interviews. Furthermore, transcripts from recorded interviews were returned to the interviewee with the option of making amendments or to provide clarifications where an aspect of the discussion may have been unclear.

Additional ethical aspects have also been applied such as the coding of stakeholders and interviewees to maintain anonymity of participants as well as updating knowledge of any social, economic, political and cultural sensitivity when carrying out fieldwork in the case study countries. Furthermore, descriptive questions were not included in the analysis of interviews, as were not considered as the focus of this research. The omission of collecting data on age, gender, qualifications and experience was envisaged as minimising any risk of interviewee sensitivities which may have resulted in their subsequent withdrawing from participation.

Prior to launching the 'Qualtrics', e-Survey, ethical approval was sourced from the SEREC committee. The requirement was due to the extended nature of recipients beyond the core set of stakeholders and interviewees engaged with. Approval to proceed was granted on 7 October 2013, having been confirmed as posing a low risk in terms of research ethics.

3.4 Methodology

The research has maintained from the outset a case study strategy (Robson, 2002; Thomas, 2011), with a mixed method triangulation design: Validating Quantitative Data Model (Creswell & Plano Clark, 2007), whereby qualitative data has been used to validate quantitative data. This research project also uses a combination of deductive¹⁴ and inductive¹⁵ enquiry, although a greater emphasis is placed on the latter.

3.4.1 Theoretical Options and the Practicalities

In deciding on a research strategy, guidance was initially sought from Robson (2002) and Creswell (2007), at which point the researcher immediately recognised that the project was unlikely to lend itself to a fixed design due to uncertainty of the extent and nature of the data being available. A fixed design was also considered questionable given the inability to pre-specify the design until scoping field visits had been carried out. Intuitively an experimental strategy would not be appropriate given the inability to have a control group – it would have been ethically inappropriate to request, for example, a stakeholder group not to carry out monitoring and evaluation to test whether M&E has an impact on service delivery. In addition, the likelihood of finding an example where absolutely no M&E activities were being carried out was very low. Neither was it likely for the researcher to secure involvement from a scientifically accepted random sample of stakeholders. However, a non-experimental design such as carrying out a survey was a possibility and therefore, a fixed design was still considered an option.

Further reading, thought and reflection emphasised the potential of a flexible design - likely delivering a richness of data and achieving an in-depth study. With a motivation to explore and examine the field of M&E in the WASH sector

¹⁴ Deduction is “used to establish a series of logical steps in the process of forming a theoretical statement about the world. Usually, a general claim is made and this is applied to a particular case or instance with a definite set of conditions.” (Smith, 1998)

¹⁵ Induction is where scientific knowledge is constructed through accumulating observational evidence (Smith, 1998).

in East Africa, talking to people and examining documents and data archives seemed the most appropriate primary methods to achieve the aim of the research. Despite having confidence in a flexible design, concern and a perception remained that, to satisfy the requirements of a PhD, statistical analysis to show relationships between stakeholder groups and types, would be required and therefore the research method should be of a fixed design.

Revisiting the literature (Robson, 2002; Richards, 2009; Yin 2009), these concerns were allayed. As reported by Robson (2002), "flexible designs can include the collection of quantitative data". The conclusion was reached that the design needed to be flexible in nature. Associated with more qualitative data collection, three traditional strategies were then considered:

- Ethnography;
- Grounded Theory;
- Case Study.

Ethnography, as with anthropological studies (Smith, 1998), where the researcher tends to live with the community or group being studied, was the first to be rejected. Despite working at a local level with communities carrying out monitoring and evaluation, being of interest to the researcher, this was not an option, primarily due to the researcher not having a sociological or anthropological background. Other factors included, that at the time of the research design, there was not an opportunity to work alongside a stakeholder group carrying out M&E in the WASH sector. Financial resources were also insufficient¹⁶ for the researcher to live and work as a volunteer alongside a community group.

Grounded theory, albeit a possible option for this project as is considered flexible, systematic and co-ordinated (Robson, 2002), was also rejected as the researcher did not have the requisite sociological background. Furthermore, the requirement for grounded theory is to have some pre-existing theoretical ideas and assumptions, which at the time was not satisfied by the researcher.

¹⁶ The student was self-funded for the full term of the research.

For several reasons, the case study strategy seemed to tick most of the boxes - flexible design: flexibility in terms of the background of the researcher and flexibility in terms of data collection allowing for an emerging and evolving design. A case study approach also “provides a form of inquiry that elevates a view of life in its complexity” (Thomas, 2011). The decision was further substantiated for the following factors:

- Limited prior research having been carried out in this aspect of monitoring and evaluation, as evident from the literature review.
- A perceived level of associated complexity, as ascertained from both personal experience and key informant interviews carried out with other sector based individuals

A final validation in the selection of a case study strategy was established when reading the definition of a case study by Helen Simons (2009), see Box 3-2.

Box 3-2 Definition of a case study

“Case study is an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, programme or system in a ‘real life’ context. It is research-based, inclusive of different methods and is evidence-led. The primary purpose is to generate in-depth understanding of a specific topic (as in a thesis), programme, policy, institution or system to generate knowledge and / or inform policy development, professional practice and civil or community action”.

(Source: Simons (2009), in Thomas, 2011...pp10)

During the early stages of research design, the intention was to focus on three countries of East Africa and engage with multiple stakeholders across public sector, private sector and civil society organisations from international donors and aid agencies through to individual level. A richness of understanding of the topic was of importance, as was to collate enough information not to generalise but provide an insight into the aspects of cost and use of M&E and, contribute to a perceived gap in empirical data and academic research. Initially there was also an interest to make a comparison of the countries however this quickly became less important as knowledge of the differences in institutional frameworks was better understood. Furthermore some stakeholders, during scoping field visits, also expressed concern over any comparative analysis

between the countries and if pursued could result in the withdrawal of their interest. All of these components confirmed to the researcher that the case study strategy using mixed method design was appropriate and relevant to the research inquiry.

The following research strategies were also reviewed to validate the selection:

- Action research: considered unsuitable based on the factors of time, resources and likelihood of available data.
- Biographical research: the study of an individual, or phenomenological research: the study of the subjective of the individuals (Robson, 2002), were not suitable as the subject of study is focused on an inanimate object – process of monitoring and evaluation – and how, why, what and by who, is carrying out the process.

To further satisfy the researcher in terms of chosen research pathway, guidance was secured from the literature of Miles & Huberman (1994), Thomas (2011), Richards (2009) and Drever (2003), various websites (Wordle, Wikipedia, Periodic Table of data visualisation) as well as PhD colleagues, supervisors and sector associates.

3.4.2 Selection of the Case Studies

In order to allay the view of some authors that a case study is an easy option and to dispel any concern that the case study strategy may be “carried out in a sloppy manner” (Bromley, 1986), selection and design of the case study demonstrating rigour and ensuring quality of the evidence, claims and reasoning is of paramount importance. According to Thomas, (2011) and Wieviorka (1992) there are notably two parts to a case – the subject and the analytical frame.

Part One - the Subject

A case can range from being that of an individual, set of individuals, groups, events or a country, at the same time as accepting that a case “is about the particular, rather than the general...(and that)...you cannot generalise from a

case study” (Thomas, 2011). However, Robson (2002), suggests that in examining multiple cases, there exists an opportunity of some form of generalization – analytical or theoretical generalization, thereby enabling the case study strategy to answer the research question “To what extent is M&E considered ‘fit for purpose’ for use in the WASH sector, in lower-income countries?”.

Thomas (2011) goes on to comment that selecting the case is mainly driven by interest. In this instance the researcher confirms personal interest was a contributing factor along with the views of other professionals and academics in the sector as sought through preliminary discussions. Three country cases: Kenya, Uganda and Tanzania were selected along with a fourth global¹⁷ case.

The three countries were selected for two principle reasons. The first reason was that they are all past working environments for the researcher thereby providing an existing network of organisations and individuals to build from – also defined as ‘local knowledge cases’ (Thomas, 2011). The second reason was because of ‘Drawers of Water’ (DoW) - one of the first and ground-breaking studies relating to the relationship between water supply and the consumer in Africa – which also examined Kenya, Uganda and Tanzania. Thirty years later in 2001, Drawers of Water II (DoW II) came about in response to a view that DoW was limited by “the relatively short period of time over which domestic water use was examined in the region” (Thompson, 2001). Whilst recognising the pioneering work of DoW and the efforts of DoW II, neither of the studies, consider or reflect on the actual cost of carrying out the research against the resultant findings and the extent to which the study provided value for money: aspects identified as gaps in research and publication of associated academic, literature.

The researcher recognises and acknowledges that the first and the initial reason comes with the risk of potential personal bias. However as highlighted by Richards (2009), see Box 3-3, if the bias is recognised, appreciated and

¹⁷ Examining the international aid architecture surrounding water and sanitation service delivery.

managed well, the design and output can be enhanced. In contrast to the risk of bias, to engage with an existing network and within a familiar environment provides many other advantages. For example, being able to apply a purposive sampling technique and to have access to current understanding of potential sensitivities in terms of culture and communication (ethical aspects), when carrying out fieldwork.

Box 3-3 Analogy of handling bias

"A badly cut garment will hang awkwardly pulled by an unrecognized bias. But haute couture uses skilful bias-cut all the time, to achieve a perfect drape. All cloth has bias - you can either control for it by cutting straight, or you can use it well, by careful design. The same choice is there in all social research (qualitative or quantitative).
Richards (2009) pp 22-23

Despite early intentions to focus on the three countries of Kenya, Uganda and Tanzania, availability of an existing network and contacts within Tanzania was significantly less than those in Kenya or Uganda. By month nine, having carried out scoping field visits to both Kenya and Uganda, thereby testing the level of effort required within a familiar environment, the decision was made to 'put on hold or park' the case-study of Tanzania. The conclusion was that the level of effort required to get the knowledge base, for Tanzania, to a similar stage as the other two countries, could compromise the quality and potential richness of the research content for the Kenya and Uganda case studies. By month 15 (6 months later), the decision for withdrawing effort from Tanzania, was highlighted as the right decision. The resources (in terms of time and money) required for two overseas countries was just about manageable whereas a third country would have been un-sustainable.

Originally the fourth case, only to become the third case – that of global – was selected as a sub-case or complementary case in order to consider country-level monitoring and evaluation in the context of the global environment and to examine possibilities of influence between one and the other. To a certain extent this case can also be defined as a 'local case' given the direct and indirect knowledge and experience of the researcher having worked globally in the development aid arena.

With the ‘parking’ of the Tanzania case, the researcher considered including the England and Wales (E&W), water and sanitation sector as a second sub-case study. The significance of including this as a sub-case was that it would provide a snapshot of a high-income country and given the preliminary research carried out, show an interesting change in approach of one set of stakeholders to monitoring and evaluation thereby providing juxtaposition. Due to time and financial resources, the ability to continue with E&W as a sub-case was not possible and therefore remains an aspect for further research – see Chapter Eight.

Going beyond the subject as Part One - the aspects of purpose, approach and process also need to be determined and understood.

The Purpose

Through referring to different authors view and labels of kinds of case studies, for the purposes of this research, various options were contemplated but centred on intrinsic, explanatory and exploratory. With reflection on the aim and objectives of this research, initially, one seemed more pertinent than the other two – intrinsic - as suggested by Stake (2005) “the study is undertaken because, first and last, one wants better understanding of this particular case...”. Nevertheless, noting that intrinsic studies often refer to a single case, added to the fact that the most common purpose of a case study, is an explanatory purpose, the researcher acknowledged both. Exploratory, as a purpose, seemed lesser of a focus given the pre-existing experience of the researcher, on the subjects of monitoring and evaluation.

The Approach – descriptive and interpretation or illustrative?

Options for an approach such as testing or building a theory were not considered given the overarching nature of the research. An interpretative approach was deemed appropriate however being considered a ‘usual bedfellow’ to ethnographic studies. The researcher finally opted for descriptive and illustrative as the two most closely aligned approaches to the aim and objectives as set out in Section 3.1. According to Merriam (1988), the

descriptive case can “illustrate the complexities of a situation” where there are multiple factors that contribute to understanding and that “the intention is not to generalise but rather to present a description” of the subject.

The Process

A single case design is preferable for studying outlier or unique cases (Yin, 1994), whereas a multiple-case design allows the researcher to draw conclusions and corroborate or validate evidence. It was the intention of the researcher to follow a multiple nested process – 3 cases, nested with public, private, civil society organisations. As defined by Thomas, (2011), the research is also considered a diachronic study – showing change over time – see Table 3-2.

Table 3-2 Options for the Case Study Pathway

Subject	Purpose	Approach	Process
Outlier Key Local	Intrinsic Instrumental Evaluative Explanatory Exploratory	Testing a theory Building a theory Drawing a picture Descriptive Interpretive Experimental	Single or Multiple Nested Parallel Sequential Retrospective Snapshot Diachronic

(Source: adapted from Thomas 2011)

Part Two: the Analytical Frame

The second part of the case is the analytical frame. As reported in Section 1.5 Aim, despite the focus being on cost and use, the five components of the monitoring flow are inextricably linked and provide the analytical framework for the multiple cases coupled with the overarching questions. For each of the components in turn one or more conceptual frameworks, as identified through the literature review, are also used to guide the analysis and are discussed further on in this chapter.

3.4.3 Stakeholder Selection and Numbers

Information from within some of the documents sourced through the structured literature review, such as the institutional framework for the sector of each country, OECD data and UN-Water GLAAS 2010 report, provided a starting point for the selection of stakeholders. Added to the availability of an existing network in Kenya and Uganda, a purposive sampling (Robson, 2002) technique was also applied. In addition a set of self-judged criteria were used to aid the process of selection with the primary and perhaps most obvious requirement that the stakeholder was to be 'key' in terms of WASH sector service delivery to rural or peri-urban environments or both. Other decisive factors and criteria which formed part of this initial sampling process were:

- The 'sample' size should include at least three public, private and civil society organisations;
- The 'sample' size should be able to provide at least three project/programmes examples per stakeholder group;
- The stakeholders identified should have as many years of experience as possible, working in each of the case study countries as well as working in the WASH sector generally.

These other factors could be seen to be leaning toward quota or dimensional sampling – two other non-probability sampling techniques (Robson, 2002), however, the emphasis was on the 'researchers' judgement'. The ability to obtain a true representative sample, as required by the quota or dimensional sampling, was highly unlikely given the complexity and multiplicity of the arena. In turn and if selected, the methods would have been unrealistic in terms of time and effort to achieve the appropriate sample, proportional to the other research activities required as part of the project.

With the initial selection completed, stakeholder maps were prepared and validated against institutional frameworks, as well as with the stakeholders, during scoping field visits and fieldwork. During this process of consultation, on occasion, a snowball sampling (Robson, 2002) technique occurred, resulting in the potential inclusion of recommended contacts as additional stakeholders.

The grouping of the various stakeholders for subsequent coding evolved as ideas developed in terms of methodologies of analysis. The initial thought was to match the two country case studies, in terms of stakeholders, as far as possible, by organisation or institution so as to retain the potential for analytical or theoretical generalizations. Another original idea was to group stakeholders and data by level i.e. global, national and programme with individuals as a complementary rather than core category. Several other iterations of grouping were considered before settling on, simply, three groups by case, inclusive of each level and any other individual – see Table 3-3.

Table 3-3 Sample Size of Stakeholder Numbers

Description	Global	Kenya	Uganda	Total
Relevant stakeholders initially identified	26	36	33	95
Number of stakeholders – data collected	26	34	25	85
Percentage of identified sample size	100%	94%	76%	90%

Recognition is needed for the fact that whilst the number of ‘relevant stakeholders initially identified’ stands at 95, during the course of the research, the potential for many other stakeholders became apparent. For example other public sector governmental ministries and international donors; private water operators; academic institutions; civil society organisations and consumers.

3.4.4 Data Collection Tools and Tactics

Prior to undertaking field work, three core data collection methodologies, in addition to the literature review, were considered appropriate for this study:

- Interviews;
 - Key Informant & semi-structured interviews.
- Document review.
- Data archives.

The use of surveys and questionnaires was also considered but put 'on-hold', until after the first series of field work activities had been completed. Tests and scales were not selected for this research project due to the fact that the case

approach is not an experiment. Neither was it likely to have a significant amount of quantitative data with sufficient accuracy to allow inferential statistical analysis. Observational methods and unobtrusive methods were also rejected as are considered more suited for an ethnographic study and deemed more favourable for a grounded theory respectively. Nevertheless, some observations were noted during the carrying out of interviews.

After referring to different literature, including Miles & Huberman (1994), Flick et al, (2004), Robson (2002), Thomas (2011) and Yin (2009), other data collection tools were added to the core methodologies as presented in Figure 3-1, below. The rationale for selecting these data collection tools, albeit an iterative process, was guided by early thoughts about data types needed to answer the research questions and in turn address research objectives – see Table 3-4.

Table 3-4 Data Collection by Research Objective

Data Collection Tool	Research Objectives					
	RObj1	RObj2	RObj3	RObj4	RObj5	RObj6
Literature Review	✓	✓	✓	✓	✓	✓
Desk Review - Data archives	✓	✓	✓	✓	✓	✓
Desk Review – Documents	✓	✓	✓	✓	✓	✓
Key informant Interviews	✓	✓	✓	✓		
Semi-structured Interviews 1	✓	✓	✓	✓		
Semi-structured Interviews 2					✓	✓
e-Surveys				✓	✓	

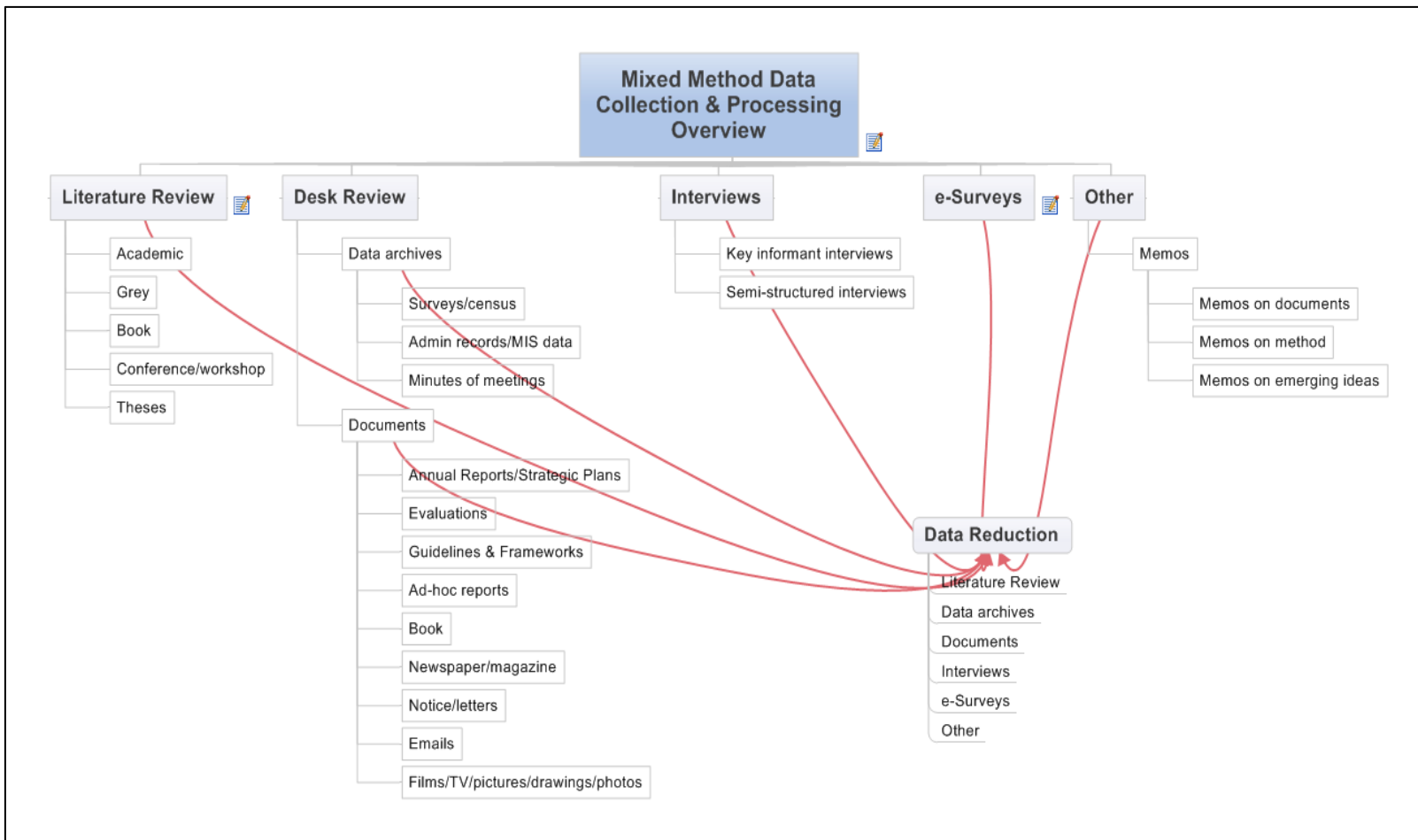


Figure 3-1 Range of mixed method data collection

Literature Review

The preliminary literature review carried out between month one and nine was used to ascertain and clarify the gaps in academic knowledge in turn guiding the development of the research objectives and research questions. In addition, the review unearthed a number of grey literature items suitable as data records for each of the cases.

Guidance on how to undertake a literature review was sought from Hart (2003), Robson (2002) and Phillips & Pugh (2000) as well as reading through examples of published literature reviews (Aubel, 2004; Rozens et al, 2006; Welle, 2008).

The aim had been to carry out a systematic review as set out by Campbell Collaboration (1982) however, given the vast topic being considered, the time taken for the activity would have imbalanced the available time for the other research activities. In order not to compromise the rigour and robustness of carrying out a review, a hybrid of a structured and a systematic review was applied. During months 32 and 36, a second structured review was carried out. Firstly, to update the original search terms from the previous two years, sourcing academic literature only. Secondly, to add some additional terms identified during the course of the data collection, analysis and interpretation that were deemed of importance to review and reflect upon so as to ensure the research maintained a current contribution to knowledge.

Furthermore, during the course of the three years, other literature was sourced on an ad-hoc basis to ascertain the extent to which an idea may be of relevance, current or former thinking or to validate a possible claim. The breakdown of article numbers is presented in Table 3-5.

Table 3-5 Article Numbers Sourced by Literature Review Phase

Literature Review	Period of activity	Number of articles sourced
Preliminary Hybrid	Month one – nine	462
Second structured	Month 32 – 36	269
Ad-hoc	Month 10 – 31	113

A more detailed overview of the literature review methodology can be found in Chapter 2.

Desk Review

Documents and data archives such as surveys and census, administrative records and minutes of meetings were judged appropriate data sources likely to capture information on the components of 'what', 'how' and 'why'.

For the components of 'cost' and 'use', strategic plans and frameworks, performance reports, annual reviews and ad-hoc evaluations were considered relevant data records to collect. However, recognising the limited availability of academic and grey literature on the 'cost' and 'use' components, uncertainty in how much information would be contained in these other records, remained of some concern to the researcher. Although acknowledgement was given to the situation that a lack of data would simply tell a different story than a lot of data.

The desk review was selected as a method to:

- Improve knowledge and understanding of the organisation prior to carrying out fieldwork.
- Strengthen the position of the researcher and give confidence to stakeholders that the research had something to contribute to their organisation – researcher demonstrates applying herself.
- Maximise time available during fieldwork - prevent trying to ask/obtain something that is clearly publically available through carrying out prior research.
- Extract data from the records and commence mapping of the components of monitoring and evaluation.

As much information as possible on certain criteria (Box 3-4), was obtained through website searches, document reviews and preliminary discussions held during scoping field visits. For each of Global, Kenya and Uganda cases in turn, 575, 209 and 315, records have been sourced. An additional 126 collected relating to the E&W complementary sub-case study ('parked' as a sub-case).

Box 3-4 Categories of data obtained via initial desk review

Establishment Date	Vision & Mission	Aim	Mandate
Background	Roles & Responsibilities	What is Monitored	Indicators
Reports Generated	Data Depositories	Data Use	Partnerships

Interviews

Guidance on the pro's and con's and the do's and don'ts of interviews was sought from Robson (2002), Thomas (2011) and Drever (2003), as well as through other articles by Boyce & Meale (2006); Kumar (1989) and Gugiu & Rodriguez-Campos (2007).

Key informant interviews

The key informant interview (KII) was selected for use during scoping field visits in order to test the interest and willingness of stakeholders to participate in the research project. A secondary benefit of this interaction was the opportunity it gave for snowball sample selection (Robson, 2002) of stakeholders. Furthermore, carrying out the KIIs allowed the researcher, to test an approach that could be applied when undertaking semi-structured interviews.

Semi-structured interviews

Preference in using a semi-structured interview (SII) technique was based on the flexibility of questioning to enable the richness of a discussion and allow the participant to talk around the subject. In addition, due to the selection of participants, the likely availability of contact time would be too limited to use a structured interview and could result in a potential risk of not being able to maximise the contact time with the subject. Recognition that any structured questioning could be delivered, as the activity implies, via a written questionnaire either by e-survey or via an email suggested that an open discussion would allow a better use of time.

Two phases of semi-structured interviews, using different schedules, were carried out (see Appendix B) and used slightly different methods – the second

having been enhanced through the experiences of the first, in terms of both questions and application. In some cases, given the new relationship with some of the stakeholders, the researcher was a little more tentative in semi-structured interview one, with regard to requiring the interview to be recorded. The consequence was a greater number of non-recorded interviews than recorded ones, which in turn required a significant amount of hand written note taking. As an effect there was, as perceived by the researcher, a reduced interaction between the researcher and interviewee as well as a thinner set of data records for the non-recorded interviews compared to those that were recorded. Techniques such as reflective observation and creation of contemporaneous notes recorded post interview were used to maximise the content. The researcher recognised the richer content of the recorded interviews and consequently, for the SSI 2, was more confident in requesting the interviews to be recorded and all bar one or two of the interviews were in fact recorded (Table 3-6).

Table 3-6 Numbers of Research Interviews Undertaken by Type

Interviews	Key informant interviews	Semi-structured interviews 1	Semi-structured interviews 2	Total
Not recorded	62	5	1	68
Recorded	6	22	38	63
Total	65	27	39	131
Percentage	50%	21%	30%	100%

E-Surveys

In order to triangulate (and validate) aspects of the 'use' component, an e-survey was considered the most appropriate technique in terms of resource availability. Various on-line survey software were considered (Survey Monkey; Bristol; Survey Shaker; So-Go Survey; Smart Survey, to name but a few) before finally selecting the Qualtrics software. The primary reason for selecting this software was the support offered through the University, publishing of on-line tutorials such as a 'basic start up' video and the apparent ease of use.

The survey (see Appendix B-2) was developed, pilot tested and ethics approval sought, prior to launching. Three core water and sanitation networks were aimed for targeting (RWSN; IRC Symposium on M&E participants; WaterLists subscribers). Due to one reason or another, the actual networks that the e-survey was issued to was different (mande news subscribers; original stakeholders from each case; twitter feed; and the Community Water Supply network of Cranfield University). With a potential of between 3,500-4,000 respondents, across the collective networks 51 responses were received with approximately 50% reflecting full responses and the balance only partial responses where one or more questions remain unanswered (Table 3-7).

The e-survey was primarily used to collect data on global monitoring and evaluation in the WASH sector. However, a few questions were added by way of a filter system, so as to specifically target respondents who had previously or were at the time of completing the survey, operating in Kenya and Uganda. This has allowed some further analysis to be added to the Kenya and Uganda cases relating specifically to use of monitoring and evaluation information, whether M&E is fit for purpose and whether M&E is providing value for money within the WASH sector, within each of the countries.

Table 3-7 Numbers of e-survey questions and responses

Survey Questions	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Responses	42	42	42	42	42	22	20	26	27	25	25	26	26	26	8	8	8	8	25	10	10	10	10	25	25
No responses	9	9	9	9	9	29	31	25	24	26	26	25	25	25	26	26	26	26	26	26	26	26	26	26	26
Not applicable															17	17	17	17		15	15	15	15		
Total	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51

Other

Diaries

As recommended by several authors including Thomas, 2011; and Richards, 2009, whether fixed or flexible, qualitative or quantitative there is benefit to keeping a research diary, either in written, audio or video form. In this case the researcher chose written form. The purpose of such a diary is to keep track of emerging ideas and reflective thoughts from other data records which in turn

can become data records in their own right – memo’s. The diaries also proved useful to document literature searches.

Memos

As ideas emerge and evolve, whether from a diary, observation or reflection note from a transcript or other document, they are recorded as a memo. In turn these memos can become a data record in their own right.

Emails

Email technology enabled quick communication with stakeholders across each of the case studies recognising the various time zones included and noting the researcher was not undertaking an ethnographic study. This also allowed follow-up pre and post the various fieldwork activities.

Conferences / Webinars

The collective of conferences, webinars, symposium and other related events have enabled data collection in three ways. First, was through further engagement with case study stakeholders and provided an opportunity to discuss some of the emerging ideas of the researcher in a wider context. Second, was in terms of providing an opportunity for hard copy and soft copy data collection of documents and data archives. Third, was in respect of the plethora of data records that were available on-line for those conferences and webinars that the research was unable to attend or listen to.

Taking into account each of the tools and methods used for collecting data, Table 3-8 provides a summary of numbers of data records collected by case.

Table 3-8 Number of data records collected

Sourced data records per case	Global	Kenya	Uganda	Total
Document/data archives	575	209	315	1099
Key informant/semi structured interviews	13	59	59	131
Total number of data records	588	268	374	1230
Percentage of overall sample size	48%	22%	30%	100%

3.4.5 Phases of data collection

Initially three specific phases of research were envisaged however, as the emphasis changed from 'VfM' to 'FfP', combined with the realisation of needing to explore and examine the 'what', 'why' and 'how' as well as the 'who', 'cost' and 'use', the phases were amended in some places and consolidated in others. This led to two phases being designed to collect data for subsequent analysis and interpretation.

Combined with a period of groundwork, the timing of each round of in-country fieldwork was as follows:

- Scoping field visits (January and May 2011).
- Phase One (October – December 2011).
- Phase Two (January/February and April/May 2013).

Scoping field visits: aimed to test interest and willingness for stakeholders to participate in the research.

Phase One: aimed to collect and analyse five categories of information from secondary data sources as well as key-informant and semi-structured interviews using the overarching questions as presented in Chapter One.

- What data: reported indicator data including associated baseline, actual and target values.
- Why data: purpose of data record sourced and examination of the influencing factors.
- How data: document tools, methods and approaches used by stakeholders to carry out monitoring and evaluation capturing any changes and what has influenced the selection and changes. Examination of the extent to which technology is a help or a hindrance.
- Cost data: budgeted and actual expenditure on monitoring and evaluation over as many years as possible for each stakeholder.
- Use data: track and document how data and information generated from monitoring and evaluation is subsequently used whether for policy or

decision-making, internal or external use and whether it has had an impact on service delivery.

Phase Two: used the initial findings and preliminary conclusions from study one and presented them back to the stakeholders, in the form of an executive summary of the interim case study report and a PDF version of a PowerPoint presentation. They were initially sent via e-mail prior to carrying out the in-country fieldwork.

A second round of semi-structured interviews was conducted to capture a second set of data:

- Roles & responsibilities: whether they are realistically assigned for monitoring or evaluation in the sector.
- Fit for Purpose: what is currently working well in terms of monitoring or evaluation and where the emphasis should be placed for future effort and investment to enhance both monitoring and evaluation and ensure it is fit for purpose for use in the WASH sector.
- Value for Money: perceptions on whether monitoring and evaluation is currently providing VfM.
- SDGs & Post-2015: examining the extent of involvement in the consultation process at a country level in terms of contributing to the discussion and decisions on the post-2015 indicators.

3.4.6 Data processing, data reduction and data cleaning

Organising the data

Authors such as Richards (2009) and Robson (2002) write about setting up soft and hard copy filing systems prior to collecting data as it is easy to get overwhelmed by the data once carrying out fieldwork. Despite having an idea of the type of data records sought, the researcher was keen on maintaining flexibility in the structure until these records were sourced or created. As a consequence, various attempts were tried before settling on the resultant method of organising data. Pre-emptive decisions over hard and soft copy storage were revised once the first round of data collection was completed and

has resulted in creation of many sub-folders. Once familiarity with the data became stronger the number of sub-folders reduced hand-in-hand with the data reduction process.

Data reduction

As reported in Chapter two, a process of data reduction was applied to the literature review data. This section focuses on the data records sourced as part of fieldwork and desk reviews.

Using the guidance of Miles and Huberman (1994), data reduction (or as referred to as 'data condensation' by Tesch, 1990), was considered a priority, by the researcher, in making the data manageable for analysis. Recognition was also given to the scenario that through the process of data reduction, preliminary analysis would, by default, also be carried out.

The process itself requires the preparation of a document sheet, or session summary sheet, per data record depending on data record type. For this research, the principles were applied in a soft copy format only - for ease of managing the data and making use of soft copy storage. A single Excel workbook was compiled with each sheet containing data relevant to a single stakeholder organisation as a 'master workbook'. However, relatively early on, this initial tool became unmanageable. During the course of months 9-15, various versions of 'master workbooks' were tried and tested to capture the necessary and relevant information. As the number of data records and familiarity with the data grew, many of these attempts either failed to provide the requisite flexibility to store, access and apply further analysis applications, or became too unruly in quantity and quality to manage the data once processed.

What seemed a disproportionate amount of time later the researcher reverted to a similar tool as the one being used for the literature review – still an Excel work book – which also enabled filtering and robust pivot table analysis. Following discussions with PhD colleagues and in terms of what the researcher anticipated doing with the data, this was considered an appropriate basis to revert to. The framework was slightly amended and to completion, proved

suitable. Anticipating that not all literature and other data records sourced would be applicable to answering one or more of the research questions and objectives, both the 'Literature Articles' master book and the 'Data Reduction' master book, with a filter function, allowed sub-sets of data to be extracted and combined, into a third master sheet, for specific analysis. This third sheet is called 'Combined Master Work Book' (see Appendix C – C1 - for extract)

An 'Access' database may have been equally appropriate however the researcher was not as experienced with the Access© software compared to Excel©, neither were the resources available for the researcher to 'get up to speed', hence considered counter-productive. Furthermore, there was also a risk that if components of the data reduction and analysis findings were to be sent to the stakeholders (consideration at the time¹⁸), the stakeholders may also have limited experience in using such software.

Specifically, each document and data archive was searched, using a search and find function, for information on each of the components of M&E (see Appendix C – C2 - for search terms) and concurrently the corresponding text or numbers were highlighted in preparation for analysis. A scale of yes, no, TBD¹⁹, (amongst other categories) was entered in the data reduction work sheet. For hard copy data records, a similar approach was used, where the researcher, speed read and highlighted using either pencil, post-its, or in some cases highlighters to signify the 'key' narrative or numbers.

For the series of SSI1 interviews the recordings were transferred into, where possible²⁰, verbatim transcripts, by using an additional research resource²¹. In turn the recordings were listened to by the researcher and transcripts 'cleaned', rectifying typos and word gaps. Thereafter, the cleaned transcripts were sent

¹⁸ The researcher had considered returning an extract of the indicator ('What' component) worksheets to the stakeholders to review and code as priorities.

¹⁹ TBD - To Be Determined.

²⁰ Some few parts of recordings were obscured by other unavoidable background noises i.e. birds, traffic, music and other conversations.

²¹ A declaration, acknowledging the data protection requirements, as agreed to by the researcher, was duly signed by the external resource, prior to undertaking the transcribing. The 'resource' is also well known to and wholeheartedly trusted by the researcher.

back to the relevant interviewee for comment, amendment and annotations as appropriate.

For the series of SSI2 interviews, again, using an additional research resource, the recordings were transferred into full transcripts, whereby omitting some of the 'Umms', 'Mmms', as these expressive sounds were considered, by the researcher, superfluous to the research analysis. As with SSI1, the recordings were 'cleaned' and returned to the interviewee for comment. In both cases, where feasible, reflective notes were also added. Certain information relating to the interviews were documented in the 'data reduction' worksheet catalogued as a session summary.

Normalising data

In theory, the temporal questions require normalisation of data where financial data is reported and there is the intention to compare financial data from one year to the next. The extent of normalising data in terms of this research was limited to financial year and where applicable used market value exchange rates to bring local currency into the US\$.

Data cleaning

As with the interviews, the data included in the Master Workbooks needed cleaning in order to maximise the rigour of the research. This was achieved through (but not limited to) cross-checking print outs of each of the analysis worksheets with those filtered sheets from the original workbooks. Further 'cleaning' of data also took place during the data analysis phase.

3.4.7 Exploratory conceptual frameworks

In addition to the monitoring flow (Figure 1-1) and through a hybrid of inductive and deductive processes, draft conceptual frameworks were sketched for purpose, cost and use of M&E. An analytical framework was also prepared for 'what' – see section 3.4.8 Data analysis – Clustering.

Analytical framework - purpose

As part of the literature review, three frameworks (Table 3-9) were identified for use when analysing the data on the purpose for M&E. A fourth categorisation was also included classifying whether the purpose was external or internal or a combination.

Table 3-9 Analytical Frameworks to categorise the purpose of M&E

Authors	Conceptual Frameworks
Casley & Kumar (1988)	Description; Explanation; Prediction
IPDET (2007)	Ethical (policy performance); Managerial (financial and human resource accountability); Decisional (policy reform); Educative and Motivational
Cotton & Bartram (2008) Gosling & Edwards (2003)	Global; National; Programme; Individual

Analytical framework - cost

Two main cost typologies were initially considered. One centred on a percentage over base rate figure and the other considered a sub-activity budget line item based approach with monitoring and evaluation being two discrete activities. These frameworks were chosen on the basis of preliminary discussions as part of the scoping field visits and data sourced through the literature review.

Analytical Framework - Use

With respect to a framework for 'use', the four relating to 'purpose', or intended use, were also applied to coding for actual use. A fifth, reported by McKay (2010), suggesting that 'OECD countries place a high priority on: 1) Policy development; 2) Evidence-based policy making and budgeting; 3) Management performance; and 4) Accountability, was also considered. The researcher resolved that these four categories were encapsulated within the other frameworks.

3.4.8 Data analysis

Application of data analysis techniques varies depending on the specific objective of research being considered and associated research sub-question being answered, as well as the actual data collected. As previously referred to, data reduction is also considered data analysis: ".....it sharpens, sorts, focuses, discards and organizes data in such a way that final conclusions can be drawn and verified" (Miles & Huberman, 1994) and therefore could be considered as an iterative process from the point of data collection. Even with a mix of quantitative and qualitative data, statistical data analysis techniques, most commonly associated with quantitative data, were acknowledged as likely to be limited, due to the incomplete nature of the data being collected. Descriptive and inferential statistics were considered as data analysis tools however the availability of characteristics of data and sample size, were not satisfied across the range of stakeholders, making any analysis limited as a statistical evidence base. Only the e-survey has really allowed for any basic statistical analysis to be applied.

Using a hybrid of the 13 tactics for generating meaning (Miles & Huberman, 1994) and the 3 components 'up from the data', 'coding' and 'handling ideas' of Richards (2009), four techniques were regarded appropriate for use in analysing the data.

Coding

According to Richards (2009), coding is considered as data reduction for quantitative data and data retention in respect of qualitative data. Three sets of data were coded. First was the academic and grey literature – a priori theme coding was applied in terms of the search criteria – 'Monitoring & Evaluation'; 'Water Governance'; 'Value for Money'; 'East Africa'; 'Rural & Peri-Urban'; and 'Millennium Development Goals'. Second was the coding of data records sourced as part of the desk review – documents and data archives – a priori theme coding was applied as per the 'monitoring flow' framework: what, why, how, cost, use, VfM. Unlike content analysis, which fixes the codes at the start, the data was, as part of the analysis process, further coded with themes

emerging as the text was repeatedly read, such as: 'FfP', Roles and responsibilities and definitions of monitoring and evaluation. Furthermore categories of data type and sub-sector were also allocated for each document. Third was the coding of the interviews. As with the documents and data archives, the same series of codes were applied however the interviews were also subject to 'topic' coding and 'analytical coding using interpretation and reflection.

Descriptive coding beyond cataloguing stakeholder type and sub-type, such as gender, age and position within the organisation or institution, has not been documented for interviews or the desk review data. The fundamental reason was so as not to deviate from the crux of the project – the research was never about gender, age, neither was it directly related to qualification related albeit maybe having an influence on some aspects of the research questions and objectives. The researchers' judgement was that asking such questions as part of an interview may have affected the interest and willingness to participate. Age and gender questions featured within the e-survey as the final two questions, in an attempt to consider some demographic trend analysis. Whilst not a predominant feature of this research therein lies an opportunity to consider as future research.

Once the interview data was coded, the highlighted text was summarised and copied across to one or more of the following: the combined master workbook; mind-map; or into a new word document. This then allowed analytical coding through interpretation and reflection. From the priori and theme coding some data was also extracted, primarily where yes or no answers were given, to allow subsequent quantitative analysis. A similar process was applied to the data records sourced from the desk review.

Clustering data

With the data acquired for each component, a system of clustering the data by software and inspection, particularly in the case of indicator data, was decided upon. The principal reason was to group objects, similar to one another, thereby reducing the number variations in order to ease the process of identifying

patterns and trends. The rationale behind using both inspection and software was that one would validate the other.

Clustering by software. An initial attempt was made at using ‘Weka’ software to cluster the data however a recurring error prevented any clustering to be completed. The error stayed unresolved despite seeking assistance. Subsequent to the initial attempt, an alternative software – RapidMiner - was sourced but remained untested. The idea of using clustering by software to validate the clustering by inspection was, later, abandoned.

Clustering by inspection. The process of clustering by inspection, to group the data, was an arduous process. For the data related to ‘what’, an original method of using an existing classification such as (but not limited to), those reported by MWLE (2003), Mehta (2000); WHO (1986) and AWWA (2012), were considered. However all were successively rejected on the risk of making the results too biased. Another option, comprising of five levels of cluster was also considered – again rejected – this time, due to being too complex (see Appendix C - C3). A series of a further three methods (Table 3-10), were then developed and tested along with several iterations of each method in order to simplify the groupings. The third and most simplified method was finally selected. The system consists of three Level One clusters namely: ‘Service Level’; ‘Service Provider Level’ and ‘Sector Level’ (see Appendix C - C3). The data referring to ‘why’ or ‘purpose’ of M&E has also been clustered, according to four conceptual frameworks using associated terms as set out in Table 3-9, Section 3.4.7.

Table 3-10 Metrics for Clustering by Inspection

Method	Description	Cluster		
		L1	L2	L3
1	Single cluster using judgement and frequency of recurrence	80	Na	Na
2	Three levels of clustering using judgement	9+	42+	60+
3	Three levels of clustering using a pre-determined classification for Level 1 (L1) and possible criteria for L2 and L3	3	33	99+

With the inconsistencies in the cost data, clustering by a specified cost typology was a challenge. However, as suggested in Section 3.4.7 initially two main cost typologies were considered. Subsequently, to allow analysis and presentation of the 'cost' data were considered including (but not limited to): clustering by national institutional framework; research project stakeholder map; stakeholder level; by tool, method or approach of M&E activities, to name but a few. See Section 3.4.9 Data Display, for others. An alternative would have been to consider the cost of monitoring and evaluation versus the cost of not monitoring, however, this would have required additional information not considered or sourced within this research project.

Counting

Taking into account the time factor, counting by inspection is possible for small numbers however with most data being contained in Excel© and Word©, counting was completed using software, in turn improving time efficiency of analysis. Counting by software is predominantly used through word counts, pivot tables or other applications within Excel© and Word©.

Content analysis

This tool was initially considered for newspapers, minutes of meetings and speeches however, disregarded when the majority of the data records collected did not satisfy these data types. As referred to above, software was considered and applied for clustering of data however was not successful. In general terms, software, such as NVivo, was also considered for the complete qualitative analysis process. With technology advancement as it is today, qualitative analysis and social science research method literature report on both the advantages and disadvantages in using software to aid the analysis. The advantages range from the ability of software to “handle large amounts of data; aid the development of consistent coding schemes; and provide an organised single location storage system” (Robson, 2002). Where the researcher believed the potential of software to aid the analysis process was in terms of eliciting themes and analytical coding. However, Thomas (2011) suggests that “a set of highlighters do the job just as well, if not better”. The primary disadvantage

pertinent in the case of this research, given the situation that the researcher is self-funded, is the fact that “proficiency in the use of new (to the researcher) software takes time and effort which comes at an additional financial cost”. As a compromise the researcher, albeit not using technology to manage the whole qualitative analysis process, has utilized alternative software for discrete components of analysis and data display such as Wordle, Excel, Qualtrics, Mind Manager 8.

3.4.9 Data Display

Matrices, graphs, charts and vignettes are the main types of data display tools to display any patterns, trends or dichotomies. Word clouds, networks and storyboards were used as part of the ancillary data analysis but subsequently not added in the Thesis as the researcher believed they did not add value.

Presentation of the ‘cost of M&E’ analysis was reviewed several times prior to carrying out data collection and subsequent data reduction activities however, during the process of analysis the way in which the findings would be presented was reviewed again for two main reasons. First was in response to the limited and diverse nature of cost information available within the documents and data collected. Second was to provide a framework for the second round of fieldwork and maximise the opportunity of collecting data to fill the current gaps in data. The pros and cons of eight different ways were considered and assessed as summarised in Table 3-11. Based on the data available the decision was made that number one would be the way in which to present the findings. Numbers two and three could be considered, however, provided a challenge in terms of retaining anonymity. Number four and five also remained options however, required further data. Despite a continuing interest in presenting findings as described in numbers six, seven and eight, with the limited data available, these will have to be ‘parked’ as options for the future.

Table 3-11 Review of Data Visualisation Methods - Cost of M&E

#	Data Visualisation	Pros	Cons
1	Vignettes providing analysis of data record – similar to an annotated literature review.	Diversity of data set is less of an issue and normalisation of data not necessarily required. Provides an easier method for anonymity.	Comparisons, trends and patterns difficult to identify.
2	Storyboard mandate and financial data against the Institutional framework as defined within the country level National Water Strategy.	Recognised structure from which to assess a cumulative national based sector cost of M&E. Highlights the gaps in the data availability.	Data gaps would result in an incomplete picture and likely lead to the 'so what' question. Only accounts for a portion of the stakeholders identified as part of this research project. Does not readily allow for anonymity. Does not readily include off-budget costs.
3	Storyboard mandate and financial data against the stakeholder map prepared for this research project.	Recognised structure from which to assess a cumulative national and international sector cost of M&E relating to the country. Highlights the gaps in the data availability.	Data gaps would result in an incomplete picture and likely lead to the 'so what' question. Only accounts for a portion of the stakeholders identified as part of this research project. Does not readily allow for anonymity.
4	Storyboard using the levels of M&E defined as Global; National; Sector; Regional; Programme; Individual.	Recognised structure from which to assess a cumulative national and international sector cost of M&E relating to the country. Highlights the gaps in the data availability.	Issue of lack of available data remains.
5	Presentation of data in terms of M&E approaches used i.e. the various tools, methods and approaches i.e. Water point mapping; Performance indicators; monitoring the MDGs.	Potentially provides an easier method for anonymity.	Issue of lack of available data remains.
6	Presentation of findings based on M&E for internal or external purposes.		Issue of lack of available data remains.
7	Presentation of findings	Potentially provides an	Issue of lack of available data

#	Data Visualisation	Pros	Cons
	based on component of the M&E process such as (but not limited to) data collection; data analysis; verification; validation; reporting; dissemination.	easier method for anonymity.	remains.
8	Expanding presentation of cost of monitoring to include cost of not monitoring.	Increases potential sources of data. Potentially provides an easier method for anonymity.	Adds to the framework of analysis.

3.4.10 Quality, triangulation and validation

Some authors consider quality as a principal concern rather than validity and reliability, in a case study strategy (Thomas, 2011; Smith & Deemer, 2000). Others, like Silverman (2010), considers “...validity and reliability as critical components ensuring rigour and robustness of research method”.

A series of ‘quality indicators’ (Box 3-5), as set out by Hammersley (2005) and adapted by Thomas (2011), guided the case study strategy and writing. In addition, as referred to at the start of section 3.4, the research design was based on an adaptation of Creswell & Plano Clark (2007), mixed method triangulation design: Validating Quantitative Data Model whereby qualitative data has been used to validate quantitative data (Figure 3-2).

Triangulation is almost implicit in the research methodology since the adoption of a case study strategy, using a multiple mixed method design has allowed the researcher to consider multiple perspectives from different angles and it is the “collation of these methods that provide the triangulation” (Thomas, 2011).

Revisiting the point that the chosen method for this research includes a strategy whereby qualitative data validates quantitative data, validation has also been sought through:

- Key informant interviews to validate case study country stakeholders.
- Presentations at conferences / briefing papers as a basic peer review method.
- E-survey to validate use of M&E data records.

Box 3-5 Quality indicators used to guide the research

Quality Indicators

The clarity of the writing:

Is there consistency in use of terms?

Are definitions provided where necessary?

Are sentences well constructed?

The problem or question being addressed:

Is this clearly outlined?

Is sufficient rationale provided for its significance?

Methods used:

To what degree, and in what respects, was each of the methods chosen (as regards selection of cases for study, data collection and data analysis) likely to be an effective one?

The account of the research process and the researcher:

Is there sufficient, and not too much, information about the research process?

Is there sufficient, and not too much, information about the researcher?

The formulation of the main claims:

Are the main claims made clear?

Are the relations between claims and evidence made clear?

Is the nature of each claim (as description, explanation, theory or evaluation) indicated?

3.5 Assumptions and Risks

Various assumptions, challenges and risks were identified during the course of the research. With close monitoring and by taking a flexible and reflexive approach to the research design and implementation, few if any were viewed as insurmountable. A completed matrix stipulating the assumption, risk and risk mitigation is available upon request.

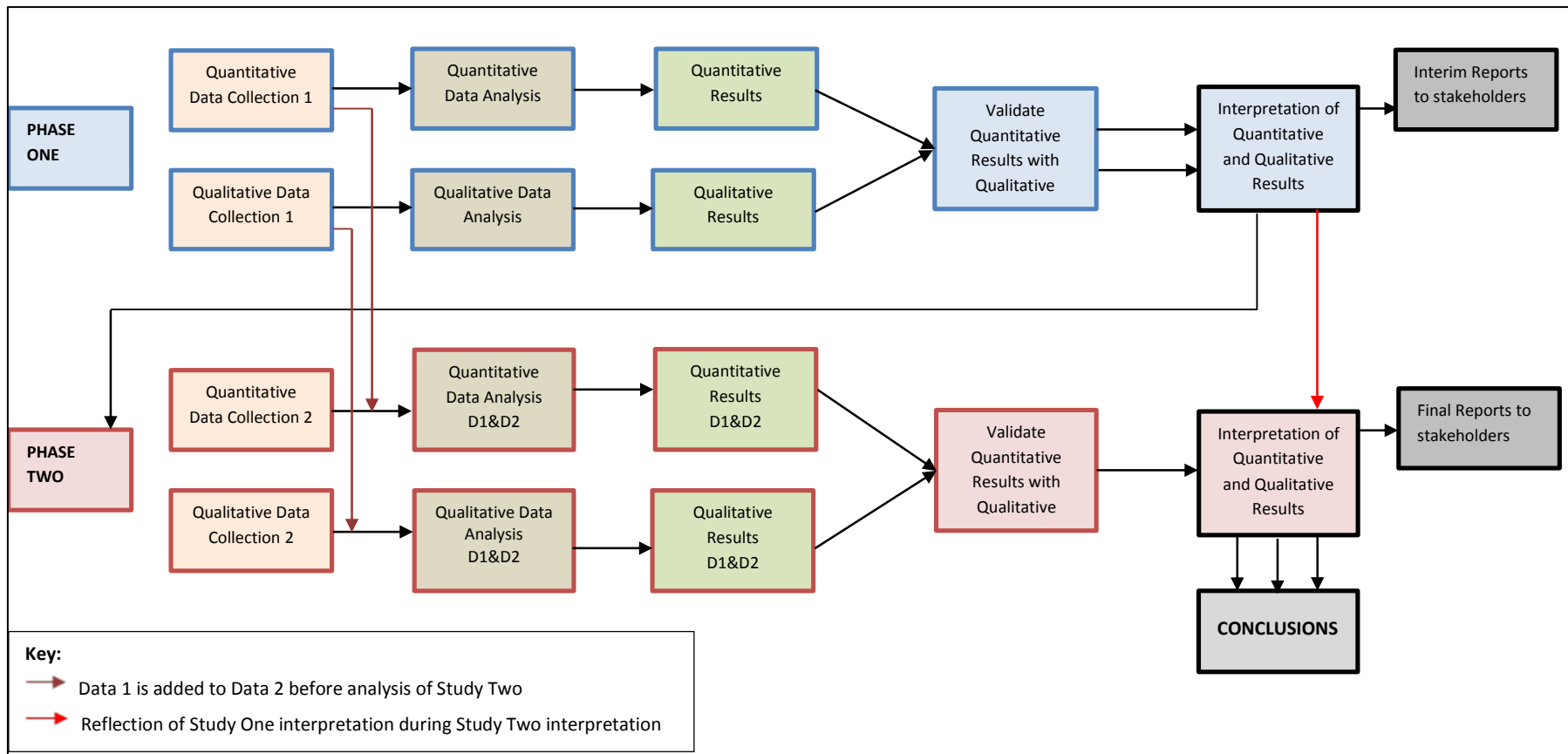


Figure 3-2 Validating Quantitative Data Model

(Source: Adapted from Creswell and Plano Clark (2007))

4 GLOBAL CASE STUDY

4.1 Introduction

There are in the region of 196²² countries across the world (Rosenberg, 2012), which are host to many different cultures, social and political environments. In addition people are communicating across almost 7,000 living languages (One World, 2009). This resultant diversity naturally has the potential to lead to inconsistencies in global reporting of monitoring and evaluation of water and sanitation service delivery.

When overlaying the diversity with the politics, culture and general enabling environments of the numerous agencies, institutions and organisations involved in international development aid and the types of projects and programmes being implemented, another layer of complexity is added to the mix. Taking just one simple example can highlight the degree of difference in reporting. According to World Bank data, country numbers equal 214 (WB, 2013), with economic classifications broken down as 36 low-income countries, 48 lower-middle, 55 as upper-middle and 75 as high income countries. Alternatively, OECD reports against recipient countries, which total 149, with the economic classification broken down as 49 'least developed' countries; 5 'other lower'; 40 'lower-middle' and 54 'upper-middle' income countries (OECD, 2013). In turn these differences have a potential knock-on effect with decision-making. For example, if allocation of development aid resources is directed at a particular economic classification whose classification is favoured and on what grounds?

Another layer of elements that have had an impact and are likely to continue to impact the evolution and fabric of monitoring and evaluation include population growth, climate change, global financial crises and the resultant economic austerity measures as well as aspects such as technological advancement. Whilst the implications and consequences of each vary, together they culminate in a multifariousness of other dynamics that need acknowledgment.

²² Of which 193 are members of the United Nations. Other references suggest anywhere up to 230, by including constituent countries or territories.

At the sector level however, there are other more prominent aspects of variance that seem to exist such as a consequence of culture and language. As reported in Chapter two, definitions and interpretation could result in challenges irrespective of the direction of information flow as can different levels of capacity and capability. Therefore both scenarios are likely to affect global level reporting irrespective of whether, the information is sourced or reported at a country level or global level.

4.1.1 Monitoring and Evaluation Globally

The literature review considered the theoretical evolution of monitoring and evaluation over the last fifty years both generally and more specifically in relation to the WASH sector. In terms of understanding what is happening in practice, a starting point is to examine who are the stakeholders involved in monitoring and who are the stakeholders involved in evaluation for the sector at a global level. In reality, one can only really speculate at the numbers of organisations, institutions, companies and individuals likely to be involved. However, given the multiplicity of stakeholders and the lack of clarity over numbers, there is a strong likelihood of both theoretical and actual duplicity of effort of both M&E by global level stakeholders.

4.1.2 Funding and Investment

Knowing exactly how much is globally invested in the water and sanitation sector is a challenge as is evidenced within the UN-Water GLAAS reports of 2010 and 2012. Knowing exactly how much is globally invested in monitoring and evaluation of the water and sanitation sector is even more of a challenge. Based on the literature review an assumption can be made that it is simply not known, or certainly not reportedly known. What is known about, or at least estimated, is the following:

- From approximately 40 donors, “the total annual average aid commitments to water and sanitation amounted to USD 8.3 billion”) – which indicates a continuing increase on previous years as depicted in Figure 4-1 (OECD-DAC, 2012).

- National government expenditure on WASH service delivery is an additional amount to that reported by OECD-DAC (2012) data.
- Development aid investment for WASH, in 2008, (Figure 4-2) compared to Education and Health differs significantly, with Education being approximately one and a half times that of WASH and Health being one and a half times Education (UN-Water, 2010).

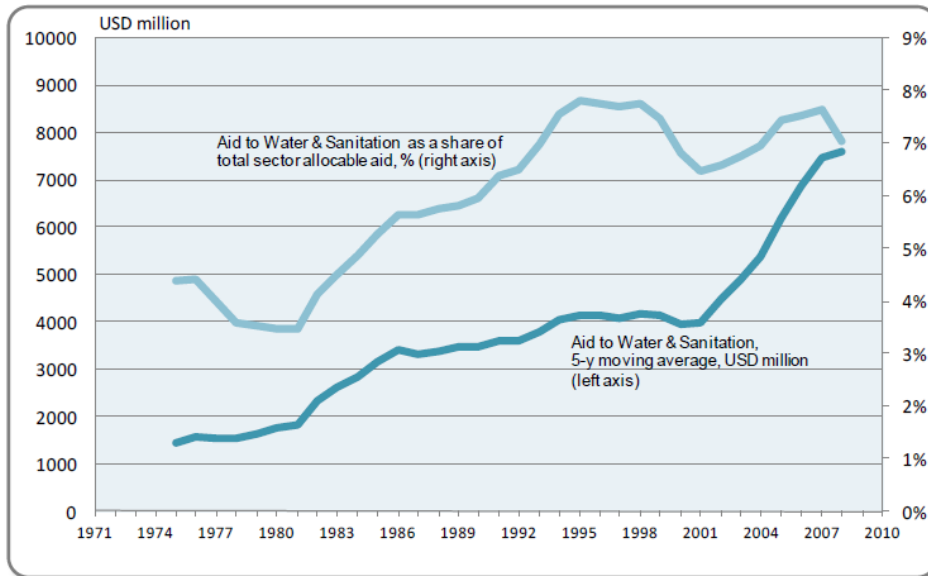


Figure 4-1 OECD Trends analysis of aid to water and sanitation.

(Source: OECD-DAC (2012))

Irrespective of whether the funds are channelled through development partner projects, budget support, technical assistance, special programmes, basket funds, or national government programmes and projects, accountability in some form is required. In turn, this requires some form of monitoring and evaluation.

In an age of transparency and accountability where technological advancement is rapid and when many countries are using performance reviews to monitor and evaluate the sector, somewhat conversely “over 60% of countries either have no financial information management systems in place or use one that provides only partial information” (UN-Water, 2012).

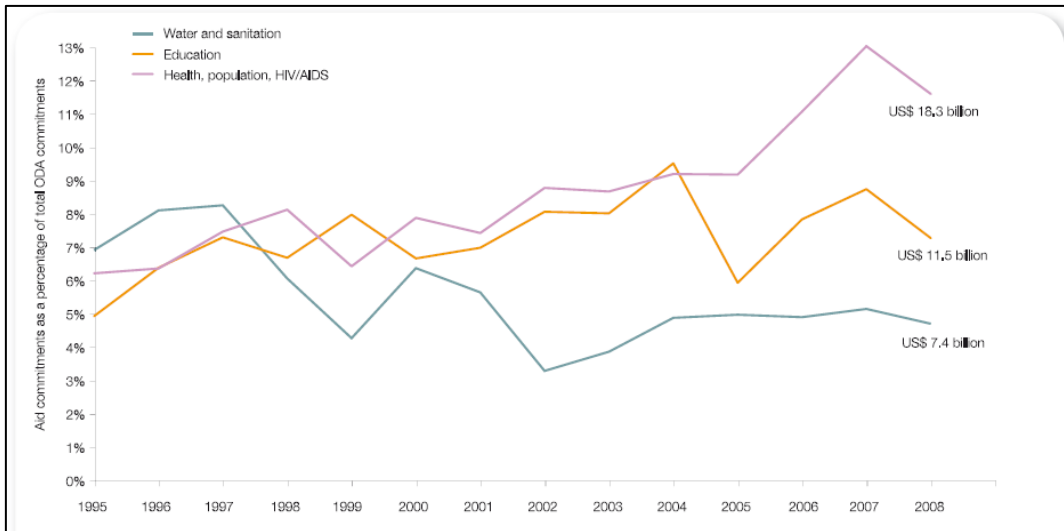


Figure 4-2 Comparative trend analysis of water and sanitation, health and education as a percentage of total ODA commitments

(Source: UN-Water, 2010 – GLAAS, taken from OECD, 2010a.).

Another way of looking at spending patterns is to consider expenditure as a share of GDP of a country. The World Bank, Water Partnership Programme (2012), examined historic spending (2000-2008) for eight countries (Table 4-1). However, what is missing is an agreement on what is an appropriate percentage of GDP spending for a country.

4.1.3 Institutional Framework

According to WB (2008), in 2005 there were some 230 international organisations, funds and programmes with approximately 30 donors operating per country: representing a 3-fold increase, between the 1960s and 2005. The consequence has been the increased ‘complexity of the global aid architecture’. In conjunction with the increasing global investment in the sector, there have been a series of global goals and targets (Figure 4-3). Furthermore, since the inception of this research a series of additional and potentially significant activities have occurred:

- Signing and passing of the Human Right to water and sanitation by the United Nations General Assembly (A/RES/64/292).

- Dialogue and consultation in relation to the setting of the post-2015 targets – Sustainable Development Goals.
- The Sanitation Water for All partnership has also set up a Global Monitoring Task Team with the view to setting up a 'shared monitoring framework' (SWA, 2012).

Table 4-1 Expenditure as a Percentage of GDP

	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
Rural only										
Burkina Faso		0.42	0.14	0.19	0.15	0.26	0.49			0.28
Cameroon			0.16	0.09	0.07	0.11	0.05	0.11		0.10
Cote d'Ivoire			0.06	0.02	0.02	0.01	0.01	0.03		0.03
Ethiopia									0.26	0.26
Ghana		0.15	0.38	0.36	0.17	0.41	0.48			0.33
Madagascar	0.08	0.13	0.06	0.09	0.12	0.26				0.12
Mali		0.38	0.27	0.18	0.30	0.53	0.60			0.38
Niger			0.28	0.36	0.75	0.62	0.40	0.97		0.57
Rural Mean	0.08	0.27	0.19	0.18	0.23	0.32	0.34	0.37	0.26	0.26
Rural & Urban										
Central African Republic			0.02	0.06	0.11	0.04	0.14	0.18	0.44	0.14
Congo Dem. Repub. of			0.01	0.01	0.20	0.54	0.48	0.69	0.51	0.35
Congo Repub. of			0.12	0.16	0.16	0.09	0.42	0.19	0.16	0.19
Mozambique		0.30	0.51	0.88	0.67	1.24	0.82	1.21	1.20	0.85
Sierra Leone			0.18	0.15	0.30	0.50	0.97	0.53	0.38	0.43
Tanzania		0.35	0.29	0.58	0.54	1.16	0.95			0.64
Togo			0.06	0.12	0.17	0.16	0.42	0.05	0.12	0.16
Rural & Urban Mean		0.65	0.24	0.39	0.43	0.93	0.84	0.71	0.70	0.39
Overall Mean	0.08	0.35	0.21	0.27	0.31	0.49	0.57	0.49	0.77	0.32

(Source: WPP, World Bank, 2012)



Figure 4-3 Global water and sanitation goals and targets timeline

(Source: adapted from Norman & Franceys, 2011)

For the purposes of this research project a total of 26 stakeholders from public, private and civil society organisations, have been selected for data collection and analysis at the global level (see Appendix D – D1). Whilst there is an apparent bias towards high-income global stakeholders, recognition must be given to the fact that this research project is focusing on the influence of the global environment within the context of the two country case studies. Therefore, there is a propensity to gravitate towards donors and development partners, which invariably are the high-income countries.

4.2 Methodology

Even though each of the three phases, as set out in Chapter 3, were carried out for the Global Case, they were done so to a lesser extent and in a slightly less systematic way than the case studies of Kenya and Uganda. Unable to travel to the various global locations of the stakeholders the research was conducted on a more remote and intermittent basis.

The timeline periods, for data collection, are as follows:

- October – December 2010: Preliminary data collection testing the interest and willingness of stakeholders to participate.
- January – December 2011: Remotely accessed and limited on-site data collection relating to study one, including semi-structured interviews.
- STEPS Symposium (March 2011) – testing of emerging ideas.
- WEDC Conference (July 2011) – testing of emerging ideas.
- RWSN Conference (Nov/December 2011) – data collection.
- January – December 2012: Remotely accessed data collection.
- World Water Forum – on-line forum data collection.
- January – August 2013: Remotely accessed and limited on-site data collection relating to study one and study two, including semi-structured interview.
- IRC Symposium (April 2013) – testing of emerging ideas.

A series of on-line webinars were also accessed during the three years of the research.

4.2.1 Document and data archive reviews

As reported in Chapter 3, the sourced documents were reviewed, catalogued and through data reduction techniques, information on each of the six themes, were extrapolated (Table 4-2).

4.2.2 Key Informant Interviews and Semi-Structured Interviews

Over the course of the research period 13 session summaries have been documented (Table 4-3), cleaned, coded, analysed and interpreted as per the methodology.

The schedules, as set out in Appendix B, were used to guide the interviews. Due to time and resource constraints, the number of interviews carried out remained limited. Through the attendance at international symposia and conferences, a few informal discussions were also carried out as a complimentary, un-recorded data set of information.

Table 4-2 Numbers of document review data records by component

Data Record	What	Why	How	Cost	Use	VfM
Yes	115	271	362	145	48	79
No	340	193	103	308	126	407
Na	46	32	33	32	29	31
TBD	34	39	37	50	331	18
Blanks	40	40	40	40	40	40
Total	575	575	575	575	575	575
Yes as %	20%	47%	63%	25%	na	14%

Table 4-3 Numbers of session summaries

Activity	Session Summaries	Recorded	Not recorded
Scoping Fieldwork	5	1 x KII	4 x KII
Study One & Two Fieldwork	8	3 x SSI 1 4 x SSI 2	1 x KII
Total	13	8	5

4.3 Results

The results are presented by research objective rather than study phase or data collection tool, in an attempt to build up an evidence base in a logical framework manner as determined through the approach and methodology set out in Chapter Three.

A series of graphs, charts and matrices are used to present some of the findings and are embedded within the narrative. Where the figures and tables are referred to but deemed as supportive illustrations only, they are contained within Appendix D and referenced accordingly within the narrative.

Of the 575 documents sourced, 415 relate to development partners, 119 relate to non-governmental organisations and the balance 41 refer to 'other' stakeholders, considered complementary rather than core. Due to time constraints, only partial analysis has been carried out on the complementary records. For a series of basic analysis see Appendix D-1.

4.3.1 Objective One

To identify the evolution of M&E approaches and associated indicators within the WASH sector over the last 20-years and map them against what has initiated the change.

As an organisation, WHO has been nationally, regionally and globally monitoring water and sanitation services since the early 1960s (WHO, 1985b) and published data since 1970 as depicted by the 'population served' data in Table 4-4. In 1982 WHO produced a protocol on national and global monitoring and in 1985 a simplified evaluation procedure was also developed - the Minimum Evaluation Procedures (MEP), - coinciding with the International Drinking Water Supply and Sanitation Decade. The procedure places emphasis on two key evaluation activities (functionality and utilization), with an optional third (impact), consideration (see Figure 4-4). Furthermore, the procedure recognises the aim of an evaluation to 'learn and improve', is to be used as a 'planning tool' and that 'the best information comes from the consumer' (WHO, 1985a)

Table 4-4 Coverage data as reported by WHO (1970-1999)

Service Area	Population Served (%)								
	1970	1975	1980	1983	1985	1988	1990	1994	1999
Global									
Urban water	65	74	73	74	75	83	95	82	94
Rural water	13	20	32	39	42	57	66	70	71
Total water	-	-	46	-	54	65	79	75	82
Urban sanitation	54	50	49	52	59	67	81	63	86
Rural sanitation	9	11	13	14	16	19	35	18	38
Total sanitation	-	-	39	-	31	37	55	34	60
Africa									
Urban water	66	68	66	61	78	83	81	-	83
Rural water	13	21	22	26	25	31	36	-	42
Total water	-	-	32	-	40	46	49	-	56
Urban sanitation	47	75	54	68	73	54	79	-	81
Rural sanitation	23	28	20	25	25	21	47	-	41
Total sanitation	-	-	28	-	38	30	56	-	55

(Source: WHO, 2000).

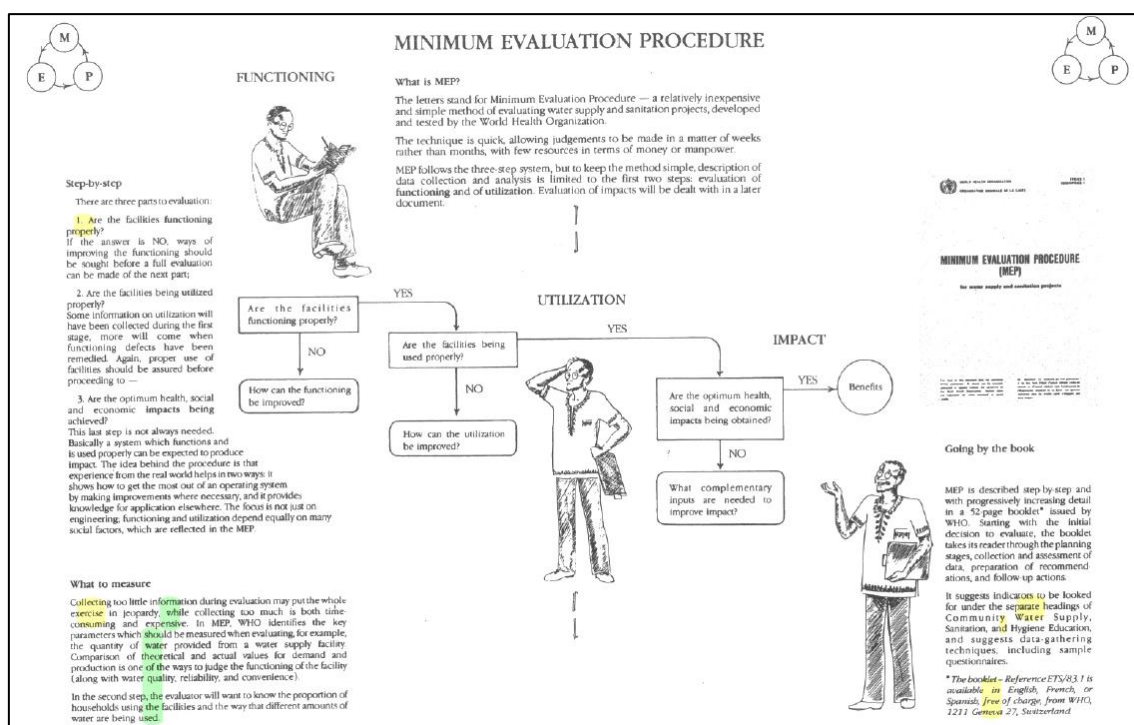


Figure 4-4 Evaluation of functionality, utilization and impact

(Source: WHO, 1985a)

From the 575 documents and data archives sourced, 258 (44%) contain some form (actual indicator with or without value or a description within the narrative). of indicator data relating to the WASH sector. Whilst many of the data records also referenced other sector indicators, for the purposes of this study, they are not included.

Some key findings from the analysis include:

- Approximately 6% of documents sourced contain definitions of monitoring, or evaluation or both.
- A total of 3321 indicator entries were extracted from the data records across three distinct types of indicators:
 - Harmonization and Alignment – Paris Declaration indicators
 - Water, Sanitation and Hygiene – Sector indicators
 - Comparable statistics - indicators
- A total of 353 (61%) documents contain information on approaches and method of M&E.
- Some reports contain objectives, actions and activities but do not include associated indicators from which to monitor the progress of such.

On first inspection of the results show that over a 30-year period, 2024 different indicators were reported of which 1699 appeared as a single entry – i.e. unique to one or other of the data records. This represents 51% of overall entries and demonstrates a fairly wide spread of indicators.

By taking a closer look at some of the data of just one stakeholder²³, examples of core indicators can be identified. For example, during a series of meetings held between government, external support agencies and other professionals, WHO/UNICEF defined a core set of three indicators: coverage, management and funding (More recently the WHO/UNICEF Joint Monitoring Programme (JMP), has further refined the indicator framework with the introduction of improved and unimproved categorisation coupled with an associated sanitation ladder and water ladder to determine level of progress of coverage.

Box 4-1). Another example as reported by JMP (1993) is that in order to enhance country-level sector monitoring and for monitoring national progress towards their goals, both the “Mid-decade and the World Summit for Children also had the same two ‘coverage’ indicators” namely:

²³ WHO/UNICEF

- Safe drinking water coverage: proportion of population with access to an adequate amount of safe drinking water located within a convenient distance from the user's dwelling.
- Sanitary means of excreta disposal coverage: proportion of population with access²⁴ to a sanitary facility for human excreta disposal in the dwelling or located within a convenient distance from the user's dwelling.

More recently the WHO/UNICEF Joint Monitoring Programme (JMP), has further refined the indicator framework with the introduction of improved and unimproved categorisation coupled with an associated sanitation ladder and water ladder to determine level of progress of coverage.

Box 4-1 JMP facilitated 'Simple Core Indicators'

<p>Coverage</p> <p>Quantifies the population served with different systems ranging from household water and sewerage connections, to hand-pumps and improved pit latrines.</p>
<p>Management</p> <p>Seeks to quantify the contribution made by users, beneficiaries or communities to operation and maintenance (O&M) costs. This management indicator attempts to put a monetary value to community inputs for operation, maintenance and management. Although it is recognised that such a proxy indicator cannot satisfactorily reflect the total spectrum of community inputs, it is however, hoped to improve the monitoring of community management over time.</p>
<p>Funding</p> <p>Used to estimate the total funds invested in the sector and to determine the proportion of investments made in low-cost technologies. Information obtained from data on funding will assist decision makers to monitor whether investments for the un-served populations are adequate and what policy changes are needed.</p>

(Source: Adapted from WHO/UNICEF, 1992)

On repeated visual, line by line inspection of the indicators some appeared to be synonymous with only minor differences in phraseology. In order to aid further analysis, the data was clustered as described in section 3.4.8 Data analysis. The results of this initial clustering are presented in Table 4-5 and the pie chart and graph in Figure 4-5 and Figure 4-6 respectively. There are just

²⁴ In both indicators, access was to be interpreted as 'actual use' by the population.

over one and a quarter times as many service provider indicators as sector indicators and just over twice as many service indicators than there are service provider indicators.

Table 4-5 Number of Cluster Level One Indicator Entries

Cluster Level One	Service	Service Provider	Sector	Other	Total
Number of indicator entries	1799	830	627	65	3321
% of total indicator entries	54%	25%	19%	2%	100%

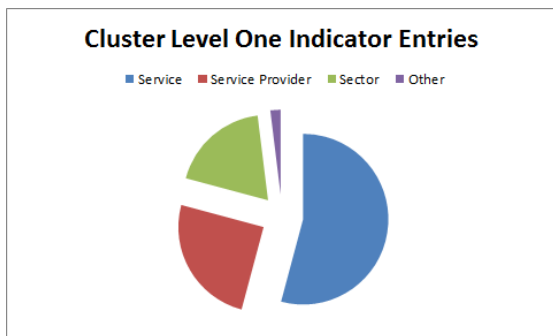


Figure 4-5 Proportion of Cluster Level One Indicator Entries

There is approximately a 90:10 split of numbers of indicators being reported against, between development partner and non-governmental organisations respectively, which is also reflected in Figure 4-6. The limited indicator numbers for civil society organisations may reflect the small number of entities that the research is engaging with (7 out of 26). However, in making an assumption that the number of documents may correspond with the proportion of stakeholder type, one quarter of the documents should therefore be related to civil society organisation. In fact, only 18 out of the 115 documents (15%) are attributed to CSO organisations. In turn the proportion of total indicator entries is even less at approximately 10%.

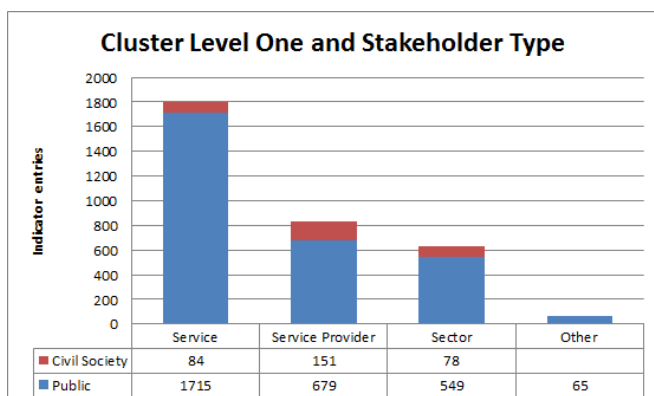


Figure 4-6 Number of Cluster Level One Entries by Stakeholder Type

Taking each of ‘service’, ‘service provider’ and ‘sector’ in turn the following sections highlight some of the patterns.

Cluster Level One: Service indicators

Service indicators span from “improved water or sanitation” or quantity, quality and distance to water points clustered as ‘coverage’ through to “continuity” or “interruption of water supply...” clustered as ‘functionality’. The ‘use’ cluster covers indicators such as “use of improved drinking water...” and “proportion of population using improved sanitation...”, whereas the ‘impact’ cluster covers data referring to (but not limited to) child or maternal mortality rates and school enrolment or regular attendance rates.

Table 4-6 Number of Cluster Level Two Indicator Entries

Cluster	Coverage	Functionality	Use	Impact	Total
Number	1023	36	643	97	1799
%	57	2	36	5	100

Not only is coverage the most frequently reported against service level indicator at 57% (Table 4-6), coverage is the most frequently reported against indicator out of all indicator entries at just over 30%. Analysing the cluster by stakeholder sub-type, as shown in Table 4-7, both stakeholder sub-type is primarily reporting against ‘coverage’ at a service level. In the case of development partners, ‘use’ is also frequently reported. In both cases ‘functionality’ and ‘impact’ indicator clusters remain minimal.

Table 4-7 Number of Service Level Two Indicators by Stakeholder Type

Service Indicator Cluster	Development Partner	Non-governmental Organisation	Total
Coverage	961	62	1023
Functionality	22	14	36
Use	640	3	643
Impact	92	5	97
Total	1715	84	1799

Cluster Level One: Service Provider indicators

There are currently 26 level two clusters associated with ‘service provider’ indicators (Table 4-8). The category of ‘organisational development’ represents the most frequently cited indicator for development partners (17% of service provider entries), whereas ‘participation’ features most prominently for non-governmental organisations (34% of all service provider entries).

Table 4-8 Number of Service Provider Level Two Indicators by Stakeholder Type

Service Provide Indicator cluster	Total number of indicator entries	Development Partner	%	Non-Governmental Organisation	%
Availability	87	81	12%	6	4%
Capacity & Capability	6	1	0%	5	3%
Consumer relations	20	11	2%	9	6%
Customer satisfaction	5	1	0%	4	3%
Environment	29	29	4%		0%
Finance	37	33	5%	4	3%
Financial	53	52	8%	1	1%
Financial management	83	73	11%	10	7%
Financial performance	38	35	5%	3	2%
Governance	1	1	0%		0%
IEC	43	39	6%	4	3%
Impact	4	4	1%		0%
Implementation	12	10	1%	2	1%
Information management	10	5	1%	5	3%
Infrastructure	1	1	0%		0%
M&E	30	26	4%	4	3%
O&M	20	9	1%	11	7%
Operations	25	9	1%	16	11%
Organisational development	124	115	17%	9	6%
Participation	143	92	14%	51	34%
Planning	28	22	3%	6	4%
Procurement	1	1	0%		0%
Regulation	2	1	0%	1	1%
Re-use	3	3	0%		0%
Sustainability	23	23	3%		0%
Technology	2	2	0%		0%
Totals	830	679	100%	151	100%

Cluster Level One: Sector indicators

With 19% of the indicators clustered as 'sector' indicators, there are currently 27 level two categories (Table 4-9). In terms of development partners the most frequently reported entry is for 'policy' related indicators whereas for non-governmental organisations, 'information management' is the most frequently reported.

Table 4-9 Number of Sector Level Two Indicators by Stakeholder Type

Sector Indicator cluster	Total number of indicator entries	Development Partner	%	Non-Governmental Organisation	%
Availability	5	5	1%		0%
Best practices	2	2	0%		0%
Environment	15	15	3%		0%
Finance	16	15	3%	1	1%
Financial	55	55	10%		0%
Financial management	35	35	6%		0%
Framework	1	1	0%		0%
Governance	35	32	6%	3	4%
Guidelines	7	7	1%		0%
IEC	2	2	0%		0%
Impact	3	3	1%		0%
Implementation	13	13	2%		0%
Information management	71	25	5%	46	59%
Institutional	6	6	1%		0%
Legislation	14	10	2%	4	5%
Legislation	4	4	1%		0%
Lobbying/Advocacy	4	4	1%		0%
M&E	61	60	11%	1	1%
Organisational development	28	27	5%	1	1%
Other	13	11	2%	2	3%
Participation	36	36	7%		0%
Planning	69	64	12%	5	6%
Planning	1	1	0%		0%
Planning & Regulation	1		0%	1	1%
Policy	107	96	17%	11	14%
Regulation	21	18	3%	3	4%
Standards	2	2	0%		0%
Total	627	549	100%	78	100%

Box 4-2 General finding on indicator entries related to impact

A general finding: Approximately 3% (105) of all global indicator entries relate to impact. In order of frequency (high to low), the level three clusters making up the 3% are:

- Health (50%); Economic (26%); Environment (8%); Education (6%); Social inclusion encapsulating gender and equity (6%).

The balance remaining were inconclusive.

Through completing a temporal analysis of the number of documents sourced and mapping them against the number of documents that contain indicators, shows a divergence over time (Figure 4-7). Taking the analysis further, the chart in Figure 4-8 shows an overview of the average number of indicator entries per data record over a 15-year period. The spike in 1998 relates to the fact that whilst only two documents were sourced one – a guideline - contains 209 indicators whilst the other – an annual performance report – contains only 12.

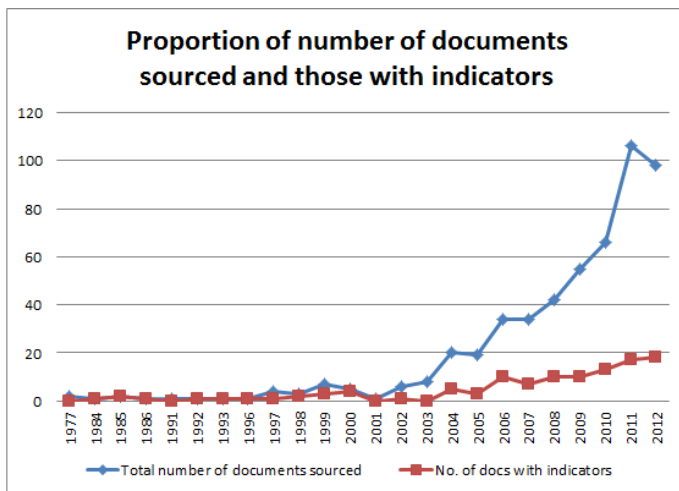


Figure 4-7 Proportion of document containing indicators over time

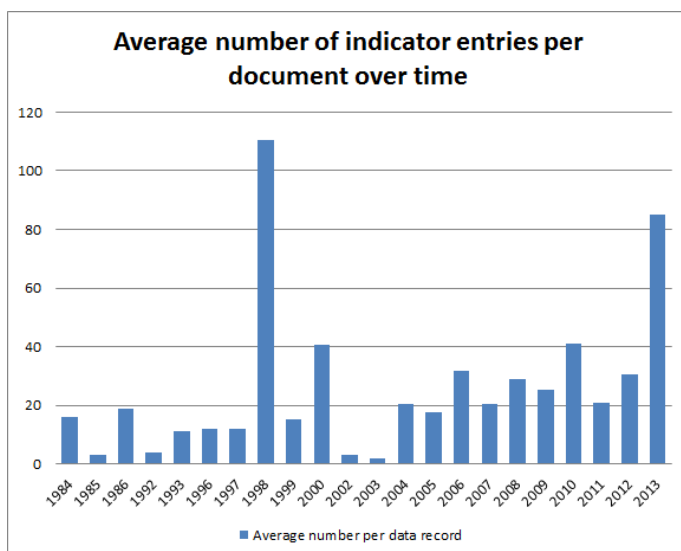


Figure 4-8 Average number of indicator entries per document

An overview of the years of reported data by published year can be found in Appendix D-2. Some notable analysis includes:

- 2012 is the published year reporting against the most number of indicator entries.
- 1998 is the year with the highest average number of reported indicators per data record.
- 2011 is the year when the highest number of different years of actual data was reported.
- 1990 and 2008 are the two most frequently reported against years in terms of actual data.

Taking a closer look at the last 20-years of clustered data, Figure 4-9 and Figure 4-10 highlight the extent of the continued reporting of service level indicators over time. The chart in Figure 4-9 also clearly indicates the introduction of service provider indicators in 1998 and despite the reporting of sector ones in 1986, a more systematic reporting is seemingly introduced from 2006 onwards. The chart in Figure 4-11, highlights the continued reporting of coverage indicators. In terms of the functionality indicators, albeit seemingly introduced in 1998 they remain sporadically reported. The 'use' related indicators, also introduced in 1998, appear more frequently over the following years and by 2010, 2012 and exceed those of coverage during 2013. In terms of the 'impact indicators', despite also being introduced in 1998 reporting has remained limited.

When reviewing the analysis of Service Provider level two indicators (Figure 4-12), as with the Sector level two indicators a more complex picture is presented. Relative to the Service level, many of the level two categories neither feature regularly or consistently in terms of frequency of reporting.

In terms of the interviews held with stakeholders, no specific discussions are raised with respect to how indicators change over time.

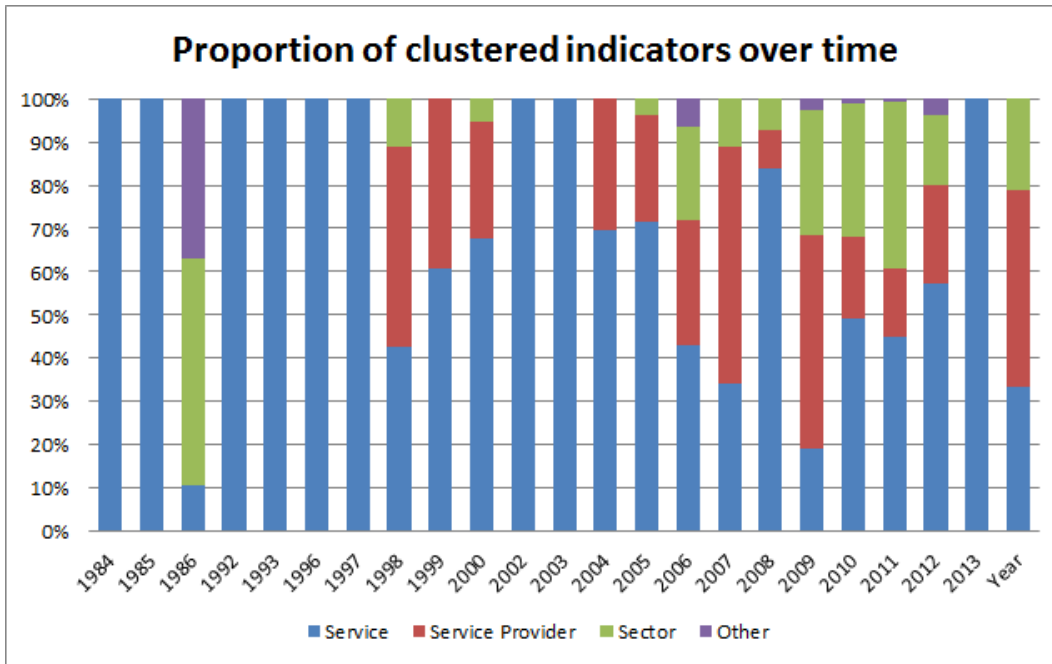


Figure 4-9 Proportion of clustered indicators, over time

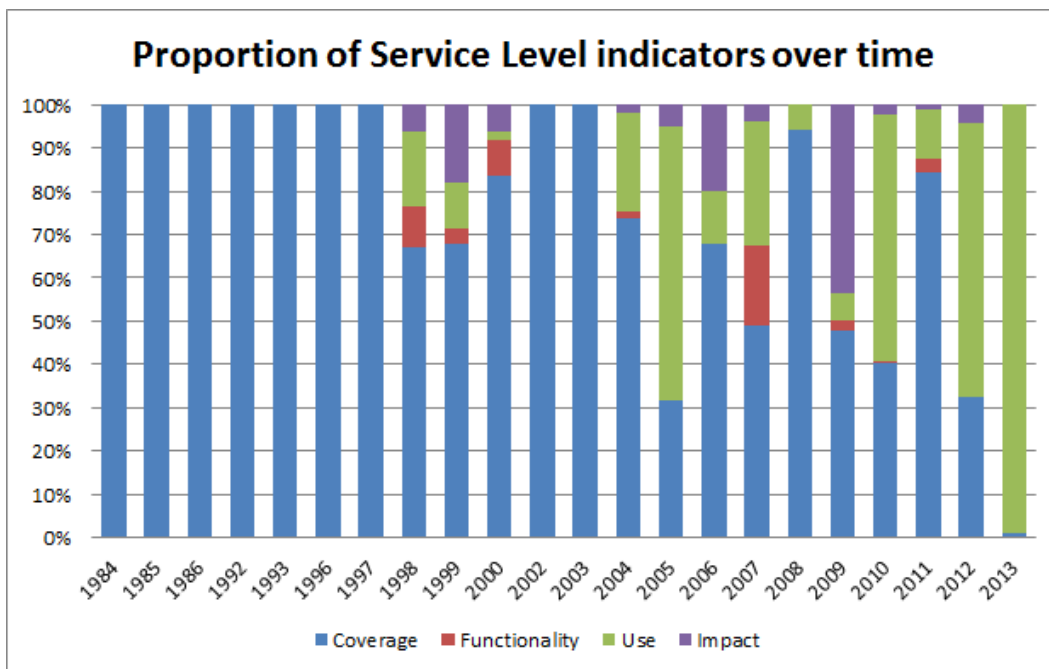
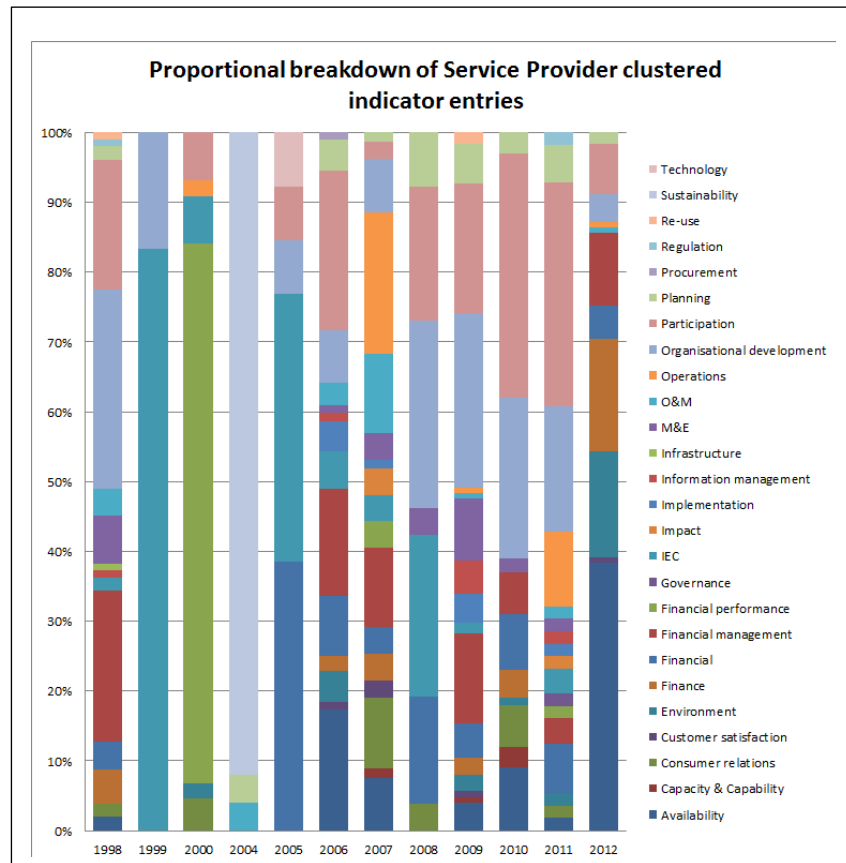
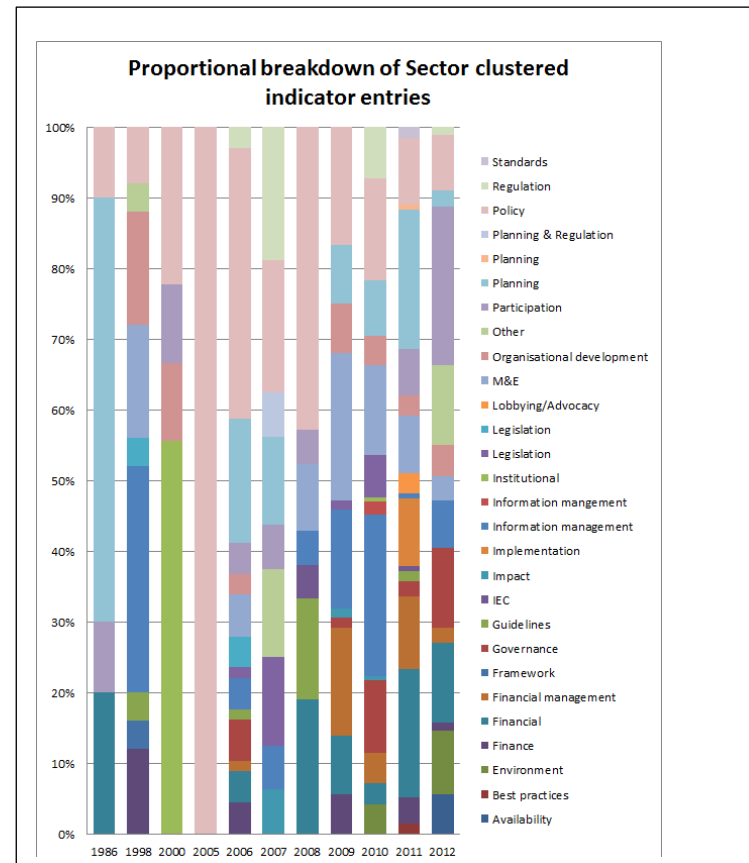


Figure 4-10 Proportion of indicator entries for service level, over time



(Figure 4-11)

Figure 4-11 Proportion of indicator entries for service provider level, over time



(Figure 4-12)

Figure 4-12 Proportion of indicator entries for sector level, over time

Another characteristic to understanding the evolution of indicators is to consider the consistency and quality of data. A sample of 1990, 1995, 2000, 2005, 2010 and 2015 baseline, actual and target values were examined (see Appendix D-3 for detailed analysis). The criteria used for the selection of indicators were:

- ✓ **Water; Service; Coverage**
- ✓ **Water; Service; Use**
- ✓ **Sanitation; Service; Coverage**
- ✓ **Sanitation; Service; Use**

Where indicators and associated values were categorised as referring to Kenya or Uganda data, in many cases the values reported for water and sanitation, were not consistent. Further analysis of all the water service coverage and use entries for the selected years, also resulted in a series of noteworthy findings:: a total of 307 out of the 316 (97%) did not report a baseline and 93% (295 out of 316) did not report a target value. The same analysis in respect of sanitation service coverage and use entries resulted in 97% (265 out of 273) not reporting a baseline value whilst 98% (267 out of 273) did not report a target value²⁵.

Little if any information is contained within the document data relating to influences in the selection and changes of indicators being monitored or reported against. One of the few reports that do, for example – UNESCO World Water Development Reporting – refers to the reducing number of indicators reported against from one report to the next. The reason provided in terms of the reduction in numbers from the first to the second report was that it was in response to an ongoing data availability issue and that there was no systematic process for updating the data used for most of the indicators within the earlier (2003) report.

²⁵ In both cases of water and sanitation analysis entries where data was not applicable was not included.

Table 4-10_ Water Service Indicator Entries over time

Water; Service	Count of indicator	%	1980	1990	1991	1999	2000	2002	2004	2006	2007	2008	2009	2010	2011	2012	2013	2015	2025	1990-1995	1990-1996	1990-1997	2005-2009	na	nd	TBD
Coverage	452	53%	1	77	6	12	8	15	18	36	3	34	2	7		6	1	18	1	6	12	6	3	159	10	11
Functionality	22	3%																						20	2	
Use	353	42%		84			90	12	12	6		36		32	32									45	3	1
Impact	22	3%										1					1							19	1	
Total	849	100%	1	161	6	12	98	27	30	42	3	71	2	39	32	6	2	18	1	6	12	6	3	243	16	12

Reported values for water service use corresponding to the year 2000, differed by five percentage points for Kenya data and between six and seven percentage points for Uganda data.

Target values associated with 2015 vary considerably in both Kenya and Uganda data reported by Global stakeholders.

Table 4-11_ Sanitation Service Indicator Entries over time

Sanitation; Service	Count of indicator	%	1980	1990	1991	2000	2002	2004	2006	2007	2008	2009	2010	2011	2012	2013	2015	2025	+5 years	1990-1995	1990-1996	1990-1997	na	nd	TBD	
Coverage	418	59%	1	77	5	8	6	6	54	4	31	1	5		8		7	1	4	6	12	6	152	13	11	
Functionality	7	1%																						7		
Use	275	39%		72		78	12	12	6		36		26	26										6		1
Impact	4	1%														1								3		
Total	704	100%	1	149	5	86	18	18	60	4	67	1	31	26	8	1	7	1	4	6	12	6	168	13	12	

Reported value for sanitation service use corresponding to the year 2000, differed by 56% for rural and 70% urban environments for Kenya. For Uganda the variances are 46% and 60% respectively.

Target values for Kenya, for 2015 are subject to minor variances where associated value for Uganda vary between 3-14%

With 32% of documents sourced in the form of guidelines, many include references to tools, methods and approaches. One such series of guidelines are those presented by ISO (Figure 4-13), with the most notable being those relating to service delivery: ISO24510/11/12. Testing of these ISO guidelines is reported to have been undertaken in Africa in 2007 and a similar piloting proposed for Asia however, documentation reporting the findings, do not appear to be available. Furthermore, during interviews, when asked, stakeholders including those working in Kenya and Uganda cases had not been aware of such guidelines.

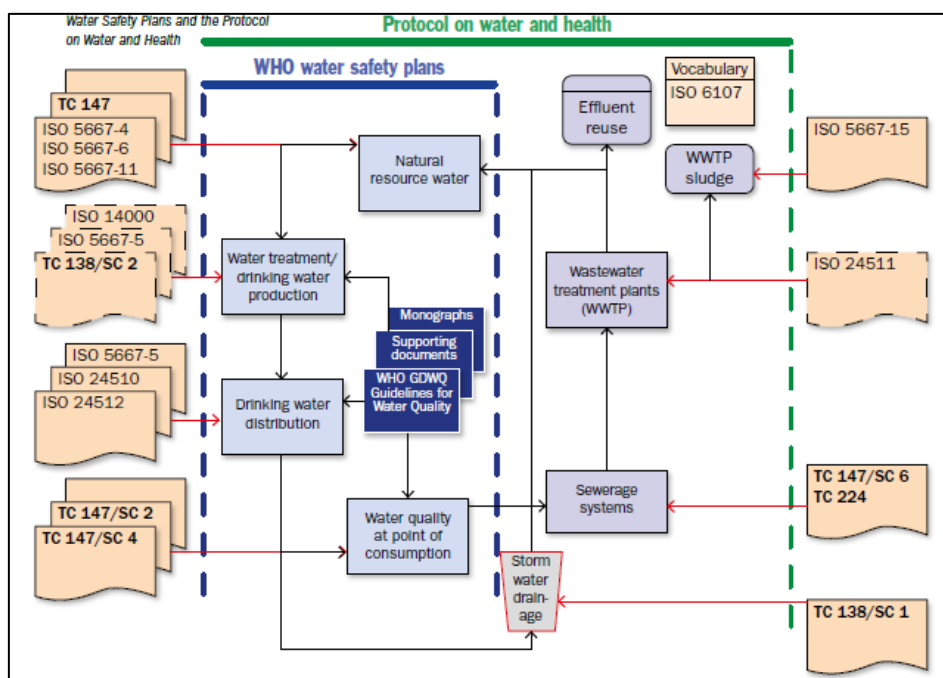


Figure 4-13 Range of ISO guidelines

(Source: Aertgeerts & Studer (2009) pp.11)

A search of a single academic database²⁶ identified 79 tools, methods and approaches for M&E reported across approximately 644,000 articles. Whilst 59 of the 79 TMAs were reported within articles relating to water, sanitation, hygiene or a combination, the proportion of total article numbers was only 3%. Whilst this demonstrates the limited systematic reporting of tools, methods and

²⁶ Scopus

approaches used, the results acknowledge the variety of TMAs being applied within the sector.

In terms of how an organisation, programme, project or individual decides on which tool, method or approach to use, available data is also limited. According to the session analysis influences depend on availability of secondary raw data sources – information collected by other organisations - or availability of advanced technology. Acknowledgement was also given to the scenario that despite using OECD-“DAC framework” for carrying out evaluations, the guidelines, templates and structures were only part of the process of carrying out a quality evaluation and that the right people in terms of team members, is a crucial component of a successful evaluation and in turn “a real challenge”.

Issues on qualitative and quantitative data collection and analysis were also discussed including incentives for data collection, data input, processing and analysis. Some examples of incentives and the motivations behind maintaining a management information system for monitoring and evaluation raised were:

- The ability to respond to requests for information – to “pull out different variables and come up with....bits of research and policy....”.
- “Data you use must.....be purposeful and meaningful to the people who collect it and those primary collectors.”
- “Try not to collect too much”.
- Potential benefit of real-time data.
- People higher up the chain can only process numbers.

4.3.2 Objective Two

To examine the conceptual framework of ‘cost’ of M&E, within the WASH sector

Global references to cost of either monitoring or evaluation for the WASH sector remain somewhat limited in number and variety. Narrative forms, include the way some stakeholders have described the requirements of significant front end costs in terms of time and resources when responding to both internal and external requirements for changing or enhancing monitoring approaches. Some

respondents also recognise hidden costs, where people work evenings and weekends to implement monitoring and reporting systems or address the periodic changes to such system requirements. These latter hidden costs are not usually factored in to actual reported costs.

On another note, mentioned by two of the stakeholders was the circumstances surrounding receipt of and subsequent use of donations and money direct from the public. Use of these funds, do not have the same conditionality or restrictions as compared to other donor provided public funding. Consequently these donations can be applied to innovations such as design and implementation of an M&E system and or appropriate supporting technology.

The authors Gorgens & Kusek (2009), in their 'Making M&E Systems Work' guideline set out four costing methodologies. The first is 'Conventional Cost Accounting' (CCA) whereby financial costs are based on direct and indirect costs, in turn, reported as an appropriate method for 'regulated or standard business processes i.e. government offices'. The second method proposed is that of 'Mathematical Modelling'. A third suggested method is that of 'Unit Costing' and the fourth is 'Activity-based costing' (ABC). The guideline continues by recommending a hybrid of unit costing and ABC for a 'multi-sectoral, multi-level and multi-year M&E work plan', however summarises that ultimately the chosen method will depend on individual 'needs and context'.

These results suggest that whilst there are recognised costing methodologies, there are not internationally recognised standards for financial reporting of cost of either monitoring or evaluation.

4.3.3 Objective Three

To examine the costs budgeted and expensed by global, national and programme level stakeholders, on M&E of service delivery, over the last 20-years.

To date no case study examples, explicitly relating to and analysing the costs of monitoring or evaluation that relate to the WASH sector directly, have been sourced or made available. However, as previously reported, some incidences

of costs of M&E for other sectors and other countries have been identified. Furthermore, in general terms very little cost data exists within the sourced data records either as a narrative or financial presentation: only 26% of the 574 records. Despite this limited sample size, the graphs in Figure 4-14 and Figure 4-15 show that over time, reporting of the cost of M&E seems to be increasing. The declining number for 2012 is reflective of the fact that data was only collected on an ad-hoc basis during 2012.

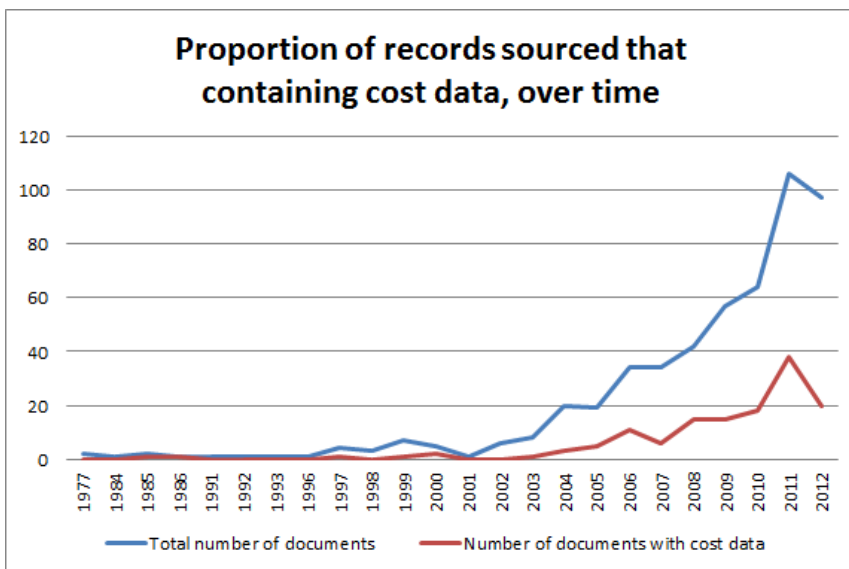


Figure 4-14 Proportion of documents reporting cost over time

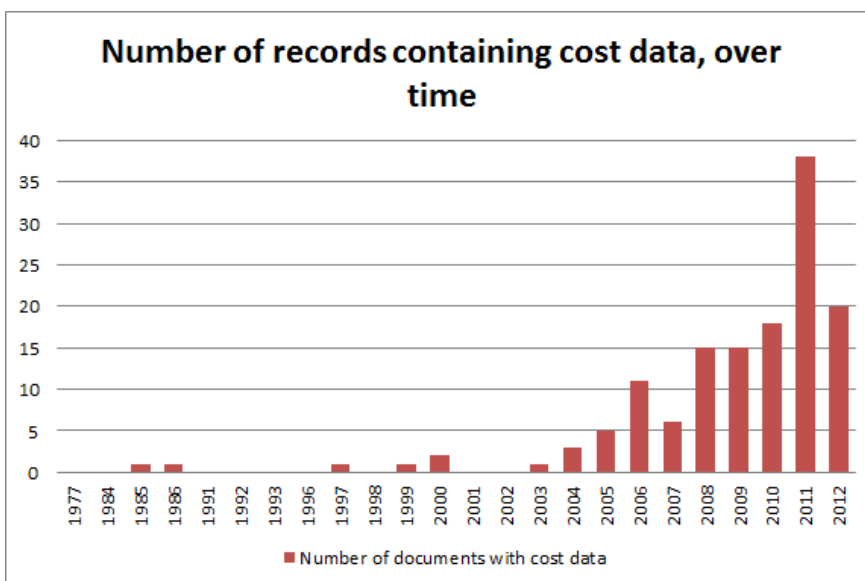


Figure 4-15 Number of data records containing cost of M&E over time

Whilst there is a perception by stakeholders that costs are escalating with regards to budget and actual expenditure for M&E, no private or civil society organisation, to date, has been able to provide estimated let alone definitive data. The only estimated examples have been provided through interviews such as the annual cost of the Joint Monitoring Programme data reported to be approximately US\$2.5-3 million per year. Another example provided is the cost of UN-Water GLAAS data as reportedly between US\$1.5-2 million per year – detail concerning the breakdown has not been disclosed for either example.

Taking the two stakeholder sub-types with the most references to cost of monitoring and evaluation details of the cost typologies are presented in Table 4-12 and Table 4-13 and give an overview of the diversity and inconsistency of reporting cost. Narrative examples depict that in the case of projects, guidelines for monitoring costs are between one and four percent however, are not substantiated. Another example suggests between three and 11 percent of project funds should be allocated to monitoring and evaluation. If these references are applied to the indicative development aid budget as reported in section 4.1.2, this would calculate to between US\$83 million and US\$913 million (1-11%) budgeted for monitoring and evaluation globally as part of the aid architecture. However, this would also be proportional to the allocation of aid across each recipient country therefore one cannot apply an average value. Furthermore, there is no evidence to suggest what proportion should be allocated to monitoring as compared to evaluation activities.

Table 4-12 Examples of cost typologies reported within NGO documents

Non-Governmental Organisation Examples
Just over a quarter of documents reported costs as a percentage value and used varying terminology such as monitoring & learning; management & administration; governance; research; programme support.
Eight other documents reported costs as a currency based figure or a figure and percentage value. This set of documents, in half of the cases, reported the costs specifically as a monitoring and evaluation budget line.
10 of the documents, contained narrative surrounding cost of M&E, suggesting the need for investment in evaluation; the situation that studies need not be long and costly; proper budgeting for M&E activities should strengthen M&E; time costs for analysing and reporting data are embedded within day to day activities and cannot therefore be 'isolated'.

Table 4-13 Examples of cost typologies reported by Development Partners

Development Partner Examples
Only 3 out of 114 development partner documents (covering two different stakeholders) report cost of M&E simply against a percentage figure . In turn the M&E is detailed using other terminology such as operating costs, knowledge management; and governance.
Eight global stakeholders reporting cost of M&E, across 21 documents, do so, as values (19) or values and percentage figures (2). Furthermore, the terminology used, varies from simply a 'monitoring and evaluation' budget line, to staffing, audit, travel, overheads (amongst other descriptors).
Of the 114 development partner documents 60 (just over 50%), reported across 14 stakeholders, contained narrative to do with cost of M&E rather than detailing any associated values or percentage values. Aspects range from underfunding of M&E, importance of budget preparation, notable costs associated with deciding on indicators; costs associated with differing methodology and in terms of data quality; benefits and costs of harmonization and joint evaluations; contradictory views on benefits and costs of adding questions into national surveys/census; effective use of M&E data to ensure cost-effective monitoring.
A further 20 documents from 9 stakeholders report cost as a combination of a narrative and/or value and/or %. This set of documents cover cost of M&E related to specific global and national cases; sub-sector; methods; and responsibilities.

4.3.4 Objective Four

To explore the underlying purpose and use of each of the data sets

Using the search and find function on each record, just under 50% of the 575 documents and data archives sourced make reference to the purpose of the data record. Of these 271 documents, annual reports and guidelines feature at 21% each, with reviews and strategies being the next most frequent data type at 15% and 8% respectively. Despite the balance 304 records not clearly reporting a purpose an assumed purpose could be defined implicitly by the document type or title. For example some of these records are titled as annual report, others as guideline, strategic plan, or toolkit. In turn these documents could be benchmarked against those records with the same title that do contain a defined purpose. Alternatively there is the caveat that what is reported as a purpose is not necessarily understood or subsequently implemented as the purpose.

During the interviews, both internal and external reasons were discussed in terms of purpose. For example one stakeholder referenced the need to have “rigorous and credible...monitoring and evaluation...” initiated through an

internal driver, but also partly, due to “...external accountability needs and demands.....it must be able to demonstrate that what it is doing is appropriate, credible, valid and also that it is spending its money in a most appropriate way....so it is actually value for money”. The need to be a “learning organisation” linking in the, aspects of social corporate responsibility was also mentioned. This learning aspect resonated across several interviews “...we are taking M and E more seriously from the fact that weadmit and accept that we have done mistakes in the past...”. This particular stakeholder also recognises external influences “....because donors want to go with the best...and how do you prove that you are the best, if your M and E system.....and you deliver on your promises....”.

At a programme level discussion centred on the differing approaches of donors in their requirements for when monitoring and evaluation should feature. Examples varied stating that some donors required a completed M&E work plan prior to the disbursement of the first tranche of funding, whereas other donors seem not to be so stringent in their requirements to the timeframe of submission of the M&E plan and did not link it to funding disbursements. Furthermore, monitoring tends to be in most cases accepted as an internal and external role responsibility whilst evaluations are externally resourced.

The component of use is linked to purpose such that purpose is intended use whereas the component of use refers to actual use of data generated from monitoring or evaluation activities. In the case of this research use also goes beyond that which has been defined and considers not only the product of the monitoring or evaluation but also the application and implementation of findings and recommended actions.

Descriptions of use from the transcript analysis include:

- To inform high level planning meetings.
- The function of learning “to improve practice and approaches for the future and sustainability”.
- Provide guidance but also “question it”.

- Sharing and “feeding into various regional and at global meetings”, websites, forum, other organisations.
- Influencing national policy – through advocating for changes in policy and practice.
- “.....some organisations M&E reports are classified.”
- Linking ‘How’ and ‘Use’, one stakeholder reflected that story-telling is a cultural norm in parts of sub-Saharan Africa and, giving two examples, discussed how story telling led to one government making a decision to adopt an approach to service delivery and another to committing funds.

As part of the discussions the researcher enquired as to the extent that organisations were tracking the use of their publications, for example whether they were applying hit analysis to their websites. The majority of responses received were either a simple “No”, or contained a reflective thought of ‘maybe in a limited way – IT or marketing or publications would be the ones to ask’.

The results of the e-survey highlighted some other specific examples of use including specifying whether an internal or external, monitoring or evaluation activity:

- Evaluation (internal) of training led to change in workshop structure and venue leading to improved learning (Nigeria).
- Evaluation (internal) of work done led to identifying other works necessary to fully restore the plant (Iraq).
- Evaluation (internal) led to change in management procedure resulting in better assessments and more coordinated approach with local authorities (Iraq).
- Monitoring (external) change in scope of sanitation project (Senegal).
- Evaluation (external) recommendation given to alter way of working, to involve local municipalities. The organisation took note but did not follow advice (Madagascar).
- Evaluation (external) resulted in discontinuation of a particular approach to construction of household toilets and forced the establishment of a minimum standards for public toilets.

- Evaluation (external) most have not had any change at community level, maybe at organisational level, but unaware.
- Review (external) of tariff policies led to changes in practices of over-charging poorest consumers (Cape Verde).

The survey also questioned the extent of use of a sample of reports and guidelines (see Appendix D-4). With respect to the reports, anywhere between 28% and 95% of respondents had not used the documents and with respect to guidelines, the range calculated at between 62.5% and 96%. In other words from the selection of reports and guidelines, more reports were used compared to the guidelines.

4.3.5 Objective Five

To examine the conceptual framework of ‘value for money’ and identify whether M&E is fit for purpose for use in the WASH sector?

The findings of this research have not been able to source any documented example or direct reference to whether monitoring or evaluation or both is providing value for money in the WASH sector – globally. However as part of the discussion around the setting of the post-2015 targets, a question about whether developing additional indicators would provide ‘VfM’ given the limited extent of use of current data (JMP, 2011). A second reference suggests that with the development of a new financial flow monitoring methodology, there exists the potential for a ‘VfM’ indicator (UN-Water, 2012). Furthermore, a third document, this time relating to water governance guidelines, suggests a value-for-money audit as an indicator for Corruption (AfDB, 2010). The closest to reporting whether M&E is VfM, is the WPP Strategic Outlook whereby one of the bullet points references ‘Show value for money by improving monitoring and evaluation’ (WB, 2011).

In terms of the overall document analysis, the term ‘value for money’ or the acronym, or a combination, have been referred to in 78 of the 574 global

documents, whereby 62²⁷ were related to development partners and 16²⁸ to non-governmental organisations. In turn and for each stakeholder sub-type, this equates to 15% of total number of documents sourced.

The following series of tables, charts and graphs highlight the frequency of use of the term over time (see Table 4-14 Figure 4-16, Figure 4-17 and Figure 4-18).

Table 4-14 Number of references to the term and acronym by stakeholder

Stakeholder Code	Stakeholder Sub-Type	No of records	No. of refernces to Value for Money	No. of refernces to VfM	Total No. of refernces	Average no. per record
A01	DP	1	1	0	1	1.0
A02	DP	1	1	0	1	1.0
A03	DP	3	5	0	5	1.7
A04	DP	5	8	0	8	1.6
A05	DP	2	5	0	5	2.5
A06	DP	11	27	0	27	2.5
A07	DP	14	515	267	782	55.9
A08	DP	6	7	0	7	1.2
A09	DP	10	4	0	4	0.4
A12	NGO	2	48	36	84	42.0
A14	DP	1	5	0	5	5.0
A15	NGO	4	1	0	1	0.3
A16	NGO	3	18	1	19	6.3
A17	DP	3	8	5	13	4.3
A18	DP	3	3	0	3	1.0
A19	DP	1	1	0	1	1.0
A22	DP	2	9	0	9	4.5
A23	DP	3	4	0	4	1.3
A25	DP	2	3	0	3	1.5
A26	NGO	1	2	0	2	2.0
Totals		78	675	309	984	

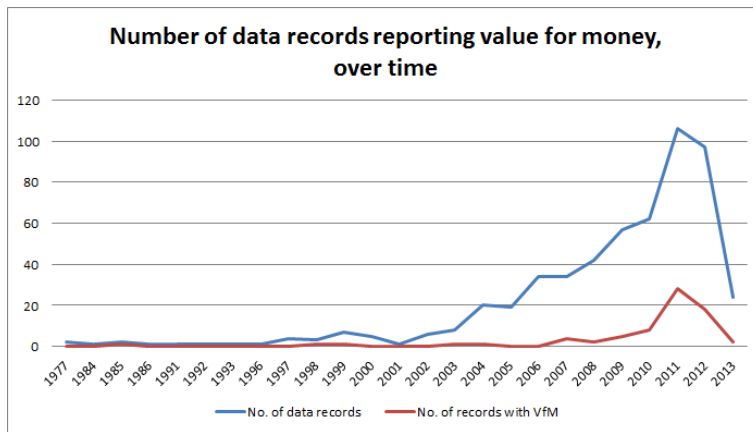


Figure 4-16 Number of data records reporting VfM, over time

²⁷ Note 62 out of 415 sourced

²⁸ 16 out of 118 sourced

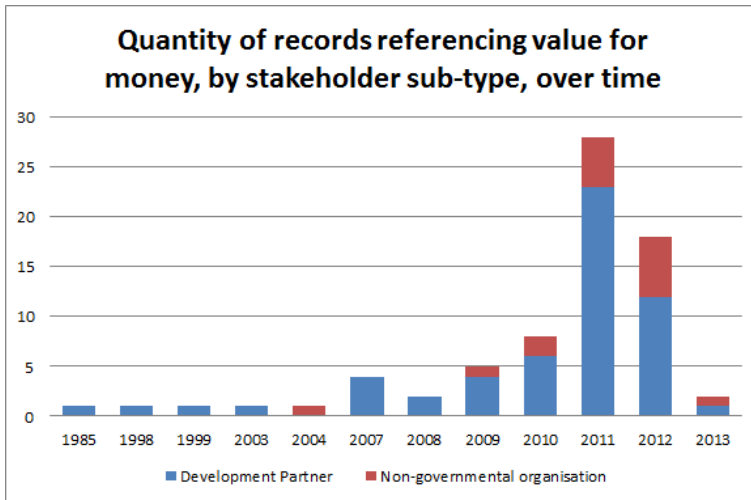


Figure 4-17 Proportion of stakeholder sub-type reporting VfM

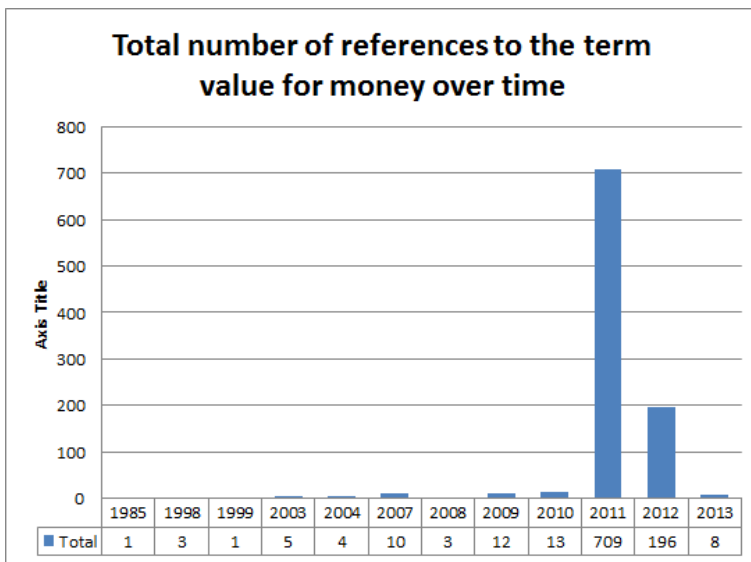


Figure 4-18 Number of references to VfM over time

In terms of the e-survey analysis 50% of respondents who answered the question as to whether M&E was providing VfM globally, in the WASH sector, responded 'agree'. A further 19% disagreed, 8% strongly disagreed and the balance 23% did not know. The split between agreeing and disagreeing may be a consequence of an emphasis on either monitoring or evaluation. Unfortunately the questionnaire did not disaggregate the two.

When considering whether M&E, in the WASH sector, globally is 'fit for purpose', as with 'VfM', neither academic articles nor documents were sourced.

Given the limited number of interviews undertaken, there are no specific findings worth noting. However, the e-survey analysis asked the question whether M&E was fit for purpose (globally). Approximately 31% of respondents disagreed and 4% strongly disagreed. Slightly more responses agreed (38%) and 11.5 % strongly agreed. The balance 11.5% reported they did not know.

4.3.6 Objective Six

To understand better the potential for harmonization and alignment of country level frameworks, with the SDGs and HR frameworks

As a country specific objective this is not applicable for analysis under the global case. However, findings from the literature review, document review and interviews, indicate that the SDGs, as with the MDGs, should also focus attention and raise visibility of the sector, but need to be kept simple – a few indicators only and that the emphasis for rural environments should be on ‘sustainability rather than an unrealistic set of high percentage coverage driven targets’ (Carter, 2013). Ultimately the SDGs also need to provide an opportunity to take the learning from the MDGs and further strengthen national information systems.

The work of the Sanitation and Water for All amongst a series of other frameworks, signed charters, principals and memoranda of understandings are also attempting to work towards an improved, standardised and harmonised country-led approach to monitoring. What is unclear is the extent of cross-over or duplication of effort, synthesis of findings and subsequent practical application of such agreements.

4.4 Analysis and Discussion

Within the Global case, acknowledgement must be given to the primary data collection activities being document and literature reviews. Due to time and financial resource constraints only a small sample of stakeholders, were interviewed to corroborate the findings from the reviews. The e-survey also provides data and analysis used to substantiate or otherwise the document reviews.

Objective One

Despite the regularity of a global goal or target for the water and sanitation sector, over the last 50-years, an increasing number of associated targets and indicators have been defined and reported against by sector stakeholders. Amidst the symphony of effort lies a core set of recurring indicators, as defined some 20 years ago by WHO/UNICEF (coverage, management, funding), although two of the three have remained limited in their reporting. These three 'core indicators' are still considered relevant today, to assess improvements in service delivery and are, as such, being proposed under the auspices of the SDGs as core components for post-2015 target setting and the accompanying monitoring effort.

According to ISO (2007), "assessing the service to users cannot be reduced to a single or universal set of performance indicators". Whilst this view is reaffirmed by others, as discussed in Section 2.3.2 of the literature review, it does not necessarily mean to say that it is not possible to focus on a core set of recurring indicators as a means to achieving a comparative incremental scale of service delivery. These results as reported on previous pages continue to demonstrate that different stakeholders report different things at each stage of the results chain even to the extent of whether an initiative or intervention provides value for money. In the context of the work of Cotton & Bartram (2008) as well as the work of the ISO, one of the questions remaining is how the Paris Declaration, Accra Accord, SWA of Global Partnership Framework have or continue to bring about harmonisation and alignment and what is anticipated for the future.

Another component of discussion is the issue of timing, or the expectation of instant results, as a consequence of society moving in to an age of short termism. As reported in the review of literature, compared to 20-years ago, or even as recently as 10-years ago, the introduction and advancement of the use of the internet and social media, has meant that communication has become almost instantaneous and perhaps brought with it, the desire for instant responses, instant decisions and instant results.

Another facet of this timing debate is over, whether the duration of funding cycles irrespective of whether related to the national government or associated international donor, are appropriate. The proposal is that funding streams are disjointed from the realism of investment needs. Whilst there is no clear evidence to suggest that a shift to longer term programme investment is impossible, as has been seen with budget support and basket funding, the majority of projects and programmes within the sector remain limited to two or three years of implementation. Whether this remains a symptom or cause, in turn the scenario is further compounded by the case that over 60% of countries have either no or only partial financial information management systems (UN-Water, 2012).

Added to the amalgam is the recent concern levied over a possible deficiency in implementing partners, of projects and programmes, reporting baseline and target values at a start of an intervention. Not only is this considered un-heard of in the private sector, the circumstance raises questions over roles and responsibilities, capacity and capability, conditionality of funding (whether domestic or internationally provided) and generally effectiveness of monitoring and evaluation.

Through both formal and informal discussions held with various stakeholders with a range of years working in the sector, none of these issues are apparently new. Whilst in some cases there was uncertainty if not disbelief in other cases people seem to be acquiescent to the fact, that after 30+ years the sector is still ruminating over aspects such as operation and maintenance. One of the prominent issues under discussion in rural environments has and continues to be the failing functionality of hand pumps. Other aspects associated with both rural and urban environments involve the need for appropriate technology, institutional strengthening, political will and support for national monitoring systems.

There is some suggestion for a more concerted effort of the international community to acknowledge, for the now high-income countries, the length of time that the process of establishing improved service delivery has taken and to

frame the associated enabling environment pathway in order to reflect on the enabling environments of the now lower-income countries. In doing this there should be an opportunity to establish an associated applicable, realistic and appropriate timeline for progression.

Objective Two and Three

The review of literature clearly demonstrates the lack of available references in terms of a typology or general conceptual framework for the cost of monitoring and evaluation, let alone one that is internationally recognised or endorsed. There is also still little indication that understanding cost of either monitoring or evaluation is a priority despite the data showing a continuing interest in financial accountability and continuing references to ascertaining value for money, in the sector.

From the document review, guidelines do exist such as that of the World Bank (2009), which provides 4 possible methodologies. However, the guideline also deems it necessary to retain flexibility as the chosen method will be dependent on 'needs and context'. Consequently this suggests the likelihood of a range of methods being applied, making the opportunity for comparable analysis a challenge and naturally calls into question whether a standardised framework is feasible or appropriate.

Taking into account the principles of performance monitoring and benchmarking, if comparable analysis at a country or organisational level is a requirement under the umbrella of 'transparency and accountability', then as with other aspects of financial monitoring there would be a certain level of motivation. Alternatively, if one was to consider that to ensure monitoring or evaluation is providing value for money sits as part of an audit, then perhaps there would be an option and motivation for the sector to map and classify past and current methods more widely and more systematically so as to come up with a pre-determined framework depending on need and context. This could provide an evidence base from which to examine the possibility of introducing a protocol alongside the global financial accounting system.

Objective Four

The components of 'purpose' and 'use' by definition are synonymous with purpose referring to intended use, whereas the other refers to actual use. While intended use is evidently documented, the availability of reported actual use is less obvious. Examples of implicit use exist as does anecdotal evidence reported through interviews and the survey although a documented research and empirical evidence base of the extent of use has remained undetermined. Therefore, the question of how is it possible to be sure of the level of contribution that reported monitoring or evaluation makes in terms of improving service delivery also remains undiscovered.

Another ambiguous question is whether it is necessary to have a documented evidence base of the benefit of either monitoring or evaluation, particularly whilst there remains opacity of how much it is costing. As with the term cost-benefit analysis the two seemingly go hand in glove in more ways than one.

Objective Five

In a similar vein as the two previous objectives, under the label of VfM and FfP, an assumption could be made that stakeholders should be concerned with cost and efficacy of use of both monitoring and evaluation data. A countervailing idea is that monitoring is seen simply as a means to an end, therefore, why would one need to isolate the activities, account for it and understand the contribution as long as the main intervention was achieved. However, there-in-lies the dilemma as global targets are not being achieved and not all data is dependable. Furthermore, the results suggest there is an interest, particularly in the case of evaluation, to develop a stronger evidence base through improved knowledge and learning activities which in turn could point towards monitoring being considered as something more than a means to an end.

As the literature has also demonstrated, by definition for something to be value for money, it also needs to be fit for purpose and in turn reflects the components of monitoring and evaluation (Figure 2-5), therefore also making it integral within the two concepts.

Objective Six

Whilst not the direct focus of the global case, one noteworthy reference must be made to some of the considerations within the literature review and whether they are likely to have an impact on the finalisation of the post-2015 framework. Rijke et al (2012) identify a water governance paradigm shift maybe taking place within many developed countries from a 'prediction and control' to a 'management and learning approach'. Therefore given the potential influences that the developed world has on the approaches and requirements of lower-income countries and associated development aid, is this going to be mirrored and raise the profile of evaluation and learning? Furthermore, if combined with the view of Kooper et al (2011) whom highlight the fact that a "common and scientific approach to information governance is still wanting", despite an increasing interest for such both within and outside of an organisation, is there also scope to consider data quality and the broader aspects of information governance (see A.2.3) alongside that of water governance.

5 KENYA CASE STUDY

5.1 Introduction

There are a multiplicity of factors ranging from geographical, social, economic and political circumstances that influence the extent and level of progress of service delivery in Kenya. To provide an insight into the country context the following few paragraphs illustrate the implications of some of these dynamics.

Kenya, is a country with an area of 224,080 square miles, has a coastal border to the East, borders with Tanzania to the South, Uganda to the West, Ethiopia, Somalia and the newly formed political country of South Sudan to the North. Bordering with countries with simmering conflict adds the challenge and responsibility of serving a sometime transient, but ultimately, fluctuating population from the consequential refugee migration. In recent years this has been evident in the North of the country, which is an already vulnerable arid and semi-arid environment. The population of Kenya has steadily increased on an average of 3-4% per year (Table 5-1 and Figure 5-1) however, according to government data, less than 20% of the land area is categorised as high to medium potential, productive land, which in turn supports approximately 80% of the population. The balance 20% of the population is reportedly living on the remaining 80% of land - categorised as arid and semi-arid (MPND, 2003).

Table 5-1 Population Growth – Kenya

Kenya	1980	1990	1999	2000	2005	2009	2010	2011	2012	2025
Population (million)	16.3	23.4	28.7	31.3	35.6	39.5	40.5	41.6	43.2	59.4
% increase	n.d.	44	23	9	14	11	3	3	4	38

With a fifth of the country’s population living in arid and semi-arid locations, who are themselves potentially resource constrained and disparately located in hard to reach environments, provides an additional challenge to those who are mandated to provide clean and safe water and sanitation services to all, as a ‘human right’ (NCLR, 2010). Even if one looks to the future with the possible scenario that over 50% of the population will be living in cities by 2050 (WB,

2013), it is plausible that a percentage of the residual 50% will remain located in rural, arid and semi-arid areas and therefore remain a logistical challenge.

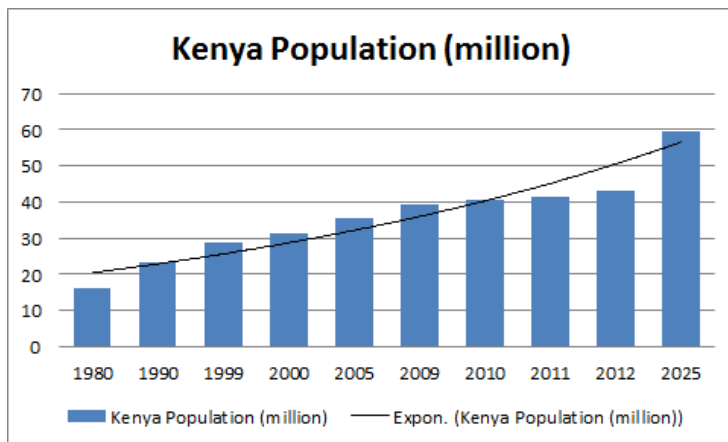


Figure 5-1 Population growth for Kenya

Economically, the country has had a fluctuating performance over the last 50 years, with GDP figures in the early 1960's and 1970's reaching a 6.6% average annual growth, dropping in the second half of the '1970's and 1980's from 5.2% to 4.1% and further still in the first half of the 1990's to 2.5% (MNDP, 2003). Since the new millennium GDP has, in the main, increased and maintained a level above 4% and whilst projected to stabilize is still trailing its East African counterparts (Figure 5-2). With a forecast of reaching approximately 6% for 2013, this also still remains considerably lower than the Vision 2030 target of 10%.

The implication for a continued below target GDP growth, is the potential negative impact it could have on the government being able to deliver on its targets as set out in the various national plans. With an inability for the country to realise the investment levels identified as needed to finance service delivery infrastructure and ensure sustainability of those infrastructures, there is also a likelihood of remaining or becoming increasingly dependent on development aid. In reality the scenario is not necessarily as simplistic as portrayed here, as it does not take into account the potential for private investment. Nevertheless, in general terms an improving GDP does lend itself to increased and sustained investment in infrastructure and service provision.

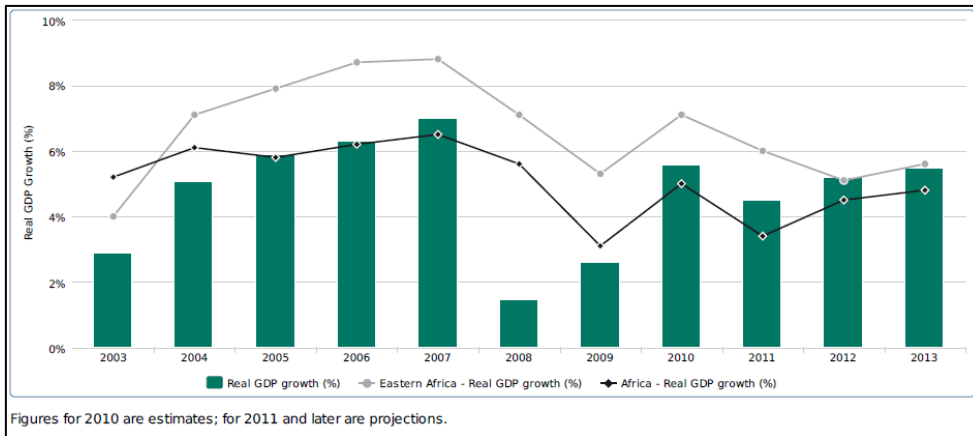


Figure 5-2 Kenya GDP Growth

(Source: AfDB, 2012)

Another contextual indicator to consider is the distribution of income – Gini coefficient²⁹ – which according to World Bank data, is estimated at 39% for rural and 49% for urban areas in 2012 (WB, 2013). The symptom of a high percentage figure is a high inequality of income, which in turn, in the case of service provision, will affect the number of people able to pay for a basic level of service. Again this raises concern for revenue streams for water and sanitation and the potential for on-going high level of subsidisation of service delivery.

5.1.1 Monitoring and Evaluation in Kenya

As referred to in Chapter Two, monitoring and evaluation has evolved over thousands of years. In Kenya and for the purposes of this study, the timeline of interest starts in 1925 whereby Kenya had its first official statistician. The timeline in Figure 5-3 highlights other key dates in the progress of data management.

Today, with respect to national and sector planning and monitoring and evaluation, the WASH sector is guided by the National Vision 2030, Sector Investment Plans (SIP), Medium Term Expenditure Frameworks and Annual Planning tools. Furthermore, in 2007, the Kenyan Government and 17

²⁹ A measure of inequality of income distribution, the higher the percentage the higher the level of inequality

development partners developed the Kenya Joint Assistance Strategy (2007-2012) with the objective “to support the government’s efforts to achieve the MDGs and the targets the government has set for itself in its national and sector development strategies” (KJAS, 2007). The KJAS reflects the principles of harmonization and alignment, similar to those set out within the Paris Declaration and Accra Accord. The strategy not only represents the “mutual commitment of government and donors to developing a more effective way of working together”, but also recognises the next steps of “monitoring and implementing the KJAS and its results” and to further rationalize partner engagement in the sector.

At national level, a number of management information systems are also in operation: IFMIS; e-ProMIS; and NIMES - albeit not an electronic based system. The other sectors also have their own management information systems such as the education sector with EMIS and the health with HMIS.

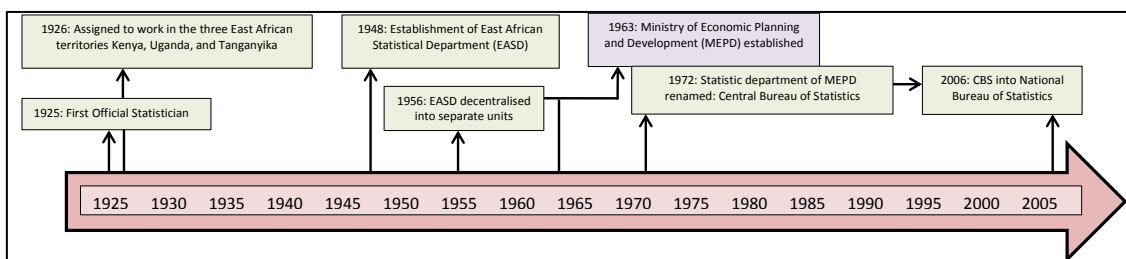


Figure 5-3 Milestones of Statistical Data Management - Kenya

5.1.2 Funding and Investment

Kenya features as one of the fifteen main recipients (FY2009/10), of aid in the water and sanitation sector (OECD-DAC, 2012), making up 41% of government finance from 24 donors³⁰ (UN-Water 2012) and is projected to reach 57% for 2012/2013 (MoF, 2012). However, the overall donor funding to the sector³¹ as a whole is smaller generally for the water sector.

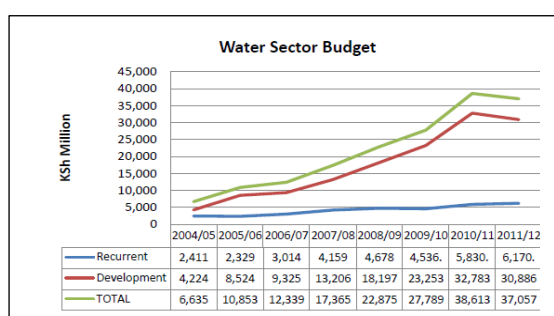
³⁰ According to OECD, 2010, CRS data 18 donors provide funding with France, Germany and Sweden taking on leading roles.

³¹ When referring to the term sector for Kenya, this includes Environment, Forestry and Wildlife – Ministry responsibility. When referring to the water sector this specifically means the water budget.

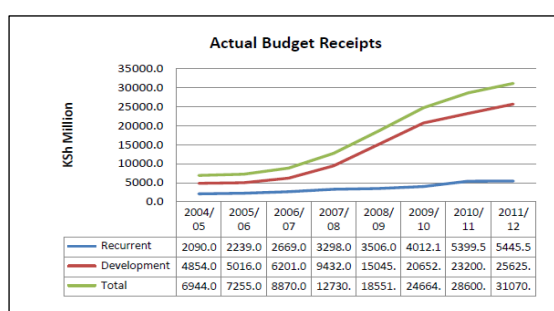
Table 5-2 Spending Patterns for Water and Sanitation Sector - Kenya

(Mn KShs)	Budget 2004/05	Actual 2004/05	Budget 2005/06	Actual 2005/06	Approved 2006/07	Actual 2006/07	Approved 2007/08	Actual 2007/08	Approved 2008/09	Actual 2008/09	Approved 2009/10	Actual 2009/10	Approved 2010/11	Actual 2010/11	Approved 2011/12	Actual 2011/12	Approved 2012/13	
Water and Irrigation																		
Recurrent - GoK	2411	2090	2329	2239	3,013.8	2,928.8	3,608.6	3,574.1	4,677.1	4,128.1	4,478.0		3,907.0				6,662.2	
Development - GoK	4224	4854	8524	5016	5,884.0	5,318.0	4,991.0	4,950.0	9,090.0	9,041.0	24,696.0		9,230.0				11,094.6	
Donor					4,206.1	2,234.9	8,189.3	4,377.8	10,307.0	6,375.8								24,014.0
Sub-Total water & irrigation	6635	6944	10853	7255	13,103.9	10,481.7	16,788.9	12,901.9	24,074.1	19,544.9	29,174.0		13,137.0				41,770.8	
Environment & Mineral Resources																		
Recurrent					1,841.0	1,730.0	1,836.0	1,743.0	2,164.0	1,978.0	2,065.0		2,272.0				2,679.0	
Development					923.0	610.0	1,464.0	630.0	1,254.0	1,188.0	2,268.0		1,103.0				2,891.0	
Donor																	910.0	
Sub-Total Environment & MR					2,764.0	2,340.0	3,300.0	2,373.0	3,418.0	3,166.0	4,333.0		3,375.0				6,480.0	
Forestry and Wildlife																		
Recurrent					na	na	3,289.0	3,158.0	3,705.0	3,501.0	3,507.0		3,294.0					
Development					na	na	2,201.0	872.0	1,883.0	1,508.0	2,267.0		434.0					
Sub-Total Forestry & Wildlife					na	na	5,490.0	4,030.0	5,588.0	5,009.0	5,774.0		3,728.0					
Total					15,867.90	12,821.70	25,578.90	19,304.90	33,080.10	27,719.90	39,281.00	-	20,240.00	-	37,057.20	31,070.60	48,250.80	

The spending pattern as documented in Table 5-2 and Figure 5-4 A and B illustrate the increasing government and donor funding along with the differences in budget and actual expenditure year on year.



(Figure 5-4A source: MWI, 2013)



(Figure 5-4B source: MWI, 2013)

Figure 5-4 A&B Water Sector Budget and Actual Expenditure – Kenya

By amalgamating and analysing the data from the two graphs and analysing the figures Table 5-3 sets out the variances between budget and actual expenditure. Whilst graphically (Figure 5-5) the recurrent budget and actual expenditure appear closely aligned, in fact, in both cases there is a significant variance from one year to the next.

Table 5-3 Variance of Budget and Actual Expenditure for the Water Sector (KShs millions)

Year	Variance ('R')	%	Variance ('D')	%	Variance ('T')	%
2004/05	321	13%	-630	-15%	-309	-5%
2005/06	90	4%	3508	41%	3598	33%
2006/07	345	11%	3124	34%	3469	28%
2007/08	858	21%	3774	29%	4632	27%
2008/09	1172	25%	3152	17%	4324	19%
2009/10	524	12%	2601	11%	3125	11%
2010/11	431	7%	9583	29%	10014	26%
2011/12	725	12%	5261	17%	5986	16%

The variance from one year to the next has an implication on planning, implementation and monitoring and evaluation activities. What is unclear from the data is the cause of under-spend for example whether it is due to a lesser receipt of funds or whether it reflects a low disbursement rate. Both scenarios potentially affect financial efficiency.

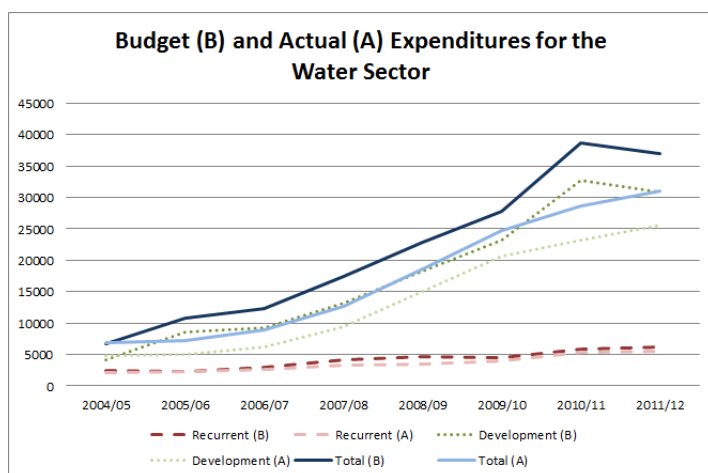


Figure 5-5 Budget and Actual Expenditure (KShs billion) Over Time

Comparing sector investment levels to population and GDP identifies that the water sector investment is increasing in absolute terms as well as per capita and as a percentage of GDP (Table 5-4). However, what remains uncertain is how these calculations benchmark against other countries either at a regional or the wider global level. Comparing the data with that in Table 4-1 (Global case),

only two (Mozambique and Tanzania) out of the seven³² countries record investment of GDP as above 1%.

Table 5-4 Water Sector Investment in Kenya per capita

Year	Population	Water sector investment per capita	GDI (Bn KShs)	Water sector investment % of GDP
2007	37,752,304	277.644	1,354.7	0.8
2008	38,773,277	332.752	1,347.2	1.0
2009	39,824,734	490.773	1,420.0	1.4
2010	40,909,194	531.616	1,493.6	1.5
2011	42,027,891	680.524 ³³	1,554.7	1.8
2012	43,178,141	n.d.	1,644.5	n.d.

5.1.3 Institutional Framework

Key institutional frameworks (Figure 5-6) for the sector, include, the Water Act 2002, the National Water Services Strategy (2007-2015), the Annual Water Sector Reviews that were initiated in 2006 as part of the sector reform programme (MWI, 2011) and changes brought about through the New Constitution (WASREB, 2011):

- Responsibility for water and sanitation has been passed to the National Government with respect to public investments.
- Responsibility for water and sanitation has been passed to County Governments with respect to the provision of water and sanitation services.
- Signing into law a comprehensive Bill of Rights to include “the right to clean and safe water in adequate quantities....and a commitment to reasonable levels of sanitation”.

³² Central African Republic; Democratic Republic of Congo; Republic of Congo; Mozambique; Sierra Leone; Tanzania; Togo.

³³ At an exchange rate (27.11.2013) 2011 sector investment per capita equates to approximately £4.76

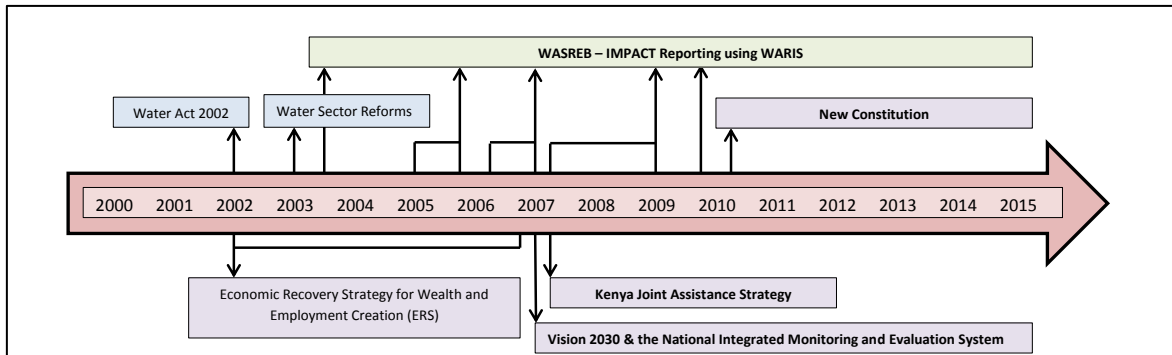


Figure 5-6 Timeline of WATSAN Institutional Framework, Kenya

During the course of the research period, the institutional framework was subject to changes. For the first and second years the official institutional framework of stakeholders was set out as per Figure 5-7 with key roles for the various institutions as follows:

- Ministry of Water and Irrigation (MWI), created in 2003, was mandated with the formulation, review and implementation of policy on the water sector and the role and responsibility for development of associated legislation, policy and strategy formulation, sector coordination and guidance, monitoring and evaluation of such. Responsibility also includes overall sector investment planning and resource mobilisation.
- Water Services Trust Fund (WSTF), established under the Water Act, 2002, is mandated to assist in financing the provision of water services to areas of Kenya which are without adequate water services.
- Water Services Regulatory Board (WSRB), established as a non-commercial state corporation in 2003 is mandated “to oversee the implementation of policies and strategies relating to provision of water and sewerage services. WASRB sets rules and enforces standards that guide the sector towards ensuring that consumers are protected and have access to efficient, adequate, affordable and sustainable services” (WASREB, 2011).
- Water Service Boards (WSBs) also established in 2002, do not provide services directly, however are responsible for ensuring there is provision of an economically viable and efficient water service delivery within their

area of authority. Furthermore, WSBs have the responsibility for asset management of the Water Service Providers.

- Water Service Providers (WSP), whether public or privately owned and whether they have a rural, urban or combined rural and urban focus are, in the main, contracted through Service Provision Agreements with WSB's, to have direct contact with the consumer for the purposes of water and sanitation service provision.

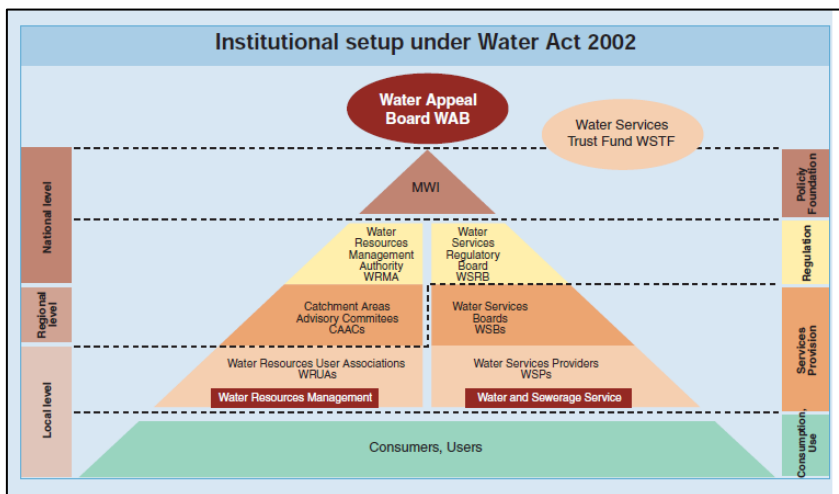


Figure 5-7 Institutional Set-Up under Kenya Water Act 2002

(Source: Water Act 2002; MWI & WSP (2008); Ombogo (2004))

A later and adapted organogram, as presented in Figure 5-8, shows the inclusion of other organisations at national and local level, namely (but not limited to), the Kenyan Water Institute and Water Action Groups. Even though this adapted version is reported in 2013 and shows a revised institutional set-up, the MWI still features and yet has since been re-established as the Ministry of Environment, Water and Natural Resources (MEWNR)(WB, 2013). Whilst no revised ‘institutional setup’ organogram has been published by the MEWNR³⁴, reflecting the decentralisation, there is speculation that there is an increase in activity in terms of transiting to devolution of service delivery to local government as set out under the new Constitution. It is therefore, entirely possible that these adjustments are taking place across the various levels as an

³⁴ At the time of writing this Thesis.

internal organisational change before announcing publically. A possible outcome of these reforms is that the Ministry of Local Government becomes a more significant and visible stakeholder for the sector.

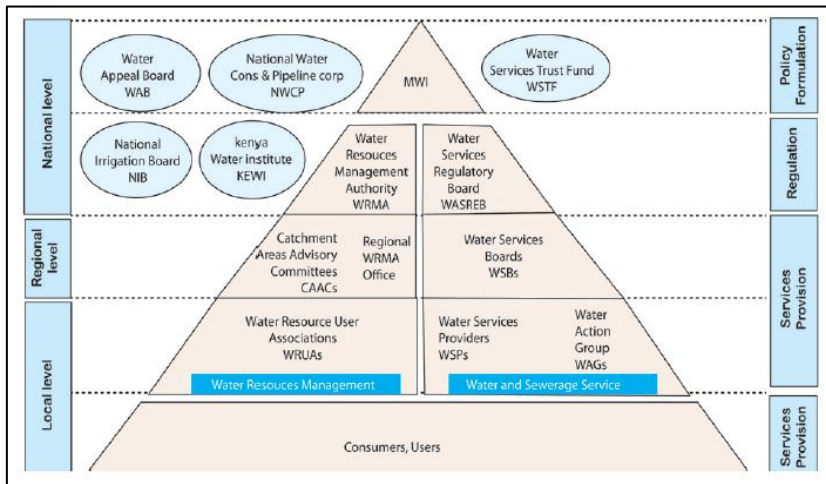


Figure 5-8 Institutional Set-Up in Kenya as reported in 2013

(Source: MWI, 2013 (AWSR))

Neither the 2002 nor the 2013 'Institutional Set Up' organograms take into account other changes to highlight how the sector has also developed, over time, with structures to maintain dialogue both within and across sectors. For example: the Sector Conference, Water Sector Working Group and Water Sector Technical Group (MWI, 2011) are not featured. At a global level, the sector, via the higher level Kenyan government has also signed up to MDGs, SWA, amongst other charters, none of which are represented within the organograms.

5.2 Methodology

When considering the selection of stakeholders, given to the time and resources available, acknowledgement was given to maintaining a reasonable number key sector organisations and individuals from which to collect data. The primary focus, as is reflective of the predominance within the sector in general, was with those stakeholders responsible for water service delivery.

Due to the nature of the responsibility of sanitation service delivery spanning other public sector stakeholders, some of these organisations were given

limited attention in terms of data collection. However, when engaging with development partners and non-governmental organisations, neither water or sanitation service delivery were favoured in preference to one another in terms of the sourcing of data. For the purposes of this research project, the stakeholder map presented in Figure 5-9, sets out an adapted version, of those presented in Figure 5-7 and Figure 5-8 and reflect the interrelated nature of global, national, regional and local stakeholders.

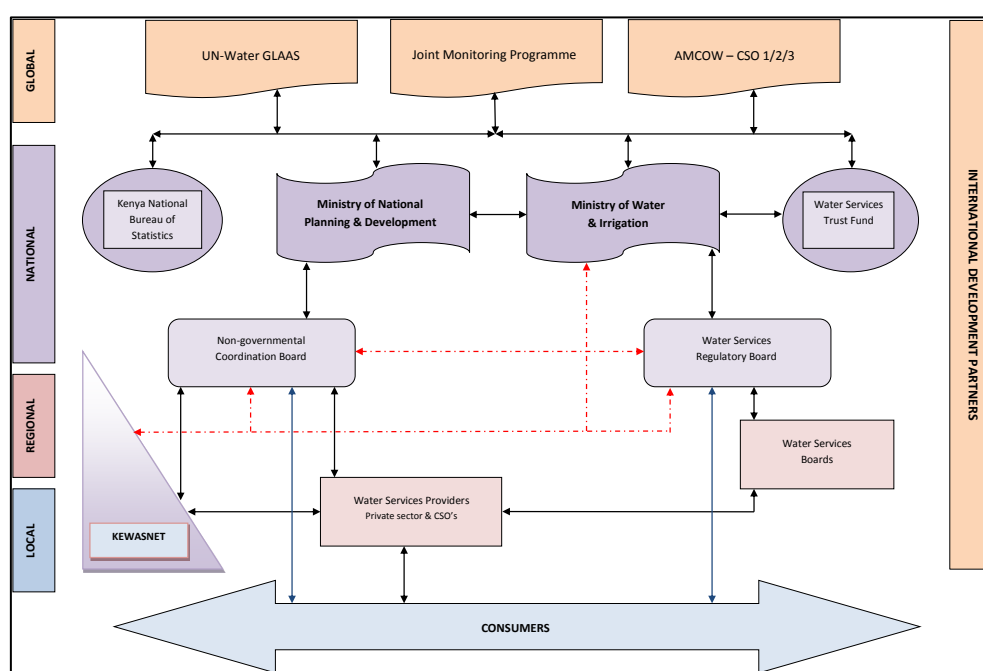


Figure 5-9 Stakeholder Map for Research

The three phases of in-country data collection, as set out in Chapter Three, were carried out for the Kenya Case as follows:

- January 2011 (1 week): **scoping field visit** primarily testing interest and willingness to participate and through purposive and snowball sampling techniques identify stakeholders to engage with for the research.
- May 2011 (1 week): a second **scoping field visit** to confirm interest, carry out key-informant interviews and start data collection activities – document and data archives.

- November 2011 (1 month): fieldwork (**study one**) carried out including semi-structured interviews and further document and data archive collection.
- January / February 2013 (2 weeks): fieldwork (**study two**) carried out including semi-structured interviews and further document and data archive collection.

5.2.1 Scoping Field Visits

The scoping field visits provided an opportunity to ask stakeholders whether there were any aspects of the research that were of particular interest or relevance to their organisation. The responses included:

- What is the extent of use of monitoring and evaluation data?
- What are some of the incentives in terms of sustaining and updating information systems?
- To have an understanding of defined monitoring and evaluation environments.
- To have a guideline to demystify the rhetoric of M&E.

5.2.2 Document and Data Archive Reviews

As reported in Chapter Three, the sourced documents were reviewed, catalogued and through data reduction techniques, information on each of six themes extrapolated. From the 209 documents sourced the quantity of documents which contain information on each component, are set out in Table 5-5.

In the case of 'Use', trying to establish the extent of use became too convoluted and therefore was forsaken. This does not suggest completing such an analysis is any less important, rather it is likely to require a research project of its own. The consequence is a more weighted reliance on the Qualtrics survey and interviews for this component of the research.

5.2.3 Key Informant Interviews and Semi Structured Interviews

Over the course of the research period 59 sessions have been documented (Table 5-6), cleaned, coded, analysed and interpreted as per the methodology. The schedules, as set out in Appendix B, were used to guide the interviews. Examining the analysis presented in Table 5-7, the differences in number of responses and sessions can be attributed to one or more issues: the question was not applicable to the schedule; the question, where included in the respective schedule was either not discussed because of time constraints; or because the interviewee was not or did not wish to discuss. Either way for each schedule topic there was approximately a 50% response rate able to be used as an evidence base.

Table 5-5 Number of Document Review Data Records by M&E component

Data Record	What	Why	How	Cost	Use	VfM
Yes	65	109	98	26	3	28
No	106	49	62	135	46	132
Na	38	46	44	43	33	27
TBD ³⁵	0	5	5	5	117	22
Total	209	209	209	209	209	209
Yes as %	31	52	47	12	1	13

Table 5-6 Number of Session Summaries

Activity	Sessions	Recorded ³⁶	Not recorded
Scoping Fieldwork	13	2 x KII	11 x KII
Study One Fieldwork	26	7 x SSI 1	1 x SSI 1; 17 x KII 1 x Email
Study Two Fieldwork	16	2 x SSI 1; 9 x SSI 2 ³⁷ 1 x SSI2-FG; 1 x SSI2-GM	1 x SSI 1; 1 x SSI 2-GM 1 x Briefing
Skype from UK	4	1 x SSI 1; 3 x SSI 2	0
Total	59	26	33

³⁵ TBD - To be determined – not possible to extrapolate either due to time constraints or given the fact that some documents has a large number of pages and were non-searchable by software.

³⁶ FG: Focus group; GM: Group meeting

³⁷ 1 x SSI1 and SSI2 inclusive (B12)

In terms of the rigour and time taken to do the transcribing, cleaning, editing, coding and extracting data from the interviews, the process was more time consuming than initially envisaged. Some recordings were disturbed by 'unavoidable' noises and those with multiple participants presented challenges in reflecting who was saying what.

Table 5-8 summarises the average time taken to process one hour of recorded interview. Through the data reduction process, transcripts were recorded whether they contained information on the priori themes of the monitoring flow (Table 5-9).

Table 5-7 Number of Responses by Interview Topic

Number	Schedule Topic	No. of responses
SSI1 - Q1	Influencing factors in terms of M&E	19/39 & 7/20
SSI1 - Q2	Budgeting process for M&E	16/39 & 11/20
SSI1 - Q3	M&E impact on service delivery	17/39 & 9/20
SSI1 - Q4	Use of technology for M&E to provide VfM	19/39 & 9/20
SSI2 – Q1	Whether roles & responsibilities are realistically assigned	17/20
SSI2 – Q2	Which aspects of M&E should be prioritised	13/20
SSI2 – Q3	Whether current M&E practice is appropriate	14/20
SSI2 – Q4	Whether M&E provides VfM	14/20
SSI2 – Q5	Changes in response to post-2015 SDGs & HRs agenda	17/20
Other	Other discussion topics – various	n/a

Table 5-8 Average Time Taken to Process Recorded Interviews

Processing activity	Av. Time
Transcribing the recording (external resource)	4.5hrs
Review entire recording against draft transcript, check and edit	2.5hrs
Code and annotate hard copy	1.5hrs
Extract and insert in Excel	1.5hrs
Extract and insert on Mind Map	1.5hrs
Average hours taken per one hour of recorded interview	11.5hrs

Table 5-9 Number of Session Data Records by M&E component

Data Record	What	Why	How	Cost	Use	VfM
Yes	27	31	45	32	29	14
No	31	27	13	26	29	44
Na	1	1	1	1	1	1
Total	59	59	59	59	59	59
Yes as %	46	53	76	54	49	24

5.3 Results

The results are presented by objective rather than study phase or data collection tool, in an attempt to build up an evidence base in a logical framework manner as determined through the approach and methodology set out in Chapter Three.

A series of graphs, charts and matrices are used to present some of the findings and are embedded within the narrative. Where the figures and tables are referred to but deemed as supportive illustrations only, they are contained within Appendix E and referenced accordingly within the narrative.

Of the 209 documents sourced, 111 relate to government stakeholder, 68 relate to development partners, 10 relate to non-governmental organisations and the balance 20 refer to 'other' stakeholders, considered complementary rather than core. For a series of basic document analyses see Appendix E-1.

5.3.1 Objective One

To identify the evolution of M&E approaches and associated indicators within the WASH sector over the last 20-years and map them against what has initiated the change.

From the 209 documents and data archives sourced, 65 (31%) contain some form of indicator data relating to the WASH sector. Despite many of the data records also referencing other sector indicators, for the purposes of this

research, they are not included. Approximately 47% of the sample, contain information on tools, methods or approaches (TMA), whilst none clearly indicated the influencing factors behind the selection of either TMA or indicator. Data collected through the semi-structured interviews did however provide information on influencing factors behind the selection of associated tools methods and approaches. Selecting indicators, data collection activities, along with motives for storage and dissemination were also highlighted. Some noteworthy metadata is presented as follows:

- The average number of documents sourced per stakeholder type is: Public = 3.4; Private = 1; Civil Society = 1.
- A total of 1423 indicator entries were extracted from the 65 data records = approximate average 22 indicator entries per data record.
- Just over twice as many documents, containing indicator data, were sourced for government stakeholders (41) compared to development partner stakeholders (19)
- The average number of indicator entries per document sourced per stakeholder type is: Public = 22; Private = 7; Civil Society = 21.

On first inspection of the data which covers a 20-year period from a total of 1423 entries 1089 different indicators were extrapolated. Approximately 65% of these appeared as a single entry – i.e. unique to one or other of the data records and demonstrates a fairly wide spread of indicators. The most frequently reported indicator appeared to be “Sanitation coverage” – having been reported 13 times between 2006 and 2011. However, this went up to 24 times where minor differences in the indicator description existed such as including a unit of measure. On repeated visual inspection of the indicators, on a line by line basis, in some instances the indicators were judged as being similar.

In order to aid further analysis the data was clustered as described in Chapter 3 Section 3.2.6 Data analysis. The result of this initial clustering is presented in Table 5-10 and the pie chart and graph in Figure 5-10 and Figure 5-11, respectively. The results show there are approximately one and a half times as

many service indicators as sector indicators and two and half times as many service indicators than there are service provider indicators.

Table 5-10 Number of Cluster Level One Indicator Entries

Cluster Level One	Service	Service Provider	Sector	N/A	Total
Number of indicator entries	693	267	428	35	1423
% of total indicator entries	49	19	30	2	100

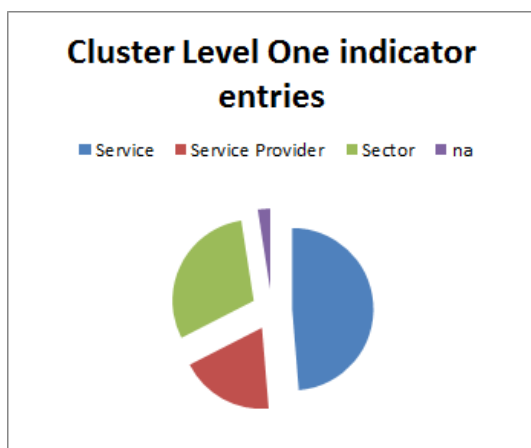


Figure 5-10 Proportion of Cluster Level One Indicator entries

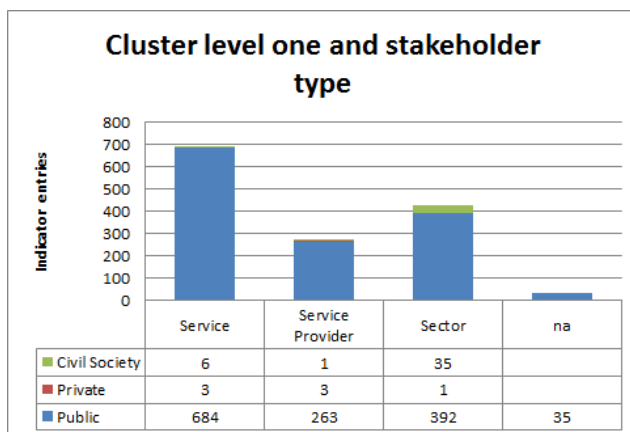


Figure 5-11 Cluster Level One Entries by Stakeholder Type

Furthermore, there are just over twice as many indicator entries for government stakeholders (910) than development partners (413), resulting in the public sector stakeholders the majority stakeholder type reporting indicators at just

below 93%. In further examining the clustered data a series of other patterns emerge with respect to service, service provider and sector clusters:

- Government reporting accounted for 66% (of service); 69% (of service provider); 54% (of sector) clustered indicators.
- Development partners accounted for 30% (of service); 24% (of service provider); 32% (of sector) clustered indicators.
- Non-governmental organisations reported for the majority of their entries, sector clustered indicators, accounting for 8% of the overall sector level total.

The limited indicator numbers for civil society and private stakeholders reflect the small number of entities that the research is engaging with. Between the two, a total of 12 documents out of the 209 document and data archives collected for Kenya relate to the two stakeholder types equalling just under 6%.

Taking each of ‘service’, ‘service provider’ and ‘sector’ clusters in turn, the following sections highlight some of the patterns.

Cluster Level One: Service indicators

Service indicators span from “water quality” or “sanitation facilities” clustered as ‘coverage’ through to “functionality” or “interruption of water supply...” clustered as ‘functionality’. The use cluster covers indicators such as “use of improved drinking water...” and “proportion of population using improved sanitation...”, whereas the impact cluster covers data referring to “child mortality rates” and “diarrhoea incidence”.

Not only is coverage the most frequently reported against service level indicator at 79% (see Table 5-11); coverage is the most frequently reported against indicator out of all indicator entries at just under 40%.

Table 5-11 Number of Service Level Two Indicator Entries

Cluster	Coverage	Functionality	Use	Impact	Total
Number	547	36	83	27	693
%	79	5	12	4	100

Analysing the cluster by stakeholder sub-type, as shown in Table 5-12, each stakeholder sub-type is primarily reporting against ‘coverage’ at a service level, for example 88% of indicator entries for government and 58% for development partners. ‘Use’ on the other hand, whilst accounting for 32% of development partner indicator entries, accounts for only 3% of government indicator entries.

Table 5-12 Number of Service Level Two Indicators by Stakeholder Type

Service Indicator Cluster	Government	Development Partner	Development Partner/Govt	Company	Non-Governmental Organisation	Various	Total
Coverage	405	121	9	3	6	3	547
Functionality	27	6	3				36
Use	16	67					83
Impact	12	14	1				27
Total	460	208	13	3	6	3	693

Cluster Level One: Service Provider indicators

There are currently 17 level two clusters associated with ‘service provider’ indicators. The process of level two clustering has been more challenging and complex than with the ‘service’ indicators and is reflected in the higher number of categories. Financial performance represents circa 45% of all service provider indicators, with organizational development at approximately 20%. As with the ‘service’ level indicators, the public sector stakeholder type represents the largest proportion of stakeholders reporting against ‘service provider’ indicators at 98.5%. Further analysing the public stakeholder sub-type data (Table 5-13), approximately 70:25 split of entries relate to entries relate to government and international development partners respectively.

Table 5-13 Number of Service Provider Level Two Indicators by Stakeholder Type

Service Provider Indicator Cluster	Total number of indicator entries	Government	%	Development Partner	%	Development Partner/Govt	Company	Umbrella
Consumer relations	23	14	8%	9	14%			
Corporate services	6	6	3%		0%			
Economic	1		0%		0%	1		
Environment	1	1	1%		0%			
Financial performance	119	96	52%	18	28%	3	2	
ICT	2	2	1%		0%			
IEC	8	4	2%	2	3%	1	1	
Implementation	1		0%		0%	1		
Information management	5	5	3%		0%			
Investment	1	1	1%		0%			
M&E	14		0%	13	20%	1		
Operations	9	2	1%	7	11%			
Organisational development	49	33	18%	12	19%	3		1
Participation	13	9	5%	2	3%	2		
Regulation	1	1	1%		0%			
Reporting	1		0%	1	2%			
TBD	13	11	6%		0%	2		
Total	267	185	100%	64	100%	14	3	1

Despite the difference in variety of level two clusters, reported by the public sector stakeholders, financial performance and organisational development are the more frequently reported against. The most notable difference is that 20% of all entries for development partners relates to M&E compared to 0% for government entities.

Cluster Level One: Sector indicators

With 30% of the indicators clustered as 'sector' indicators, there are currently 16 level two with one temporary cluster categorised as 'TBD' – to be determined – (in this case 96), where a decision still needs to be made as to how to allocate. The cluster of 'TBD' has the highest percentage (22%) and is illustrative of the difficulty and complexity surrounding the clustering of indicators at this level. The next most frequent categories are 'organisational development' and 'regulation', each representing approximately 15% of entries (Table 5-14).

Table 5-14_ Number of Sector Level Two Indicators by Stakeholder Type

Sector Indicator Cluster	Total number of indicator entries	Government	%	Development Partner	%	Development Partner/Govt	Company	Umbrella
Consumer relations	1		0%		0%	1		
Financial performance	17	8	3%	8	6%	1		
Guidelines	8	8	3%		0%			
IEC	9	6	3%	1	1%	2		
Implementation	17		0%	10	7%	6		1
Information management	20	11	5%	1	1%			8
Investment	32	8	3%	23	17%	1		
Legislation	4	3	1%	1	1%			
M&E	21	14	6%	2	1%	2		3
Organisational development	65	40	17%	19	14%			6
Participation	8	1	0%	4	3%			3
Planning	18	2	1%	16	12%			
Policy	37	31	13%	3	2%	1	1	1
Regulation	65	47	20%	13	9%	5		
Research & Development	4	1	0%	2	1%			1
Strategy	6	6	3%		0%			
TBD	96	46	20%	36	26%	2		12
Total	428	232	100%	139	100%	21	1	35

The associated sector indicators for ‘regulation’ include “draft regulations” and “reports of compliance and enforcement” with organisational development indicators such as “annual water sector conference held” and “number of training held”.

When examining the data by stakeholder sub-type the most frequently reported again sector indicator sub-category is ‘investment’ for development partners whereas for government entities is ‘regulation’ closely followed by ‘organisational development’. This highlights the assumption as set out in the literature that different stakeholders at different levels monitor and or evaluate different things.

Box 5-1 General finding on indicator entries related to impact

A general finding: Less than 2% (27) of all indicator entries directly relate to impact. In order of frequency (high to low), the level three clusters making up the 2% are: Health (41%); Service delivery (15%); Conflict (11%); Economic (7%) Health & Economic (7%); Environmental; Floods; Poverty; Water Stress (each at 4%); balance n/a (4%).

The analysis of the proportion of documents containing indicator entries, over time, highlights an increase in number of available reports and indicators being published. However, the graph in Figure 5-12 also demonstrates a divergent relationship between the two, over time.

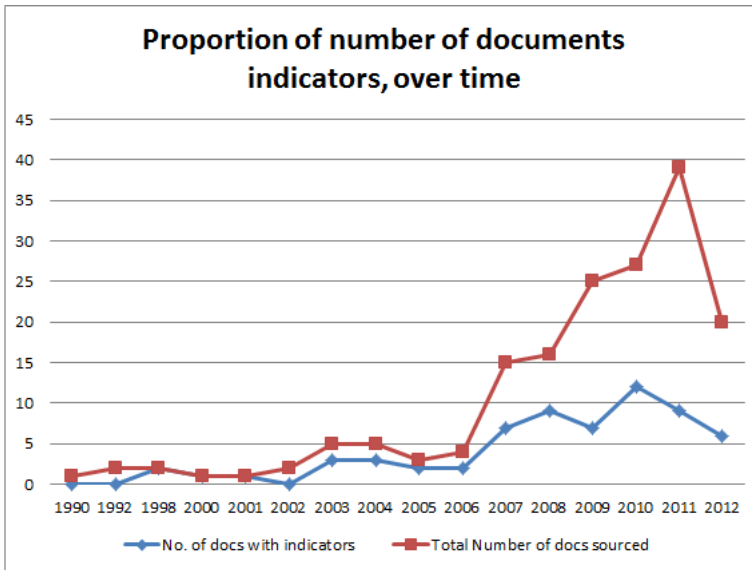


Figure 5-12 Percentage of document containing indicators over time

Figure 5-13 shows the steady increase in the average number of indicator entries per data record over a 15-year period.

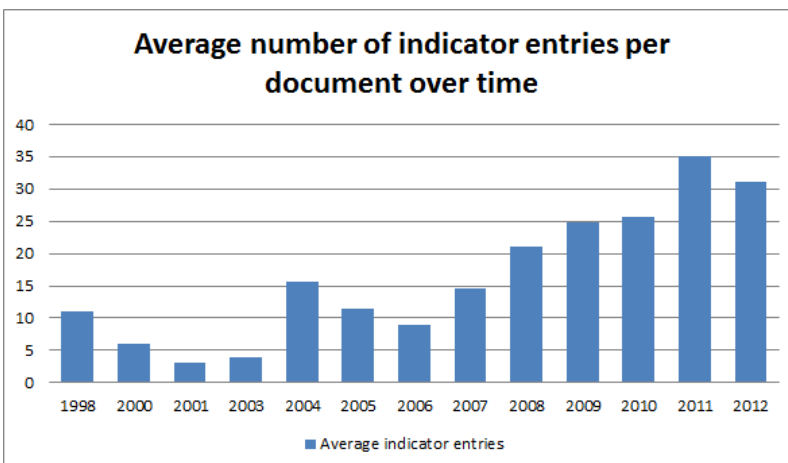


Figure 5-13 Average number of indicator entries per document

An overview of the actual years of reported data by published year can be found in Appendix E-2 and some notable analysis includes:

- 2011 is the published year reporting against the most number of indicator entries.
- 2011 is also the year with the highest average number of reported indicators per data record.
- 2008 and 2010 are the years when the highest number of different years of actual data was reported.

- 2010 and 2012 are the two most frequently reported against years in terms of actual data.

Taking a closer look at the clustered data, over the last 20 years, Figure 5-14 highlights the extent of the continued reporting of service level indicators over time. The chart also clearly indicates the introduction of sector indicators in 2003 and despite the reporting of service provider in 1998 and 2004, a more systematic reporting is evident from 2006 onwards.

A similar analysis for Service level two indicators (Figure 5-15) highlights the continued reporting of ‘coverage’ indicators. Functionality, albeit introduced in 2003 is not seemingly reported against on a regular basis, neither are ‘use’ related indicators despite having been introduced in 1998 do not appear again until 2007. Similarly, with ‘impact indicators’, despite being introduced in 2003 reporting has remained limited and sporadic since that time.

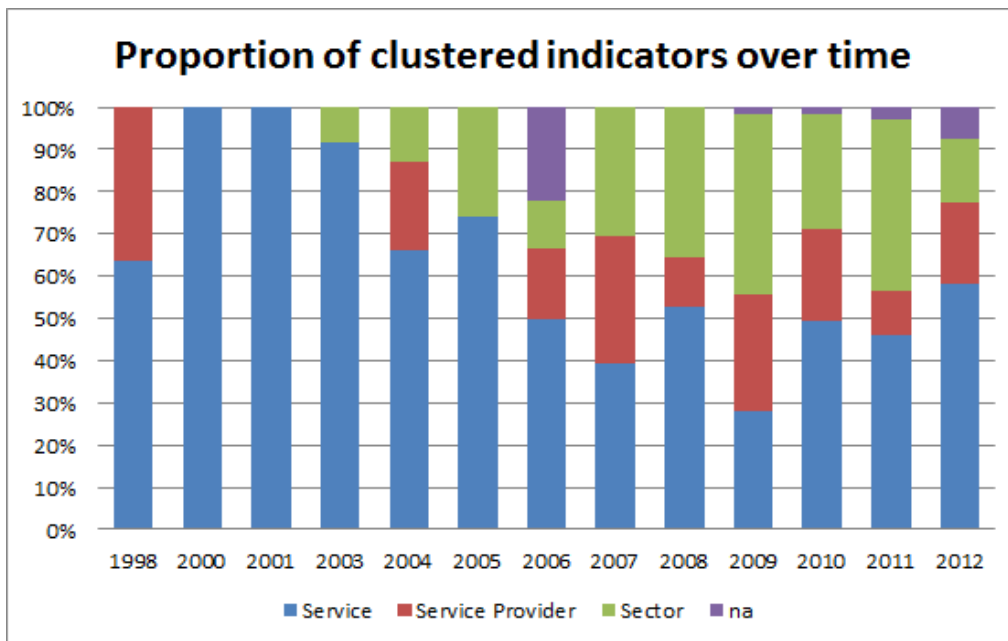


Figure 5-14 Proportion of Clustered Indicators Over Time

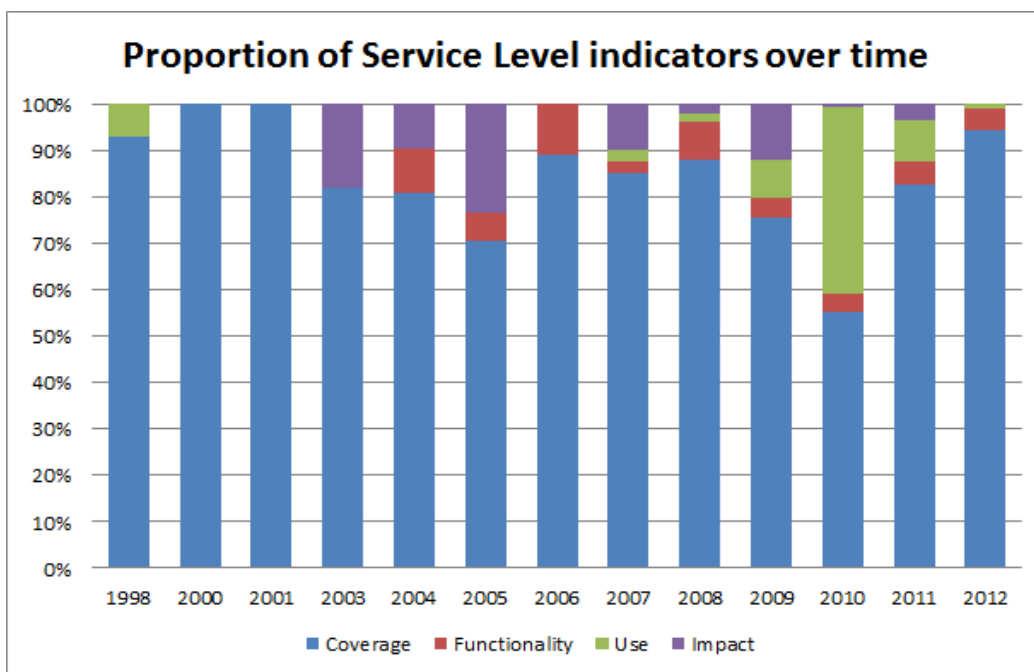


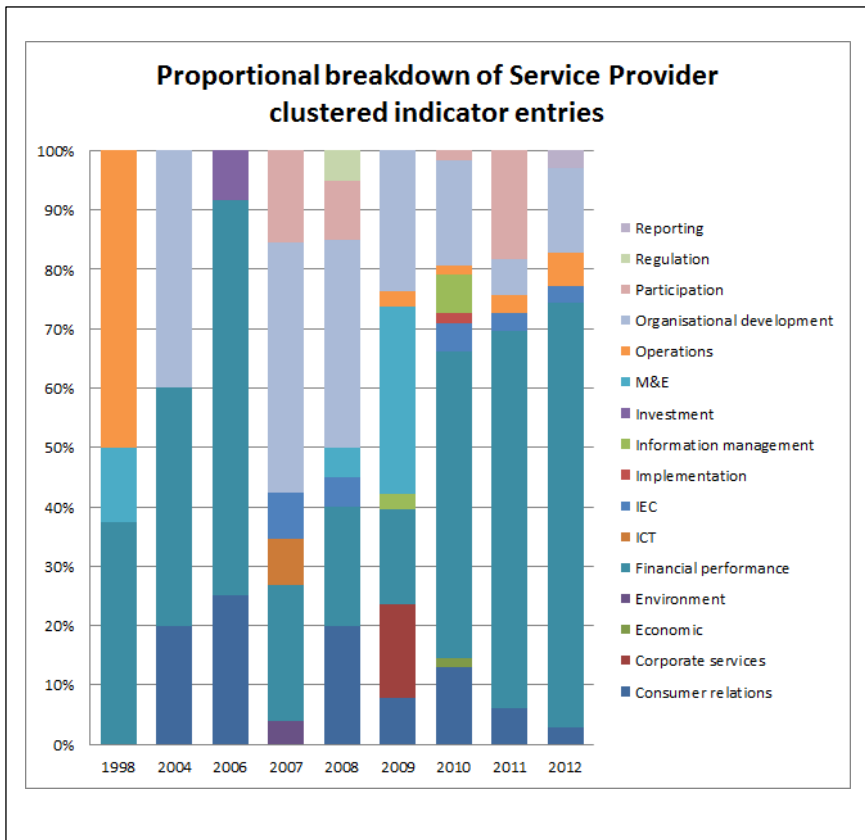
Figure 5-15 Proportion of Indicator Entries for Service Level, Over Time

When reviewing the analysis of Service Provider level two indicators (Figure 5-16), a more complex picture is presented. This is primarily due to the increased number of level two indicators compared to the ‘Service’ cluster. Many of the level two categories neither feature regularly or consistently in terms of frequency of reporting. As with Service level indicators, the first published entry occurs in 1998. A similar scenario is evident for the Sector level two indicators (Figure 5-17). Again a more complex picture is presented, however, differing by having a visible cluster of TBD, appearing in 2005. Another difference is the first published entry for the Sector cluster occurs in 2003, 5 years later than Service or Service Provider data.

Another facet to understanding the evolution of indicators is to consider the question of consistency of data. A sample of data for the years, 1990; 1995; 2000; 2005; 2010; 2015, baseline, actual and target values was examined (Table 5-15 and Table 5-16 for document numbers and Appendix E-3 for detailed analysis). The criteria used for the selection of indicators were:

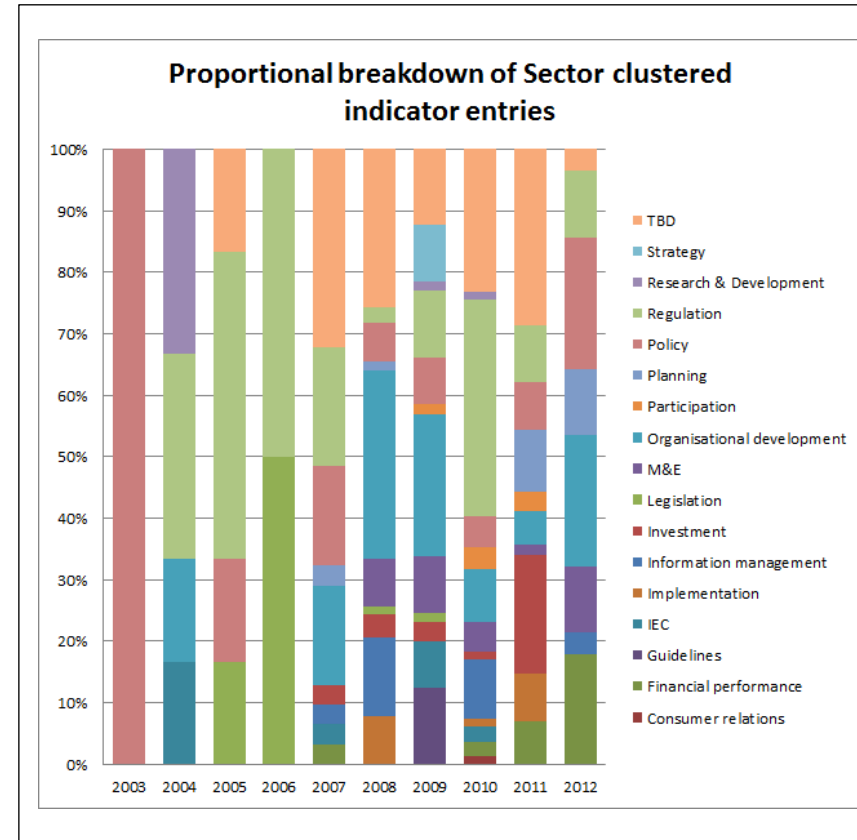
- ✓ **Water; Service; Coverage**
- ✓ **Sanitation; Service; Coverage**
- ✓ **Water; Service; Use**
- ✓ **Sanitation; Service; Use**

In most cases the values reported were consistent, with variances kept to a minimum. Further analysis, by taking all indicators filtered using the above criteria (62 entries for sanitation and 52 for water), comparable or not, resulted in a series of notable findings: only 14% of entries had corresponding baseline values, 22% had target values and 9% had both baseline and target values.



(Figure 5-16)

Figure 5-16 Proportion of Indicator Entries for Service Provider Level, Over Time



(Figure 5-17)

Figure 5-17 Proportion of Indicator Entries for Sector Level, Over Time

Table 5-15 Water Service Indicator Entries over time

Water; Service	Count of Indicator	%	1989	1990	1994	1995	1996	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2030	2005/2006	2009/10	2010/11	na	nd
Coverage	336	85%	1	5	7		1	2	6	1	1	12	1	3	9	6	10	23	15	15	45	12	9	6	12	1	15	6	7	41	25
Functionality	19	5%													3	1	1	2	1									2	3		2
Impact	9	2%																		1											
Use	33	8%		4		4			4					4					1												
	397	100%	1	9	7	4	1	2	10	1	1	12	1	7	12	7	15	25	17	15	47	12	9	6	12	1	15	8	10	41	27

Reported values during 2003, 2004 and 2007 for water service coverage values corresponding to 2000 differed by seven percentage points however, the indicator descriptor were also different:

- (2003 & 2007) Proportion of population with sustainable access to an improved water source: 48%
- (2004) Halve the proportion of people without access to safe drinking water: 57%

Table 5-16 Sanitation Service Indicator Entries over time

Sanitation; Service	Count of Indicator	%	1990	1994	1995	1999	2000	2001	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015	2016	2030	2005/2006	2009/10	2010/11	na	nd	TBD	
Coverage	140	71%	6	4	1	2	5	1	6	2	4	6	2	7	9	4	6	14	4	6	2	1	11	2	3	15	3	14	
Functionality	8	4%										2	1	1		1		1											2
Impact	1	1%																											1
Use	47	24%	8		8		8				8			8		4													3
	196	100%	14	4	9	2	13	1	6	2	12	8	3	16	9	9	6	14	5	6	2	1	11	2	3	15	3	20	

Reported values during 2010 and 2011 for sanitation service coverage values corresponding to 1990 differed by 13%:

- (2011) Sanitation coverage: 26%
- (2010) Improved sanitation facilities (% of population with access): 39%

Little if any information is contained within the document data records that relates to influences in the selection and changes of indicators being monitored or reported against. These minimal references include the new Constitution whereby the Human Right to water is likely to have an impact on what some organisations are monitoring. However, it is important to note at this stage that some organisations are already monitoring equity and the human right.

From the 27 interviews that raised aspects of influences, the responses were clustered into whether ‘internal’, ‘external’ factors, or a combination, as set out in Table 5-17. Most of the conversations referred to monitoring in general, however a couple did specifically refer to indicators. For example, some interviewees discussed the challenge of ensuring consistency of terminology and definitions used and purported that the sector was subject to a ‘definition crises’. Acknowledgement was also given to IBNET as an international guideline aiding the selection of utility benchmarks for regulatory purposes in Kenya.

Table 5-17 Clustered influencing factors of indicator selection

Influencing factors	Quantity	Descriptors
Internal	5	Regulation; Planning; Government; Organisation; Capability
External	11	Other organisations; population growth; consumers; regional; government; bi-lateral donors; funding cycles; consultants
External & internal	10	Conditionality; government; citizens; guidelines; legislation; shift from projects to programmes; domestic accountability; regulation; terminology; actors around the table
External or internal	1	Quantity of data

In terms of the tools, methods and approaches used to carry out M&E activities or related to the creation of the document sourced, as previously noted approximately 47% of records contained some reference. The most recent references refer to changes and availability of new data collection tools, including water point mapping, SMS technology, MajiData and variety of surveys and a citizen scorecard. From the analysis of the interviews, which asked for the views on whether technology was perceived as a help or a

hindrance and perceptions of the use of technology in terms of ensuring M&E provides value for money, a number of technology types were also identified (Table 5-18). Of the 26³⁸ sessions in which the question was asked, approximately 99% provided responses with the discussions most frequently centring on mobile phone technology, management information systems and on-line data systems as having the potential to help and enhance M&E with data acquisition, enable consumer engagement and provide real-time data. However, many of the discussions also highlighted risks and challenges suggesting that technology can also be a hindrance. For example: multiple systems not being integrated; data quality issues; sustainability concerns; inadequate feedback and action loops; deviation of resources; need to understand the concept of M&E; and the question of advanced technology versus a simpler solution.

Acknowledgement was also given to ensuring that technology advancement must be demand driven, affordable and accessible and that the role and responsibilities must be defined and incentivised for sustainability purposes such as updating the data. No information was available within the document data records and very few references were made during the interviews on the decision making process around which tool, method or approach to use. However, as presented in Box 5-2, there are a variety of influencing factors associated with undertaking M&E, which are also likely to include the component of 'how'.

Box 5-2 Factors Influencing “how M&E is undertaken”

Influencing factors in terms of carrying out M&E

- Headquarters through specialised units develop such tools (B09).
- Albeit an internal choice, the selection of the which TMA to use, is also a conditionality of the donor (B15; B18).
- With reference to the extent of choice available to use, at the level of the consumer, such as internet, despite being more affordable, is second to putting food on the table (B20).

³⁸ Only 26 out of 59 as the question was asked within SSI1.

Figure 5-18 Technology types identified during the course of the interviews as being a help rather than a hindrance

Technology Type	Session frequency	GPS	D/Base	Photo	Mobiles	On-line	Computer	MIS	WPM	GIS	H2O Testing	General	Other	na	nd	
GPS																
Databases	1	1	1	1												
Aerial photography																
GPS																
Mobile phones	1	1			1											
MIS	4							4								
MIS																
Website link	1					1	1	1								
Computers																
MIS																
GIS	1							1		1						
MIS																
On-line platform	1					1		1	1							
WPM																
Mobiles	1				1											
Mobiles (&)																
Water quality testing kits	1				1						1					
Mobiles																
GPS	1	1			1	1										
Internet																
Moblie & Technology general	1				1							1				
Pre-paid meters																
Mobiles	1				1								1			
Record card vs																
Technology	1											1	1			
Technology general	9											9				
Video storyboarding vs reports	1												1			
On-line platform																
Mobile	1				1	1							1			
Tele-conferencing																
On-line platform	2					2										
na	14													13	16	
nd	16															
TBD	1															1
Totals	59	3	1	1	7	6	1	7	1	1	1	11	4	13	17	74

5.3.2 Objective Two

To examine the conceptual framework of ‘cost’ of M&E, within the WASH sector.

The literature review carried out between October 2010 and 2011 has provided very little empirical or academic evidence of cost of monitoring and evaluation within the WASH sector in general let alone specifically related to Kenya. General articles that do exist primarily relate to water quality testing such as the review of place-based monitoring by Brands & Rajagopal (2007). Other academic references also exist, such as that of Gilroy Coleman (1992), however is in relation to agricultural and rural development projects. Considering the work of Maddock (1993), who noting that “M&E are expensive activities” asked the question “has project monitoring and evaluation worked?” In spite of asking the question in the context of the agriculture and rural development sector, the overarching question and his series of sub-questions seem applicable to the WASH sector:

- Has M&E been “worth the money spent on it?”
- Has monitoring “led to significant improvements in the quality of management decisions, which have in turn resulted in improvements in project performance which have been worth more than the cost of providing the information”?
- Have “ex post evaluation....led to beneficial changes in project design and policy that would otherwise not have been made”?

Maddock (1993) also refers to the work of Guido Deboeck & Bill Kinsey (1980) and Gilroy Coleman (1992), who report that costs of M&E for rural development projects³⁹ as range from 0.5% to more than 5% of base-cost and more than 2% of base-cost respectively. Whilst these three separate reports relate to a different sector, the 1980 report does centre on East Africa, of which nine of the 54 projects reviewed were based in Kenya. Of the nine, seven contained a

³⁹ Note, some rural development projects include rural water supply and sanitation as sub-components.

component of M&E and in turn four of the seven budgeted funds for M&E activities which ranged between 0.4% and 1.4% of base costs. These percentage figures could be used as a comparison for the WASH sector data.

Other literature sourced, in particular grey literature, tends to be in the form of guidelines such as IFAD's Guide for project M&E (2002) and World Bank's Monitoring & Evaluation: Some Tools, Methods & Approaches (2004). Both of these documents present cost in slightly different ways. IFAD (2002), highlights items to consider when preparing an M&E budget such as investment costs for equipment, communications and labour costs. The guideline also provides examples of M&E costs as a percentage of total project cost for five projects in Latin America. The World Bank report however, provides examples of the different tools, methods and approaches to M&E and describes associated costs as low, medium or high, with a caveat that states 'depending on.....' different criteria for different examples.

From the document analysis 26 out of 209 (12%) contain some information on cost and within the 26 interviews responding to the questions about cost the majority report cost in a discrete way. For example data are reported either as financial values or on a percentage basis, rather than reporting 'cost' as embedded within a management fee, or within other activities. In the case of the documents, 60% of the 26 documents reported cost with financial data. These results suggest that for Kenya there is no defined conceptual framework for cost of M&E for the WASH sector.

5.3.3 Objective Three

To examine the costs budgeted and expensed by global, national and programme level stakeholders, on M&E of service delivery, over the last 20-years.

Whilst documents and data records sourced for Kenya do not appear to hold planning details related to how budgets are developed and the ability to spend and prioritize spending on monitoring or evaluation, some examples were provided during the course of the interviews. One repeatedly referred to

perspective deliberated that under-funding of monitoring and evaluation was the main influencing factor for the low budgeting of either activities. In some cases, the suggestion was made that with a heightened visibility of the importance of budgeting by development partners, a trickledown effect would be likely and in turn an increase in budget allocation. A few other responses acknowledged a lack of guidelines available to steer stakeholders to appropriate levels of funding as a contributing factor to the lack of appreciation of what an appropriate level of funding would be.

A juxtaposing question of what is the 'cost of not monitoring' was also discussed as was the issue of whether the cost mattered as it would be the same whether information generated is used or not used thereby inferring more importance to 'use' than 'cost'. On the occasion where a guideline developed by the organisation itself, was available and referred to a percentage of budget figure, details of how the percentage figure was calculated was either unknown or not defined and speculation by the interviewees was made that it was simply based on (someone's) judgement.

Another interesting comment made, which could be considered as a summary of all of the above, was that "cost depends on demand and motivation and incentives and is a controversial subject". This same individual went on to ask (rhetorically) the question in respect of roles and responsibilities "Who decides the budget allocation?"

In terms of actual cost data, to date no case study examples, explicitly relating to and analysing the costs of monitoring or evaluation for the WASH sector, have been sourced or made available for any of the Kenyan stakeholders. However, 12% of the documents sourced do appear to contain some incidences of costs of monitoring or evaluation or both. Of those 12%, the analysis shows 'strategy' as the data type most frequently reporting cost accounting for approximately one third of the documents (see Table 5-18). The 'annual' and 'review' data types are evidently the next most frequently reporting cost. For the strategy data types costs are defined as budget estimates for selected strategic actions; budget investment level for specific programme components including

programme support, administration and communication; values against M&E activities; and total department cost, where the department is responsible for M&E.

Table 5-18 Number of data records reporting cost

Data type cluster	Number of records	PUBLIC			CSO
		Government	Development Partner	TBD	NGO
Annual	5	5			
Evaluation	2		2		
Proposal	2		1	1	
Review	4	1	3		
Strategy	8	6	1		1
Survey	2	2			
TBD	3	1	2		
Total	26	15	9	1	1

Despite this limited sample size, the graphs below in Figure 5-19 and Figure 5-20 shows that over time, reporting of the cost of M&E seems to be increasing.

Some other noteworthy metadata from the document analysis, includes:

- 1 of the 10 (10%) data records sourced for NGO's contained M&E cost data.
- 9 of the 68 (13.2%) data records sourced for development partners contained M&E cost data.
- 14 of the 111 (12.6%) data records sourced for government contained M&E cost data.

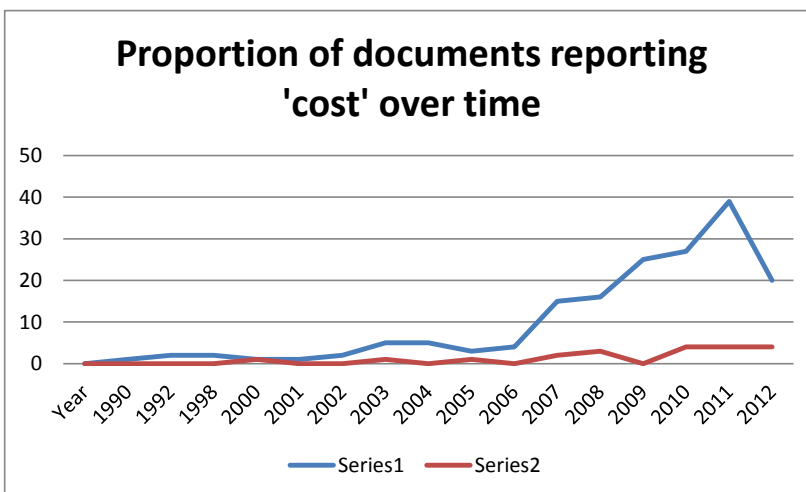


Figure 5-19 Proportion of documents reporting cost over time

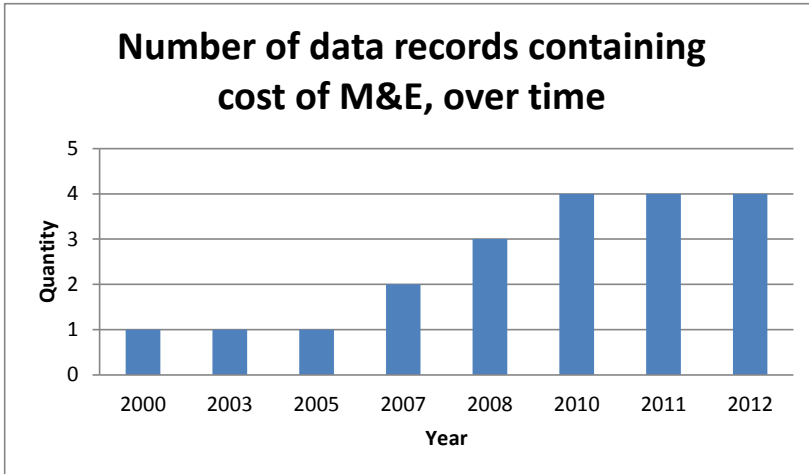


Figure 5-20 Number of data records containing cost of M&E over time

From the transcript analysis two main threads of discussion were held relating to actual budgeting for M&E:

- Whether the role of M&E is currently embedded across a team or organisation or separated out as a discrete function.
- Discrete cost typologies such as percentage based calculations and itemised financial values.

In respect of the first thread, recognition was given to the situation that if the role is embedded then it can lead to challenges in understanding the absolute cost of M&E, as there tends not to be a specific budget line. However, having a role separated out as a discrete function can also lead to challenges in terms of recognising that a project M&E person may not do it in the same way as a technical or financial team member. In both scenarios and recognising some monitoring is repetitive, there is also the risk that the costs could be considered inflated.

The second thread of discussion provided several examples of percentage values used to determine budget levels of monitoring and evaluation Table 5-19. To understand how these translate into absolute values the suggested percentages have been applied to the water sector budget as reported in section 5.1.2 and Table 5-20. One particular discussion identified the challenges associated with recording actual costs of monitoring in relation to the

difficulties around timesheet control and activity based costing. When attempting to practically apply timesheet control across all day-to-day activities, the ability for people to quantify time when talking either in the office or field and isolating that it was specifically related to monitoring as well as identifying an output became almost impossible. Furthermore the interviewee felt it was also counterproductive and ultimately meant that it was not successful.

Table 5-19 Examples of percentage based values for cost of M&E

Example	Monitoring and/or evaluation	Type	Percentage value
1	M&E	Project & National	2-4% & 5%
2	M&E	Field visits	2%
3	M&E	Project	5-7%
4	Audits and evaluations	Project	10%
5	M&E	Target & Actual	5-7% & <1%
6	M&E	Activity (not staff)	<3%
7	M&E	Project	5%
8	Evaluations	Project	5%

A few isolated comments were also made suggesting that donors need to make a decision on costs of monitoring and budgeting levels. However, the comments were given against a backdrop that with the ‘current dynamic between donors and implementing partners – M&E – will never get the resources it needs – ever’. In contrast another respondent suggested that the ‘funding shouldn’t be a problem’ as they (public sector - government) have ‘lots of money which they never use’.

Two sub-case analyses were envisaged as part of examining case studies of cost of M&E. One was the annual sector reviews however, data was not readily available. The second was to consider the costs of the regulatory authority. As an organisation that has the mandate for performance monitoring service providers, the assumption can be made that all the costs of the company could be designated as ‘monitoring costs’. Two series of calculations were undertaken to examine these costs. The first was to calculate the overall cost of the

organisation as a percentage of billing revenue⁴⁰ and the second as a percentage of sub-sector budget and expenditure (Table 5-21).

From the analysis of interviews the cost of the organisation as a percentage of billing revenue has been referenced on more than one occasion as 1%. The analysis in Table 5-22 supports that claim. Another sub-case was highlighted during the interviews: Organisation A and Organisation B, in a common area, both requiring a hydrological survey as part of their project, but different funding agents – donors. Both organisation A and organisation B have surveys carried out when there are a number of more efficient options possible – sharing one survey, dual funding, amongst others. Whilst there are potentially a number of reasons to carry out separate surveys, questions around cost efficiency, especially when the reasons are not disclosed, are inevitable.

Taking the two stakeholder sub-types with the most document references to cost of monitoring and evaluation, details of the cost typologies are presented in the following two tables (Table 5-23 and

Table 5-24) and give an overview of the diversity and inconsistency of reporting cost. In terms of considering what an appropriate percentage could be applied to M&E activities is not clearly evident within the findings for Kenya. The report of Deboecke & Kinsey (1980), which is based on empirical evidence from East Africa suggests between 2 and 3% of the project costs should be allocated for M&E systems to allow a 'reasonable job' to be done. However, the report goes onto suggest that 'some participants felt that even 1.5% of project costs would be adequate if low-cost options for data gathering, processing and analysis could be identified and used by the project staff'. In respect to the documents and data records collected, not one of the percentage, narrative or figure based data provided a rationale behind the associated cost. Furthermore, when discussing the aspect during the interviews, again there was much supposition about 2-5% being an appropriate percentage of overall project budget, for M&E activities, however, no-one could substantiate why.

⁴⁰ Where billing is the turnover of WSPs (rural and urban) equivalent to the turnover of WSBs

Table 5-20 Application of proposed percentage rates for M&E to the water and irrigation sub-sector budget

	Budget 2004/05	Actual 2004/05	Budget 2005/06	Actual 2005/06	Approved 2006/07	Actual 2006/07	Approved 2007/08	Actual 2007/08	Approved 2008/09	Actual 2008/09	Approved 2009/10	Actual 2009/10	Approved 2010/11	Actual 2010/11
Water and Irrigation (Mn KShs)														
Recurrent - GoK	2,411.0	2,090.0	2,329.0	2,239.0	3,013.8	2,928.8	3,608.6	3,574.1	4,677.1	4,128.1	4,478.0		3,907.0	
Development - GoK	4,224.0	4,854.0	8,524.0	5,016.0	5,884.0	5,318.0	4,991.0	4,950.0	9,090.0	9,041.0	24,696.0		9,230.0	
Donor					4,206.1	2,234.9	8,189.3	4,377.8	10,307.0	6,375.8				
Sub-Total water & irrigation	6,635.0	6,944.0	10,853.0	7,255.0	13,103.9	10,481.7	16,788.9	12,901.9	24,074.1	19,544.9	29,174.0	21,748.0	13,137.0	28,601.0
Market exchange rate for Kenya KShs: US\$														
http://data.worldbank.org/indicator/PA.NUS.FCRF Accessed 25th March 2013		75.55		72.10		67.32		69.18		77.35		79.23		88.81
Sub-Total water & irrigation (US\$ million)		91.91		100.62		155.70		186.50		252.68		274.49		322.05
Application of proposed rates for M&E (US\$)														
1% (or less than) - Suggested as actual case		919,126		1,006,241		1,556,996		1,864,975		2,526,813		2,744,920		3,220,471
2% (2-4%, or <3%)		1,838,253		2,012,483		3,113,993		3,729,951		5,053,626		5,489,840		6,440,941
5% (5-7%) - Suggested as target case		4,595,632		5,031,207		7,784,982		9,324,877		12,634,066		13,724,599		16,102,353
10%		9,191,264		10,062,413		15,569,964		18,649,754		25,268,132		27,449,199		32,204,707

Without a cost typology or 'best practice' costs for M&E within Kenya, the applied proposed rates calculated against the sub-sector budget are somewhat meaningless in understanding what could be considered an appropriate budget for M&E. However, what it does offer is an indication and rapid assessment of possible budget or actual expenditure. The primary limitation of this analysis is that it does not necessarily take into account all off-budget spending.

Table 5-21 Organisation costs as a percentage of sub-sector budget

A/R Year	2007	2008	2008	2010	2010	2012
Period of cover	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
W&I Sector Budget	TBD	10,481,700,000.00	12,901,900,000.00	19,544,900,000.00	21,748,000,000.00	28,601,000,000.00
WASREB Budget (KShs)	TBD	70,498,339.00	75,340,063.00	66,741,411.00	82,841,427.00	111,660,780.00
WASREB Budget as % of Sector	TBD	0.7%	0.6%	0.3%	0.4%	0.4%
WASREB Expenditure (KShs)	TBD	65,405,689.00	61,878,545.00	65,242,019.00	83,916,636.00	108,081,875.00
WASREB Expenditure as % of Sector	TBD	0.6%	0.5%	0.3%	0.4%	0.4%

Table 5-22 Organisation costs as a percentage of billing revenue

A/R Year	2007	2008	2008	2010	2010	2012
Period of cover	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Water Service Board Turnover	5,526,000,000.00	6,014,000,000.00	nd	7,162,000,000.00	9,851,000,000.00	12,166,000,000.00
WASREB Budget (KShs)	TBD	70,498,339.00	75,340,063.00	66,741,411.00	82,841,427.00	111,660,780.00
WASREB Budget as % of WSB Turnover	TBD	1.2%	#VALUE!	0.9%	0.8%	0.9%
WASREB Expenditure (KShs)	TBD	65,405,689.00	61,878,545.00	65,242,019.00	83,916,636.00	108,081,875.00
WASREB Expenditure as % of WSB Turnover	TBD	1.1%	#VALUE!	0.9%	0.9%	0.9%

(Source: WASREB (2012,2011,2010))

Table 5-23 Examples of cost of M&E - Government

Public sector stakeholders - Government
Two references to surveys . The first a general statement about requiring 260 personnel, a costly and complex exercise. The second details an estimated cost of the exercise as Kshs 8.4bn.
Several strategic plans refer to cost of monitoring. One which includes an assessment reference suggests the cost of replacement of items used for M&E as Kshs 111,127,000. A second strategic plan defines M&E within an institutional and cross-cutting dimension. The budgeted values for a 5-year period within one objective total Kshs 50M and under a second objective total another Kshs 50M. Separately these calculate each to 5.5% of the 'dimension' budget. Together, this Kshs 100M equates to 0.009% of the overall budget for the 5-year strategic plan. However, given the use of terminology of the other objectives within this dimension, the assumption could be made that the total dimension budget relates in some way to M&E. The dimension budget as a percentage of overall total strategic plan budget equates to 0.08%. A third strategic plan example presents a multiplicity of budgeted activities relating to M&E such as financial conditionalities; project monitoring and project evaluations. The challenge with this example is that against some activities, staff time is written without a cost and on other occasions whereby implicitly staff time could be assumed it is not written.
For a 5-year period (2008-2012), actual expenditure, detailed within annual reports of a single organisation that could be considered collectively as M&E, given the mandate, fluctuate between 0.3% and 0.6% of the water and sanitation sector funding.
A narrative in one review considers monitoring and evaluation is under-funded making it difficult to monitor project expenditures and ascertain project outputs.

Table 5-24 Examples of cost of M&E – Development partners

Public Sector Stakeholders - Development Partner
In relation to a programme - the overall programme could be considered as an M&E cost as is an M&E programme however, the budget line, within, for M&E as a value which equates to 1.78% of overall programme budget. A second programme example considers monitoring costs as being contained within overall administrative or management overhead costs or a combination. A third programme - M&E country-wide programme (multiple sectors), activity based budgeted costs by year over a 6-year period. Allocation of funds to M&E activities calculates at 0.9% of total budget whereas actual expenditure comes in at 1.4% of total expenditure. More specifically, relating to the sector budget where M&E is contained, allocation calculates as 13.8% whereas actual expenditure comes in at 17.5%.
A review provides an example of the cost of not monitoring sanitation.
A couple of examples of monitoring activities detail the cost of monitoring as a cost per capita within which the cost is defined and as low, medium, or high.
A proposed plan of 22 WASH sector related projects with a total value of US\$28.6M. An indicative cost of M&E could range between 2-5% which equates to US\$0.5 and 1.5M equalling an average of US\$22,000 – 68,000 per project.

5.3.4 Objective Four

To explore the underlying purpose and use of each of the data sets.

Through applying a word search and find function to each record, just over 50% of the 209 documents and data records sourced, make reference to the purpose of the data record. Of these 109 documents, approximately one tenth specifically used the terminology of 'purpose' as a sub-heading within the record. Very few of the data records explicitly describe the purpose of the data record. Some describe the way it could be used but not explain why the report or data record has been prepared. Whilst certain assumptions can be made through examining the title and content and applying implicit reasoning, there is always the caveat that what is reported is necessarily used for its intended purpose. Furthermore, this does not necessarily satisfy the rigour or validate requirements for empirical evidence. The documents and data records that most clearly presented the purpose of the record were 'guidelines'.

Using the four conceptual frameworks, as reported under Section 3.4.7 Exploratory Conceptual Frameworks, data on the purpose of M&E, as extrapolated from the document data records and interviews, was analysed. Approximately one quarter (24%) of document records report against an internal or external purpose with the balance 76% of records, reporting against both an internal and an external purpose. Applying the categorisation of Casley & Kumar (1988), approximately 65% of the data records examined have a descriptive and explanatory purpose. The second most prominent categorisation under this framework is a combination of description, explanation and prediction at 26%, with the balance either description, (6%), explanation (3%) or a combination of explanation and prediction (1%). Categorising against the framework suggested by IPDET (2007), proved slightly more challenging than the previous two classifications and as a consequence, the results show a more fragmented categorisation (see Table 5-25). However, further analysis by way of clustering shows that 45% relate to one or other of the categories, 32% relate to two categories and 21% relate to three or more categories. The classification process using the amalgamated framework of Cotton & Bartram

(2008) and Gosling & Edwards (2003), shows approximately 90% of the intended use relates to a single level, with the most prevalent as Global.

Table 5-25 Purpose of data records

Categorisation of Purpose (IPDET 2007)	Number of records
Ethical (policy performance) as a primary purpose	
Policy Performance	21
Policy Performance & Decisional	1
Policy performance & Educative and motivational	2
Policy performance & Managerial	3
Policy performance & Managerial & Decisional	10
Policy Performance & Possibly Decisional	3
Managerial (financial and human accountability as a primary purpose	
Managerial	5
Managerial & Policy performance	11
Managerial & Policy performance & educative and motivational	2
Managerial & possibly Decisional	7
Possibly Managerial & Educative and motivational	4
Decisional (policy reform) as a primary purpose	
Decisional	5
Decisional & Policy Performance & Educative and Motivational	1
Possibly decisional	2
Possibly Decisional & Educative and motivational & Policy performance	4
Possibly Decisional & Educative and motivational	1
Educative and Motivational as a primary purpose	
Educative and Motivational	16
Educative and Motivational & ???	1
Educative and Motivational & Policy performance & Managerial	1
Educative and Motivational (&? Policy performance)	2
Educative and Motivational & Policy Performance & possibly Decisional	5
TBD	2
Total	109

Three separate approaches to analysing how M&E data is actually used was carried out by:

- Examining specific examples and attempting to track extent and reach of use.
- Analysis of the interviews.
- Examining the results from the e-survey which contained a series of questions around use.

The document data record analysis proved extremely challenging to ascertain specific examples of actual use of M&E data, leading to an impact on service

delivery. Attempts were made to find an audit trail on the basis that implicitly, some level of M&E must have been carried out to report the recommendations and undertakings. While this would be a starting point the methodology would have required further examination of evidence to suggest that actions had been carried out in response to the recommendations. By tracking from one year to the next it was hoped that a link could be made in terms of any consequences, improvements or otherwise of the original recommendation(s). Due to timing and data availability constraints, this component of the analysis was not possible however, is recommended as a future research.

The interview responses relating to 'use' were clustered into the categories 'not used', 'should be used', 'how to use' and 'examples of use' (Figure 5-21). Approximately 50% of respondents recognised that M&E data is not used or should be used or a combination of both. The majority of examples given were broad statements such as 'it informs decision making' within the organisation; 'there is a forum which facilitates information exchange'; 'I'm sure NGOs use them' (when referring to JMP data); and 'opportunistic use of forum for networking opportunities'. How to use the data was also raised as a question - how do you use the data and translate into practical actions and solutions?

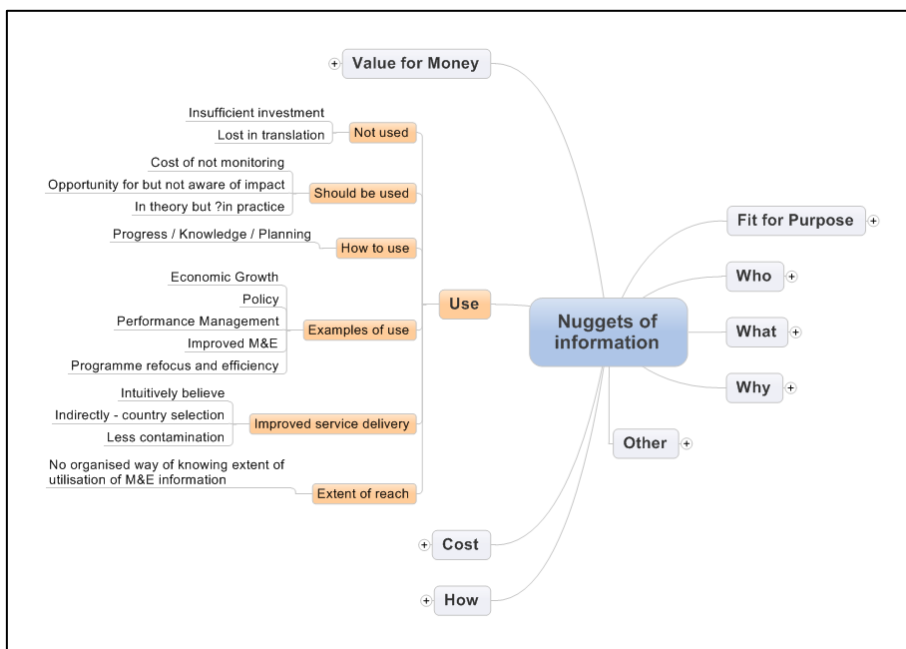


Figure 5-21 Mind map of interview responses relating 'use' of M&E data

The results of the e-survey highlighted other specific examples:

- Evaluation and validation of tariffs to ensure cost is justified and has resulted in a number of utilities progressing towards 100% O&M cost recovery.
- Design of water supply projects are modified based on field monitoring – leading to improvements and acceleration of implementation.
- Improved performance as a consequence of Annual Performance Assessments through benchmarking.

The survey also highlighted the extent of use of a sample of reports and guidelines (see Appendix E-4). For each of the reports approximately 50% of respondents had not use the sample of documents and at least 60% had not used the sample of guidelines.

5.3.5 Objective Five

To examine the conceptual framework of ‘value for money’ and identify whether M&E is fit for purpose for use in the WASH sector?

Not one academic article was identified through the review which referenced theoretical, empirical or anecdotal evidence on the relationship between ‘VfM’ and monitoring or evaluation for the WASH sector within Kenya. Additionally, the research has not been able to source any documented example or reference to whether monitoring or evaluation is providing value for money in the WASH sector in Kenya. However, a terms of reference, was sourced for “Value for Money Audit for the Urban Water and Sanitation sub-Sector”. and the term ‘value for money’ or the acronym VfM, or a combination, have been referred to in 28 of the 209 documents sourced for Kenya. All of the references relate to public stakeholders. The following series of graphs and charts in Figure 5-22; Figure 5-23 and Figure 5-24 below highlight the frequency of occurrence and stakeholder sub-type. The references cover the health, procurement, education, transport and the water and sanitation sector. In the case of the latter, this includes a specific Value for Money study.

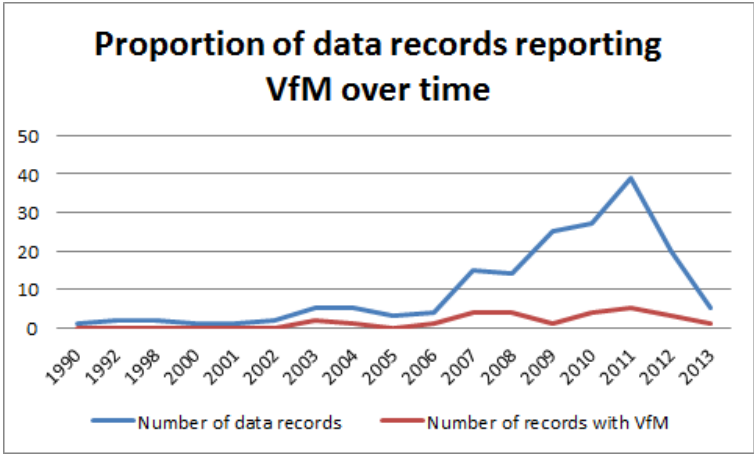


Figure 5-22 Proportion of data records reporting VfM

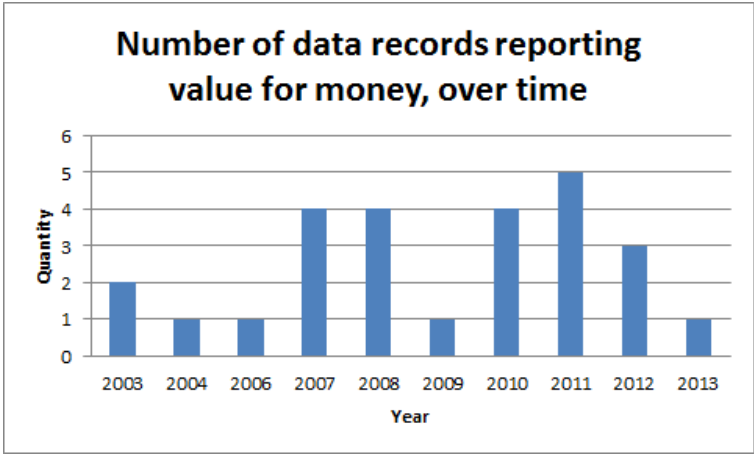


Figure 5-23 Number of data records reporting VfM

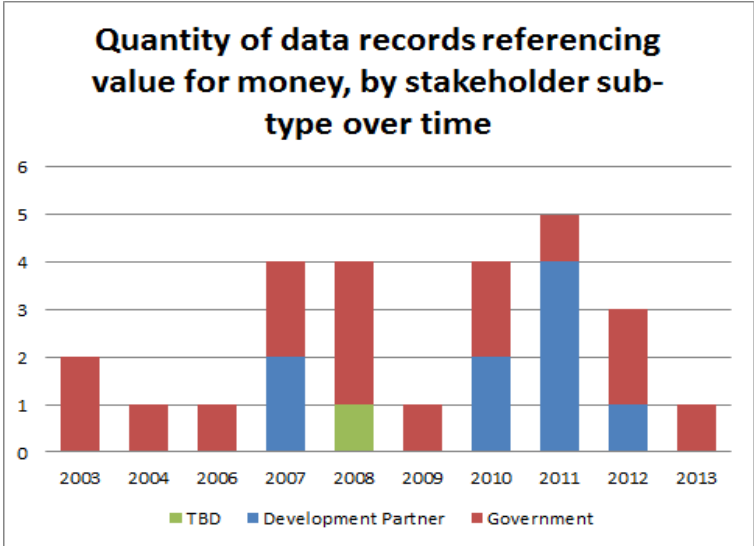


Figure 5-24 Proportion of stakeholder sub-type reporting VfM

Only nine of the 59 sessions contain any perception of whether M&E is providing VfM in the WASH sector, with the majority suggesting a mix of 'yes' and 'no'. Despite the small response rate, some participants provided a rationale for their responses. For example: 'VfM' is not provided because so little money is spent; or because the information generated is not used or not in a digestible format. On the other hand some felt there was a mixed response, as in the case of one respondent who felt that some public sector stakeholders were providing 'VfM' whereas the NGO's were not quite there yet. Perhaps the results would have been different if the question was asked specifically in relation to monitoring or evaluation.

In terms of the e-survey analysis, of the 8 respondents who answered the question as to whether M&E was providing VfM in Kenya, in the WASH sector, 50% responded 'yes' whilst the balance responded that they did not know.

When considering whether M&E, in the WASH sector, in Kenya is 'fit for purpose' as with 'VfM', neither an academic article nor document was sourced. The interviews however, discussed the extent to which M&E is 'fit for purpose' for use in the WASH sector, using the following two schedule questions:

- The aspects that need strengthening or need prioritising to ensure M&E is fit for purpose.
- The positives of M&E and identifying what is working well.

Taking each in succession Table 5-26 and Table 5-27 provide an overview of the two themes. Some of the examples of aspects referred to as, needing strengthening included:

Who: getting the right people around the table; enormous number of stakeholders....levels of authority, recognising M&E as a core business – responsibility of all; enforcement of poor performance; weakness with responsibility with rural.

What: data quality in general and specifically that it is not linked to financing allocations; commerciality of data; post implementation monitoring of functionality; data collection rather than indicator collection.

Why: to be driven by the highest level; understood through planning and design of M&E; requires a lot of empowerment, even when cost is forgotten we don't know why we're doing it.

How: action oriented, operationalization weak; talking rather than doing; central database; guidelines and framework; gap in qualitative data analysis; gap between project end and water point mapping which starts from scratch again.

Table 5-26 Aspects that need strengthening to ensure M&E is 'FfP'

Aspects needing strengthening	Session frequency	Who	What	Why	How	Cost	Use	Terminology	Consequences
Purpose; Levels; Database; Use	1	1		1	1		1		
Regulator	1	1							
Data collection; Use;Who	1	1			1		1		
Indicators - post implementation monitoring - functionality; Water Point Mapping	1		1		1				
Use; How - Tools	1				1		1		
Budget; Design; Inspectorate	1	1	1	1	1	1	1		
Level of monitoring; Simplify; Financial monitoring	1	1	1						
Use; Functionality; Terminology	1		1				1	1	
Knowledge management; Guidelines; Data storage; Consequences; Impact - change; Working Groups; Universities	1	1			1		1		1
Capacity & Capability; Planning; Guidelines	1	1			1				
Joint planning; Information Sharing; Legal framework; International standard; Coordination	1	1			1		1		
Analysis of qualitative data; Actual costs	1				1	1			
Data and report quality; Quick decision making	1				1		1		
na	44								
nd	1								
TBD	1								
Total	59	8	4	2	10	2	8	1	1

Cost: budgeting, challenges around actual cost.

Use: lessons learned; knowledge management and information sharing; strengthen Working Groups; level of authority to allow lower-level decision making.

Other: terminology and definitions, consequences for poor performance.

The results from the e-survey analysis report that of the 8 respondents who answered the question as to whether M&E was FfP in Kenya, in the WASH sector, 3 responded 'yes' ; 1 responded 'no' whilst the balance responded that they 'do not know'.

Some of the examples of aspects of M&E referred to as working well include:

Who: JMP – consistent monitoring over a long period of time from global to national level data determining problems, issues - there was nothing before; , Regulator is working well in terms of urban environments; regular National reporting.

Table 5-27 Aspects of M&E that are currently working well

Aspects working well	Session frequency	Who	What	Why	How	Cost	Use
SWAP - framework; Project budget	1				1	1	
Regulator	1	1					1
JMP; Joint Sector Reviews	1	1			1		
Insurance system; Regulator	1	1			1		1
Regulator; Sector Review	1	1			1		1
JMP; NGOs & Development Partners	1	1					
Financial monitoring; Results	1		1		1		
International guidelines; Strategic planning	1				1		
Inputs and outputs	1		1				
National reporting	1	1			1		
na	44						
nd	4						
TBD	1						
Total	59	6	2	0	7	1	3

What: Financial and project monitoring, preparation of strategic plans and move towards going beyond the numbers.

Why: no discussion.

How: e-ProMIS, Sector Annual Reviews, SWaP - frameworks, data collection tools.

Cost: M&E budgeting in each project.

Use: Urban way ahead of rural, specific example using an insurance system.

Considered part of the contextual understanding of whether something is fit for purpose, is to ensure roles and responsibilities are realistically assigned. The extent to which this is perceived also formed part of the SSI 2 schedule. The following paragraphs provide an overview of the some of the discussions.

Various suggestions were made about how consumers could be more involved in the monitoring process, in terms of ensuring improved service delivery to the population - particularly in terms of functionality. The consumer is considered the 'constant' within the process of monitoring. Recognition was also given to the potential that the consumer will think differently to the Water Boards. One respondent also suggested that the consumer should also be the one to "find the way to report (functionality), as if not interested in reporting functionality, then should they have the water point"? Despite the question of whether assessing functionality comes under monitoring or evaluation, the point is a valid one as seen within other countries under a label of consumer voice and the setting up of customer complaint call centres. However, the consumer also needs to have the confidence that the concern or complaint, in this case functionality, of the water source will be appropriately addressed.

At a project level, one respondent identified that in their case, roles and responsibilities were realistic. However they went on to say they would love to have a dedicated deputy to focus purely on monitoring and evaluation, within the project, to capture knowledge learning, but the budget would not support it. The caveat is that the donor is unlikely to endorse such a scenario particularly with the financial constraints and recognition that M&E is often the first thing to be squeezed as project implementation is seen as the priority. This suggests that neither monitoring nor evaluation is seen as part of the project implementation, rather the activities are seen as simply a 'means to an end'. In this particular interview, the researchers' perception was confirmed by a statement of the interviewee that M&E is simply a tool to get the end product of project implementation.

The sector level comprises a number of actors – multiplicity of stakeholders across public, private and civil society organisations. Discussions considered whether one individual organisation should or could be spearheading the effort of ensuring systematic M&E takes place across the sector. The role would ensure the feeding of information both ways: up to national level (and to a lesser concern global level), as well as feeding back to those collecting the data

including the consumer. Recognising the existence of the Regulator as an organisation already mandated to monitor water service providers many respondents suggested the regulator could be the appropriate organisation to spearhead this effort. Many respondents also acknowledged the improvement in efforts of urban WSPs reporting and felt that the regulator could bring on board, more effectively, other organisations such as NGO's and rural water service providers. Conversely concern was also raised in the weaknesses of quality of data, including indicators and the limited action based consequences for poor performance. The idea was raised on more than one occasion that the regulator could benefit from sitting under the Ministry of Finance – for purposes of linking monitoring and evaluation to informed financial decision making as well as having 'a bigger bite' in terms of enforcing consequences of poor performance. A series of sector guidelines for M&E was also deemed to be of benefit, again contributed to by the Regulator, acknowledging the guideline development already undertaken within the sector.

Uncertainty around the Sector Working Group and Water Service Technical Working Group was raised on a few occasions as well as that of WESCOORD. Generic to each working group is a question on lack of consistency of participants which has a negative impact on progressing issue resolutions. Historic understanding and knowledge of the issues has to be imparted time and time again. Also highlighted was the scenario that the voluntary basis of information sharing results in some gaining more benefits than others. Insinuations were made that the bigger organisations benefit often at the expense of the smaller organisations. As one respondent clearly put it "NGOs have an interest in divide and rule – as they fight for the same money".

Other sector based organisations, associations and networks such as KeWASNET, Association of Water Service Provider were also touched upon in terms of supporting the efforts of the possible 'spearheading organisation'. There was a fairly strong thread of discussion about addressing what NGO's are doing and what they would be well placed to do going forward i.e. advocacy and communications, lobbying on behalf of the consumer – helping the

government / regulator with getting Rights of the Consumer secured rather than project managing infrastructure service delivery.

At a national level, again as with the sector, there are a number of actors involved driving or being driven by a plethora of issues. In terms of M&E in the WASH sector, the key findings as expressed through the interviews, proposed the drive and incentive for both monitoring and evaluation needs to be country wide from a high authority such as the President. Furthermore, the activities of monitoring and evaluation should be compulsory for each project and a core function of every government ministry.

The NIMES programme was discussed by a few respondents and it became apparent that not many were familiar with the process. Weaknesses rather than the positives were identified by referencing that it had been launched some 10 years ago and yet there had since been very little visibility of implementation or progress. Challenges between sector and national data such as KNBS household surveys were also acknowledged. Suggestions were made that with improved awareness, some streamlining of JMP, KNBS and Sector data, an opportunity would arise so that one could validate the other. Several references were also made to the Health sector and how the sector had seemingly resolved the aggregation of data issue and were now collating information, from health facilities to national data. The recommendation was that perhaps there are lessons that can be learnt from other sectors.

Dialogue was also held around the extent to which universities could play a role as learning organisations to improve the quality of data and knowledge products through rigour and improved learning. However, concerns were also raised around the level and standards of local universities compared to those of international recognition.

General associated factors to avoid the, disconnect, duplication, unstructured approach to M&E, were also referenced such as:

- Questioning whether M&E should be embedded or separated as a function within an organisation or project.

- The needs of different levels but ensuring a feedback loop exists,
- Maintaining an appropriate level of supervision.
- Good design, planning and co-ordination of efforts: seemingly constrained within Kenya.

5.3.6 Objective Six

To understand better the potential for harmonization and alignment of country level frameworks, with the SDGs and HR frameworks.

As the MDG's near the end of their target period, in 2012, the JMP established four working groups to examine the options for post-2015 goal, targets and indicators. According to the Consultation on Draft Long List of Goal, Target and Indicator Options for Future Global Monitoring of WASH (2012), *“current global indicators fall short of measuring progress in some key areas, such as those mentioned under the Human Right to Water and Sanitation: drinking-water quality, accessibility, reliability, affordability, sustainability, broader aspects of sanitation and wastewater management, as well as distribution of services among population groups”*.

Also in 2012, there was a High-Level Panel formed to make recommendations on the post-2015 development agenda in which Kenya was represented. In 2013 the UNDP with the Global Water Partnership led the country level consultation process to Kenya to determine priorities and preferences based on the new constitution and the practical realities of the country's enabling environment. Analysis was undertaken to compare the indicator data sets against the JMP working group and the GWP consultation papers and selected 'Human Rights to Water and Sanitation' terms. In each case no more than 10% of the data set relate to any one term contained within the proposals. What is not clear from the document and interview analysis is whether the existing indicators are going to remain and simply be added to in terms of possible changes in global target and indicator setting. An alternative scenario is that the current indicators will be amended. The limited dialogue held suggested that the country level sector indicators, particularly in the case of the regulator, already

satisfy the progressive realisation of water and sanitation as a human right. However, the results indicate that this may not be the case for the other systems and activities of monitoring being carried out and reported for Kenya.

The interview analysis data also reveals a limited number of stakeholders have engaged in the process of SDG development, either voluntarily or upon request by others - more than 50% of respondents confirmed they had not either been consulted or provided any contribution to the post-2015 discussions. Those that have participated in discussion or contributed have done so as development partners and upon request. In one case alone - an NGO – had done so voluntarily. In addition to the specific focus of SDGs and post-2015, some responses were given relating to current indicators as well as ideas for what the ‘what’ of monitoring should consider:

- Local context must be recognised – as if the operational level is not effective then global level is useless – need to strengthen the source of data.
- Cost & quantity – concern of loss of focus, risk of being at a huge cost thereby compromising accuracy,

Despite this minimum level of contribution to either on-line or in-country consultations (note this series of interviews was carried out prior to the UNDP led consultation process in Kenya however, upon since, accessing the report, no stakeholder was included in the process....), many of the respondents had suggestions on what post-2015, SDGs should consider:

- **Indicators:** Limited number of indicators; simple to understand by everyone; disaggregate as data points and enter into a national depository / archive. Being selective about what to measure is important and messaging needs to be as simple as possible. Reflect and think what is the critical thing we want to monitor.
- **National:** Think outside the box; consider integrated WASH monitoring; more of an issue at national level rather than trying to reconcile national and global.

Very little discussion was focused on the intended or actual use of the SDGs; the implications of how to measure the SDGs, or the implications of possible associated costs. This may be a consequence of other responses, such as ‘it won’t affect Kenya’; ‘it’s not the main objective of Kenya’; or simply due to the fact that many of the respondents had not been involved in, let alone had access to the draft SDG proposals.

5.4 Analysis and Discussion

Objective One

There is compelling evidence to suggest that global M&E, over the past twenty years, has also shaped national M&E, in terms of what is monitored and reported. Such evidence includes the likely influence, through the introduction of international agreements like the UN Development Decades and the MDGs has had. Results detailed under section 5.3.1 show that the predominant indicator reported against is ‘coverage’ whereas ‘functionality’ and ‘impact’ have not featured to any great extent. The MDGs do not obviously consider functionality or impact as part of the reporting requirements. This influence has the potential to continue, particularly given the imminent introduction of the Sustainable Development Goals and the continuing high level of donor funding from development partners within Kenya (Figure 5-5)

However, there is also a strong sense of loyalty to reporting against nationally derived indicators and targets and worthy of note are the nine core indicators the regulator commands water service providers and water service board to report against. With the introduction of the water and sanitation (utility) regulator in 2003, there is some evidence highlighted in the transcript analysis, to suggest that in urban environments, the external influences have less emphasis. Respondents suggest that global targets are secondary to national development plans, targets and associated indicators. However, acknowledgement needs to be given to the fact that development partners have been providing support to the Kenyan Regulator and international benchmarking guided the selection of what the Regulator is using in terms of the indicators for their monitoring framework – thereby denoting an in-direct external influence.

With the increase in external funding and introduction of country-led systems⁴¹ obligations of reporting are seemingly increasing over time. This is demonstrated by the increasing number of documents containing information on monitoring activities, as well as the increasing number of indicators reported within each document. Attempts to ascertain the extent of aggregation of data has been a challenge. Disaggregation is more clearly evident through the analysis of the clustered data as reported in section 5.3.1, which highlights the range of service provider and sector level indicators in addition to the core set of recurring service level data. The analysis also shows that there is no sign of any reduction in numbers of indicators being monitored or reported.

Legislative requirements and transparency and accountability obligations are also influencing demand for reporting. This is most marked across the public sector organisations. Neither, private or civil society entities, on the other hand, are similarly constrained. Despite the fact that much of the funding for these organisations comes from the public purse, the extent of availability of project and programme related documentation from these sources is limited. The reluctance to offer information was, in some cases, rationalised on the basis of being commercial in confidence and a perception of the adage of knowledge equals power. The mind-set is likely to continue as long as the level of competition and selection criteria, for development funds remains unchanged.

Another challenge with donor funding as evident over the last 5-10 years is a continuing duplication of effort within Kenya, despite the introduction of the Paris Declaration and Accra Accord Principals, the introduction of the Sector Wide Approach and the development of the Joint Assistance Strategy. Two notable examples were shared during the course of interviews (Box 5-3). Examples like these highlight questions about efficiency and effectiveness and question the extent to which monitoring and evaluation is providing value for money.

⁴¹ Such as NIMES, e-ProMIS; IFMIS; Annual Sector Review

Box 5-3 Examples of duplication of M&E

Example one (monitoring): National and local government, in becoming more proactive in undertaking monitoring activities at the sector and national level, is resulting in a duplication of effort and at risk of creating 'donor fatigue' amongst the communities themselves. Coordination of monitoring or evaluation activities across sectors and a streamlining of resources is a suggested resolution.

Example two (monitoring): With different organisations funded by different donors, in the same community can lead to duplication. Both contracted interventions require baseline data i.e. groundwater surveys, but there is little evidence of sharing of information or combining of resources across contracts to be more efficient.

The analysis has also identified another aspect of duplication - repetitiveness of reporting the same data. As identified in the literature review (Nilsson, 2006; Gupta, 2007; Carter, 2011), importance is given to look back to look forward when strategizing for the future. This appears to have resulted in excessive repeated reporting of past annual data sets. Not only does this have the potential to restrict clarity but can also lead to inconsistencies of reporting. A reasonable, appropriate and accurate time series for reporting needs to be established. The results for Kenya show that, for example, within a single year, published data is reporting up to 25 years of actual data.

Another thread of evidence, relating to the evolution of M&E, suggests that national and local governments are less proactive with evaluations than they are with satisfying the framework for monitoring. Ostensibly evaluations are less challenging compared to those of monitoring. However, the number of challenges with monitoring could, in turn, be deemed as a contributing factor to the limited number of evaluations being undertaken in the country. There are signs within Kenya, that efforts to reverse these challenges and the omission of evaluations are evident, such as with the establishment of the Evaluation Society of Kenya and more recently the launch of the Monitoring and Evaluation week, held in November 2012.

What is less evident are the efforts of development partners and donors to empower and enable government to have a more complete picture of both the technical and financial contribution civil society organisations make in terms of water and sanitation service delivery. In reality the total budgeted and expensed

annual amount of sector financing channelled through civil society organisations, remains unknown. Associated regulation is seemingly limited in its enforcement either by government or through the monitoring by development partners. This situation however, may alter with the introduction of the devolution of government, when responsibility for implementation of service delivery is at the local level.

This local level responsibility has the potential for a more closely aligned and empowered set of stakeholders, complete with the mandate and thus incentive to maintain a better understanding of civil society contribution. In turn local government, in the eyes of civil society, may be a more proactive, approachable and willing counterpart and recipient for information and data. This will however, depend on appropriate levels of capacity and capability at the devolved level, as well as sustaining sufficient operational financial resources.

A few stakeholders referred to the preferred role of NGOs, as being one which supports consumers through advocacy and lobbying, consumer demand to hold government, whether central or local, accountable to equitable service delivery. The stakeholders presenting this view were also of the opinion that with this more pivotal role, NGO's would in turn be supporting the monitoring effort of the regulator, particularly given the decentralisation of responsibility for service delivery.

In addition to duplication of effort another challenge, is the need to ensure the quality of data collected. For Kenya, as evidenced with the analysis of the values being reported for 'coverage' and 'use', in a few cases there were inconsistencies. Through the interviews, a number of reasons were given for discrepancies in data quality including (but not limited to): differing definitions relating to what is being monitored (thereby allowing for misinterpretation and misalignment of data sets); different methodologies being used for data collection across the sector; issues around aggregation of data; and issues around the level of capacity and capability within organisations, projects and programmes for undertaking M&E. During the discussions held with stakeholders, other factors such as whether the roles and responsibilities were

realistically assigned – ‘ensuring the right people were sitting around the table’ when planning and using M&E – as well as enabling monitoring and evaluation to be demand driven as a means to incentivise, were also key factors for consideration for progressing effective monitoring and evaluation.

Examining just one of these issues in more detail – methodology – there is a vast array of tools being piloted or introduced by development partners, directly or in-directly, under the auspices of providing improved quality data. At the same time there is also concern as to whether Kenya currently has the appropriate back-end systems in place to ensure sustainability of use of data collected. Technology use and advancement is a relatively recent feature within the public sector. Whilst likely due to the speed of technology development, its introduction and subsequent use, there remains some vagueness over the evidence of actual impact, of these new technologies, on service delivery. Furthermore, data collection is just one of the process components of carrying out monitoring and evaluation. Uncertainty also remains around whether, there is sufficient appreciation of monitoring and evaluation purpose; and whether there is sufficient capacity and capability to apply the necessary rigour to analysis and interpretation of data to ensure correct decisions are taken by those intended users.

Another aspect of methodology worth flagging, is the way that donors, (who historically have maintained preferred methods and approaches to both M&E), are becoming less rigid in their demands. Added to the heightening of country-led systems, an emerging consequence or perhaps risks is that despite good intentions, this evolution may lead to a deepening or widening of reporting inconsistency at a national level. Several respondents suggest or recognise, that until the purpose of both monitoring and evaluation is sufficiently understood; until sufficient skills and capacity exist for ensuring rigour and quality of the data collected, analysed and interpreted; and until the data is actually used thereafter, there is a real risk that collection of data will simply be a means in itself rather than a means to an end or anything more.

When examining the data on external influences of monitoring or evaluation, the aspects of data flow, validation and technology were the main foci of discussion. One notable observation was with respect to the level of external support for planning of M&E. In particular question was raised in terms of limited support for the operationalization of monitoring. The concern was levied more on monitoring, given that evaluation is predominantly carried out by external resources. As a consequence thought was given to the possibility of an international standard being of use. The standard could perhaps more effectively guide the flow of data however recognition was also given the fact that in the current situation despite legislation being in place with defined mandates, the data flow, albeit known in theory, is not happening as effectively as it could in practice. This also extends to the implementation of data validity processes. Whilst recognising that stakeholders do not necessarily need 100% accuracy to make effective decisions, as with the Pareto principle⁴², the persistent need for rigour therefore, to some extent, remains in question, as does the complex reasoning behind why, the data flow is not necessarily as fluid or accurate as it could be. Some such reasons include bias of reporting by way of an interest in maintaining the lack of clarity.

A system to provide empirical evidence that Kenya is moving towards 'Water for All, is primarily what is needed, adapted to capacity and capability that exists. It needs to include a mechanism that allows sub-sectors⁴³ to maintain their own systems so as to remain focused on collecting, analysing and reporting what is of importance to not only national requirements, but also the sub-sector level. In order to achieve this and maintain longevity of use, the system needs incentives and drivers which in turn need further understanding. In order to establish these criteria, ultimately one needs to understand how far away Kenya is from achieving this. Whilst still uncertain the research would indicate that the urban environment as compared to the rural environment is slightly ahead.

⁴² "The Pareto principle states that, for many events, roughly 80% of the effects come from 20% of the causes" (Bunkley, 2008)

⁴³ For example rural or urban or peri-urban alternatively water or sanitation.

Objective Two

The review of literature as reported in Chapter Two highlights the vast number and diverse nature of references that exist on “cost of monitoring”, particularly in the case of ‘grey literature’. However, the results of the searches for academic literature, specifically associated to the water, sanitation and hygiene sector, were far less productive, in fact almost non-existent.

From the general findings few, if any, articles consider a conceptual framework for measuring cost and those that do, acknowledge the incomplete nature of research on the topic (Rommelmann et al, 2003).

Whilst some of the literature (28 out of 808 articles), provide concrete examples on cost, only (3-5) included East Africa in the sample or within associated references. Of those none were WASH sector related. The evidence base could provide the foundations of building a regional storyboard. However, in reality, the institutional, political, social and economic similarities at country level are limited and therefore the validity of clumping country data together because of a regional locality may be inappropriate. An approach of combining countries where other economic, social, political and environmental similarities exist may be more considered.

The results presented under section 5.3.2, demonstrate the limited reported or published academic and grey material available from stakeholders on cost of monitoring and evaluation. Responding to the question on method of budget process of monitoring or evaluation, the majority of responses related to having taken a discrete approach, either in terms of itemising activities or applying a percentage of total project or programme budgeted cost. When considering budgeting on a line item, most acknowledged that staff time was not included as these costs usually featured under a separate budget line within the accounts. On the occasions where staff time was included, it was for individuals that had been recruited specifically for monitoring and evaluation activities, such as external (to programme/organisation team or employees), short-term ‘technical assistants’ or an ‘evaluation team’. Not one stakeholder described the situation where all monitoring or evaluations or both costs were included as an overhead

or embedded within other budget lines. However some did acknowledge that it was entirely possible.

Evidently, there is no cost typology, guideline, framework or definition reported or available for cost of M&E in the WASH sector in Kenya. The reported empirical evidence that does exist is limited in terms of substantiated evidence, to connect the decision-making process with budgeted or actual expenditure.

Objective Three

At the start of this research, when engaging with sector stakeholders, there was a noticeable interest in and desire to understand better the cost of both M&E. This is evidenced by the continuing involvement of the majority of stakeholders in the research project. Nevertheless, considering the analysis carried out under this objective no case study examples explicitly relating to and analysing the costs of M&E for the WASH sector in Kenya were identified. This suggests that some scepticism remains over whether the sector is willing to put a cost against monitoring or evaluation as activities or as disaggregated budget lines.

Taking account of the documents reviewed and available within the Kenya case and beyond, the lack of guidelines available to stakeholders setting out what is considered reasonable or appropriate as a budgeted cost is likely to be one reason for the reticence. Alternatively it could simply be due to the perception that M&E is nothing more than a 'means to an end'. In other words, as long as the outcome is achieved i.e. understanding whether a project or programme is progressing, or whether there is sufficient investment to achieve 100% coverage, the cost of obtaining that information is of secondary concern and is neither valued nor deemed important let alone a priority.

This latter view was echoed, in part, by one stakeholder during formal interview. They observed that in recent years, shrouded by austerity measures and the need for maximising results and ensuring accountability, there was a need to achieve more with less donor funding. In turn this was affecting the time and financial resources available to monitoring and in particular evaluation. There is likely, a raft of other possible and plausible motives or causes, for the lack of

clarity over cost, amongst the general discourse. In Kenya, responses ranged from, administrative problems of recording time when many staff carried out multiple tasks, as well as difficulties in defining day to day activities in terms of monitoring functions. A few isolated responses also suggest that donors need to make a decision of appropriate costs associated with monitoring. Again, this highlights the influence donor and development partners have on mind-sets including that of monitoring and evaluation and that the limited understanding of cost of M&E, is a symptom of the reflected importance given to it, by donors and development partners.

If stakeholders are looking to development partners and donors to define or guide cost typologies for M&E then this would synchronise with the recent emphasis of public sector on transparency and accountability, under an umbrella of 'good governance'. Whilst the sector has limited evidence of past and current costs of monitoring or evaluation or both, the following assumptions can be made:

- With an increasing amount of donor and development financing (Figure 5.5), there is an increase in number of projects and programmes, each with a level of requirement for monitoring and evaluation.
- With an increasing requirement to monitor and report (as set out under section 5.3.1) associated costs are also likely to increase.
- With the technology advancement and increasing number of 'gizmos and gadgets' being tested and applied within Kenya, these too add to the financial cost of monitoring.

Objective Four

As reported within the results under section 5.3.4 approximately 10% of data records sourced, specifically referenced the intended use of the record. Approximately 50% made some reference to the purpose embedded within the narrative of the text, for example, as a preface to the document, or as part of the introduction. Whilst this could imply that the purpose is not fully appreciated or understood, recognition must also be given to the scenario that the purpose may be considered implicit within the document title, such as 'Annual Progress

Report' or 'Strategic Plan'; or Mid-Term Review. However, when posing that scenario to stakeholders during interview, several responded that the former was more likely than the latter adding that whilst reports were being generated, the purpose was primarily related to a box ticking exercise to appease the conditionality requirements of donor.

Various acknowledgments were made during discussions concerning capacity and capability of monitoring and evaluation and that the activities were not necessarily seen as a profession, compared to that of engineering, social or environmental sciences. In support of this, information was sourced on the level of and availability of academic and non-academic training in monitoring or evaluation or both within Kenya and further discussed with stakeholders. The findings show that the training primarily comprises of one or two week courses embedded as modules within other business management or project management courses, but in general are very limited. Whilst some research projects are posted on the University of Nairobi website (Box 5-4) there are still only a few which specifically link M&E with the WASH sector.

Box 5-4 Examples of projects carried out by students of the University of Nairobi

References sourced from the University of Nairobi website (accessed 4 November 2013)

Macharia, J (1998) "M&E of Decentralized Development in Kenya".

Kimonyi, A.W (2010) "The relationship between M&E and the success of projects".

Njenga, E (2013) "Development Plans in Kenya: Factors influencing M&E of development projects (a case study of Machakos District)".

Another reported possible factor for having an incomplete picture of the purpose of monitoring within the sector, is linked to still having a somewhat fragmented sector approach. With multiple funding agents, multiple projects and programmes being implemented by an unknown number of implementing partners across a vast and in some cases, logistically hard to reach places results in miscellany. Added to the mix, until recently, has been a resource constrained centralised system of governance, mandated with monitoring the implementation of service delivery.

With the introduction of and recent transition to implementation of, the new constitution the mire of monitoring has potential to clear. With the mandate of implementation of service delivery at the county level, it relieves central government to focus on the policy and regulatory functions. In turn service delivery monitoring has the potential to become streamlined and in doing so more efficient and effective.

An alternative and perhaps converse scenario is also possible. With the shift in responsibility for service delivery to local level, monitoring could be pushed further down the priority list, as other perceived and real, higher level priorities command time, human and financial resources. In turn any inherent negative views of monitoring being a hindrance rather than a help could be accentuated. In a similar vein, evidence points towards there being a disconnect between the design and implementation of M&E as a result from the misalignment of roles and responsibilities. For example, design and implementation of projects and programmes (depending on the donor) is often contracted out separately. On the one hand this provides for transparency and fair competition (amongst other factors), whereas on the other hand can cause disaggregation of planning and subsequent operationalization of monitoring and evaluation.

This is also evident through interview discussions, when examples were provided about external consultants being bought in to a programme or project to help design or develop an M&E plan. Despite having good intentions, there is always a risk of aiming high and in the enthusiasm of endless possibilities, result in unrealistic plans - a symptom observed by Maddock (1993). The consultant then leaves the project at which point, the reality emerges of what it means and what is needed to deliver the ambitious plan. This often occurring at a time during a project when the realisation of a host of other influencing factors associated with project implementation take effect, at which point monitoring and evaluation becomes, once again, simply a means to an end and is consequently placed lower down the list of priorities.

There are also reported cases where, either in respect of copyright conditionality requirements, in the case of donor funded projects, or whether

commercial sensitivities as requested of the private and civil society sector, data and information that could be of relevance and interest to others, is not shared. From the research results under section 5.3.1, there is evidence showing that data is being collected and to a certain extent reported, recognising that not all of what is monitored is necessarily reported. However the level of analysis and interpretation is uncertain as the details of methodology are infrequently described. This leads to certain assumptions (if any at all), when reading such reports, being made as to the level of rigour applied when analysing the data. The question about data quality as previously reported under Objective One, remains a challenge within Kenya which in turn has been described as a cause for limiting the use and in turn resulting in duplication of effort. As a consequence, some prefer to carry out their own analysis or even, in a few cases collect their own data too, rather than use that which is generated by others.

There are however, various defined uses for both monitoring and evaluation data, as identified through the review of literature and further defined within the methodology chapter. In Kenya specifically, use is scantily reported with clearly defined examples impossible to locate from all levels and across all stakeholders. As previously acknowledged within the context of data collection being reported, not all of the information which is used, for example to inform decisions or policies, or allocate funds, is reported. Whether it should be is a different matter and some evidence would suggest that it should be, particularly when government, development partners and consumers are demanding for accountability and transparency of public funds.

Some interviewees vindicated the unrealistic numbers of recommendations, as are often made at the end of review or evaluation reports. Ostensibly the recommendations are often made at a time beyond which is feasible to address, thereby having a counterproductive effect on actual use for the particular project. Other suggestions for limited use include the continued changes in personnel from one phase of a programme and project to another which can lead to the classic analogy of 'reinventing the wheel'.

Other factors suggested as impeding effective use of monitoring or evaluation information or both relate to the difficulty in either disaggregating the contribution a single organisation has made to a project or programme component. For example to what extent has the donor contributed to improved coverage? Alternatively, to what extent have other factors had in contributing to the impact of an intervention, which could lead to an over-inflation of original calculations thereby risking misunderstanding or misinterpretation of the contribution.

In situations where data is collected and analysed but not shared, or shared and not used, by others due to concerns over data quality were also reported. Concerns such as insufficient investment in M&E and the apparent lack of demand for impact assessments highlight other examples. The lack of established requirements or regulation within existing M&E frameworks to report use of data were also suggested as being attributed to M&E data being collected and analysed but its use and impact on service delivery not being reported. In contrast there is evidence as obtained through this research (see Section 5.3.4.) that information generated from monitoring and evaluation is being used and having an impact on service delivery in Kenya. However, the audit trail of this use is less clear as is the motivation or incentive for data use.

Objective Five

Chapter two and the findings under section 5.3.5 clearly demonstrate the limited reporting on 'VfM' of M&E for the WASH sector. Whilst literature does exist with respect to conceptual frameworks, i.e. 'VfM' in theory, the practical application is less obvious. The researcher however, acknowledges, this omission of data, could be due to databases that contain such information remain unknown to the research or the researcher not having sourced data from the 'right' stakeholder. For example the Auditor General was not included as a stakeholder and yet VfM originates from within the audit profession. From the results under Section 5.3.5, what is apparent however, is the following:

- Within the sector and across the stakeholder groups value for money means different things for different people.

- Until the cost of M&E is properly established and reported, value for money assessments of M&E cannot be made.
- M&E is not currently fit for purpose in the Kenya WASH sector because...purpose is often misunderstood and misdirected; the measurement process is flawed; quality and rigour of analysis is questionable.
- There is a disconnection between the purpose and aggregation of data – resulting from misaligned roles and responsibilities.

The absence of information with respect to monitoring or evaluation being 'fit for purpose' in the WASH sector is even more accentuated than that of M&E being 'value for money'.

Objective Six

On one hand the evidence suggests that the extent of consultation in terms of the post-2015 SDGs with Kenya is rather pitiful, on the other hand, given the evidence of actual impact of the MDGs on an increasingly country-led monitoring and the changes in the Constitution, the question remains as to whether it really is an issue.

While the consultation that have taken place within Kenya engaged with very few of the key sector stakeholders engaged with through this research it does not necessarily indicate that officials higher up the ranks are not being consulted through different means, i.e. high-level dialogue. That said, the SDGs at the time of writing this Thesis are still undecided and therefore still presents an opportunity for further dialogue with the key stakeholders.

The findings, in respect of the analysis of proposed targets and indicators and the fact that the SDGS are undecided, suggest that:

- There is still the potential for harmonisation and alignment of a core set of indicators under the SDGs and country-led monitoring of the sector.

- Full harmonisation is unlikely because the consultation process in Kenya is limited and key stakeholders are not being involved in the process.
- Harmonisation is unlikely to affect the components of Why, & How M&E is carried out in Kenya, but may affect the What, Cost and Use.

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6 UGANDA CASE STUDY

6.1 Introduction

As with Kenya, there is a multiplicity of factors: geographical, social, economic and political; that influence the extent and level of progress of service delivery in Uganda. However, the details of these factors for the two countries are quite different. The following few paragraphs illustrate the implications of the influences, for Uganda, to provide an insight to the country context.

Uganda, with an area of 93,263 square miles, is a landlocked country - in the sense that it has no coastal borders, instead bordering with Kenya to the East and North East, Tanzania to the South, the Democratic Republic of Congo to the West and the newly formed political country of South Sudan to the North. An estimated 15% of the land is covered with water, with a further 3% covered by swamp (MWE, 2010).

The population of Uganda has been subject to, not only internal conflict but has also been afflicted by other regional conflict, thus adding to the challenges and responsibilities associated with a transient and fluctuating population. The population of Uganda, of which 85% is reported to be living in rural areas, has steadily increased on an average 3-4% per year (see Figure 6-1 and Table 6-1) with an increase to 5% from 2011 to 2012. Furthermore, it is estimated that 96% of those living below the poverty line, live in rural areas. According to the EC (2008), more than 90% of the Ugandan population are either directly or indirectly dependent on the products and services from agriculture, fisheries, forest and wetlands. In addition, the country is subject to several environment-related trends. For example, soil degradation, loss of biodiversity, pollution and unsanitary conditions which in turn puts the “economic and environment and social development at risk”. Many of the problems are attributed to poor management of water resources.

Table 6-1 Population growth for Uganda

Uganda	1980	1990	2000	2005	2006	2007	2008	2009	2010	2011	2012	2025
Population (million)	12.7	17.7	24.3	28.4	29.3	30.3	31.3	32.4	33.4	34.5	36.3	54.8
% increase	n.d.	39	37	17	3	3	3	4	3	3	5	51

(Source: OECD/DAC; HDRSTATS)

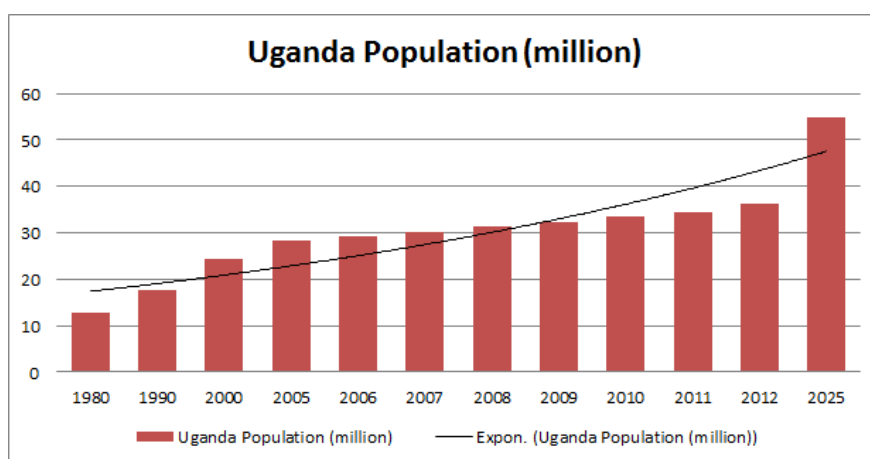
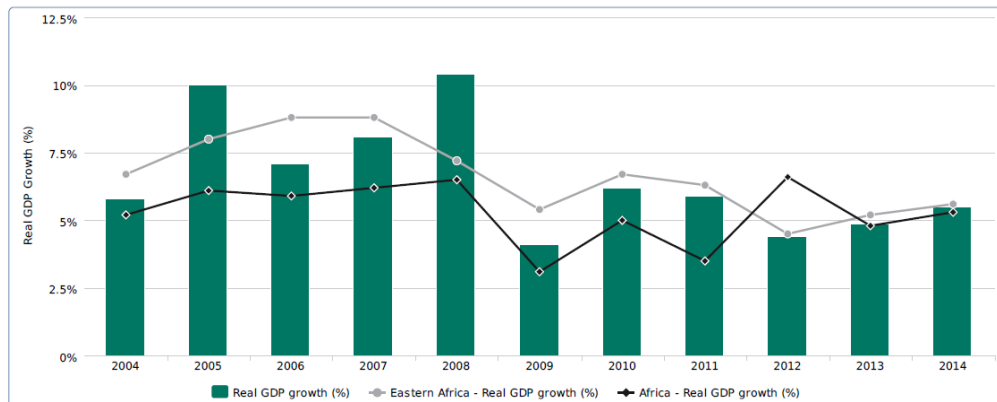


Figure 6-1 Uganda Population

Economically, the country has had, since its independence in 1962 a fluctuating performance. In more recent years, (Figure 6-2) growth has in the main been retained between 5-10%, with only two out of the last ten years, dipping below 5% (2009 and estimated 2012). With the forecast of an increasing GDP figure, comes the potential for the government to realise the investment levels identified as needed to finance service delivery infrastructure and ensure sustainability of those services. Continued and sustained GDP will also be important given the funding stream, coming into the sector from international donors, is reducing.



Figures for 2012 are estimates; for 2013 and later are projections.


StatLink  <http://dx.doi.org/10.1787/888932805859>

Figure 6-2 African Economic Outlook - Real GDP Growth

(Source: <http://www.africaneconomicoutlook.org/en/countries/east-africa/uganda/>)

6.1.1 M&E in Uganda

For the purposes of this study, the timeline of interest covers 50-years, since 1962 and the independence of Uganda. Acknowledgement must be made that monitoring efforts have been recorded well before this date such as the recording of population numbers with provisional records as early as 1878. Methodologies have also developed over time, as evident with a more structured introduction to the process of census from 1911 – denoted as the “first original count” (UBOS, 1996) - through to modern data collection efforts.

Sadly and as a consequence of the political turmoil, much of the government, administrative data collected post-independence was either lost or destroyed (UBOS, 1996). In the case of the population census, by 1990 a data gap existed since 1969, causing a challenge for the new government in terms of planning and strategizing for development. Data gaps are particularly evident for the North (Wold et al, 2006).

Today, with respect to national and sector planning and monitoring and evaluation, the WASH sector is guided by the National Development Plan (NDP) which has a vision of transformation over the next 30 years. The current operational plan covers the period 2010/11-2014/15.

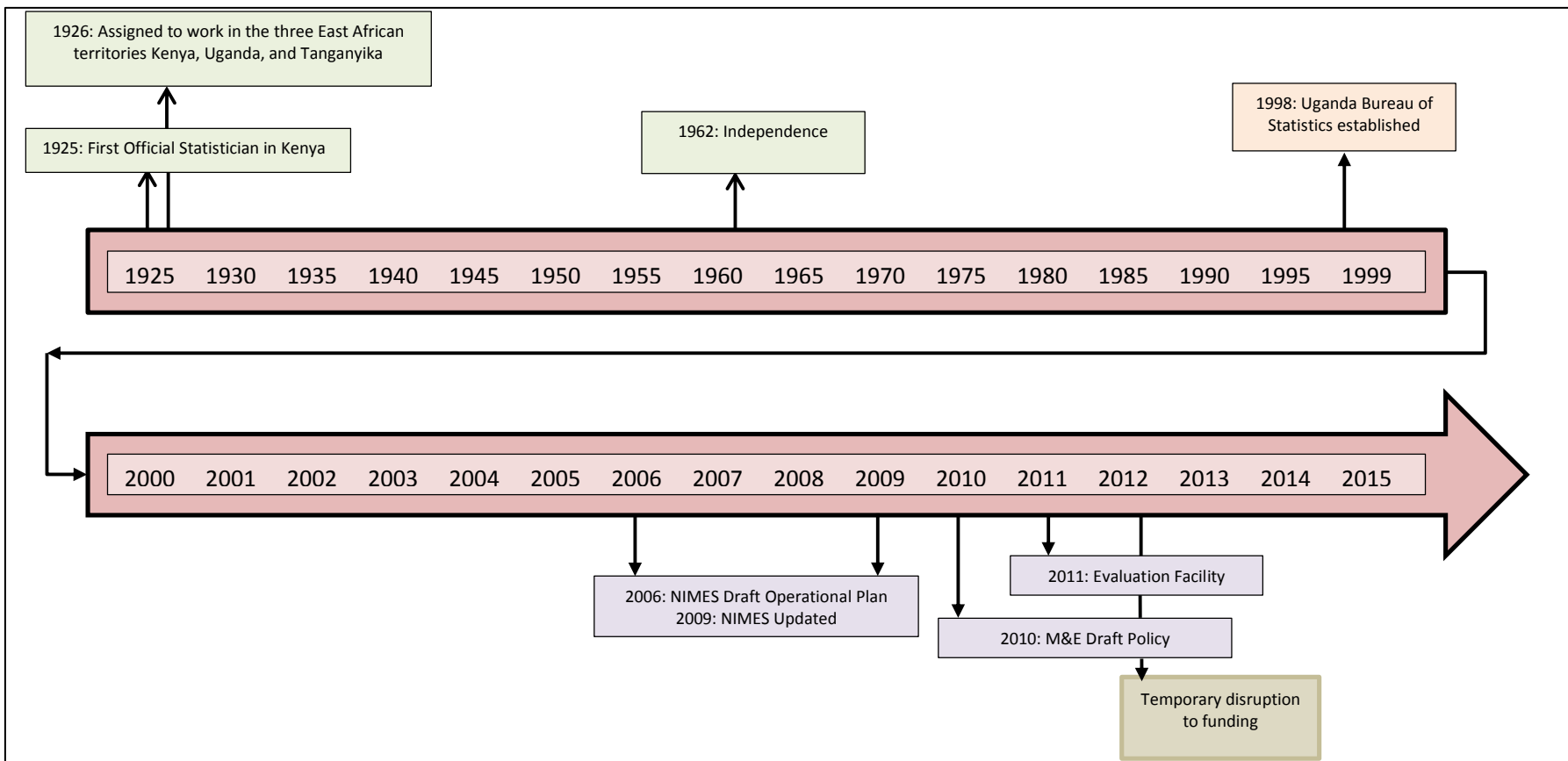


Figure 6-3 Milestones of data management in Uganda

The Uganda Water Act (1997), the Strategic Sector Plan for Statistics which ran from 2007/08-2011/12, the Strategic Sector Investment Plan (SIP) and a host of other legal frameworks, regulations and standards, strategies and guidelines as reported in the SIP (2009), also guide the sector development. Another, relatively recent endeavour is the Joint Assessment Framework: a signed agreement between the Government of Uganda and Development Partners and used to monitor and report progress of performance across the various sectors. Accompanying this framework and aligned with the Annual Sector Reviews, are Joint Sector and Joint Technical Reviews, held every year but at alternate six monthly intervals.

Furthermore, in 2006, a National Integrated Monitoring and Evaluation system was tentatively introduced and updated in 2009 to reflect against the NDP. In 2010, a policy for Public Sector M&E was drafted and was still waiting Cabinet approval in May 2013. In 2011, the Government also established an Evaluation Facility. Together, all of these actions highlight an increasing interest in monitoring and evaluation.

6.1.2 Funding and Investment

For FY2010/11, approximately 3.1% of the total national budget was allocated for Water and Environment (MWE, 2011) and an additional UGX 112.9bn (approx. US\$44.7M⁴⁴) of funds channelled through off-budget support (Figure 6-4). With respect to on-budget funding, the Water and Sanitation sub-sector⁴⁵ (WSS), received UGX 164.9bn, (approx. US\$65.4M) of which circa 29% was from development partners. According to UN-Water (2012), each of 17 donors provided US\$100,000⁴⁶ or more of aid. A further UGX 8.1bn (approx. US\$3.2M) was allocated to sector programme support.

⁴⁴ Market Exchange Rate US\$1 = UGX2,522.70

⁴⁵ The Ministry is also responsible for Environment and therefore Water and Sanitation features as a sub-sector under their budget description.

⁴⁶ Approximately UGX 251Million

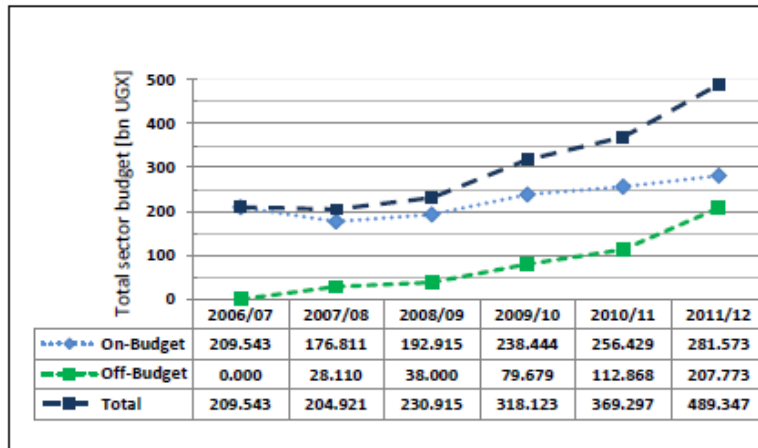


Figure 6-4 Sector Budget for the period FY2006/07 to FY2011/12

(Source: MWE (2012) SPR)

Reported off-budget amounts for FY 2010/11, for WSS, totalled between UGX 60bn and UGX 89bn (approx. US\$23.8M and US\$35.3M), depending on the source and whether referring to ‘planned target investment’ or ‘available funds’. In turn UGX 17.9bn (approx. US\$7.1M, maximum 20%) was reported to be channelled via UWASNET members (MWE, 2011) and described as donor funds (UWASNET, 2011). According to OECD (2010), CRS data, 18 donors fund Uganda with Denmark and Germany having leading roles. The AfDB, Denmark, Germany, Sweden and WaterAid are also recognised as being actively involved in national coordination or harmonisation platforms. Figure 6-5 indicates a slight reduction in investment within the sub-sector over time, possibly a symptom of two other calculations: the reduction of proportion of budget allocation by Government from 4.9% in FY2004/05 to 2.2% in FY2009/10; and the reduction of proportion of donor funds, once making up 62.5% in FY2004/05 and only 30.4% in FY2009/10.

Comparing sector investment levels to population and GDP (see Table 6-2), identifies that the sub-sector investment per capita is gradually increasing as is the investment as a percentage of GDP. What remains uncertain, however, is how these calculations benchmark against other countries either at a regional level or in the wider global context. Referring to the global case Table 4-1

provides some indication the GDP% figures for other countries as do the calculations for Kenya in section 5.1.2.

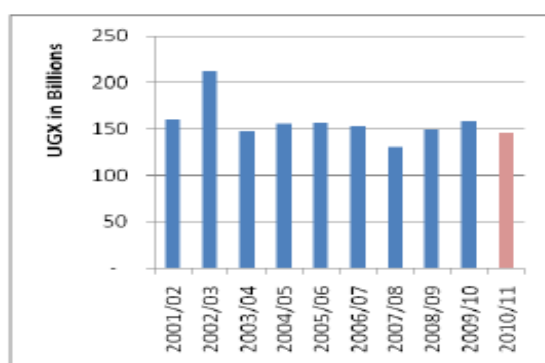


Figure 6-5 Water and Sanitation Sub-sector Budget Allocations

(Source: MWE, 2010)

Table 6-2 Investment levels by population and GDP

Year	Population (million)	Sector investment per capita (UGX)	GDI (Bn UGX)	Sub-sector investment % of GDP
2007	30.3	6893	16,980.2	1.2
2008	31.3	6539	18,073.5	1.1
2009	32.4	7127	19,186.9	1.2
2010	33.4	9525	20,587.9	1.5
2011	34.5	10704 ⁴⁷	21,480.2	1.7
2012	36.3	13481	No data	2.1 ⁴⁸

⁴⁷ At an exchange rate (27.11.2013) 2011 sector investment per capita equates to approximately £2.58

⁴⁸ Estimated figure

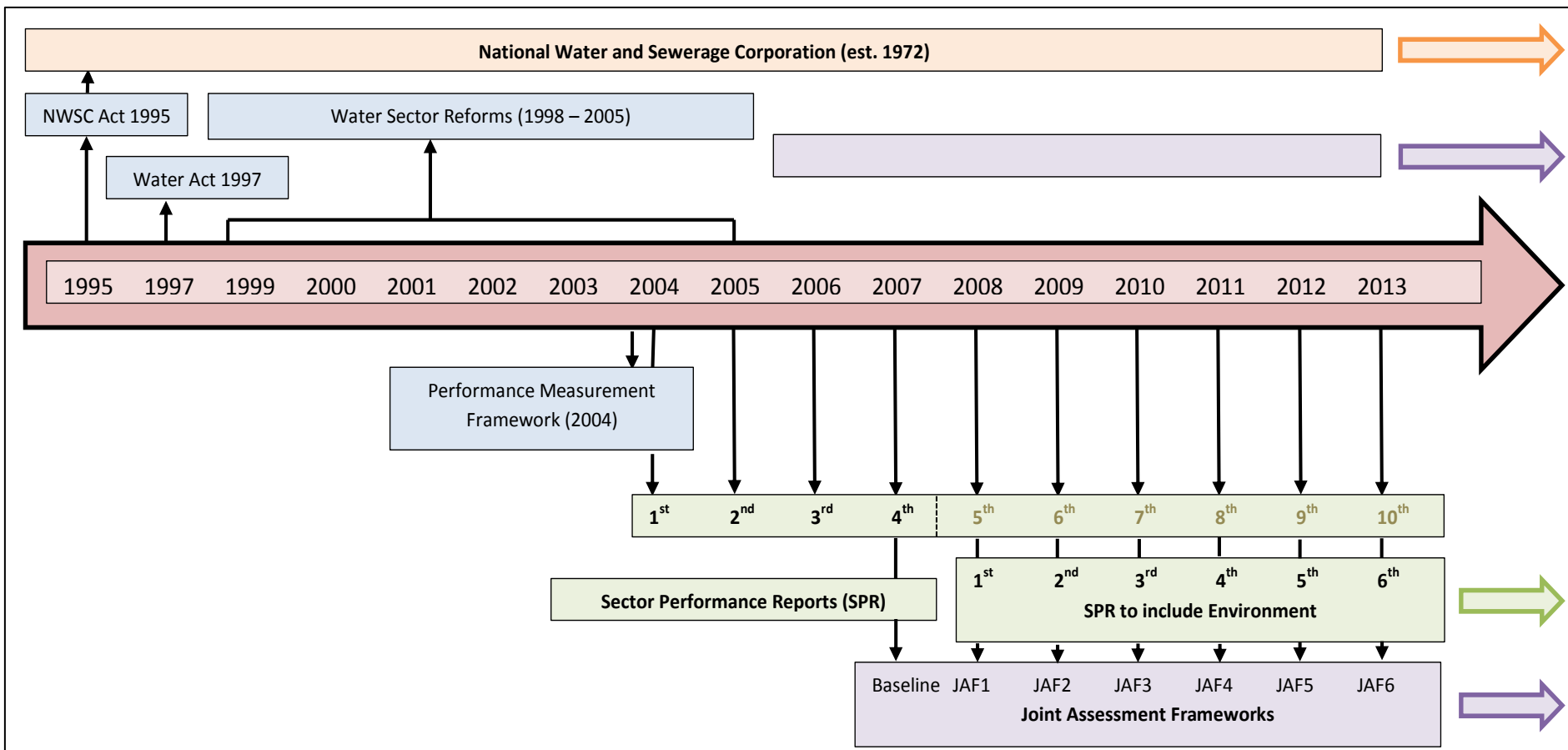


Figure 6-6 Timeline of key aspects of the institutional framework of the water and sanitation sector

6.1.3 Institutional framework

Since 2008, the Sector has comprised of the Water & Sanitation sub-sector (WSS) and the Environment & Natural Resources sub-sector (ENR). For the purposes of this research, the WSS remains the focus. The timeline associated with this transition and other key milestones is provided as an overview in Figure 6-6.

The institutional framework that surrounds the WSS sector includes roughly 12 national Government Ministries, Local Governments (over 100 Districts) including District Water offices, District Water and Sanitation Coordination Committees, over 200 NGOs, Private sector firms and Community members (Figure 6-7). In turn, the WSS encompasses water resource management; water for production; rural water supply and sanitation; and urban water supply and sanitation. The emphasis of this research is on the latter two classifications.

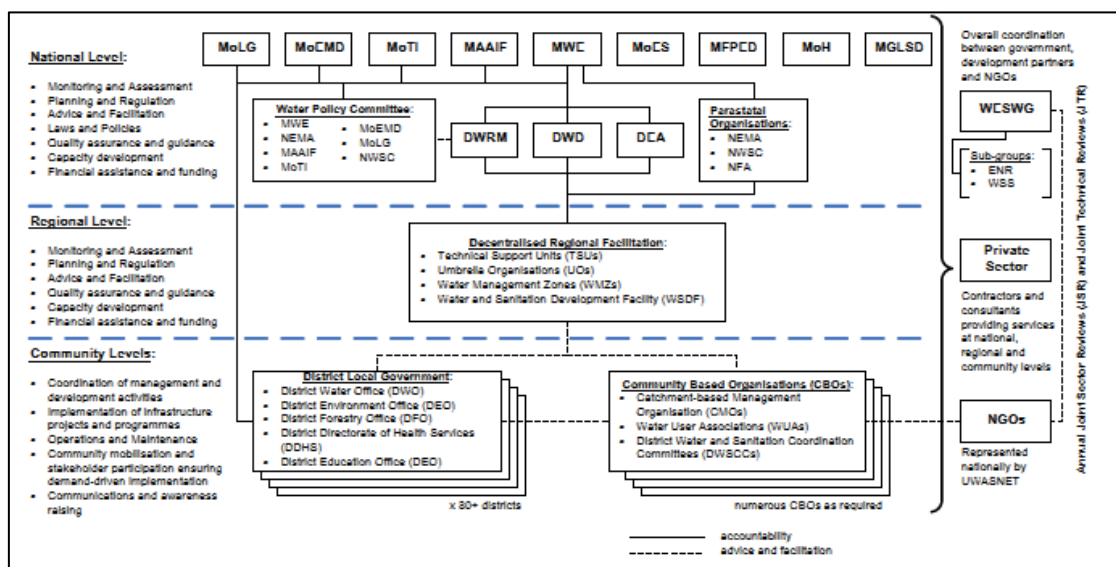


Figure 6-7 Institutional Framework as reported in 2010

(Source: MWE (2010))

During the course of the research, the institutional framework has remained unchanged including the roles and responsibilities of the key stakeholders engaged with during the course of the study. The following bullet points provide

an overview of some of the mandates of the organisations as set out in Figure 6-7.

- The Water Policy Committee (WPC), established under the Water Act Cap 152 and Water Resources Regulations (1998) has the mandate to assist and advise the MWE and to promote inter-Ministerial and inter-sectoral coordination over a wide range of WRM and development issues. Predominantly WRM focused.
- Ministry of Water and Environment (MWE) has the responsibility for setting national policies and standards, managing and regulating water resources and determining priorities for water development and management. It also monitors and evaluates sector development programmes to keep track of their performance, efficiency and effectiveness in service delivery. Three Directorates: DWRM, DWD, DEA. The mandate of the MWE regarding sanitation and hygiene activities is stipulated in the MoU signed by MoH, MoES and MWE. The role of MWE is limited to development of public sanitary facilities and promotion of good practices of hygiene and sanitation in small towns and rural growth centres. For the purposes of this research, the focus is on DWD.
- Department for Water Resource Management (DWRM) – responsibility for developing and maintaining national water laws, policies and regulations; managing, monitoring and regulation of water resources through issuing water use, abstraction and wastewater discharge permits; IWRM; trans-boundary. 3 departments: Dept. of Water Resources, Monitoring and Assessments; Dept. of Water Resources Regulation; Dept. of Water Quality Management.
- Department for Water Development (DWD) – responsible for providing overall technical oversight for the planning, implementation and supervision of the delivery of urban and rural water and sanitation services across the country, including water for production. Responsible for regulation of provision of water supply and sanitation and the provision of capacity development and other support services to Local

Govt., Private Operators and other service providers. 3 Depts.: Rural WSS; Urban WSS; Water for Production.

- Nation Water and Sewerage Corporation (NWSC) – parastatal operates and provides water and sewerage services for 23 large urban centres across Uganda including Kampala. NWSC’s activities are aimed at expanding service coverage, improving efficiency in service delivery and increasing labour productivity.
- Ministry of Health (MoH) – responsible for hygiene and sanitation promotion for households through the Environmental Health Division.
- Ministry of Education and Sport (MoES) – responsible for hygiene education and provision of sanitation facilities in primary schools. It also promotes hand washing after latrine use in the schools.
- MGLSD – responsible for gender responsiveness and community development / mobilisation. It assists the sector in gender responsive policy development and supports districts to build staff capacity to implement sector programmes.
- Ministry of Finance, Planning and Economic Development (MoFPED) – mobilises funds, allocates them to sectors and coordinates development partner inputs. MoFPED reviews sector plans as a basis for allocation and release of funds and reports on compliance with sector and national objectives.

Over 200 NGOs are estimated as working in water supply and sanitation and in 2010, UWASNET was reported as having a membership of over 170 active NGOs and CBOs. In acknowledging the multiplicity of stakeholders involved in the sector, it is not surprising to find that the sector is guided by many frameworks. In addition to the Water Act and National Water Policy the sector also has to tie in to a number of other interrelated policies, legislations and strategic plans. For example, the globally set MDGs and the nationally derived Development Plan – Vision 2030; Sector Strategic Plans for Statistics. Furthermore, the sector is obligated to satisfy the requirements of the Joint Assessment Framework (partnership policy with development partners/donors). More recently, there is an increasing demand for accountability and

participation, by other stakeholder groups such as the consumer and the private sector whether directly or indirectly through organisations such as UWASNET, APWO and ULGA.

Given the array of organisations and institutions involved, adopting a sector wide approach (SWAP) and an accompanying sector performance measurement framework (PMF) in Uganda, has been crucial. It is considered to have provided “a transparent process that brings together all the work that is taking place in the country,...a mechanism that can show promising approaches and identify gaps...” and combined with the Annual Sector Performance report “consolidates the status, investment, programme and challenges,.....,for an entire country” (Ssozi & Danert, 2012). Ten years on since its creation amidst the other demands for reporting and associate monitoring and evaluation requirements, the following questions could be raised:

- Is the PMF fit for purpose, 10 years on, for national, sector, district, programme and individual (consumer) needs?
- Are the ‘other’ international and national organisation M&E efforts appropriate and feeding into the country-led needs? If not, why not and should it?

6.2 Methodology

During the stakeholder selection process approximately 60 individuals were identified across 34 stakeholder entities with the possibility of selecting further public, private and civil society organisations also operating in the sector. However, a balance needed to be made in terms of financial and time resources available hence scaling back to a similar number to that of the Kenya case. The main focus, as is reflective of the sector prominence, was with those stakeholders responsible for water service delivery. Additionally, the fragmented nature of sanitation and hygiene service delivery across a number of public sector mandates would have required additional and unavailable resources. For the purposes of this research project, the stakeholder map in Figure 6-8, sets out an adapted version, reflecting the interrelated nature of global, national, regional and local stakeholders.

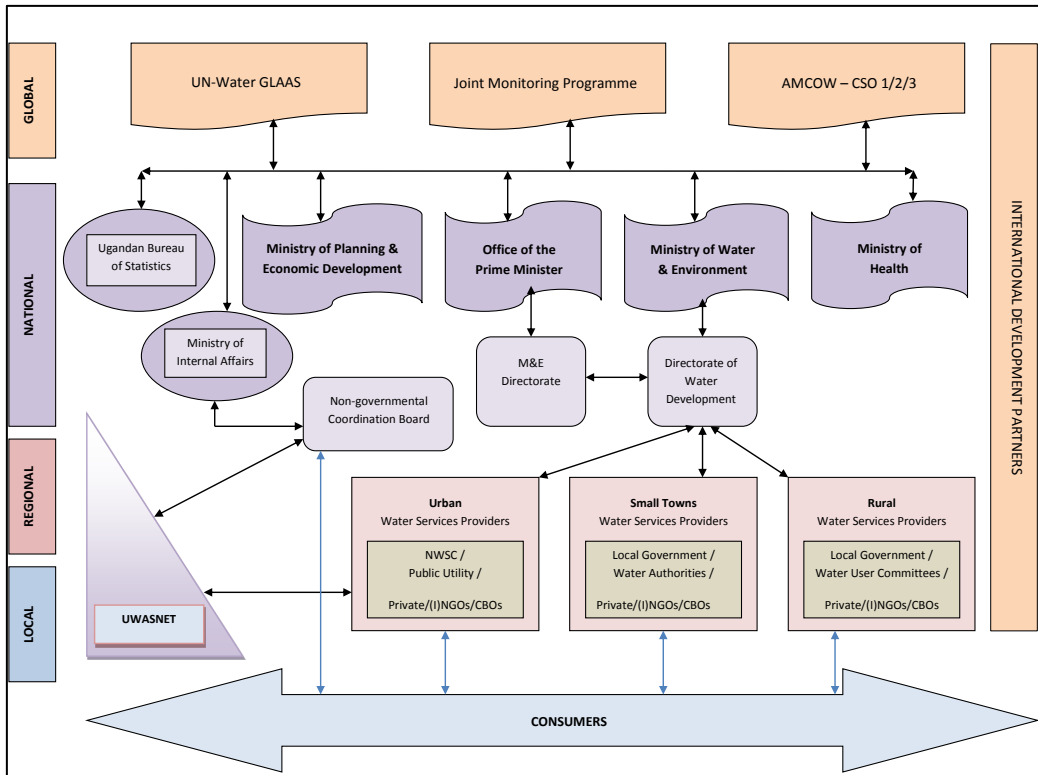


Figure 6-8 Research Project Stakeholder Map for Uganda

When engaging with development partners and civil society organisations, this disparate nature of roles and responsibilities was not so evident and therefore, sub-sectors were not favoured in preference to one another in terms of sourcing data.

The three phases of in-country data collection, as set out in Chapter Three, were carried out for the Uganda Case as follows:

- May 2011 (1 week): **scoping field visit** primarily testing interest and willingness to participate and through purposive and snowball sampling techniques identify possible stakeholders to engage with for the research. Also to carry out key-informant interviews and start data collection activities – document and data archives.
- October 2011 (1 month): fieldwork (**study one**) carried out including semi-structured interviews and further document and data archive collection.

- November/December 2011 (1 week): to attend the RWSN conference and take the opportunity to follow up with stakeholders.
- April/May 2013 (2 weeks): fieldwork (**study two**) carried out including semi-structured interviews and further document and data archive collection.

6.2.1 Scoping Field Visits

Ensuring relevancy of the research project, to the stakeholders, was considered essential as a means to validating the research topic and maintaining the flow of data. In most cases a general question was asked during the meetings: are there any aspects of this research that are of particular interest or relevance to your organisation? The responses included:

- How much systematic M&E is being undertaken in Uganda and whether there is any other place, country or sector it is being undertaken in a systematic way?
- Demonstrating an interest in level of use and what mechanisms are in place to ensure use.
- Suggest the research consider a project that ended 10-years ago and look at it retrospectively.
- Proposed the researcher examine a 10-year, completed project and how M&E used to inform decision making compared to a programme today under a Sector Wide Approach.
- Recommended the researcher consider looking at the District Conditional Grants.
- Suggested to look at the policy of full cost recovery for urban water.
- Indicated that whilst every project has M&E critical indicators for M&E have never been set – what could they look like?

6.2.2 Document and data archive reviews

As reported in Chapter Three, the sourced documents were reviewed, catalogued and through data reduction techniques, information on each of six themes extrapolated. From the 315 documents sourced the quantity of

documents which contain information on each component, are set out in Table 6-3.

Table 6-3 Number of Document Review Data Records by M&E component

Data Record	What	Why	How	Cost	Use	VfM
Yes	134	159	148	79	19	109
No	58	112	108	193	211	155
Na	118	40	43	41	39	39
TBD ⁴⁹	5	4	16	2	46	12
Total	315	315	315	315	315	315
Yes as %	43	50	47	25	6	35

6.2.3 Key Informant Interviews and Semi Structured Interviews

Over the course of the research period 59 session summaries have been documented (Table 6-4), cleaned, coded, analysed and interpreted as per the methodology.

The schedules, as set out in Appendix B, were used to guide the interviews. The information in

Table 6-5, provides an overview of interview topic, research question and number of responses. Due to a number of reasons, such as time constraints or stakeholders wishing not to discuss, not one interviewee provided an answer to all research topics and questions covered within the schedules.

Table 6-4 Number of Session Summaries

Activity	Sessions	Recorded	Not recorded
Scoping Fieldwork	10	0	10 x KII
Study One Fieldwork	23	9 x SSI 1	2 x SSI 1; 12 x KII
Study Two Fieldwork	23	14 x SSI 2 3 x SSI 1 & 2	4 Briefing meetings 2 Working sessions
Skype from UK	3	3 x SSI 2s	0
Total	59	29	30

⁴⁹ TBD – To be determined – not possible to extrapolate either due to time constraints or given the fact that some documents have a large number of pages and were non-searchable by software.

Table 6-5 Number of Responses by Interview Topic

Number	Schedule Topic	No. of responses
SSI1 - 1	Influencing factors in terms of M&E	24/33 & 3/26
SSI1 - 2	Budgeting process for M&E	22/33 & 15/26
SSI1 - 3	M&E impact on service delivery	22/33 & 5/26
SSI1 - 4	Use of technology for M&E to provide VfM	16/33 & 5/26
SSI2 – 1	Whether roles & responsibilities are realistically assigned	20/26
SSI2 – 2	Which aspects of M&E should be prioritised	18/26
SSI2 – 3	Whether current M&E practice is appropriate	11/26
SSI2 – 4	Whether M&E provides VfM	16/26
SSI2 – 5	Changes in response to post-2015 SDGs & HRs agenda	17/26
Other	Other discussion topics - various	n/a

The rigour applied and time taken to do the transcribing, cleaning, editing, coding and extracting data from the interviews, was more time consuming than initially envisaged. Some recordings were disturbed by ‘avoidable’ and ‘unavoidable’ noise, such as poor quality of the Skype connection, or during a group discussion there was a challenge due to the distance of one of the participants from the Dictaphone. Table 6-6 summarises the average time taken to process one hour of recorded interview.

Table 6-6 Average Time Taken to Process Recorded Interviews

Recorded interview processing activity	Av. Time
Transcribing of the recording (external resource)	4.25hrs
Review entire recording against draft transcript, check and edit	2.25hrs
Code and annotate hard copy	1.5hrs
Extract and insert in Excel	1.5hrs
Extract and insert on Mind Map	1.5hrs
Average hours taken per one hour of recorded interview	11hrs

Through the data reduction process, transcripts were documented in relation to whether they contained information on the priori themes (Table 6-7).

Table 6-7 Summary of Session Data Records by M&E Component

Data Record	What	Why	How	Cost	Use	VfM
Yes	34	27	42	36	29	20
No	16	22	8	15	21	26
Na	8	8	8	7	8	9
Possibly	1	2	1	1	1	4
Total	59	59	59	59	59	59
Yes as %	58	46	71	61	49	34

6.3 Results

The results are presented by objective rather than study phase or data collection tool, in an attempt to build up an evidence base in a logical framework manner as determined through the approach and methodology set out in Chapter 3. A series of graphs, charts and matrices are used to present some of the findings and embedded within the narrative. Where the figures and tables are referred to but deemed as supportive illustrations only, they are contained within Appendix F and referenced accordingly in the narrative.

6.3.1 Objective One

To identify the evolution of M&E approaches and associated indicators within the WASH sector over the last 20-years and map them against what has initiated the change.

From the 315 documents and data archives sourced, 138 (43%) contain some form of indicator data relating to the WASH sector. Whilst the primary focus is with domestic water and sanitation, there are a few other indicators (less than one per cent), that have been captured or uploaded as deemed, in some way, relevant. For example local government indicators that refer to service delivery. However, it should be noted that service delivery goes beyond that of purely water and sanitation and hygiene covering other sectors such as education and health. Despite many of the data records also referencing other sector indicators, for the purposes of this study they are not included.

Additional data was also collected in the form of raw data: water point sources. This data has not been uploaded as is incomplete and over time became corrupted. However, if the data was re-sourced, it could provide an interesting opportunity to compare alongside other reported coverage values for Uganda.

Some key metadata coming out of the initial data analysis include:

- A total of 5595 indicator entries were extracted from the data records.
- The average number of documents sourced per stakeholder type is: Public = 10; Private = <1; Civil Society = 6.5.
- More than twice as many documents, containing indicator data, were sourced for government stakeholders (80) compared to development partner stakeholders (33).
- The average number of indicator entries per document sourced per stakeholder type is: Public = 36; Private = 0; Civil Society = 79.

For a series of tables which provide a breakdown of other analysis of the data records see Appendix F-1.

On first inspection, using a pivot table to analyse consistency of terminology and phraseology of 'what' is being monitored, 1894 different indicators were identified covering a 20-year period. Of these, 1001 appeared as a single entry – i.e. unique to one or other of the data records. This represents approximately 18% of all entries (5595), demonstrating a fair level of similarity between the indicators. The most frequently reported indicator appeared to be ***“% of Water User Committees/Water Boards with women holding key positions”*** – having been reported 139 times between the years 2006-2011.

On an ad-hoc basis, repeated visual inspection of the indicators highlighted, in some instances, that the indicators were synonymous albeit word for word different. Therefore, in order to aid further analysis the data was clustered as described in Chapter 3 section 3.2.6 Data analysis. The result of this initial clustering is presented in

Table 6-8 and the pie chart in Figure 6-9 and graph in Figure 6-10.

Table 6-8 Number of Cluster One Indicator Entries

Cluster Level One	Service	Service Provider	Sector	N/A	Total
Number of indicator entries	3119	1736	735	5	5595
% of total indicator entries	56	31	13	0	100

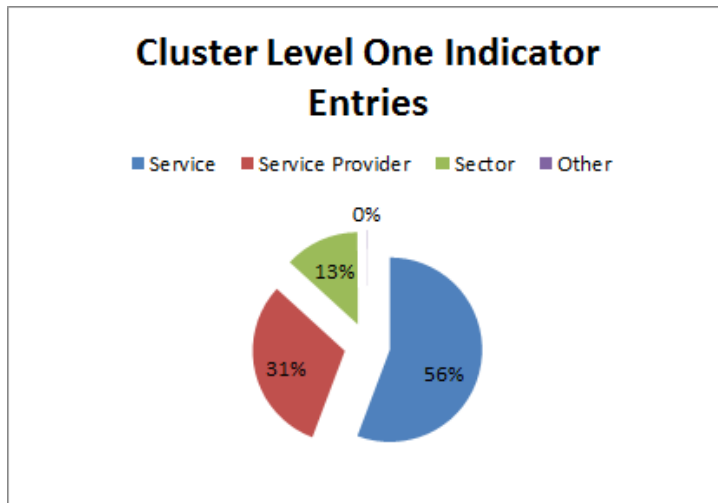


Figure 6-9 Proportion of indicator entries by cluster level one

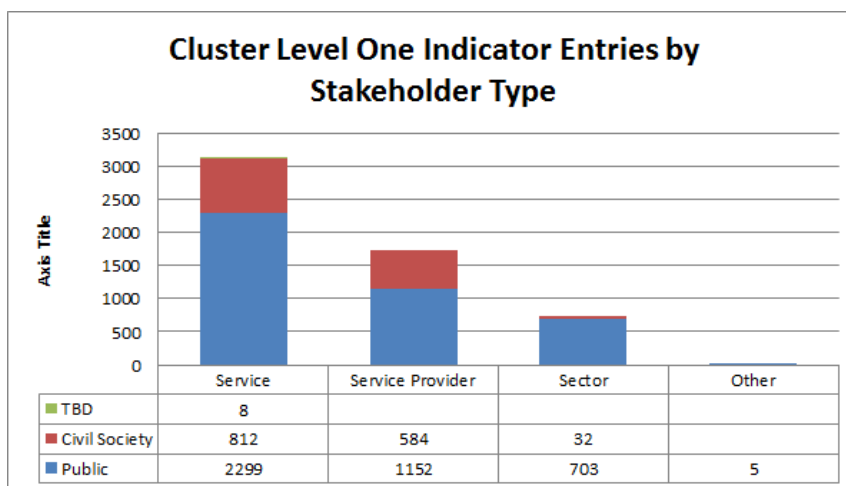


Figure 6-10 Cluster level one entries by stakeholder type

The results show there are approximately one and a half times as many service indicators as service provider indicators and just over twice as many service provider indicators as there are sector indicators. Further analysis by stakeholder sub-type reveals there are just over six times as many indicator

entries for government stakeholders (3551), within two and half times as many documents, compared to development partners (572). There are also twice as many indicator entries for non-governmental organisations (1187) within approximately half the number of documents, as compared to development partners. In examining the clustered data even further, the following was identified in terms of percentage reporting against service, service provider and sector clusters:

- Government reporting accounted for 59% (of service); 61% (of service provider); 88% (of sector) clustered indicators.
- Development Partner reporting accounted for 14% (of service); 4% (of service provider) and 7% (of sector) clustered indicators.
- NGOs on the other hand with half as many documents and year twice as many indicator entries of development partners, accounted for 23% (of service); 25% (of service provider); 4% (of sector) clustered indicators.

Examining cluster level two data, other patterns emerge. Taking each of ‘service’, ‘service provider’ and ‘sector’ in turn, the following sections highlight some of these patterns.

Cluster Level One: Service indicators

Service indicators range from “access to hand-washing” or “no. of boreholes constructed” clustered as coverage, through to “functionality of existing water points” clustered as functionality and “reduction of infant mortality and morbidity rates”, clustered as impact. For a further insight into some of the indicators included in the clustering, see Appendix F-2.

Table 6-9 Number of Service Level Two Indicator Entries

Cluster	Coverage	Functionality	Use	Impact	Other	Total
Number	2533	340	218	26	2	3119
%	81	11	7	1	<1	100

Not only is coverage the most frequently reported against service level clustered indicator, at 81% (Table 6-9), coverage is the most frequently reported

against indicator out of all indicator entries at 45%. Analysing the cluster by stakeholder sub-type, as shown in Error! Reference source not found., government, development partners and non-governmental organisations are also primarily reporting against, coverage indicators at 83%; 73% and 80% respectively. The next most frequently reported against category of service indicator is functionality at 12% for both for government and NGO, however, is ‘use’ for development partners at 18%. Impact indicators feature as only 4% and 1% of indicator entries for development partners and NGOs respectively.

Table 6-10 Number of Cluster Level Two Indicator Entries by Stakeholder Type

Service Indicator Cluster	Government	Development Partner	Government / Development Partners	Non-Governmental Organisation	Umbrella	TBD	Total
Coverage	1522	327	10	583	84	7	2533
Functionality	223	22	3	90		2	340
Use	90	81	2	45			218
Impact		17		9			26
Coverage, Impact, Functionality	1						1
Use and Functionality					1		1
Total	1836	447	15	727	85	9	3119

Cluster Level One: Service Provider indicators

There are currently 21 level two clusters associated with ‘service provider’ indicators and one temporary cluster categorised as ‘TBD’ – to be determined – for indicators (in this case 74), where allocation either to an existing or new category is undecided. The process of level two clustering has been more challenging and complex than with the ‘service’ indicators and is reflected in the high number of categories and residual TBD’s.

Service Provider indicators range from “% of water points with actively functioning Water & Sanitation Committees....” clustered as participation; various derivatives of “training” within the cluster of organisational development; and “no. of monitoring reports” as part of the monitoring cluster. In order of prevalence, the most frequently reported indicators relate to ‘financial performance’, ‘participation’ and ‘organisational development’ and as previously written, the government and non-governmental organisations are the two stakeholder sub-types most frequently reporting against service provider indicators (61% and 25% respectively). The following findings are taken from the data as presented in Table 6-11:

- ‘Organisational development’ is the most frequently recurring indicator cluster at Service Provider level for non-governmental organisations (24%).
- ‘Organisational development’ relates to only 9% of government stakeholder reported indicator entries.
- ‘Financial performance’ is the most frequently recurring indicator cluster at Service Provider level for government stakeholders (34%).
- ‘Financial performance’ relates to only 4% of NGOs Service Provider reported indicators.
- ‘Financial’ indicators are the second most frequently reported against service provider indicator (22%) for NGO’s.
- ‘Participation’ indicators are the second most frequently reported against service provider indicator (23%) for government.
- Operations is the most frequently reported against indicator (35%) for development partners.

Table 6-11 Number of Service Provider Indicators by stakeholder type

Service Provider Indicator Cluster	Total number of indicator entries	Government	%	Development Partner	%	Government / Development Partners	Non-Governmental Organisation	%	Umbrella
Consumer relations	25	23	2%		0%		2	0%	
Financial	196	92	9%		0%	2	94	22%	8
Financial performance	394	358	34%	17	23%		19	4%	
Guidelines	3		0%		0%		1	0%	2
IEC	104	55	5%	9	12%		35	8%	5
Information management	83	26	2%	3	4%		23	5%	31
Investment	1		0%		0%		1	0%	
M&E	87	48	5%	5	7%		20	5%	14
O&M	26	26	2%		0%			0%	
Operations	32		0%	26	35%		6	1%	
Operations and Maintenance	3	3	0%		0%			0%	
Organisational Development	284	101	9%	3	4%	9	105	24%	66
Participation	360	259	24%	7	9%	2	89	21%	3
Planning	15		0%	1	1%		5	1%	9
Policy	3		0%		0%		2	0%	1
Regulation/Compliance	12	12	1%		0%			0%	
Reporting	1		0%		0%		1	0%	
Research & Development	27	20	2%		0%		6	1%	1
Strategy	4		0%		0%		2	0%	2
Sustainability	1		0%		0%		1	0%	
TBD	74	42	4%	3	4%		20	5%	9
Technology	1		0%		0%		1	0%	
Total	1736	1065	100%	74	100%	13	433	100%	151

Cluster Level One: Sector indicators

From the documents sourced, those reported by government contain the most sector clustered indicator entries (88%). The data was further clustered in to 19 categories and has been less challenging than the service provider cluster.

However, there is also an additional temporary cluster of 'TBD' – to be determined – for a minimal number of indicators (in this case 7), where a decision still needs to be made as to how to allocate. Sector indicators range from derivatives of “abstraction and discharge permit compliance” clustered as regulation; to policy clustered indicators such as “number of major policy, planning and budgeting reports/papers prepared”. The most frequent use of level two categories is ‘regulation’, accounting for 46% of indicator entries with the next most frequent being ‘financial’ at 19% and then ‘organisational development’ at 10%. The two most frequently reported sector indicators for non-governmental organisations are ‘policy’ accounting for 44% and regulation at 30%. NGO reported data only accounted for 4% of all sector indicator entries.

Table 6-12 Number of Sector Clustered Indicators by stakeholder type

Row Labels	Total number of indicator entries	Government	%	Development Partner	%	Government / Development Partners	Non-Governmental Organisation	%	Umbrella
Financial	137	126	20%	11	22%			0%	
Guidelines	5	2	0%		0%		2	7%	1
IEC	4	4	1%		0%			0%	
Information management	26	26	4%		0%			0%	
Investment	1	1	0%		0%			0%	
Legislation	4	4	1%		0%			0%	
Legislation & Policy	5	5	1%		0%			0%	
M&E	52	40	6%	5	10%	4	1	4%	2
Management	3	3	0%		0%			0%	
Organisational Development	77	77	12%		0%			0%	
Participation	15	12	2%	1	2%	2		0%	
Planning	6	6	1%		0%			0%	
Policy	41	23	4%	5	10%		12	44%	1
Regulation	335	296	46%	29	57%	1	8	30%	1
Regulation & Policy	5	5	1%		0%			0%	
Research & Development	6	3	0%		0%		3	11%	
Standards	1	1	0%		0%			0%	
Statistics	3	3	0%		0%			0%	
Strategy	2	1	0%		0%		1	4%	
TBD	7	7	1%		0%			0%	
Total	735	645	100%	51	100%	7	27	100%	5

Box 6-1 General findings on indicator entries

A few general findings:

- Considering all indicator entries, impact indicators only exist at a ‘service’ cluster level.
- Considering all indicator entries, almost twice as many ‘service’ than ‘service provider’ and just over twice as many ‘service provider’ than ‘sector’ are reported.
- Considering all indicator entries, these are only those indicators being reported and not necessarily all that are being monitored or evaluated.
- In terms of service provider and sector clustered data, despite an apparent set of core indicators, there is also a symphony of other indicators also being reported against.

The analysis of the proportion of documents containing indicator entries, over time, (Figure 6-11) highlights that whilst the document numbers are increasing, the proportion containing indicator entries appears to be reducing.

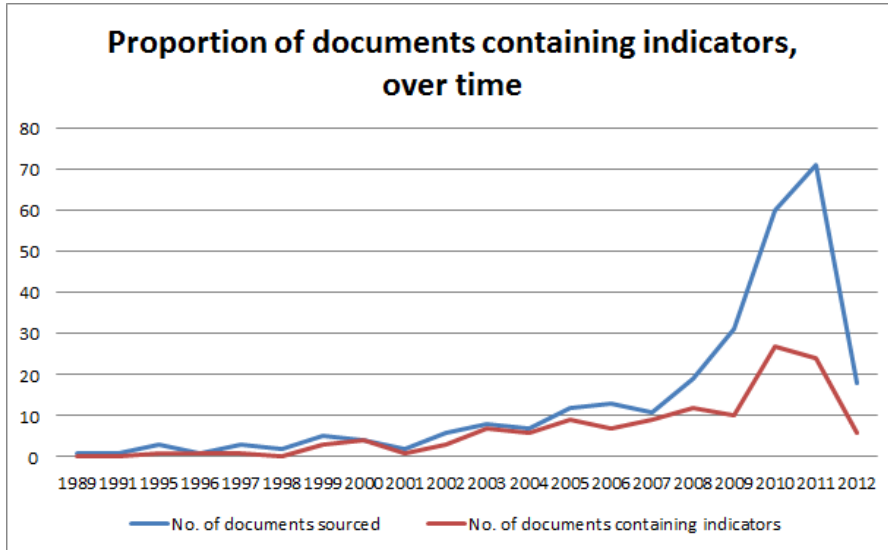


Figure 6-11 Proportion of Documents Containing Indicators, over time

Figure 6-12 shows a broad overview of the average number of indicator entries per data record over a 15-year period.

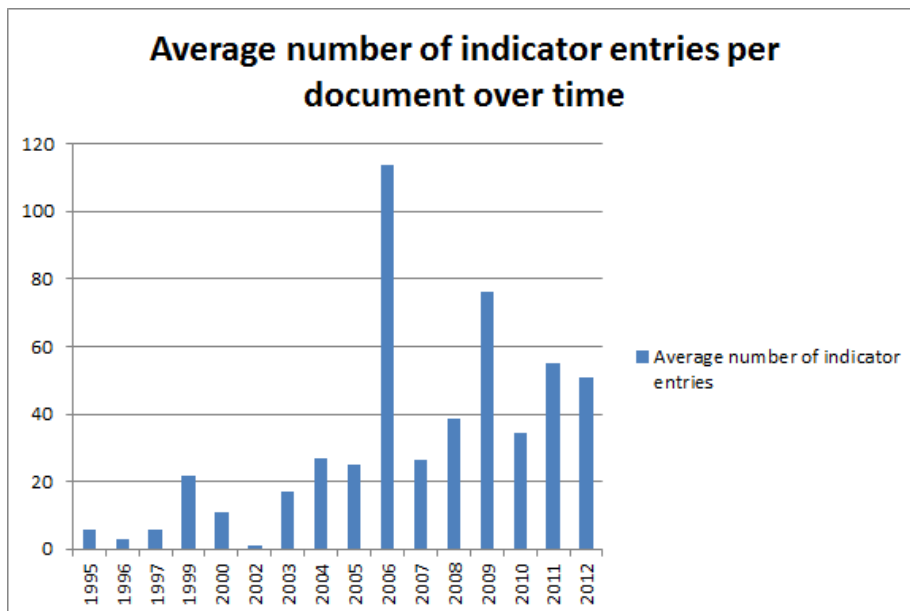


Figure 6-12 Average number of indicators entries per document

The spike in 2006 relates to the fact that two of the seven documents are strategic plans and together contain 595 of the 795 indicator entries extracted.

An overview of the years of reported data by published year can be found in Appendix F-3. Some notable findings include:

- In absolute terms, 2011 is the published year reporting against most number of indicators.
- 2006 is the year when the highest average number of reported indicators per data record, exists.
- 2010 is the year when the highest number of different years of actual data was reported.
- 2010 is also the most frequently reported against year in terms of actual data closely followed by the years 2008, 2009 and 2011, which in turn corresponds with the four years, with the highest number of data records sourced.
- Approximately 12% of entries failed to report any actual value data and fairly much spanned the whole time series of published year. Of these, 85% related to strategic plans.
- The other non-value data where actual values were considered not applicable, again fairly much spanning the full time series, accounted for approximately 8% of entries of which 55% related to guideline documents.

Taking a closer look at the clustered data, over the last 20 years, the charts in Figure 6-13 and Figure 6-14 emphasise the extent of the continued reporting against service level indicators and coverage indicators in particular. When reviewing the analysis of Service Provider indicators (Figure 6-15) very few if any patterns emerge. Instead the chart reflects a somewhat complex multiplicity of reported process indicators. As the absolute numbers demonstrate there are some indicators more frequently reported, however, the chart establishes, there is not necessarily a systematic or continuous reporting against many of the indicators.

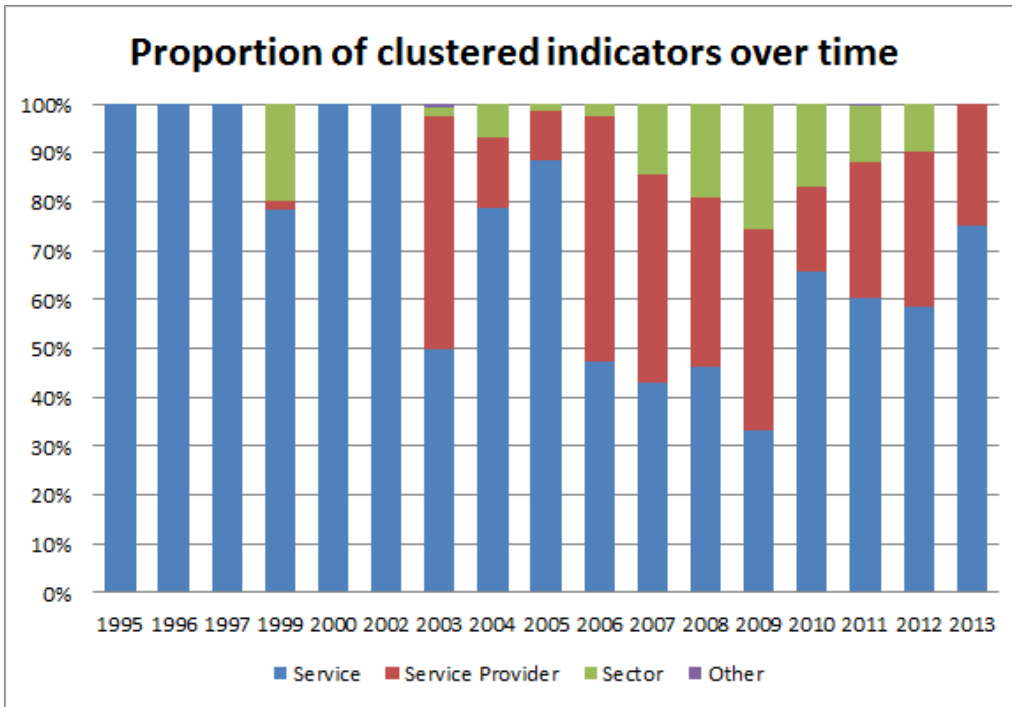


Figure 6-13 Extent of Continued Reporting against Service Indicators, over time

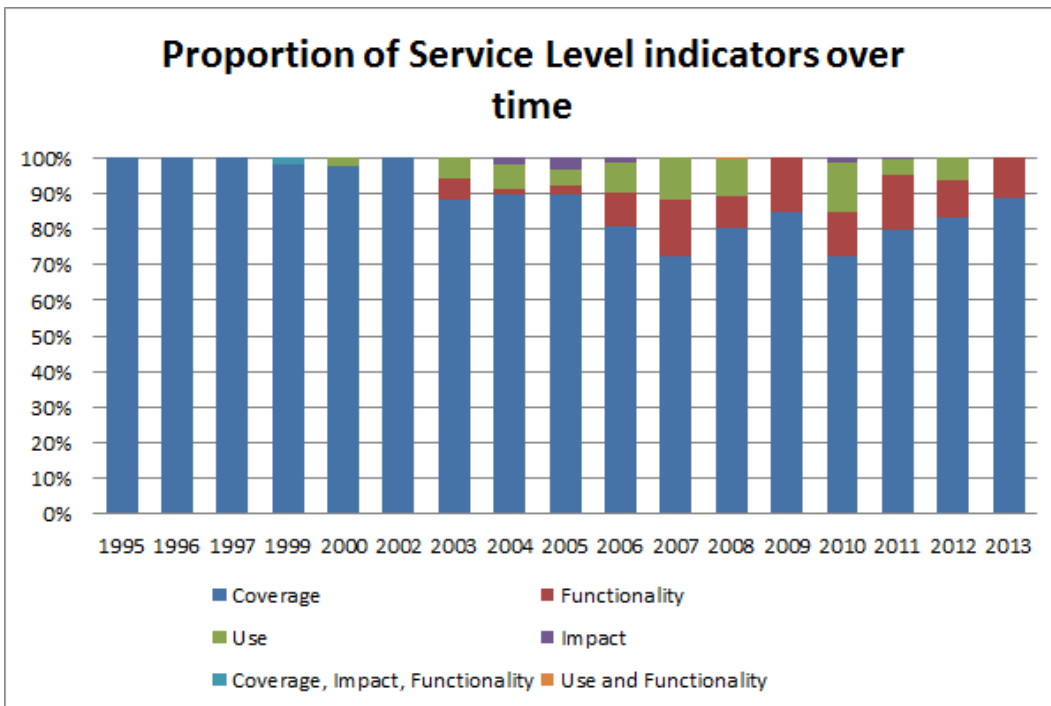


Figure 6-14 Proportion of service level indicators over time

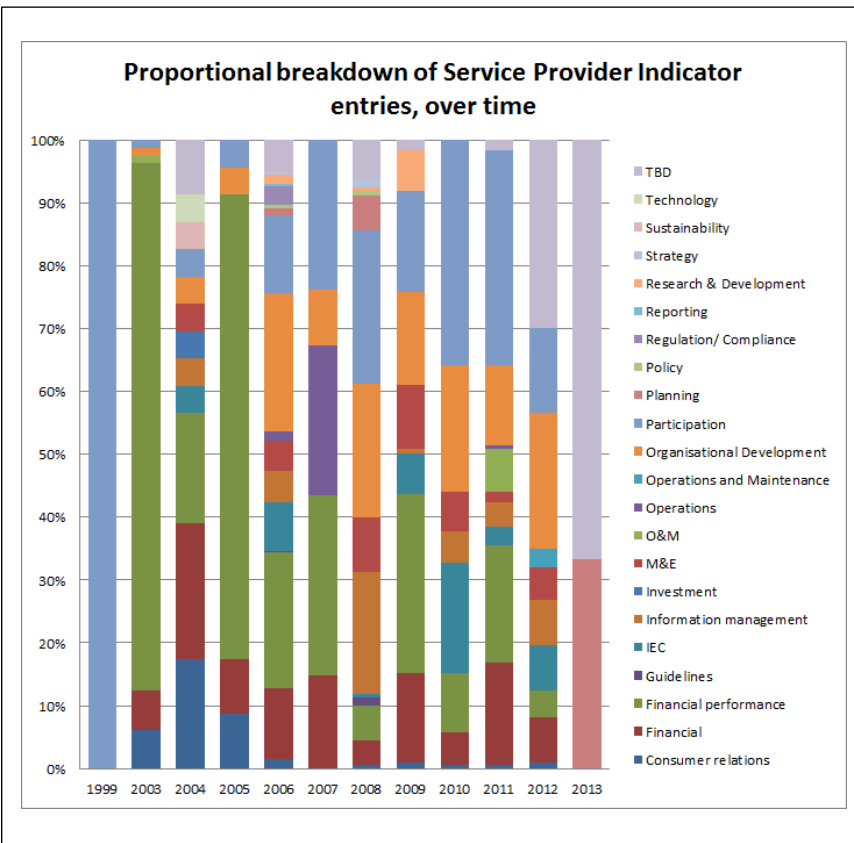
A similar scenario is evident for the Sector indicators (Figure 6-16) - again a more multifaceted picture is presented, with some categories featuring more prominently than others, as evident with the numbers. Data accuracy of some of

the documents is questionable with individual reports containing different values in the executive summary to that reported in the main text. In some cases reporting is provided in a complex and differing manner from one year to the next making comparison of data less than straightforward. A second observation is the considerable amount of past data being presented in annual budget reports combined with 3 years forward planning and target values. Given the nature of the word for word inconsistency in indicators being reported from one year to the next, this may also result in challenges of using data records for comparisons.

The detailed analysis in Appendix F-4, examines the extent of year on year consistency of data. A sample of data for the years, 1990; 1995; 2000; 2005; 2010; 2015, baseline, actual and target values was examined (Table 6-13 and Table 6-14 for document numbers). The criteria used for the selection of indicators were:

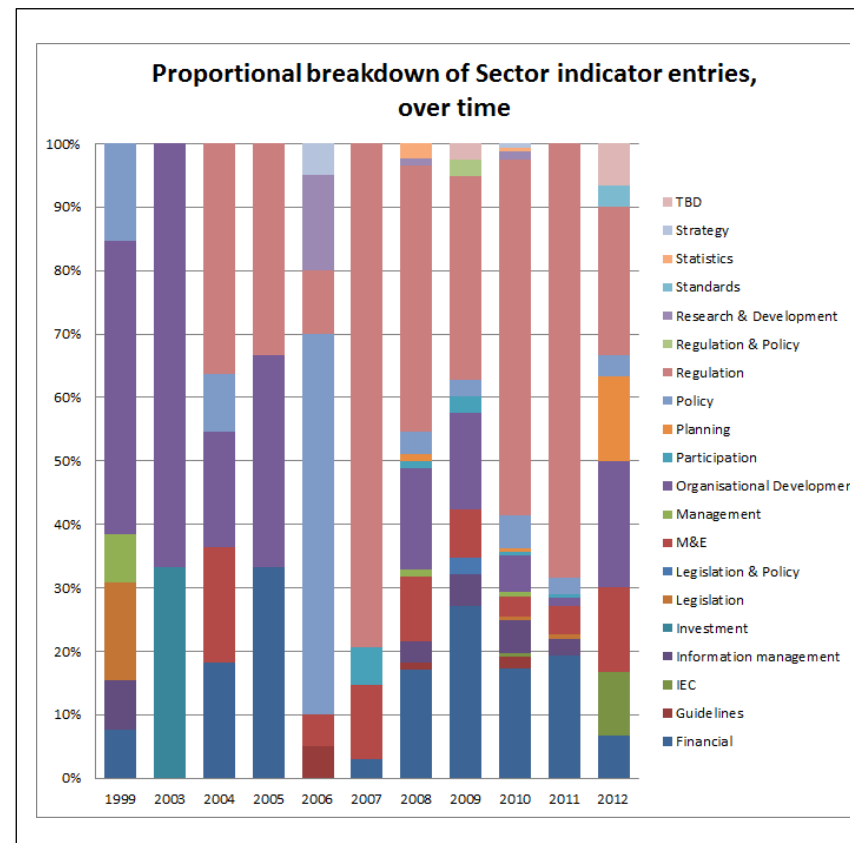
- | | |
|--|-----------------------------------|
| ✓ Water; Service; Coverage | ✓ Water; Service; Use |
| ✓ Sanitation; Service; Coverage | ✓ Sanitation; Service; Use |

In several, water related cases the values reported were inconsistent with percentage point variances ranging from 2-33%. This inconsistency was less visible with the sanitation related cases however is likely due to there being fewer comparable indicators reported within the selected years. Other notable findings, when analysing all indicators filtered for sanitation criteria across all selected years, comparable or not and where applicable, 95% did not report a baseline value; 64% did not report a target value and 39% did not report an actual value. The same analysis for water resulted in 96%; 57%; 46% not reporting a baseline, target or actual value respectively.



(Figure 6-15)

Figure 6-15 Percentage of Service Provider Level Two Indicators



(Figure 6-16)

Figure 6-16 Percentage of Sector Level Three Indicators, over time

Little, if any information is contained within the data records relating to what influences the selection or change of indicators being monitored or reported against. Narrative from interviews describes a variety of influencing factors, broadly split into three categories – internal, external or a combination of internal and external. Most of the references to influencing factors reflect the ‘why’ and ‘how’ components of the M&E process rather than the ‘what’ and just over 60% of responses refer to a combination of internal and external factors (Table 6-15).

A few specific references were made to indicators, as part of other topics such as what needs emphasising or not to ensure M&E is fit for purpose. For example there were several acknowledgements made of the influence or guidance within the sector, from the framework of the ‘golden indicators’. However, some of the associated comments were also linked to concerns that the framework doesn’t necessarily satisfy the local level needs of monitoring.

Table 6-15 Clustered influencing factors of indicator selection

Influencing factors	Quantity	Descriptions
Internal	5	Head Office; Sector; Local government; Executive Committee.
External	5	Conditionality of contract; Financial (funding agent); Project driven; Donor driven.
Internal & External	17	Beneficiaries, Donors, Government, NGOs, CLTS guidelines, Corporate, Head Office, Financial, Performance indicators, Advocacy needs, International, National policies, Political, Personal needs, Shareholders, Project type & terms of reference, Technical requirements.
Other	32	Not applicable / not responded

Another series of comments were provided in relation to the minimal influence that globally set targets and indicators make to national level framework development. Instead it is the National Development Plan that influences what is monitored and reported against. Furthermore, recognition was also given to the importance in harmonizing definitions if looking to compare data sets and that setting such standards should also be sector driven. If the standardisation of definitions of indicators is not possible, then a clarity and visibility of the

differing methods is a 'must' when reporting these different sets of data, in order to avoid misinterpretation.

In terms of the tools, methods and approaches used to carry out monitoring or evaluation activities or those used to create the sourced document, approximately 47% (148 out of 315) contained some reference.

When discussing whether technology was a help or a hindrance to monitoring, a number of technology types were raised (see Table 6-16). Of the 26 sessions 21 responses were provided⁵⁰. The most frequently discussed technology was the MIS. Databases, on-line systems and mobile use of technology were also frequently raised. Generally technology advancement was perceived in a positive way and as a couple of respondents had evidence that training in such usually has 100% attendance.

A number of challenges however, were also deliberated such that some of the technologies appear quite ambitious bearing in mind the level of information technology is low in comparison to the rate to which ICT is being 'propelled'. In turn, this can and has led to a 'destructive' element. For example the deviation of time, financial and human resources required each time a new technology is introduced. Examples were provided, where the technology had either a short life-span (as long as the programme funding), or in other cases, just fail thereby being considered as wasted resources.

Another aspect discussed, relates to the multiplicity of trials which are seen as a double-edged sword. On the one hand the trialling of new approaches and method to streamline data collection and provide real-time data (invariably funded off-budget by development partners), are seen in a positive light, as is something unlikely to be funded directly by governments. On the other hand, examples were provided where, in areas of trialling new technology, country-led and established systems currently requiring updating in terms of data collection activities are seemingly being delayed. The perception is this could be a result of a deviation of resources to the new technological trials.

⁵⁰ Note the question relating to technology was a core question in SSI1 hence 26 rather than 59 records.

Table 6-16 Technologies used in M&E

Technology Type	Session frequency	GPS	D/Base	Mobiles	On-line	MIS	WPM	GIS	General	Other	na
MIS, GPS	1	1				1					
GPS; Camera's; mobile phone, emails	1	1		1	1					1	
MIS; Archive systems	1					1				1	
App's; databases; MIS	1		1	1		1					
GIS; MIS	1					1		1			
General technology	3								3		
General discussion	1									1	
Databases; OBIT	1		1			1					
Databases; general technology	1		1						1		
Web-based; Databases	1		1		1						
MIS	1					1					
Web-based;	1				1						
Web-based real time	1				1						
IT - WPM	1						1				
WPM	1						1				
Mobile phone	1			1							
General technology; MIS	1					1			1		
Billing software	1									1	
na	34										34
nd	3										3
narrative	1									1	
TBD	1										1
Total	59	2	4	3	4	7	2	1	5	5	38

Additionally, there is concern over the limited availability of the associated cost of the systems, coupled with questions about compatibility, sustainability and potential for scaling-up to a national level. Most trials are taking place at district or sub-county levels hence there remains an unknown as to the applicability of going to scale nationally.

No information within the document and data archive review was identified as relating to how an organisation, programme or project decides on which TMA to use. Neither were any guidelines, policies, or regulations advising the appropriate course of action. In some cases, where a 'Terms of Reference' is provided as an annex, for example in an evaluation report, this could be considered as a decision making factor. Where slightly more evidence is available is within the session notes from the interviews. The few direct references to the influencing factors for TMA selection are set out in Box 6-2 below.

Box 6-2 Factors influencing how M&E is carried out

1. Sector is now using log-frame combined with technology (C00)
2. Other sectors such as the health sector (C14)
3. Different purposes: operational, policy, inspection and audit (C09)
4. Guideline influence – CLTS (C15)

6.3.2 Objective Two

To examine the conceptual framework of 'cost' of M&E, within the WASH sector

The literature review carried out between October 2010 and 2011 has provided very little empirical or academic evidence of cost of monitoring and evaluation within the WASH sector in general let alone specifically related to Uganda. Where the articles do refer to Uganda, they tend to report generalities such as recognising the potential for costly data collection and the need to keep systems 'simple' and 'cost-effective' (Pinfold, n.d and Kayaga, 2008). Specific references to cost remain limited. Hague (2001) disaggregates financial monitoring and

poverty monitoring. In terms of Poverty monitoring in Uganda, PAF Monitoring and Accountability funding is set at 5% equating to between US\$2-4million p.a. Another case-study example is that of Abelin & Wakooli (2001), who report on the Water Supply and Sanitation Management Information System (WSS-MIS). The authors estimate the cost of setting up the GIS lab as approximately \$60k consultant fees, \$31k equipment and software and \$14,800 map layers. Training and data collection which took about 4 weeks totalled an average cost \$4,500. However, the level of detail remains very skeletal as an absolute cost given that it does not seem take in to account processing and production amongst other possible expenses.

Considering the 25% of documents (79 out of 315), that contain some information on cost and those directly relating to the water and sanitation sub sectors, there are a variety of ways in which the cost has been reported. Some discuss through a narrative both directly and in-directly such as 'saving costs' and references to other organisations that bear the costs of monitoring. Others itemise unit costs, for example as percentage costs or budget and actual expenditure against a series of budget lines either activity or component or total values. A few report a mix of all of the above.

The results, both in terms of the document and interview analysis, indicate that when reporting cost for the majority, it is done so either as activity or percentage based cost rather than embedded. Therefore whilst there is no defined conceptual framework for cost of monitoring and evaluation for the WASH sector, in Uganda, there is a preference for itemising rather than embedding. Furthermore, in a few cases, the suggestion was made that there is a need for better accountability and transparency, of monitoring and evaluation and that perhaps this could be achieved through the use of specific indicators.

6.3.3 Objective Three

To examine the costs budgeted and expensed by global, national and programme level stakeholders, on M&E of service delivery, over the last 20-years.

As previously reported, the literature review has identified various factors that can influence level of investment in both monitoring and evaluation activities, how budgets are developed and the ability to spend and prioritize spending. In the case of Uganda, as with Kenya, documents and data records do not appear to hold this level of planning detail however findings are evident from analysis of key Informant and semi-structured interviews.

Where percentage figures over base rate are either proposed or defined by respondents, the rationale and evidence base associated with the figure is given as 'mainly driven by ... a comparison with several projects' or defined within a 'guideline'. Where defined within a guideline, no supporting rationale is provided nor understood in terms of how the percentage had been derived. One respondent very openly doubted the logic behind most budget calculations for M&E, other than their own. The reason given for this doubt was that M&E had only recently become anything more than just a "periphery thing" where budgeting for M&E has been "as a by the way".

Another characteristic of the approach to budgeting and limited understanding of how much an appropriate level of budget for M&E is the repeated reference to lack of budget or available funds made available for the activities. Whilst the results suggest the inadequacies of simply applying a percentage of the overall budget as a budget calculation for M&E, acknowledgement must also be given to other scenarios. For example, that lack of funds could be attributed to the level of capacity or capability or both of human resources available to carry out the tasks. Alternatively there could be an issue relating to competing priorities for funds, or even how the budget is allocated between data collection, analysis and use.

The non-percentage related cost typology for budget development included (but was not limited to), components such as time: days or weeks worked; training: internal staff and partners; data management: records and MIS; logistical costs: vehicle running costs and travel allowances. However, no actual or absolute values were provided.

Something quite clearly resonating throughout the interviews when exploring the cost of M&E activities is the complexity of attributing or defining what is or what is not a cost of M&E and whether there is benefit in excising those perceived costs into a separate budget. This complexity is primarily associated with monitoring rather than evaluation due to the nature of evaluation being a discrete activity whereas monitoring is carried out, in theory, on a continual basis. The paradox exists in that maintaining appropriate monitoring is crucial and is critical to ensure evaluations do not become 'costly' forensic audits and that they intrinsically provide value for money. In turn this raises the concern whether, without sufficiently understanding the cost of monitoring, we will not be able to guarantee an appropriate level of monitoring or indeed ensure evaluations are VfM.

To date no case study examples, explicitly relating to and analysing the costs of either monitoring or evaluation, have been sourced or made available for the WASH sector. However, as previously reported, some incidences of costs of M&E have been sourced either as a narrative or financial presentation: only 25% of the 315 records. Some noteworthy metadata from the document analysis includes:

- In both cases of government and development partners, just over 30% of data records sourced contain M&E cost data whereas for NGOs this number reduces to 16%.
- Annual reports and strategic plans make up 58% of the data records containing cost of M&E (Table 6-17).
- Just over 70% of the data records containing M&E cost relate to the government stakeholder sub-type (Table 6-17).

Despite this limited sample size the graphs in Figure 6-17 and Figure 6-18 illustrates that overtime, reporting of the cost of M&E seems to be increasing.

Table 6-17 Number of data records reporting cost

Data Type Cluster	Number of records	Development Partner	Government	Non-Governmental Organisation	TBD
Ad-hoc	3	1	1	1	
Annual	21	1	16	3	1
Concept Note	1		1		
Evaluation	3	1	2		
Final Report	6	2	3		1
Guidelines	2		2		
Minutes	3		3		
Plan of Action	1		1		
Policy	4		4		
Programme Document	1		1		
Progress Report	2		2		
Project Document	3	3			
Review	3	1	2		
Statute	1		1		
Strategy	23	6	15	1	1
Survey	2		2		
Total	79	15	56	5	3

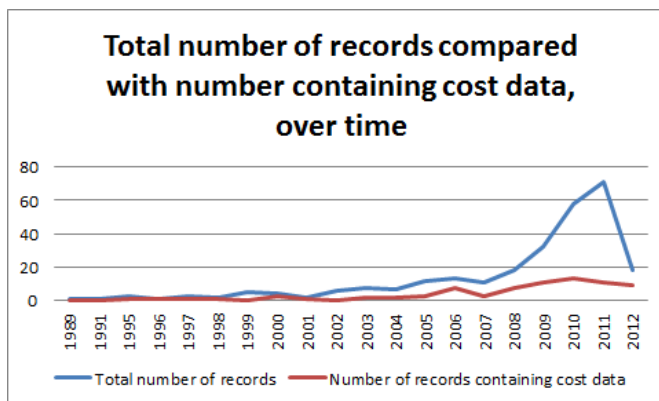


Figure 6-17 Proportion of records sourced containing cost data

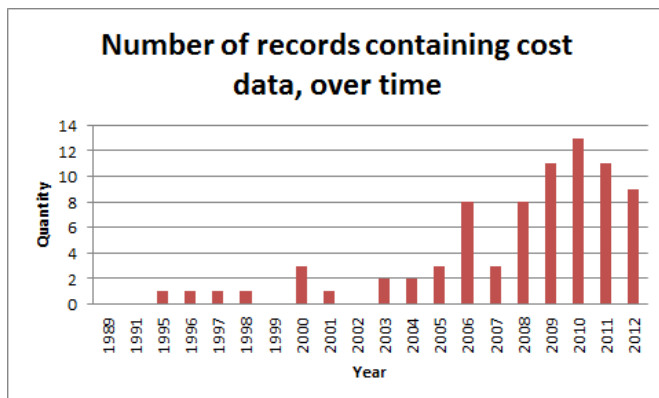


Figure 6-18 Frequency of records containing cost data over time

From the transcript analysis, the majority of the discussion centred on itemising the cost of M&E. Even in the cases where embedded costs were mentioned half was with the proviso that the costs should in fact be itemised. In other cases, despite initially referencing costing as embedded, on further discussion, such costs were in fact related to staffing costs and thus part of a salaries budget line.

As previously noted under Section 6.2.3, the sector performance monitoring process has been described as a successful method in ensuring transparency and accountability as well as enabling a country-wide overview of progress across the sector. This was further echoed during the interviews. However, whilst in its own right, the uptake of the framework is encouraging in terms of some of the benefits that have been identified and documented the associated costs have not yet been calculated and documented. This research has endeavoured to source such data, however has only been able to access a few pieces of the picture:

- Indicative budgeted for Annual Sector Review meeting for 2012 was approximately US\$77,000 for venue, publicity, stationery and allowances for government attendees only. However, additional costs could be added such as days worked - 2-3 days per participant; donor/development partner attendance and associated costs; civil society attendance and associated costs for the meeting itself, coupled with the staff time and other costs related to the preparation for the meeting.

Reasons for this absence of the cost analysis are not clear, but indications would suggest it is due to the sector not necessarily seeing an improved understanding the cost of monitoring or evaluation as a priority.

Of the 79 data records containing cost, 71% relate to government stakeholder sub-type and a further 19% relating to development partners. The balance 10% are shared between other stakeholder types (Table 6-17). The two data types most frequently reporting cost information were: strategy documents at 29%; and 'annual' documents at 27%. The balance ranged from (amongst others)

'ad-hoc' evaluations; policy documents; minutes; surveys and reviews (Table 6-17). Taking the two stakeholder sub-types with the most document references to cost of monitoring and evaluation, a snapshot of some of the cost typologies are presented in Table 6-18.

Table 6-18 Examples of cost of M&E - Government

Government Examples
For the water sector, the estimated cost of regulation (considered a monitoring function), as a proportion of sector revenues is 0.87% (SIP, 2009?)
Guideline examples increase in percentage allocation of budget from 2009 (up to 5%) to 2012 (up to 6%).....?overall sector budget (district budget increase?....increase in number of districts
Development Partner Examples
Overall, descriptions of cost vary from percentage of budget (2%); per capita cost of M&E activity (low, medium, high); activity based costs (supervision, research, review, internal evaluations, audits...); line items (field visits transport, fuel, oil, per diem, days worked).
There is insufficient data to validate however, on initial analysis there does not appear to be a correlation between data type and cost typology, neither does there appear to be a trend between year and cost typology.

As previously reported the literature provides minimal examples of a percentage of the project costs that should be allocated for M&E systems to allow a 'reasonable job' to be done. The example of Deboecke & Kinsey, (1980) proposes between 1.5% and 3%. Within Uganda as reported within the National M&E Policy percentage values are proposed as are recommendations made within the report of the 'Rapid Review of Public Expenditure on M&E across the Government of Uganda'. Added to these two examples, proposed percentages over base cost, oscillate between 1% and 5%. However, a couple of reports recognise costs of around 20%, at the same time as interview analysis itemises percentage values as low as 1%. Despite this range of figures, not one of the references provides a substantiated rationale behind the percentages.

To further examine the absolute costs of such percentages at a sector level, a range of percentage figures were applied to the sub-sector budgets as reported in section 6.1.2. These calculations provide 'guesstimates' only (Table 6-19) and again, feature as only part of the picture.

Table 6-19 Application of proposed percentage rates for M&E to the sector budget

	Budget (2006/07)	Budget (2007/08)	Budget (2008/09)	Budget (2009/10)	Budget (2010/11)	Budget (2011/12)
Sector Budget						
On-Budget (UGX bn)	209.543	176.811	192.915	238.444	256.429	281.573
Off-Budget (UGX bn)		28.110	38.000	79.679	112.868	207.773
Total (UGX bn)	209.543	204.921	230.915	318.123	369.297	489.346
Market exchange rate for UGX to US\$	1,723.50	1,720.40	2,030.50	2,177.60	2,522.70	2504.6
Total (US\$ M)	121.58	119.11	113.72	146.09	146.39	195.38
Application of proposed rates for M&E (US\$)						
1%	1,215,800	1,191,100	1,137,200	1,460,900	1,463,900	1,953,800
2%	2,431,600	2,382,200	2,274,400	2,921,800	2,927,800	3,907,600
5%	6,079,000	5,955,500	5,686,000	7,304,500	7,319,500	9,769,000
10%	12,158,000	11,911,000	11,372,000	14,609,000	14,639,000	19,538,000

At an average rate of US\$400,000 per evaluation, the numbers of evaluations possible for the sector 2011/12 varies from four when applying a 1% of budget, through to 48 if applying 10% of budget for monitoring and evaluation. However, these numbers would likely be reduced given a proportion would first be allocated to monitoring activities. The question of what is a reasonable number of evaluations to carry out for a sector, in a given year, should also be considered.

6.3.4 Objective Four

To explore the underlying purpose and use of each of the data sets.

Through applying a word search and find function to each record approximately fifty per cent of the 315 documents and data records sourced, make reference to the purpose of the data record. The documents and data records that most clearly presented the purpose of the record were 'guidelines'.

Using the same method as with Kenya, the extrapolated data on purpose was analysed against the four conceptual frameworks as set out in section 3.4.7. Excerpts sourced from the interviews, are also coded against the classification of whether considered as 'internal', 'external' or a combination. A mere 8% of document records report an internal or external purpose with the balance 92% of records report both an internal and external purpose coupled with just over 60% of interview respondents also indicating a combined purposes. Applying the categorisation of Casley & Kumar (1988), approximately 80% of the data records examined have a descriptive and explanatory purpose with 17% having a combination of description, explanation and prediction. Categorising against the framework suggested by IPDET (2007), proved slightly more challenging than the previous two classifications and as a consequence, the results are more complex (see Table 6-21). However, further analysis by way of clustering shows that 61% relate to one or another of the categories, 36% relate to two categories and 3% relate to three or more categories. The classification process using the amalgamated framework of Cotton & Bartram (2008) and Gosling & Edwards (2003), shows approximately 95% relate to a single level: 67% to National level and 28% to Programme level.

An analysis of how M&E data is used was carried out by taking a specific monitoring and evaluation activity and attempting to track the extent and reach of use of the resultant information.

Table 6-20 Purpose of data record

Categorisation of Purpose (IPDET, 2007)	Number of records
Ethical (policy performance) as a primary purpose	
Policy Performance	3
Policy Performance & Decisional	1
Policy Performance & Managerial & Educational and Motivational	2
Managerial (financial and human accountability) as a primary purpose	
Managerial	33
Managerial & Decisional	7
Managerial & Educative and Motivational	14
Managerial & Policy performance	11
Managerial & Policy Reform	2
Managerial & possibly Decisional	7
Managerial & possibly Educative and Motivational	1
Decisional (policy reform) as a primary purpose	
Decisional	18
Decisional & Educative and Motivational	6
Decisional & possibly Educative & Motivational	1
Educative and Motivational as a primary purpose	
Educative and Motivational	42
Educative and Motivational & Decisional	1
Educative and Motivational & Managerial & Policy performance	1
Educative and Motivational & Policy reform	2
Educative and Motivational & possibly Decisional	5
TBD	1
Total	158

Certain assumptions about use could also be made when considering the document title or data type. However, the caveat that what is reported is necessarily used for its intended purpose deemed the analysis void.

As with the Kenya case, the document data record analysis proved extremely challenging to ascertain specific examples of actual use of M&E data, leading to an impact on service delivery. Therefore, the research considered examining ‘recommendations’ and ‘undertakings’ from the series of Annual Sector Performance Reports. Attempts were made to finding an audit trail on the basis that implicitly, some level of M&E must have been carried out to report the recommendations and undertakings. This would have been a starting point with further attempts being made to look for evidence to suggest that actions had been carried out in response to the recommendations. By tracking from one year to the next it was hoped that a link could be made in terms of any consequences, improvements or otherwise, from one year to the next. Due to timing and data availability constraints, this component of the analysis was not

possible however, is recommended as a future research opportunity. The result is a weighted dependency on the research findings from interviews and the e-survey.

Analysis of the interviews illustrate that the majority of examples of ‘use’ were broad statements such as ‘it informs decision making’ within the organisation Figure 6-19. Others references the difficulties around tracking use, or that a lot more could be done with the data already collected. An alternative terminology was also suggested reflecting that it is better to talk about demand, rather than use, given that if demand is there, then the assumption of use can be made.

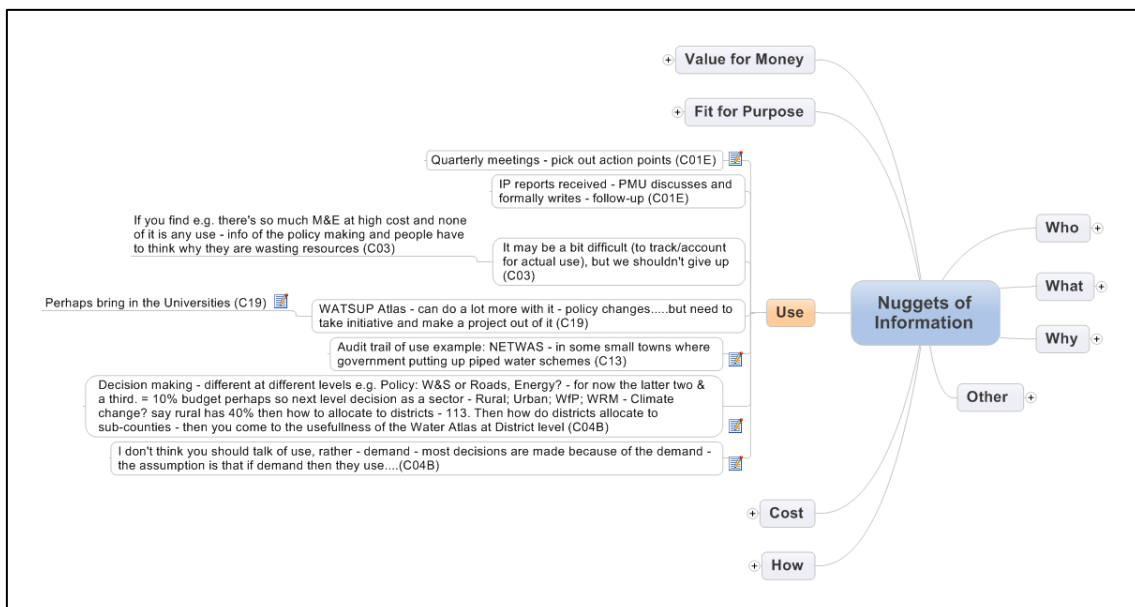


Figure 6-19 Mind map of interview comments about ‘use’ of M&E data

Some examples of specific and actual use of both monitoring and evaluation data were also provided through substantiated personal experiences, including aspects of informing decision-making at project and programme management level; staff performance and community satisfaction aspects. Other slightly tenuous examples were provided relating to policy decision making in theory, perception of use and in one case, the extent of use whilst evident in theory, remained a ‘work-in-progress’ in operational terms.

Respondents raised issues over quality of data collected or reported leading to reduced confidence in the data which in turn influences the extent of use of

such data. Another aspect equally referred to was concern around the frequency and timing issues of monitoring and evaluation data availability. Examples provided highlighted a disconnect in information generated and subsequent use thereby having an impact on its relevance or currency.

A few interviewees perceived a difference exists between the use of information by public and private organisations. They felt that the bureaucracy associated with public sector organisations can be a “barrier to using the information quickly to influence policy change”, which is unlike a private sector organisation who if it “...is not working you cut it off that day...”.

Specifically in the case of the Uganda water sector, recognition was given to the following:

- The situation that increasingly decisions are systematically being made in response to the information being provided from evaluations.

However finding an audit trail to that use is not as straightforward as making the claim. Associated with the view of an increasing use of data, is that an improvement in technology and evolving methodology is allowing an improved lead time of data collection, analysis and reporting. For example, as described by one organisation, their process of monitoring, from start to finish, prior to the introduction of improved data collection technology, had an 8 month lead time before the findings were available, at which point the information become almost redundant for its intended use. The technology however, allowed real-time data collection.

Another perceived change to the level of use of data, again linked with the advancement in technology, is that data is seemingly easier to share for lesson learning purposes. Again, the extent of having an audit trail of actual use in terms of having an impact on service delivery is not clearly documented. That said, the lack of availability of such documentation may be due to the time associated with the process. As reported by one organisation the time taken between identifying an issue to seeing the impact of the implementation of a policy-decision can be anywhere up to 5 years. Some examples where

stakeholders have stated during interviews their monitoring and evaluation is having an impact on service delivery, are presented in Box 6-3.

Box 6-3 Examples where M&E information has had an impact on service delivery

1. Follow-up of project/programme monitoring missions, raising service delivery concern, decisions made and action points taken back to the community.
2. Monitoring and evaluation information leading to high level financing decisions in terms of allocating to areas of need.
3. Poor performance in service delivery resulting in staff changes.
4. Poor performance, resulting in monitoring review leading to rehabilitation of service leading to water where previously no water.

The results of the e-survey highlight other specific examples where M&E information, generated either by internal or external activities, were subsequently used:

- Slow contractor progress resulting in a decision to award a single contract per contractor which resulted in implementation and quality improvements.
- Technological design change.
- Project scope adjusted in response to an internal MTR questioning viability of original concept.
- Training courses initiated in response to an external evaluation expressing concerns about O&M capability.
- Design of appropriate technology.

The survey also highlighted the extent of use of a sample of reports and guidelines (see Appendix F-5). For each of the reports cited within the survey, between 25% and 75% of respondents had not used one or other of the sample documents and at least 66% of had not used the sample guidelines.

6.3.5 Objective Five

To examine the conceptual framework of ‘value for money’ and identify whether M&E is fit for purpose for use in the WASH sector?

Not one academic article was identified, through the review, which referenced theory, empirical or anecdotal evidence on the relationship between ‘VfM’ and M&E for the WASH sector within Uganda.

Apparently there are four VfM studies that have been carried out in the water supply and sanitation sector (2002; 2006; 2008; 2011). Only two have been possible to obtain through this research of which one the file became corrupted. The remaining one of 2011, specifically considered the ‘use of the District Water and Sanitation Conditional Grant for the construction of water supply systems’. Whilst the report did not directly looking at the extent to which M&E is providing value for money in the sector some key findings were reported:

- Cost of supervision and monitoring: 5% of total grant budget, defined as construction supervision visits, inspection of water points after construction, regular data collection and analysis and specific surveys.
- Method – participatory monitoring.
- Five references were made to minimal water quality monitoring under the districts because of lack of funds.

What is not clear within this last bullet point is whether water quality monitoring was minimal because of insufficient funds within the supervision and monitoring budget, or whether it was due to insufficient operational funds. Reason being, water quality testing is itemised as part of the operations budget, not the supervision and monitoring budget. Despite the absence of data records specifically examining ‘VfM’ of monitoring or evaluation or both, for the sector, the term ‘value for money’ or the acronym VfM, or a combination, have been referred to in 109 of the 312 documents sourced for Uganda. Within these 109 data records, that cover government, development partner and non-governmental organisation stakeholder sub-type, approximately 888 entries are

documented. The following series of figures (Figure 6-20; Figure 6-21; and Figure 6-22) highlight the frequency of occurrence and stakeholder sub-type.

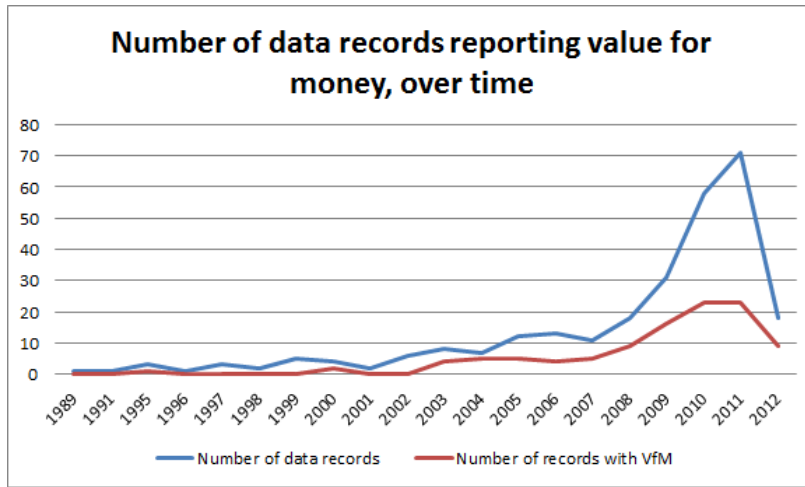


Figure 6-20 Proportion of data records reporting VfM

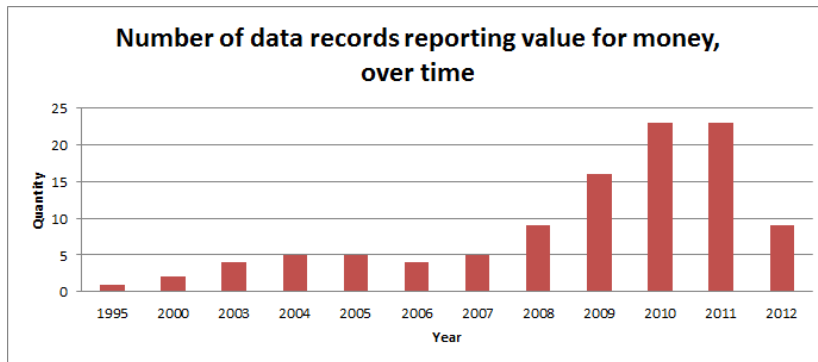


Figure 6-21 Number of data records reporting VfM

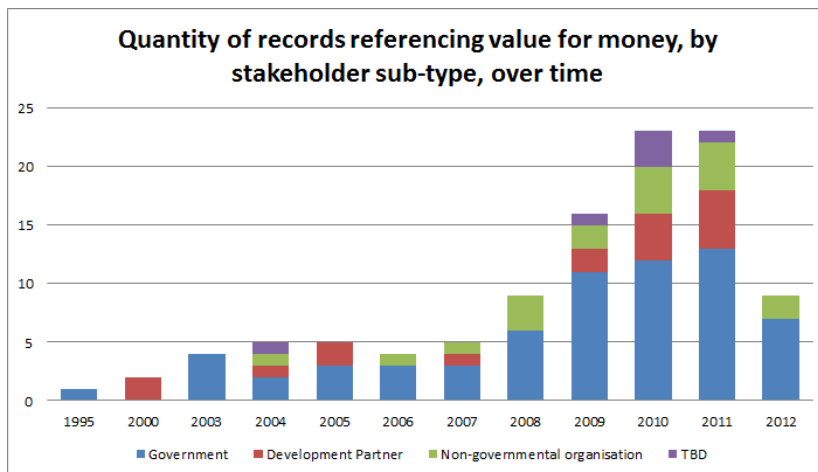


Figure 6-22 Proportion of stakeholder sub-type reporting VfM

Only 16 of the 59 sessions discussed whether M&E is providing VfM in the WASH sector, of which 87.5% perceived M&E, to some extent, providing value for money in the sector. Where interviewees felt VfM was provided was perhaps a little biased and based on perception of use rather than cost and in some cases simply because if it wasn't, they wouldn't be doing it.

In terms of the e-survey analysis, of the 10 respondents who answered the question as to whether M&E was providing VfM in Uganda. Approximately, 30% responded 'yes'; 30% responded 'no' whilst the balance 40% responded that they 'do not know'.

When considering whether M&E, in the WASH sector, in Uganda is 'fit for purpose', as was the case with, 'VfM', not one academic article nor a single document was located. The interviews that discussed the extent to which M&E is 'fit for purpose' for use in the WASH sector, did so using the following two schedule questions:

- The aspects that need strengthening or need prioritising to ensure M&E is fit for purpose.
- The positives of M&E and identifying what is working well.

Taking each in succession Table 6-21 and Table 6-22 provide an overview of the two themes and are each followed by a summary of key points provided as they relate to the six components of monitoring and evaluation. Where considered of relevance, additional aspects are also reported. Some of the examples of aspects referred to as needing strengthening included:

Who: Everyone should be involved in M&E, certainly project staff on a programme or project. The function should not be given to external consultants to carry out (monitoring) as they will not have the continuity of contact. Need analysts to analyse and interpret data and do a lot more with it.

How: Appropriate tools and methods needed to capture economic contribution investment in the WSS makes. There is a multiplicity of tools and methods with very little assessment of the effectiveness of such within the sector.

Table 6-21 Aspects that need strengthening to ensure M&E is 'FfP'

Aspects needing strengthening	Session frequency	Who	What	Why	How	Cost	Use	Data Quality	Capacity & Capability	Other
Why; How; What	1		1	1	1					
Storage & Use	1				1		1			
Definitions; Roles	1	1	1							
Between Outputs & Outcomes; Why - everything else will come from that	1			1						
All of it	1	1	1	1	1	1	1			
Defining at planning - Why	1			1						
Data quality	1							1		
What 1st then the Why	1		1	1						
Principals laid down with a degree of sequencing - guidance.	1									1
Any funds subjected to M&E. Selective, spontaneous, systematic not continuous; Keep it simple	1					1				1
The Why should be clear, indicators well defined and standardised; civil attitude - feedback	1		1	1			1			
Finances - cost; The Why; Repackaging of information for use	1			1		1	1			
Data quality; capacity; costed; how; indicators; use is missing	1		1		1		1	1		
Operationalisation; How; Guideline	1				1					1
Operationalisation and use	1						1			1
All components. Bottom line Capacity and capability.	1	1	1	1	1	1	1	1	1	
How priority but Who, What, How all important aspects. Ethics also important	1	1	1		1				1	1
Understanding it - capability	1								1	1
na	40									
TBD	1									
Totals	59	4	8	8	7	4	7	3	3	6

Table 6-22 Aspects of M&E that are currently working well

Aspects working well	Session frequency	Who	What	Why	How	Cost	Use	Reporting	Other
Annual Reviews	1							1	
Quarterly Reporting	1							1	
Quarterly Reporting & Activity listing	1							1	
Systematic Reporting	1							1	
MIS	1				1				
Indicators and guidelines	1		1						1
National level JSR, JTR	1	1			1				
Indicators; Tools	1		1		1				
National level	1	1			1				
Indicators	1		1						
Indicators; Participation; Record keeping	1	1	1					1	
na	45								
nd	1								
TBD	1								
Issue	1								
Totals	58	3	4	0	4	0	0	5	1

Cost: More consideration over cost, particularly when discussing replication and scaling-up: who funds and sharing to bring down cost, if it costs X today, what will it cost in future years.

Use: Should talk of demand rather than use. Need to strengthen actual use and then cost shouldn't be such an issue

Other: Missing phase between Output and Outcome – phase of utilisation. Need a cohesiveness of government around allocation of funds. Capacity and capability challenges.

In contrast, 11 out of the 59 sessions discussed the aspects of M&E that were perceived as currently working well. The most frequently referred to aspect was national and sector annual reporting against a series of indicators.

In terms of the e-survey analysis, of the 10 respondents who answered the question as to whether M&E was 'FfP' in Uganda, in the WASH sector, 20% responded they 'No', 40% responded 'Yes' whilst the balance responded 'don't know'.

6.3.6 Objective Six

To understand better the potential for harmonization and alignment of country level frameworks, with the SDGs and HR frameworks.

As reported within the Kenya case, the MDG's are near the end of their target period and with the recent discussion around the setting of post-2015 targets and associated indicators, there have been various consultations, reviews and working groups all considering priorities and preferences. The latest consideration for what are being termed as the Sustainable Development Goals, under the JMP, set out four targets and 14 indicators. As part of the UNDP led, GWP National Consultation process with Uganda sector stakeholders, four indicators relating to WASH were also proposed. Both of these sets of indicators have been analysed against the 5595 indicators extracted from the sourced documents to ascertain the extent of alignment

Results for the GWP series of Uganda proposed indicators demonstrate that despite the large proportion of clustered coverage service indicators, the proportion of indicators specifically referencing 'improved water' or 'improved sanitation' feature as 9% and 4% respectively. The proposed indicator referring to reporting change in the non-functionality rate of WASH, using the search term 'function', filters another 9% of the indicators.

The 5595 indicator entries were also analysed against terms associated with the Human Right to Water and Sanitation. The term 'access' features most prominently out of all the associated terms, at 11.6%, with reliability being the next most frequent at 9.4% of entries.

Only 23% of respondents answered the question relating to whether they had been involved in any consultation regards the development of the SDGs. Very few had been involved and even less respondents had actually heard about or seen the proposed targets and indicators for the WASH sector even though they are available on-line. During the general discussions with stakeholders about the SDGs, there was very little comment about the possible impact or effect that the SDGs would likely have on the monitoring requirements within the sector and or country. This is predominantly to do with the fact that most respondents had not been privy to the proposed targets and indicators that were being considered by the various global working groups. The few thoughts that were presented by stakeholders included:

- Importance to reach agreement on definitions, harmonisation and setting of standards.
- Country level development plans are given more priority than global targets.

6.4 Analysis and Discussion

Objective One

Today, in the WASH sector in Uganda, M&E is predominantly government led and actioned. By assuming a 'Sector Wide Approach' in 2001 the foundation was laid to enable a certain level of coordination and consistency of reporting of project and programme activities across the sector. The adoption of a performance measurement framework in 2003/04 and subsequent channelling of funds through basket funding and sector budget support acted as a catalyst to further enhance monitoring of sector performance. In addition to these sector focused institutional structures are other nationally driven monitoring and evaluation efforts such as the Budget Monitoring and Accountability Unit of the

Ministry of Finance and the M&E Directorate under the jurisdiction of the Office of the Prime Minister. Whilst these systems are recognised as ‘country-led’, involvement by development partners and other external influences, within the establishment or evolution of the structures and associated processes, systems and procedures is also evident. Nevertheless, Uganda, like many other countries is also host to a parallel development partner system, not necessarily integrally linked to the monitoring or evaluation data collection, analysis or reporting system of the government.

Understanding why and how these parallel systems continue, in a time where global agreements such as Paris Declaration and Accra Agreements have been in place for almost 10-years, has been considered and analysed by others (Wood et al, 2011) and not the direct focus of this research. Conversely, this dual system, brings with it opportunities as well as challenges. For example, there are a number of technological trials going on within Uganda, for the enhancement of data collection in terms of improving both accuracy and timeliness of receipt of data. These kinds of activities would not be possible under the existing governmental target or financial structure or resources. Nevertheless, the activities also clearly bring with them challenges.

Multiple in number, these off-budget activities, are seemingly less transparent and more difficult to coordinate, resulting in a trade-off of between the potential benefits that they could bring to government, versus the time and effort needed to coordinate the information collection and analysis in order to compare and consider applicability for use and potential for scaling-up. There appears to be limited, if any, enforcement either from government or development partners to ensure that a comprehensive cost-benefit-analysis of these trials is undertaken and made publically available.

The potential for improving transparency and information flow exists through the Water and Environment Sector Working Group or one of its subsidiaries⁵¹ and

⁵¹ The Water and Environment Sector Working Group was established at the time of the adoption of the SWAp. Sub-groups such as the Water and Sanitation Working Group also has its own set of ToRs and

through the Uganda Water and Sanitation Network, both of which have related mandates. The former is mandated to “coordinate the implementation of all water and environment programmes /projects/activities in view of national priorities, policies and strategies” (MWE, n.d.), whilst the latter, to collectively report on interventions of the NGOs, through the Annual Sector Report. Despite these mandates, there appears to be limited willingness for development partners or NGOs to make freely available the information, as evidenced from a review of the UWASNET annual reports.

The reticence of systematic reporting of all development partners to ensure systematic reporting has not been explained. It has been suggested however, that development partners assume their primary responsibility in terms of reporting results is to the donor/contractor since delivery of results and outcomes often forms part of the remuneration agreement. Whatever the rationale, the consequence is a financial and human resource burden to ‘chase’ the stakeholders for what should be a systematic reporting obligation working to a common goal.

External influence on the government-led system can be found in the frequency of reported indicators. Although the sector framework comprises the 11 ‘golden indicators’ – going well beyond the two indicators of the MDGs – service coverage still remains the most frequently reported indicator (45% of all entries). Functionality, which is also one of the ‘golden indicators’ features far less often, totalling only 6% of all entries. This imbalance is mirrored across public and civil society organisations, national and international – pointing towards it being a potentially wider scenario than just within Uganda and emphasising the claim that different stakeholders monitor and report different things.

Almost ten years on, from the introduction of the golden indicators, the relevance and appropriateness of some of the indicator set is being called in to question (Danert & Ssozi, 2012). Questions are being raised, in part, with

mandates, with the potential in both (including other sub-sectors), thematic subsidiaries being formed around specific issues.

respect to data quality and the applicability of the indicators as well as the absence of an indicator to demonstrate and justify the economic impact of investing within the sector. This forms the second part of the global target associated with the WASH sector: 'achieving economic growth'. There is uncertainty, however, on how to measure such impact and it is likely that Uganda will have to look outside of the national public, private and civil society players to resolve this challenge.

There is little visible documented evidence of evolution of the way either monitoring or evaluation is conducted in Uganda. Definitions have remained consistent albeit the terminology particularly with respect to the terms 'monitoring' have shown some variance over time. There is also compelling evidence that the obligations of reporting monitoring and evaluation in the WASH sector are increasing over time. Too many obligated reporting requirements when those required by UWASNET remain to a certain extent voluntary, have been proposed as a reason for the limited reporting in the case of NGOs to UWASNET. The quantitative analysis shows an increasing number of indicators being reported over time albeit that the proportion of documents containing indicator entries are decreasing.

Qualitative analysis supports this finding with the stakeholders suggesting they have chosen, or are obliged, to engage more in qualitative, story-telling, (MSC methodologies) alongside reporting the numbers. Whether it is out of choice or through conditionality of contract, the multiple method and approaches to undertaking and reporting monitoring and evaluation comes with certain challenges. For example, with new methodologies being applied there is uncertainty about the capacity and capability of resources available within implementing partners to carry out multiple activities. The literature review has demonstrated that there are over 70 (and an increasing in number), tools, methods and approaches available for planning and implementing monitoring and evaluation. Despite this research indicating that far fewer are actually applied in Uganda across the WASH sector, as the interest, capacity and

capability increases, so is the likelihood of applying an increasing number of methodologies.

The reasons given to the limited use of the variety of tools available has not been that the alternatives are not appropriate, or too costly, instead, include, the proviso within contract conditionality, or that there is a lack of awareness of the alternative options and the associated benefits, if any. However, recognising the increasing interest of donors and governments to go beyond the numbers, support country-led initiatives and generally take a 'lighter-touch approach', the 'conditionality' aspect of method is likely to reduce. Nonetheless the level of information available on the cost, benefit and applicability of use for these different methods remains limited.

Ultimately these challenges culminate in set of other questions. For example, over the next 5-10 years, to what extent will the widening of data collection and analysis tools and methods impact on the ethos of a streamlined M&E system that is based on the principles of using a set of aggregated data?

Despite the increase in, not only numbers of reports, but also indicators reported against there is still a marked gap in the reporting of baseline and target values (see section 6.3.1). Worthy of note, is that this lack of baseline and target data was one of the aspects highlighted during a recent Parliamentary session, following the release of the Court of Auditors report on 'European Union Development Assistance for Drinking Water Supply and Basic Sanitation in Sub-Saharan Countries' (2012). Parliamentarians expressed their surprise that implementing partners were unable to identify either a starting or ending point of the project intervention they were implementing. It was commented that this scenario was wholly unlikely in the private sector. This is perhaps one area where a change in emphasis in effort is needed – a more private sector approach to M&E within the public sector.

Data set values are, by definition, going to be inconsistent based on the circumstance that indicators vary in terms of how they are defined and methodologies for data collection also differ from one institution to another. In Uganda a certain amount of effort has been levied to reconciling these

differences between national and sector data as is evident within the analysis of Appendix F-4. This has been both in absolute terms and simply by raising the visibility that different methodologies are and will continue to be applied, based on the differing needs. In turn it is about communicating that this situation is to be understood and accepted and when these 'inconsistencies' within the data are compared, it is done so for purposes of triangulation of data. The consequence is that, within reason, whatever that may be i.e. +/- 5%, the repetitive argument and rejection of data sets or associated disputes are laid to rest in place of maintaining a practitioner and pragmatist approach and bearing in mind the 80:20 rule⁵². If this is acceptable for the private sector and high-income countries, surely, this can be considered appropriate for lower-income countries as a means to attainment of a basic level of service delivery.

As previously discussed, adoption of improved technology is being trialled in Uganda to alleviate some of the burden of data collection. One repeatedly reported aspect referred to during interviews was the associated lead time from data collection to analysis and reporting. The number of indicator entries of service level data, coupled with discussions around roles and responsibilities of data collection puts the greatest level of effort as being at local and district government levels. The challenge seems to 'sit' around the issues of knowing, to what extent the information collected is wholly appropriate to the needs of those who collect the data as compared to the needs of those who invariably carry out the analysis and higher sector or national level reporting. Also linked to this issue is the question of the packaging of the data and information when it is reported at the higher levels and the extent of usefulness at the lower levels.

The amount of effort predictably is pyramid in nature increasing as one gets closer to the consumer and the further away one gets from the site of delivery, the less actual data collection is undertaken. However, is there a way that the roles and responsibilities for collection, analysis and reporting, along with the actual data points collected for use at these different levels, can be re-

⁵² The Pareto principle (Bunkley, 2008)

orchestrated to bring about an improved M&E system ensuring the activities are providing value for money?

Objective Two

There is no evidence of any consistency in how monitoring or evaluation activities are budgeted. The appreciation of either an actual or appropriate cost of evaluation and to a lesser extent monitoring, for the sector, remains unclear in Uganda. Furthermore, the perception of more than one stakeholder is that most budgeting for monitoring activities remains ad-hoc and even in rare cases where guidelines are provided, they are done so without a substantiated basis and more on personal judgement or anecdotal evidence.

Logically, the situation is not surprising given the availability of guidance in what is considered an appropriate budget or how to calculate an appropriate budget, for M&E, that has the benefit in achieving the intended purpose of either monitoring or evaluation is lacking.

In 2011, an attempt to resolve some of the uncertainty surrounding cost, the OPM, launched a rapid appraisal of the public expenditure on M&E across government. The framework used to guide the collection of data was centred on monitoring or evaluation related functions and terminology⁵³, thereby providing possibly one of the first empirical evidence cost typologies reported. The assessment provides (but not limited to), two notable conclusions or recommendations. Firstly, the authors suggest that budgeting for M&E activities are centred around the particular monitoring or evaluation activity whether it is for example technical backstopping, technical monitoring, supervision or evaluation, such that these activities are clearly defined against a persons' role and responsibility. Secondly the authors suggest that a minimum percentage of the recurrent non-wage budget is specified for use 'primarily on the costs of running and managing a MIS' and an additional minimum percentage of all

⁵³ Inspection, control, procurement oversight, annual performance reports, sector reviews, value for money audit, mid-term and final evaluation, impact evaluation, ex-ante, baseline.

project budgets, isolated for evaluation at the project level. Both of these proposals appear within the draft national M&E policy.

Albeit a considered response or recommendation to a current gap in information, some caution perhaps should be given to fixing minimum percentage figure, if not simply for the fact that two, three or five percent is quite different for a \$100,000 project (\$2,000; \$3,000; \$5,000) compared to that of a \$1 million project or programme (\$20,000; \$30,000; \$50,000).

Objective Three

In order to make an informed management decision, let alone one that results in a national policy, a substantiated evidence base, often combined with a level of judgement, logic and reasonableness should be applied. In the case of Uganda, whilst the latter two components may exist, there are certain limitations on the former, when it comes to examples of public, private and civil society budgets and expenditure on either monitoring or evaluation within the sector. Therefore, one could argue that there is insufficient evidence existing to determine the true cost of M&E of service delivery and any policy associated with determining a minimum budgeting cost should be implemented with caution.

Interestingly, the political willingness and urgency to review expenditure levels on M&E across all sectors was evident in the recent commission, of the rapid assessment. This was shortly followed by a review of monitoring and evaluation roles and responsibilities across government.

Irrespective of whether internally or externally driven, in theory the cost of monitoring and evaluation has increased at all levels over the past 20-years. With an increasing investment⁵⁴ in the sector along with intensification of requirements for transparency and accountability, the associated costs of a burgeoning staffing structure and introduction of more and more associated technologies, together, result in an increasing cumulative cost. Furthermore, against a backdrop of the upsurge in appreciation of the usefulness of

⁵⁴ As an overall trend, recognising that over the last couple of years sector allocations as a percentage of national budget has fallen, as has the absolute value of development aid, donor funding.

evaluation as well as monitoring to inform decision-making, this has the potential of adding further costs. As new and innovative ideas in achieving a rigorous evidence base emerge in an environment where there is an absence globally, let alone at country level, of what is considered an appropriate cost of M&E the costs may well escalate further.

Objective Four

To 'look back to look forward' and to look at the end to understand where to start are both global and country level statements referenced by others as appropriate in terms of achieving good water governance (Nilsson, 2006; Gupta, 2007) and for the purposes of M&E collectively (Weiss, 2004; Carter, 2011) . Whether these are applied in practice or limited to theory, is another matter. In the case of Uganda, there is evidence of both theoretical and operational scenarios.

As reported under section 6.3.4; many examples have been provided in respect of use of both M&E data. However, these are coupled with statements that 'use' of data is not maximised due to the burden of collecting data, implying a misplaced emphasis and misalignment on what is being monitored, or what data is being collected, compared to the intended use and actual use of the data once analysed or reported.

Evidence also exists to suggest that in some cases data collected is neither, analysed or reported. The proposed misalignment may be attributed to poor planning, or a conditionality requirement – more commonly referred to as box-ticking. Needless to say, given the lack of motivation or incentive (as expressed by some a catalyst to making collection a burden), the risk is a resultant set of inaccurate data collected; poor quality data analysis; and in some cases whereby the first situation leads to the second situation, inevitably leads to the information being shelved rather than effectively used. It is at this point where a circular reference can occur in questioning whether the activities of M&E are making efficient use of funds and the extent to which they provide value for money.

As a reminder, of some of the examples of use having an impact on service delivery that were provided through interviews and the e-survey are presented in Box 6-4.

Box 6-4 Examples of use of M&E activities in Uganda

Internally provoked changes:

1. Reduction in the allocation of contract numbers to contractors resulting in increase of speed and quality of implementation.
2. A monitoring report triggered more trials to confirm effectiveness and efficiency of the intervention.
3. Repeated monthly reporting has resulted in various improvements from administrative improvements such as the reporting format resulting in gap filling and clarity, through to technical aspects such as financial components.

Externally provoked changes:

1. A mid-term review identifying weakness resulted in contracting some training.
2. A donor monitoring activity led to a technical improvement – appropriate technology.
3. An evaluation of the intervention approach requested for improved collaboration, which when acted upon resulted in increased public funding to small-scale facilities offering pro-poor services.

Whilst this gives some optimism that both monitoring and evaluation data is being used and having an impact on service delivery, the perception of limited use is seemingly seen as a result of other facts such as lead time and level of reporting. However, stakeholders need also to be mindful, cautious or even a little cynical and consider the possibility that the anecdotal evidences are no more than lip service, perception, or judgement rather than a body of validated, documents evidence.

Objective Five

As reported in the literature review, value for money means different things to different people, suggesting it is not an exact science. This is also a sentiment echoed across the interview analysis for Uganda, with 87.5% of respondents perceiving, to some extent, M&E provides VFM in the sector. In contrast those who responded to the related e-survey question, 40%⁵⁵ did not know whether it

⁵⁵ Approximately 30% disagree; 20% agree and 10% strongly agree

did or it did not. The mix of responses not only supports the claim that the conceptual understanding of VfM differs, but may also suggest that the term and concept of VfM is not fully understood by all stakeholders.

Considering the OECD (2011) definition of VfM which links it to fitness for purpose, through the term quality, one could make the assumption that the findings of questions around FfP (Section 6.3.5) reflect those for the questions around VfM (Section 6.3.5). However, this is not necessarily the case. For example, none of the documents sourced that refer to VfM refer to 'fitness for purpose' thus indicating a lesser use or understanding of the concept. The differences are further evident through the survey results whereby 40% agree that M&E is fit for purpose compared to 20% who agreed M&E is value for money; 20% disagree that M&E is fit for purpose compared to 30% who disagree that M&E is providing value for money. Furthermore, during the formal discussions, the majority of interviewees referred to a combination of aspects of monitoring and evaluation to be improved so as to make it 'fit for purpose'. The discussions around VfM⁵⁶, primarily focused on just one aspect of why the activities may not be VfM – questioning the efficacy of use of information generated. Consequently this brings into question the level of understanding of the interrelationship of fitness of purpose needing to be satisfied to make something VfM.

The references to 'use' may relate to the increasing interest on impact of investing in the sector and the impact on economic growth or reduction in health costs, as previously referred to. Moreover, the higher regard given to VfM compared to FfP, could be in response to a bias, such that VfM audits are carried out and not wanting to downplay a perception of VfM for fear of some repercussion down the line. There is no such audit or review associated with whether monitoring or evaluation is fit for purpose. As far as the researcher is aware, neither is there any legislation or regulation relating to such.

⁵⁶ As referred to under RQ5.4&5.5

Alternatively, the results could simply suggest that the 'use' of M&E information is considered of more relative importance compared to the other components, including cost. This would also tie in with the concept that an activity will cost the same whether the information generated and reported is used or not used determining that emphasis should be placed on improving use rather than analysing cost. This view however, does, in part, contradict with another concept - that accountability and transparency is pivotal to good (water) governance, which is in turn needed to achieve improved service delivery.

Objective Six

On one hand the evidence suggests that the extent of consultation in terms of the post-2015 SDGs with Uganda has not only restricted but also been delayed on the part of the global stakeholders. On the other hand, given the evidence of actual impact of the MDGs on an increasingly country-led monitoring framework and decreasing development aid budget, the question remains as to whether it really is an issue. While the consultation that took place within Uganda engaged with very few of the key sector stakeholders engaged with through this research it does not necessarily indicate that officials higher up the ranks are not being consulted through different means, i.e. high-level dialogue. That said, the SDGs at the time of writing this Thesis are still undecided and therefore there still presents an opportunity for further dialogue with the key stakeholders.

The findings, in respect of the analysis of proposed targets and indicators and the fact that the SDGS are undecided, suggest that:

- There is still the potential for harmonisation and alignment of a core set of indicators under the SDGs and country-led monitoring of the sector.
- Full harmonisation is unlikely because the consultation process in Uganda is limited and key stakeholders are not being involved in the process.

Harmonisation is unlikely to affect the components of Why, & How monitoring or evaluation is carried out in Uganda, but may affect the What, Cost and Use.

7 DISCUSSION

The discussion is presented by objective rather than research question as re-examines the analysis and discussions presented under the three case studies (Chapters 4, 5 and 6). Key evidence points pertaining to each of the research questions were mind-mapped to establish the claims and have since been consolidated (Table 7-1) to show how this evidence leads to conclusions. The claims identified across each of the three cases are also presented in Table 7-2 and show where claims can potentially be considered as generic claims despite the differing enabling environments.

Two principal definitions underpin the discussions, within this chapter, as follows:

- Fit for Purpose: “the extent to which data produced by a measurement process enables a user to make technically (& administratively) correct decisions for a stated purpose” (Thompson & Ramsey, 1995).
- Value for money: “the optimum combination of whole-life cost and quality (or fitness for purpose) to meet the user’s requirement. It can be assessed using the criteria of economy, efficiency and effectiveness” (OCED/DAC, 2011).

It is also worth remembering the difference between monitoring and evaluation. The activity of monitoring is a continuous function of systematic data collection to provide information on progress whereas evaluation, albeit again systematic in its implementation, is a periodic activity requiring objectivity to determine the realisation of a set of objectives. Furthermore monitoring tends to be carried out by those directly involved in that which is being monitored, whereas, evaluations are more likely to be carried out by an external resource with the requisite specialist analytical and interpretative ability. Therefore, before using the acronym of M&E one should be mindful as to whether it is really both that are being referred to, or whether it is one or the other.

During the course of this research both in respect of the interviews and in terms of the documents sourced and reviewed, the term M&E is often used

inappropriately since either monitoring or evaluation alone would be more fitting. For example, the perception of some stakeholders is that consumers would be best placed to carry out monitoring of functionality and yet, one could argue that functionality is in fact an evaluation activity as defined under the MEP (WHO, 1985a). Where there is a possibility to argue the case either way, there is other evidence recognising the differences between the two. For example there are an increasing number of associations and fora specifically focused on evaluation (as reported under section 2.3.1), rather than the collective of M&E.

To identify the evolution of M&E approaches and associated indicators within the WASH sector over the last 20-years and map them against what has initiated the change.

Considering today's current global monitoring framework - the MDGs, monitoring and evaluation in the WASH sector could be argued as having lost its way from the days of the International Drinking Water Supply and Sanitation Decade and the introduction of the Minimum Evaluation Procedures (MEP). Albeit predominantly referring to evaluation, the MEP provided a clear and concise framework for monitoring activities particularly in respect to defining value for money. The MDGs on the other hand, whilst providing a global comparative performance benchmarking framework, have been less successful in covering key aspects such as functionality or impact. Nevertheless, recognition has to be given to the simplicity of the MDGs and what the global monitoring effort has achieved over the last 50 years. The efforts of organisations such as WHO, UNICEF, the JMP, WB and more recently UN-Water, amongst others have raised the visibility of the sub-sector and helped to highlight key issues. Similarly the achievements of civil society organisations with their advocacy campaigns, holding government to account and their pursuit for inclusivity and equity of service delivery, have also contributed to the achievements. One could also argue that the differences are due to the MDGs being a global multi-sector framework whereas the IDWSSD was a sector specific framework. Despite these differences there is a longstanding

recognition for the need to monitor sustainability and service use in addition to the MDGs main focus of service coverage.

While each of the case countries exhibits its own specific limitations, based on the varying socio-economic, political and environmental enabling environments, the unregulated development aid sector has unintentionally hindered, rather than helped, countries transit and work through the challenges and complexities. Continuous changes to the conditionalities and monitoring requirements in the use of donor funds have brought with it a series of charges about duplication and multiplicity of effort and challenges to the recipients of the aid over capacity and capability. This heterogeneous theatre of the development aid arena which integrally and substantially finances the water and sanitation sector within many lower-income countries is likely set for the next 50-years. Therefore, moving from one development decade to another, it is critical that evidence based lessons from the past are taken into account.

Acknowledgement and recognition however also needs to be given to the various aid effectiveness agendas and charters⁵⁷ introduced over the last 20-years to bring about harmonisation, alignment and standardisation, support country-led systems and provide an altogether 'lighter-touch' to monitoring development aid. Although generic challenges, opportunities and barriers faced by countries and international development partners alike remain and more needs to be done to synthesise the understanding of the challenges that leads to a proactive action plan to resolve such constraints. Tinkering with modestly used tools, methods and approaches may not be enough. The evidence from this research highlights the plethora of new mechanisms being introduced as the inclusive, adaptable tool and yet the research and also emphasises the limited cost-benefit-analysis carried out on this ever increasingly burdensome approach to monitoring. Countries must be given the opportunity to decide for themselves whether to adopt a new system based on a thorough understanding

⁵⁷ For example the Paris Declaration, Accra Accord, SWA Framework and Global Partnership Framework.

of the establishment cost as well as the longer term cost of sustaining the system.

Perhaps the timing to date has not been conducive to tackling some of these issues. Nevertheless, with the ongoing development of the post-2015 targets and framework, there now exists an opportunity to encapsulate the lessons learned from these positive and negatives of previous efforts. Added to the proposed paradigm shift of good governance (Rijke et al, 2013) and the increasing interest in the concept of information governance (Kooper et al, 2011), combined therein the prospect of translating them in to a more regulated systematic and universal system that supports all country needs – donors and recipients alike.

If no action is taken many of the challenges and barriers to effective monitoring and reporting are likely to reappear in the post-2015 scenario. For example, the unresolved aspects of language, definition and the expanding numbers of indicators cannot be ignored. Without agreement on a consolidated core set of recurring data points, that are paramount in ensuring sustainability, the resonating theme of monitoring and to a lesser extent evaluation, being a panacea for a few and a burden for many, will likely continue.

National governments must be encouraged to introduce and subsequently enforce the creation of a core set of recurring sustainability indicators to be reported by all: public, private and civil society alike, when engaging in service delivery interventions. Supported through a suite of incentives (not necessarily financial) that are appropriate and aligned to the enabling environments of each a country-led and internationally driven process is fully compatible with existing charters, policies and international agreements. Therefore, as acknowledged by a few stakeholders across the cases, understanding more about what are the drivers and incentives that people respond to across the sector, within a country and across different countries, remains key to addressing some of these barriers and negative perceptions associated with both monitoring and evaluation.

The complexity surrounding this globalisation issue is not new and has been the subject of plenty of discourse, debate and continuous review. Universal agreement and discernable progress has however, been limited. At a national level, the story is a little different. Monitoring in the WASH sector has, in both case countries progressed positively, albeit against differing timelines. Evaluation has also been introduced through the selection of functionality, use and impact indicators. Reported values of associated coverage data, for example, are largely analogous at all government levels and across all externally funded projects and programmes. Inconsistencies of country level data are largely limited to values and data reported at a global level (see Appendix E-5); and centre around issues over interpretation of definitions and methodology. Regardless of these differences at a country level, concerns over the global level reported inconsistencies in both cases were judged as nothing more than an inconvenience.

With this in mind, the question of when does data accuracy become an issue and what is considered an appropriate, or acceptable level of variance between data sets can be asked. Part of the answer is related to understanding the cause of the difference. As previously identified, sometimes the disparity is in respect of definition and interpretation. In such cases one obvious resolution has simply been to acknowledge the differences with the associated documents. The situation however, is not so straightforward when ulterior motives are at hand – touched on through this research but not examined in any detail. Inconsistencies aside, there has been anecdotal evidence valuing the role of comparative global data sets as an example of both monitoring and evaluation being fit for purpose and providing value for money and yet very little reported empirical evidence of the global data sets being used.

Alongside this mix of pluses and minuses associated with global monitoring, there has been an increasing visibility of the efforts to support country-led, national level monitoring, with Uganda being a 'success story' example with its 11 golden indicators and performance monitoring framework, achieved over a relatively short period of time. Weaknesses do still exist though in

understanding the demand and need for data collection and analysis through to use, at each of the different levels. Examples were given in both cases of roles and responsibilities that were misaligned. For example, the mandate for data collection is often given to those who are not the ultimate users of that data, or if the analysis is ever fed back to those who have collected the data it may not be in an appropriate format to allow effective use of the findings. In turn those obliged to collect higher level data are not necessarily in a position to collect and analyse the data needed for their own use. This misalignment has the potential to either lead to omission of key data points or to compromise data quality. On the one hand roles and responsibilities could simply be reorganised by shifting responsibility for data collection and analysis to those who will ultimately use it. However, local budgetary constraints often limit the engagement of appropriately trained staff, further exacerbated by the reluctance to live and work in remote areas. Distance from the source of the data also leads to questions over accuracy and authority. Removing responsibility to a third party would raise questions over whether those carrying out the monitoring really have sufficient understanding of the ins and outs of the data being collected.

One possible approach raised by stakeholders would be maintain local responsibility for data collection but to assign responsibility for data aggregation and analysis to specialist units at centralised locations. Roles for the collection, storage and analysis components could be reconsidered enforcing the systematic aggregation of data sets to a centralised system so that data is collected by those who use it for their own needs and yet also made available to those at a higher level with responsibility for regulation and policy.

The research also identifies a role for one stakeholder group, not necessarily currently empowered and yet directly affected by the service provided - the consumers. Whilst civil society organisations have been lobbying government and service providers for accountability for the consumer, the proposition made by some stakeholders was the pivotal role that civil society could make sensitising the consumer to be more proactive in lobbying instead of demanding

sustainability of services themselves. Recognising the differences between a centralised and decentralised model of service delivery would also need to be considered but all told the idea is becoming more plausible with the advancement of technology allowing almost instantaneous information flow, whether it be through social media networks or what has become 'simply' SMS.

Conceding to the complexity of the service delivery pathway, addressing just one component is not going to resolve all. The integrated nature of these components requires action of some if not all, simultaneously rather than attempting to resolve them one at a time. International guidelines, to set out best practice, to guide national monitoring activities was also discussed with many sector stakeholders.

As highlighted within section 4.4, there is a plethora of guidelines by different global donors on indicators associated with monitoring the WSS sector but little in the way of cost benefit analysis of tools, methods and approaches. Furthermore, whilst examples appear within the literature for what is considered an appropriate M&E system, there is less academic literature available on case study examples, by country, that would provide empirical evidence on the facets of monitoring and evaluation, such as rural and urban differences, or evolution of M&E within the county. Given the complexity of the large number of data sets there is certainly scope for a comprehensive review of existing guidelines. These appear as highly fragmented across many different documents and themes. For example practical examples of how monitoring and evaluation is undertaken are routinely presented at most conferences, workshops and meetings covering M&E developments, or are introduced through many of the grey literature and advocacy papers published on-line or in hard copy across the multifarious number of websites. No one single depository exists where they can be compared and evaluated.

Whilst there is a need for flexibility in the M&E framework, particularly relevant to programmes in rapidly evolving enabling environments (conflict and transitioning governance), there is also a need for a consistent approach, particularly to monitoring to enable, to assess and to then evaluate progress

and change. Therein lies the dilemma of rigidity and consistency versus flexibility and real-world pragmatism. In turn this may explain the inconsistencies as evidenced in what is reported from one year to the next and the omitted baseline and target data.

To examine the conceptual framework of ‘cost’ of M&E within the WASH sector and to examine the costs budgeted and expensed by global, national and programme level stakeholders on M&E of service delivery, over the last 20-years.

Each of the cases has demonstrated that donors are still doing their own thing, creating and developing new tools and systems, without detailed consideration to the actual cost of implementation and sustainability. Although intended as a means of ‘supporting’ country level efforts, the clandestine nature to what extent these efforts are producing benefits and at what cost, seems to contradict the ethos of ‘good governance’, ‘transparency’, ‘accountability’ and ‘value for money’. Information of how much it is costing is simply unavailable in any meaningful way.

There is a broad diversity of ways in which ‘cost’ of both M&E is perceived and reported, without any consistency of approach either across programmes and projects, or at sector or country levels. Similarly there is no noticeable pattern or trend across public, private or civil society organisations in terms of cost methodology. Some stakeholders view the expenditure on M&E as too high whereas others suggest that not enough is invested in M&E. In reality, given the dearth of academic, empirical or anecdotal evidence that exists on the subject, neither view can be substantiated.

As differentiated by World Bank (2009), it is the ‘M&E Work Plan’ not the ‘M&E Plan’, that is costed. From the four costing methodologies proposed, the conventional cost accounting (CCA) is suggested as working well for government offices, but none are specifically identified as relevant to non-governmental organisations or private companies. What is of interest is the link between understanding of cost of M&E and the availability of M&E work plans.

Only a limited number of M&E Work Plans were available amongst the sourced public, private and civil society documents.

At both country and global levels it was suggested that improved efficiency, effectiveness and enforcement would be achieved if sector driven M&E efforts and regulatory bodies were more closely aligned to finance ministries. As observed, these are the ministries holding the purse-strings. With the origins of VfM coming from audits and audits being predominantly finance driven, the linkages seem credible but further research would need to be undertaken to support or refute this proposition.

To explore the underlying purpose and use of each of the data sets.

The willingness of stakeholders, whether at individual, project, programme, organisation, national or global level to discuss proposed and actual use of monitored data sets provides readily available anecdotal evidence. The results from each case suggest that whilst the purpose of carrying out monitoring and evaluation activities is understood, it is a loose form of understanding suggesting that it is “demand driven” and defined by others. It is seen as something that has to be done and is described by many as a proverbial ‘box-ticking’ exercise.

The research has demonstrated a number of attributing factors and likely consequences for this appeasement around ‘purpose’. External influence and demands feature as a reason for why information is not better used. Lack of capacity and capability has been suggested as a factor for why timelines are often not met and poor data quality for why data is sometimes inconsistent. Even in circumstances where monitoring and evaluation is internally demand driven and where data quality is of an adequate level, there is no evidence to suggest it has had an impact, whether positive or negative on service delivery. Inevitably this leads to a resounding question of whether or not documenting or reporting of ‘actual use’ is of paramount importance or is going a step too far and potentially doubling effort for limited results – in turn making it inappropriate.

There is a view that perhaps the sector needs to leave the evaluation of impact (whether it is poverty reduction, saving lives or achieving economic growth) to national statistical centres and associated health and GDP indices. This again returns to the question of whether roles and responsibilities are realistically assigned against a contextual understanding that different levels of stakeholders need different levels of information. Not only are capacity and capability constraints coupled with data quality issues cited as reasons for limited use of data, they are also associated with duplication or multiplicity of the data collection effort. The question remains why? If there is a lack of confidence in the quality of data collected, in part due to capacity and capability constraints, why are responsibilities for data collection being duplicated rather than properly assigned?

The research suggests other factors come in to play over the timeliness of data collection and its eventual analysis and use. For example, information needed for higher internal management decisions is only analysed periodically and is not available for “real-time” decision making. Other country level examples have indicated the absence of timeliness of data collection and limited opportunity for aggregation in to a central depository enabling the confidence around the data that goes in as well as the potential for data coming out to be questioned. This extended lead time from collecting data, to analysing, interpreting, reporting and disseminating is often so lengthy that the end resultant use is never properly captured. However, just because something is not reported does not mean that it isn't happening. A central quality controlled depository where information is stored and instantly accessible would raise confidence in the quality of data and allow greater “real-time” use.

To examine the conceptual framework of ‘value for money’ and identify whether M&E is fit for purpose for use in the WASH sector.

The linkages between monitoring, evaluation, fitness for purpose and value for money have been presented in theory and through the empirical evidence obtained from the research. However, very few stakeholders had an appreciation of the official definitions of VfM and to a lesser extent FfP.

Although the challenges raised and perceptions of the stakeholders about what makes an effective monitoring and evaluation process did however, reflect the language of what both of the terms mean. This absence of understanding or selective interest in the term VfM seemingly mirrors the findings of the literature review. VfM originates in the audit profession and has only been introduced relatively recently to the development arena and has resulted in confusion and misunderstanding. As for the connectivity and interrelationship between the two frameworks – VfM and FfP – no single stakeholder whether through qualitative or quantitative data has directly expressed any appreciation or particular interest relating to the activities of monitoring or evaluation.

To understand better the potential for harmonization and alignment of country level frameworks with the SDGs and HR frameworks.

Key to any potential alignment of higher and country-level frameworks are the questions: Are the right people being included in the decision making process? Who should monitor? What, should be monitored? How and when it should be monitored? And fundamentally why and to what extent will the data be used and by whom? There has been clear evidence of sector stakeholders willingness to discuss the challenges and opportunities surrounding both monitoring and evaluation. However, the ability to find and fund resolutions to ensure monitoring and evaluation is fit for purpose is less clear due to the complexity of some of the issues, the multi-party responsibilities and interests and perhaps even the command of both M&E as a profession. The requirements for monitoring and evaluation have attracted practitioners from a variety of professional backgrounds and there is no evidence of a “common gene-pool” in terms of approach and emphasis. This is where the collective of country-led or demand driven efforts supported by the international arena could have an effect.

Table 7-1 Synthesis of research question, method, evidence and claims

Key: RQ – research question; LR – literature review; DD – document data; SSI1/2 – semi-structured interview 1 or 2; ES – e-survey.

Research Question	Method	Synthesis of the evidence	Claims
RQ1.1		What are the definitions of M&E and is M&E terminology synonymous?	
	LR, DD	Insufficient evidence. Limited suggestion that OECD definition is the favoured definition of the terms monitoring and evaluation	n/a (1)
RQ1.2		Is there a recurring set of core indicators?	
	LR, DD	The average number of indicators reported against per data record is increasing over time. 'Coverage' indicators are consistently the most frequently reported indicator over time, with different stakeholder types monitoring and reporting against different indicators.	1, 2, 4
RQ1.3		How do indicators change over time?	
	LR, DD	The indicator type is changing over time from 'service' level to include an increasing proportion of 'service provider' and 'sector' level. There is also a shift from 'coverage' type indicators to include 'functionality', 'use' and 'impact'.	1, 3
RQ1.4		Is there consistency between indicator values across stakeholders?	
	LR, DD	Variance in indicator values existed between global reporting country cases and the country cases reporting themselves. In each case approximately 90% did not include a baseline and target value	11, 12, 13
RQ1.5		What influences the change(s) in indicators?	
	LR, DD, SSI1	Very little document evidence exists in terms of what influences changes. Interviews suggested a combination of internal and external.	1, 2, 3
RQ1.6		How many different types of TMA exist for M&E and have any rigorous CBA been undertaken on them?	
	LR, DD	79 TMA reported across 644,000 articles of which only 3% related to WASH. Of this 3%, 59% of the 79 TMA were cited. Technological advancement and piloting of new technology was reported through interviews. No evidence of rigorous CBAs which ties in with RQ2.1-3 and RQ3.1-4. Also ties in to RQ5.1-3.	5, 6, 7, 8, 9

Research Question	Method	Synthesis of the evidence	Claims
RQ1.7		How does an organisation, programme or project decide which TMA to use?	
	LR, DD, SSI1	Incentives and motivation from funding agent, ad-hoc by change, availability of secondary raw material, conditionality of donors.	1, 11, 12, 15
RQ2.1		What are the different ways in which academic literature present cost of M&E?	
	LR	Only examples available were with respect to other sectors, i.e. % based for rural development or specific values.	6, 7, 8
RQ2.2		What are the different ways in which grey literature present cost of M&E?	
	LR, DD	No international recognised standard for financial reporting of cost of M&E, minimal evidence with respect to reporting cost of M&E budget or actual for each case. Some use narrative, some financial and some percentage based – no consistency across stakeholder type either.	6, 7, 8
RQ2.3		What are the different ways in which stakeholders understand cost?	
	DD, SSI1, SSI2	No consistency between cost typology, activities or values in terms of what constitutes a cost. Recognition that a defined conceptual framework for cost of M&E does not exist. Suggested need for better accountability and perhaps an indicator(s) for cost of M&E.	6, 7, 10
RQ3.1		What is influencing the levels of budgeting and actual expenditure?	
	DD, SSI1	In some cases unsubstantiated evidence, in other cases evidence through guidelines purporting % based values in turn unsubstantiated. Other examples provided based on judgement – previous project experiences.	7, 8
RQ3.2		Are there any case study examples of costs of M&E in the WASH sector?	
	LR, DD, SSI1, SSI2	No specific case studies specifically detailing costs identified. Proportion of data records reporting some aspect of the cost of monitoring or evaluation is increasing over time.	6, 7, 8
RQ3.3		How do costs of M&E differ depending on stakeholder type?	
	DD, SSI1	Diversity and inconsistency exists within and across each stakeholder type.	6
RQ3.4		What is an appropriate baseline % cost within a programme, to be spent on M&E?	

Research Question	Method	Synthesis of the evidence	Claims
	LR, DD, SSI1, SSI2	Not one clearly evidenced example within the document data and those referencing % based figures are unsubstantiated. The % based figures that were reported through interviews were either justified as 'experience' or guidelines which in turn were unsubstantiated.	6, 7, 8
RQ4.1	What is the purpose of M&E?		
	LR, DD, SSI1	Approximately 50% of documents reporting some form of monitoring or evaluation or both report the purpose of the activity report of which most are embedded within narrative rather than clearly stipulated as a purpose. A large proportion of data records indicate both internal and external influences for monitoring with the interviews suggesting that it is largely an externally driven reason.	11
RQ4.2	What type of data is being analysed, reported, disseminated and shared?		
	LR, DD	Insufficient evidence.	n/a
RQ4.3	How is the data being used?		
	DD, SSI1, SSI2, ES	Documented evidence of aggregated data and subsequent use is generally difficult to source and is considered linked to roles and responsibilities for the activities. Examples provided through interviews and e-survey data indicate M&E data is used however seemingly on a personal and immediate basis as the e-survey also indicated that respondents did not use reported information such as guidelines and evaluation reports as generated from monitoring and evaluation activities.	5, 12, 13
RQ4.4	Are there any examples where data used for either policy- and/or decision-making are then implemented and have had an impact on WASH service delivery?		
	DD, SSI1, SSI2, ES	Limited examples provided through interviews and e-survey responses however not substantiated through documented evidence/audit trail.	13
RQ5.1	What are the different ways in which stakeholders understand VfM?		
	LR, SSI2	Despite the term VfM being referenced in document data records the term means different things to different people irrespective of stakeholder type.	14

Research Question	Method	Synthesis of the evidence	Claims
RQ5.2		Are there any case study examples that report 'VfM' of M&E?	
	DD	Negligible evidence exists in terms of reporting VfM of monitoring or evaluation activities which ties in with the limited reporting of cost of monitoring and evaluation.	15
RQ5.3		Is M&E in the WASH sector providing 'VfM'?	
	LR, DD, SSI2, ES	Considering the definition of VfM and the interrelationship with something being fit for purpose and the activities of monitoring the evidence suggests M&E is not VfM. Several respondents from the e-survey do consider it is as do some of the interviewees perceive M&E to be VfM. Without an understanding of cost, whether M&E is VfM is not possible to establish.	15, 16
RQ5.4		What are the different ways in which stakeholders understand 'FfP'?	
	DD, SSI2, ES	No document data was available defining fitness for purpose by stakeholders. Only one reference was sourced which integrated the term in the definition of VfM as a replacement for the term 'quality'. Interviewees considered the terms under the umbrella of reflecting on what aspects of monitoring and evaluation needed strengthening or what was considered as working well.	16
RQ5.5		Are there any case study examples that report 'FfP' of M&E?	
	LR, DD, SSI2, ES	No document or session data was sourced reporting examples of monitoring or evaluation as being FfP.	16, 17
RQ5.6		Is M&E in the WASH sector 'FfP'?	
	SSI2, ES	The e-survey suggested that just under 50% of respondents considered M&E FfP however given the small sample size the responses from the interviews tied in with the evidence under Objective One and Four leads to a different conclusion.	16, 17
RQ6.1		How do past and current indicators relate to those being proposed for the post-2015 Sustainable Development Goals (SDGs)?	
	LR, DD	Very few of the proposed SDGs relate to any one term contained within the post-2015 proposals leading to the scenario that different stakeholder types at different levels monitor and report against different indicators.	2, 18, 19
RQ6.2		What is the extent to which key stakeholders are being consulted about the proposed SDG targets and indicators?	

Research Question	Method	Synthesis of the evidence	Claims
	LR, DD, SSI2	Despite global aid effectiveness, harmonization and alignment charters and frameworks the consultation process has been limited and very few stakeholders had seen the post-2015 proposals. This has the potential to add to obligations of reporting over time and provides a reason for the continuing parallel systems remain. The potential for harmonisation and alignment exists however with limited consultation full harmonization is unlikely.	2, 18, 19
RQ6.3	Are the SDGs simply going to add to the burden of what stakeholders are going to be monitoring and reporting against at national regional, programme, consumer level?		
	SSI2	With the lack of consultation and the scenario that new definitions and terminology will add to what countries are required to monitor and report leads to burdening governments in terms of what to monitor and report against	1, 18

Table 7-2 Summary of claims made across each case

#	Claims made from the empirical findings obtained through the research	Global	Kenya	Uganda
1	Global M&E has shaped national M&E over the last 20-years and will continue to do so	✓	✓	✓
2	Obligations of reporting M&E are increasing over time	✓	✓	✓
3	Reporting of M&E is largely driven by legislative, transparency and accountability requirements	✓	✓	
4	Duplication of data collection activities and inconsistencies of data reporting remain a challenge		✓	
5	Lead time from collection, analysis, reporting to use needs to be shortened			✓
6	There is no cost typology defined for M&E for the WASH sector	✓	✓	✓
7	Insufficient evidence exists to determine the true cost of M&E of service delivery	✓	✓	✓
8	The sector appears unwilling to put a cost against M&E	✓	✓	✓
9	The theoretical cost of M&E has increased at all levels over the past 20-years		✓	✓
10	Political willingness is seen with the urgency to review expenditure levels on M&E across all sectors			✓
11	M&E is undertaken without sufficient knowledge and understanding of its purpose		✓	✓
12	A disconnect exists between the purpose and aggregation of data resulting from misaligned roles and responsibilities		✓	✓
13	M&E data is being collected and analysed but its use and impact on service delivery is not being reported	✓	✓	✓
14	Within the sector and across stakeholder groups, value for money means different things for different people		✓	✓
15	Until the cost of M&E is properly established and reported, value for money assessments of M&E cannot be made		✓	✓
16	The interrelationship between VfM and FfP is not well understood			✓
17	M&E is not currently fit for purpose in the WASH sector	✓	✓	✓
18	The potential for harmonization and alignment with the SDGs exists however full harmonization is unlikely		✓	✓
19	Harmonization with the SDGs is likely to affect the 'what' and 'cost' and 'use' components but not the 'why' and 'how'		✓	✓

8 CONCLUSION

This aim of this research was to understand better the cost and use of monitoring and evaluation in the WASH sector and to consider whether WASH sector M&E is 'fit for purpose' (see Figure 8-1). The rationale was based on the scenario that to determine progress in the sector, understood to be necessary for global health and economic growth, there is a need for an appropriate level of monitoring and evaluation to answer questions about 'coverage', functionality 'use' and 'impact' of water and sanitation services. The study examined three cases and considered who is monitoring what, why and how as well as determining how the data generated for M&E activities is used and how much the activities are costing the sector.

The chapter initially presents a series of empirical findings in respect of each of the overarching research questions including potential policy implications. Recommendations and contribution to knowledge are then set out before providing an acknowledgement of research limitations and proposals for future research. A concluding statement completes the chapter.

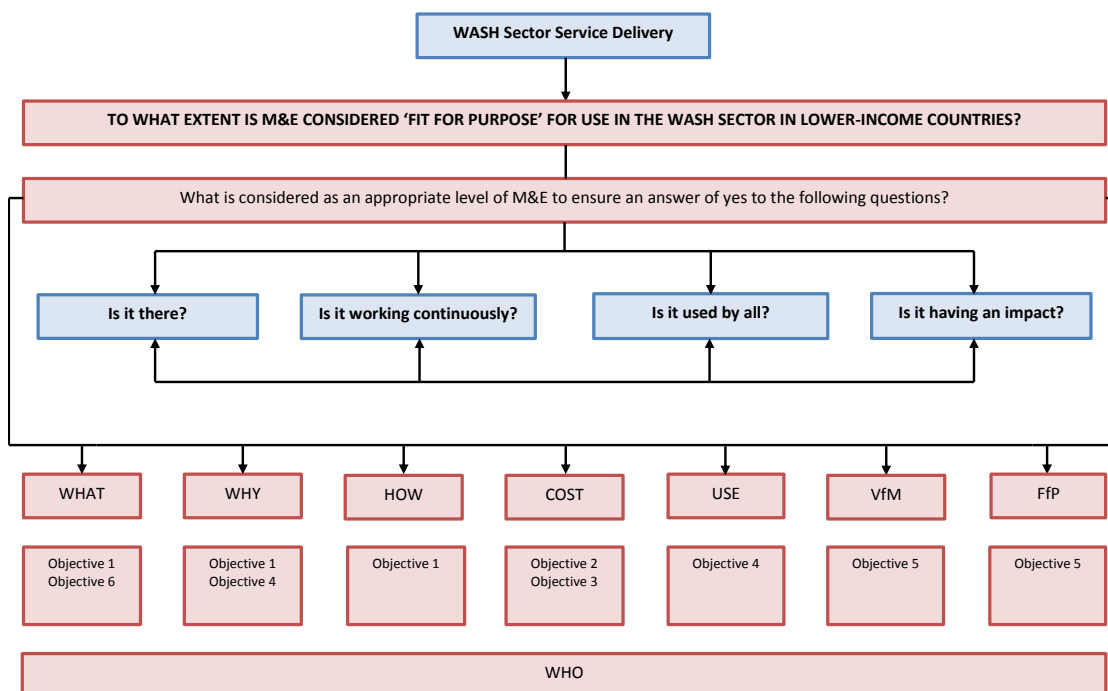


Figure 8-1 The research inquiry

8.1 Empirical evidence and policy implications

The research questions as set out under section 1.5 and the research inquiry as set out in Figure 8-1 are used to frame the empirical evidence and contribution to knowledge.

Who is undertaking monitoring and evaluation either directly or indirectly in the sector? (all objectives)

The findings reported under each of the three cases, demonstrate that a vast number of stakeholders are involved in WASH monitoring both from within the sector and beyond. With the integrated nature of water and sanitation service delivery and multi-faceted interests of public, private and civil society organisations, the evidence points towards a scenario whereby roles and responsibilities are, in some cases, unrealistically assigned, particularly given the continuing burden of internal and external parallel systems.

The large number of multi-sector, multi-donor stakeholders involved in the WASH with their varying aims and interests make a common approach problematic. However, considerable progress that has been made to align accountability and national sector-wide approaches are beginning to clarify what needs to be monitored and by whom. Much more needs to be done to strip out the parallel systems, tighten and simplify the procedures and 'get to grips' with ensuring both the monitoring and evaluation efforts are more effectively and efficiently used to improved service delivery.

What is being monitored and evaluated in the sector? (objectives one & six)

As demonstrated by the mapping of indicator entries from over 1,000 documents and data archives combined with the analysis of the post-2015 discourse, the number of and variety of indicators being monitored by sector stakeholders has risen exponentially over many years and this trend is likely to continue. The research has confirmed that "coverage" remains consistently the best targeted indicator. The evidence also supports the theory that different stakeholders at different levels monitor different things and that for the

stakeholders within the global case there is some evidence of a longitudinal change in reported indicators. This shift appears to follow the results chain where indicators being reported change from input to output monitoring. Appreciating the more recent introduction of structured sector monitoring at the country level, evidence would seem to suggest that similar changes are emerging within both the country cases.

Despite the efforts of global charters, frameworks and agreements a series of parallel systems have been developed and driven by changes in aid architecture or as a consequence of technological and methodological advancement. Empirical evidence strongly suggests that the burden on governments and service providers to collect and analyse ever more data is affecting the quality and timeliness of the data being reported which in turn is limiting the feedback and application of lessons learned. However, as the results demonstrate different stakeholders will seemingly always need to monitor different things at the same time as highlighting that a core set of recurring indicators is also possible to monitor. Whether guided by global demands or simply logical and local necessities the research recognises the benefits a clearly defined core set of recurring indicators can contribute to realising the overarching goal of saving lives and achieving economic growth.

For what purpose is monitoring and evaluation being undertaken in the sector? (objectives one & four)

Time series data sets covering purpose and use are more difficult to identify and indicators seeking to address cost and value for money issues appear largely driven by external interests and paradigm shifts.

Having examined the purpose and use of monitoring and evaluation across the three cases, evidence suggests that the burden to lower-income countries from the donors, to reach unrealistically high targets of coverage, is risking the achievement of other country sector priorities. Capacity constraints, misaligned roles and responsibilities and lack of ownership of targets and aims seem to be at the heart of the issue.

Action is needed to more effectively align purpose and data use and to build common data pools which can become depositories of monitored information. In turn this should allow for more general review and analysis by a broader audience including the end-users of service provision who are currently minimally represented in the M&E framework.

How is monitoring and evaluation being carried out in terms of tools, methods and approaches used? (objective one)

This research has highlighted the wide variety of both monitoring and evaluation tools, methods and approaches (TMAs) being used in the WASH sector. Changes in the methods adopted have led to disconnects between temporal data sets and a lack of consistency in the data being reported. New approaches appear to have been introduced without regard to the cost, in both financial and human resource terms, of their initial establishment or longer-term maintenance.

There is no evidence to suggest that cost-benefit-analyses are routinely carried out before any new TMAs are introduced. Practitioners have reported aid receiving countries are often used as a testing ground for new monitoring systems. Albeit with good intentions the evidence indicates that in some cases the imposition of new approaches can be costly, timely and counterproductive. Piloting often happens in isolation without sufficient knowledge and understanding of cost efficiencies. When considering replicating at scale and overall benefit, those investing in the sector whether government or private sector organisations are at a disadvantage when trying to ensure value for money.

To what extent is the data generated from monitoring and evaluation being used and is it having an impact on service delivery? (objective four)

Although considerable progress has been achieved in shifting the water governance paradigm to a more “evidence-based learning” this research strongly suggests that more needs to be done to capture and conceptualise more effectively what works and why. This research indicates that the

information generated from monitoring day-to-day is used more frequently than that arising from periodic evaluations. Clearly evaluations depend on the analysis of monitored data but “real-time” decision-making is being sacrificed to longer-term corrective action with an inevitable negative impact to the consumer.

More needs to be done to separate out data needed for day-to-day application from that needed to guide longer-term policy decision-making. The disaggregation of monitoring and evaluation is considered later on in this section.

How much is monitoring and evaluation costing the stakeholder? (objectives two & three)

This research strongly suggests there is widespread lack of appreciation and understanding of the cost of either monitoring or evaluation. The limited availability of monitoring and evaluation work plans at global, national and sector levels is indicative of the apparent lack of interest to determine and monitor the associated costs within the sector. From a policy perspective, all M&E plans should be accompanied by properly costed work plans so that the cost of systematic monitoring can be judged against the benefits that will follow from real-time feedback and review of progress.

By the nature of the increase in number of tools, methods and approaches being used along with the increased demand for more effective monitoring and evaluation from both donor and country level stakeholders, there is a strong likelihood that the cost is increasing. The evidence suggests an oxymoron between policy and practice in that policy promotes transparency, accountability and value for money and yet in practical terms the sector is being required to monitor an ever increasing number of indicators while being unaware of the true cost of the activities they are undertaking.

8.2 Recommendations

Taking into account the above theoretical and policy implications of the research findings it is possible to outline a series of recommendations for global and national level stakeholders to consider when setting out future monitoring and evaluation activities for the water and sanitation sector.

First, it is recommended to disaggregate the terms monitoring and evaluation even though the two are usually integrally linked. Unless monitoring activities are properly resourced, there will always remain challenges with evaluations and the burden of collection of monitoring data will progressively grow. One suggestion would be to make monitoring more visible through raising the profile alongside project and programme management. To do this it is recommended to strengthen the qualifications and training available to people collecting, analysing and applying WASH sector data. Many private sector and civil society organisations already undertake such staff training but the level across public sector is less well documented. Whether this is as a consequence of availability, preference/choice or demand is unclear. This research suggests the need to embed project management and monitoring, research, evaluation and learning associated training within the recognised technical subjects demanded by the sector so that the full project cycle management concept is better appreciated. The effective linking of evaluation with research and learning (REL) should lead to a more rigorous evidence based decision-making process with the emphasis on learning rather than the current association of policing and audit.

The second recommendation is to seek ways to make monitoring and in turn evaluation, more demand driven and to understand better the associated incentives and barriers. To achieve this goal, further research is recommended over a large country sample taking note of differing social, political, economic and environmental enabling environments.

The third recommendation is the introduction of the concept of information governance as a key feature of monitoring and evaluation within the WASH sector. Understanding where the role or responsibility lies, is likely to differ from one country to the next however, this research has suggested various

scenarios. Furthermore, the research suggests that whilst an accreditation process is an option for consideration, it must be on a voluntary basis.

Finally it is recommended to build a 'regulatory framework' around monitoring in order to introduce more standardised approaches and to build a recognised professional network that governs and regulates how it operates. This is already in place to regulate accounting practices and a similar internationally recognised body could be established for monitoring.

8.3 Contribution to knowledge

The intended contribution to knowledge envisaged at the start of this research was to:

- Identify latent causes of target failures potentially linked to the state of M&E and efficacy of use of resultant data.
- Lead to improved stakeholder investment decisions through providing an evidence based understanding of cost of monitoring and evaluation activities.
- Enhance the way in which data and information generated from M&E activities is used, particularly for purposes of implementing management and policy decision making.

In broad terms, the findings of this research were intended to increase awareness amongst sector stakeholders of what is being monitored by who, at what cost and for what purpose as well as how the data collected is being analysed and used – ultimately whether monitoring and evaluation activities are currently fit for purpose in the WASH sector.

The research has clearly demonstrated the different indicator priorities for different stakeholders at the international and country levels. Furthermore, the research has indicated a longitudinal change in the use of different indicators that mirrors the changes of emphasis on components in the monitoring and evaluation results chain. Whilst more significant evidence exists at a global level, evidence is also emerging at country level.

However, this study has also found that monitoring and evaluation is currently not fit for purpose for use in the WASH sector. Whilst no ‘silver bullet’ has been unearthed during this research to ensure M&E is FfP, ways in which the current gaps in the M&E process can be filled to improve the way M&E is conducted and applied to ensure improved service delivery have been identified.

8.4 Research Limitations

During the course of the research a number of limitations of research have been identified, namely:

- **Over-analysis:** Upon reflection, it is recognised that there is a fine line between breadth of scope of interest and enquiry and appropriate levels of reflection and analysis, to provide sufficient research rigour. Processing data across such a wide subject area and over such a long timeframe has had an impact on the adherence to the timeline of the original work plan and not allowed an in-depth analysis of any one of the numerous key factors identified.
- **Two country cases rather than three:** The original scope was to include a third East African Country however, both time and financial resource constraints necessitated the scaling back of country case-study numbers. The inclusion of a third country would have allowed a more detailed investigation of the role of external influences or national decision-making. The study also intended to examine England & Wales as a complementary case and to provide juxtaposition to Kenya and Uganda. As explained under section 3.4.2, the sub-case was also ‘parked’ due to time and financial resource constraints.
- **Economic background:** The lack of an economic background, may have limited the researcher’s ability to properly examine the cost data collected. However, given the dearth of information available at the start of the project and the evidenced interest amongst stakeholders on the cost of M&E, acknowledgement needs to be made to the fact that it has

taken a non-economist to consider cost and use of M&E as an important issue requiring research.

- **Stakeholder selection:** During the latter course of the Uganda field work it became apparent that the Accountability sector (Ministry) and the Auditor General's Office along with Local Government and also Public Administration would also have been useful Ministries to engage with in terms of service delivery – potential for further research.
- **Stakeholder numbers:** In the case of Kenya perhaps too many. After the first round of data collection it became apparent that the Ministry of Finance should be included as a stakeholder in order to aid the process of collecting sector budget and expenditure levels for water and sanitation. The Ministry of Finance also holds a variety of programme related data as part of their IFMIS and e-ProMIS systems.
- **Literature Review:** Rigour was given to the selection of search criteria and terms but it was not possible to follow-up with comprehensive meta-analysis. It should also be noted that only English language references were sourced during this research.
- **Language:** Differing ways of interpreting “development-speak” may have led to a bias in the analysis and separation of indicators into clusters and when analysis against the proposed post-2015 and HR indicators. Ultimately this comes down to the researchers' judgement and rationalisation/supporting justification. This is also linked to the analysis of 'use' values as well as retrospective references to the term 'use'.

8.5 Further research ideas

Based on the research findings, interpretations, conclusions and subsequent reflection, the potential for further research is set out as follows:

How to monitor and evaluate the contribution that one dollar spent on water reduces burden of disease and associated cost on health in terms of expenditure on drugs? The work of Hutton (2012), Hutton et al, (2004) amongst others has gone some way in terms of setting out the benefit-cost ratios, aggregating data from country to global level in the interests of

estimating the costs associated with delivering the MDGs. However, understanding these benefits and costs at a country, regional, district level are of particular interest amongst case study stakeholders and yet surprisingly absent despite the overarching goal of saving lives and achieving economic growth. Noting the adage of not running before walking, acknowledgement is given to the progressive appreciation or pathway of development of M&E. However, after some 50 years of development decades with the upcoming SDGs, perhaps the economic sustainability and viability aligned to country needs could be addressed for those countries sufficiently progressed in the monitoring and evaluation pathway.

To replicate this research to allow stakeholders at whatever level to be more informed when considering global level target setting or the applicability of M&E tools, methods and approaches. Taking the view that this is one of the first pieces of research really examining what is being monitored and reported against within a country context and to a lesser extent by global stakeholders, similar country studies are recommended in an attempt to build up a collective storyboard. Further research on 'what', is being monitored, to understand more about where similarities and dichotomies exist from one country to the next, could help with the setting of global targets, indicators and definitions.

Further research on understanding the extent of how the data is aggregated, associated roles and responsibilities and differing purpose, capacities and capabilities may also lead to identifying barriers, incentives in-turn driving the demand for data quality and subsequent efficacy of use.

To examine the interrelationship between regulatory authorities, water utilities and civil society organisations. Several references to the value of regulatory authority involvement within the sector have been highlighted during this research. However, documented evidence of the interrelationship with sector stakeholders outside of the utilities such as non-governmental organisations, networks and umbrella organisations is less understood. The researcher suggests to take a sample of regulatory authorities across East

Africa and map the components of M&E (what, why, how, cost, use) for urban and rural WASH sector, with particular reference to rural environments and the relationship held with NGOs and informal WSPs.

A focused in-depth study on a sample of donor and national government funded projects and programmes across different regions and document and examine the M&E pathway related to ‘use’ of information generated.

The research has clearly demonstrated the difficulty in accessing and finding an audit trail of ‘use’ of data and yet is a critical component of determining whether M&E is fit for purpose and in turn providing value for money.

8.6 Closing statement

There has been much speculation in recent years over the extent of external influence on national M&E and the suggestion that the international community has not done enough to ensure harmonization and alignment of systems and procedures. This research does not offer conclusive proof either way, but it does serve to highlight just how complex the process of monitoring has become and helps to demonstrate what might be needed to lessen the burden and improve the way it is conducted.

Cognisant of anecdotal evidence, this research has highlighted through empirical evidence across the three cases the uncertainties around purpose and limited extent of use of both global monitoring data and evaluation data. It has also identified the growing cost and complexity of what is being monitored and differences between aspects ranging from terminology to the criteria used for evaluations. In turn the research questions whether, in its current form Global M&E in the WASH sector is fit for purpose.

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APPENDICES

Appendix A Literature Review Analysis

A.1 Extracts from M&E Landscape Map

Table A-1 Examples of tools, methods and approaches used for M&E

Examples of M&E Tools, Methods and Approaches	
Basic Necessity Survey	Needs assessment
Benchmarking	Objectives Oriented Project Planning
Check Toolkits	Outcome Mapping
Citizen Report Cards	Output Based Monitoring
Client Satisfaction or Service Delivery Survey	Participatory Action Research
Common Monitoring and Evaluation Framework	Participatory Impact Pathway Analysis
Community Based Auditing	Participatory Learning and Action
Community Score Cards	Participatory Learning Methods
Context-mechanism-outcome pattern configurations (CMOCs)	Participatory Monitoring and Evaluation
Core Welfare Indicators Questionnaire	Participatory Rural Appraisal
Cost-Benefit and Cost-Effectiveness Analysis	Performance Indicators
Cost-benefit, cost-effectiveness, and cost-comparison analysis	Pipeline comparison
Country Status Overview 2 - scorecard method	Place Based Monitoring
Demographic and Health Surveys	Process evaluation
Developmental Evaluation	Program theory assessment
Difference in means or Single Difference	Propensity Score Matching
Difference-in-difference or Double difference	Public Expenditure Tracking Surveys
Dynamic Actor Network Analysis	Randomised control trials
Environmental Sustainability Index	Randomization or experimental design
Equity Distribution Indicator	Rapid Rural Appraisal
Evolving Storylines	Realist evaluation study design
Farming Systems Research	Reflexive Monitoring Action
Field Level Operations Watch	Regression discontinuity design
Gini index	Results Oriented Monitoring
Goal Oriented Project Planning	Schreiners Simple Poverty Scorecard
Grassroot Development Framework	Simulated counterfactual
Hierarchical Card Sorting	Small n impact evaluation approach
Household Budget Surveys	Social Auditing
Impact Evaluation	Social Framework Approach
Impact Monitoring	Social Return on Investment
Instrumental variables	Soft Systems Monitoring
International Organisation for Standardisation - TC224 / (ISO/TC224)	Spider Wheel
Living Standards Measurement Surveys	Sustainability Snapshot
Logical Framework	Theory Based Evaluation
Logical Framework Approach - interchanged with ZOPP and OOPP (see 1980s)	Theory of Change
Method Active de Recherche et de ...	Tools as being presented by USAID through Webinars
Methodology for Participatory Assessment	Value for Money
Middle range theory	Water Point Mapping and Monitoring
Minimum Evaluation Procedures	Water Poverty Index
Mixed methods data collection	Water Resource Management Information Systems
Monitoring and Evaluation Wheel	GRUBS
Most Significant Change	

Examples of Indices used when reporting WASH include: Corruption Index, Global Peace Index, Green Gross Domestic Product, Gross Domestic Product, Gross National Income, Gross National Product, Happy Planet Index, Human Development Index, Index of Sustainable Economic Wealth, Physical Quality of Life Index, Popsicle Index, Quality of Life, Social Development Index, Standard of Living, Sustainable Livelihood

Security Index, Water Barrier Norm, Water Institution Health Index, Water Poverty Index, Water Provision Resilience, Water Stress Index.

Table A-2 Examples of websites reporting WASH

Website
Ad-hoc Working Group on Rural Potable Water Supply and Sanitation
Affiliated Network for Social Accountability
African Evaluation Association
African Water Facility
Aid Watch
AKVO
Akvopedia
Aquastat
charity: water Map
Community Choices Tool for Water, Sanitation and Hygiene
Database of Impact Evaluations - 3iE
Field Level Operations Watch (FLOW)
Global Applied Research Network in Water Supply and Sanitation
Global Development
Indicator Data
International Benchmarking Network for Water and Sanitation Facilities
International Benchmarking Network for Water and Sanitation Utilities
International Development Evaluation Association
International Organisation for Collaborative Outcome Management in South Asia
Mapping for Results Platform
Methodfinder.net
Monitoring and Evaluation News
My M&E
my.Water.org
NGO Aid Map
One World Trust
Outcome Mapping Learning Community
Peer Water Exchange
Planning, monitoring and evaluation in complex social situations
Prove It
Uganda Cluster
UN Water Activity Information System
UN-Water International Decade for Action: Water for Life 2005-2015
WASH in Schools Monitoring Package
WASH Sustainability Charter
WASH WATCH
Water Conflict Chronology Map
Water Credit Map
Water Dialogues
Water Monitoring Alliance
Water Point Mapper
Water Services That Last
World Bank data bank

A.2 Additional Literature Review Material

The additional literature review text contained within this appendix relates to terms referenced within Chapter Two, along with their origins, definitions and concepts and whilst considered relevant for background are not considered as the direct focus of this research.

A.2.1 Governance origins and definitions

According to the Oxford English Dictionary (2005), the term governance is defined as "the action or style of governing", whereas the World Bank defines the term as "the exercise of political authority and the use of institutional resources to manage society's problems and affairs" (WB, 1991). Just as the general term has different definitions (Tropp, 2007), there are also different types of governance such as corporate governance, project governance, political governance, **water governance** and **information governance**. The latter two are of relevance to the research and have therefore formed the focus of this review.

By sampling one comprehensive academic database - Scopus - using an 'article title' search of the term 'governance', 17,602 articles were filtered dating back to 1957. By expanding the search to include 'abstract and keywords', the number increased to 52,066⁵⁸. From fairly modest numbers of entries during the earlier decades, the number of articles in any one year reached to over 100 from 1995. A ten-fold increase was seen from 2006, which in turn doubled in 2011 and 2012 to more than 2,000. A review of governance type and sector provides an interesting insight into the evolution of the topic and the reasoning for the increase in article numbers (see Box A-1).

It should be noted that these references have been obtained from only one database and may not be representative of the wider available literature. It does, however, provide a snapshot and perspective of the evolution of the subject area within academia, indicating a substantial increase in visibility, of governance over time. This claim is also supported by Ivanova (2002), who acknowledges the explosion of "economic, social, health and human rights issues over the last fifty years" has resulted in the need for "policymakers to consider an optimal design of governance structures to reflect this complexity in order to reduce duplication, fragmentation and conflict". In turn

⁵⁸ The number increased to 52,162 by 31st July 2013, thereby averaging an increase of 100 articles per week.

the increased visibility of the term ‘good governance’ has come about in response to the issue of ‘explosion’, suggesting a natural progression.

Box A-1 Good Governance

During the 1970s, of the 59 articles over 50% related to the health sector. The focus on the health sector also continued through the 1980s even though the total number of articles more than doubled to 177. During the 1990s references to different types of governance expanded and covered topics such as the wider public policy including education, urban, law and land-use. Despite being considered by some researchers as a “development fad” (Halfani et al, 1995), the term governance or more frequently referred to as “good governance”, has during the 2000s, become a “common element of aid-speak” (Moretto, 2006). It is too soon to make any conclusive analysis on the pathway or relevancy of the term during the 2010’s, other than a forecast trend predicts the numbers of academic references will continue. Articles covering governance in the WASH sector are less numerous.

IBRD (2006) highlights the importance policy-makers and academics place on governance, stating that ‘good governance matters for economic growth’. The authors also reflect on the fact that whilst in 1994 virtually no internationally comparable governance measurement existed, from 1996 onwards reporting of governance has been carried out at a global level and forms “one of the world’s largest publically available compilations of data on governance”. In turn this has seemingly provided donors and development partners along with national governments, the information to inform policy making.

Table A-3 Overview of Database Search Term Filters

Search Terms	No.	Years	Water	Sanitation	Hygiene
Governance guidelines within governance search	108	2000-2013	6 (2005-2010)	1 (2012)	None
Governance framework within governance search	973	1991-2013	128 (1996-2003)	17 (2000-2013)	12 (2002-2012)
Monitoring and evaluation within governance search	233	1997-2013	83 (2001-2013)	9 (2007-2012)	14 (1997-2013)

A.2.2 Water governance

The review of governance, service delivery and monitoring and evaluation in the water and sanitation sector sought to understand the extent to which research had been undertaken in terms of the evolution and influences of these three facets and to identify possible gaps in the literature. To frame this component of the review, three questions were derived: What is water governance?; How does water governance relate to service delivery?; How does water governance relate to M&E?

There is a balance between practitioner (grey) and theoretical (academic) literature sourced on 'water governance'. Using the Scopus database and applying the title only filter, a search for 'water governance' resulted in 189 articles. Expanding the search to include abstract and keywords resulted in 460 articles. However, a search for "water governance", within the 52,066 filtered articles for governance, resulted in 704 references suggesting some level of error in cross-referencing within the database itself. Despite this anomaly the earliest reference of the combined searches dated to 1996, although it is not until around 2007 when article numbers, in any one year, significantly increase. This in turn points towards 'water governance' being either a new paradigm or a change in 'labelling'.

Again, using the original governance filter applying a search for the term "service delivery" resulted in 1,537 references. By adding a second filter, of the phrase 'water and sanitation' resulted in a further reduction to 103 articles. These articles dated from 1997 to 2013 of which 49 were considered relevant for review. The low number indicates a fairly recent interest in service delivery within the water and sanitation sector. Once more, using the original 'governance' filter, a third series of searches were carried out. The term "monitoring and evaluation" resulted in 233 references which reduced to 83 when filtered for the term "water"; 9 for the term "sanitation" and 14 for the term "health". These results also imply a minimum proportion of academic research being carried out is related to monitoring and evaluation of the WASH sector.

Origins and definitions

Whilst the phrase 'water governance', as defined by the Global Water Partnership, only dates from around 2002, as a concept and activity, water governance, according to Gupta (2007), has been in place for thousands of years. In support, Delaney (1989) also reported, "throughout civilization, considerable time, effort and resources have been expended on provision of water and the maintenance of water supplies", thereby implying some form of water governance.

Unlike Gupta (2007), who suggests water governance can be traced back approximately 6000 years, Delaney suggests only as far back as 4000 years; when the Roman Empire and Middle Eastern and North African countries "recognized linkages between clean water, sanitation and good health". Nevertheless, the implication is that water governance is not new, but is rather an old paradigm with a new label.

This is further echoed through the work of McGranahan and Satterthwaite (2006), who identify that the approaches of water governance from the 19th to 20th century have undergone negative changes and become less 'open and transparent'; have tended to be 'expert driven'; and been 'sectoral and segmented'. The changes reported in the 19th and 20th centuries also indicate a loss of knowledge and interest and suggest that as a society, we are regularly re-popularising old ideas in response to knowledge, management and leadership cycles. The premise that politics is at the heart of water governance and in being so, reflects the need for control over natural resources, has been raised by Franks (2004) and others (Rogers and Hall, 2003; Bakker, 2002).

Box A-2 Definition of water governance (GWP, 2002)

Water governance refers to the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society.

Reflecting on the work of Smith & Gross (1999), who state in relation to water, that “no other resource is so intricately linked to human health and survival”, it would not be unreasonable to question whether population growth would have continued to exist to such an extent without some form of water governance. Tropp (2007), on the other hand, indicates that whilst the aspects of governance have been around for many years, water governance is relatively recent, driven by investments in technological innovations and development of infrastructure to increase water supply. In 2009, there was a whole conference allotted to the subject of 'New Thinking in Water Governance' reporting case studies from across the globe and in 2011 a workshop designed to discuss the issues of water governance at global, national and international levels. Both events highlight the continuing discourse around the subject.

Hukka et al (2010) raised the question “Is there truly a new paradigm of water governance emerging, or are we simply engaging in delusionary rhetoric?” They acknowledge that, how water is perceived, governed and managed is changing but point out the uncertainty about the direction of change. A series of articles by Tortajada (2010a; 2010b) attempt to examine the linkages and drivers of change having an impact on water sector governance. They identify that, given the inter-relationship with other sectors at global, national and sub-national levels, “it is essential that the implementation of changes in water governance can match the constant evolution of other sectors”. This seems to indicate that despite water being essential for life it does not influence decision making in other sectors. Rather it is influenced by changes

taking place in these sectors. Perhaps therefore, in order to strictly understand where the roots of water governance lie, there needs to be an examination of other sector governance and what is influencing their changes. This is however not the direct focus of this research.

According to Rogers and Hall (2003), the notion of governance includes the following:

- Socially accepted public policies and institutional frameworks.
- Social resources mobilized to support the policies and frameworks.
- The policies should have the goal as sustainable development of water resources.
- Key stakeholders must be involved in the implementation to ensure effectiveness.

The emphasis of terminology being used (within the bullet points) is reflective of the subtle shifts in development theory, which is not uncommon, as is experienced within other sectors, including approaches to monitoring and evaluation. What this suggests is that the changes in the WASH sector governance are only secondary consideration in terms of development focus and are potentially the consequences of sector stakeholders looking to other sectors for guidance.

There are several articles referring to water governance as framed by a list of principles which in turn result in a propensity to creating a 'best practice' (Bakker, 2002; McGranahan & Satterthwaite, 2006). However, as argued by Cleaver et al (2005) and Booth (2011), a 'one size fits all' approach is not appropriate given the evidence base that exists, rather, there is a need for a context specific approach which is 'locally anchored'. Preceding this view, Rogers & Hall (2003), whilst setting out a series of principles, also suggests that with 'no single definition of governance' neither is there a 'single model of effective water governance'. The authors also add that 'to be effective, governance systems must fit the social, economic and cultural peculiarities of each country'.

Box A-3 Principles of water governance (Rogers and Hall, 2003)

Approaches: Open and transparent; Inclusive and communicative; Coherent and integrative; Equitable and ethical. Performance and operation: Accountable; Efficient; Responsive and Sustainable.

Similarly, McGranahan & Satterthwaite (2006), extend their discussion to suggest that 'water governance cannot be disassociated from other governance issues' which in

turn raises the question about how a governance framework differs from a Water Policy or an Act or an institutional framework or even an M&E plan to ensure service delivery.

Water Governance and the influence on service delivery?

As already referred to in the previous sections, notably, governance goes beyond the politics of government and therefore, beyond a political water policy, act or institutional framework. However, these traditional legislative and policy-based structures are also changing and becoming more inclusive, with a greater, perhaps more visible, involvement of NGOs and private sector partners. Added to this, is the debate between public versus private sector and centralised versus decentralised service delivery models (Yu et al, 2012).

As reported by Laryea-Adjea & Dijk (2012), who examine two institutions in Ghana with contrasting approaches to service delivery, or Bately (2011) who considers the relationship between NGOs and government in terms of service delivery, water governance in terms of service delivery within a country can take on different forms. This would seem to support the writing of many (Cleaver, 2006; Booth, 2011; Rogers & Hall, 2003), that there is not one single mechanism for water governance given the need for recognition of contextual differences at all levels. Another perspective is that of Jaglin et al (2011), who raise concern about the inclusivity of 'water governance'. Their paper demonstrates the consequences that competing service delivery actors have on the 'capacity and legitimacy of local government', linking the multiplicity of 'project-based models' to impeding sustainable service delivery, particularly in small towns. Furthermore, they suggest that a more comprehensive learning alliance coupled with strong partnership based, coordination and regulatory measures are required. Wiek & Larson (2012) also challenge the research and practical application of water governance to date, by suggesting that a holistic approach inclusive of 'systematic perspective; focus on social actors; transparent and accessible discourse on values and goals; and a comprehensive perspective on water sustainability' is lacking. They attempt to set out a new set of water governance principles and a framework for monitoring governance regimes.

Water Governance, target setting and monitoring & evaluation

One example of how to measure water governance is the Capability, Accountability and Responsiveness (CAR⁵⁹) framework, as used by Tearfund with their WASH Disaster Management work. The framework is based on the original CAR framework of DFID (Williams, 2010). Other governance frameworks which are used as a basis of water governance assessment by UNDP are those as set out in Kaufmann, (2007).

Table A-4 Overview DFIDs CAR framework

Williams (2010)
<p>Capability: The ability and authority of leaders, governments and public organisations to get things done.</p> <p>Accountability: The ability of citizens to hold leaders, governments and public organisations to account.</p> <p>Responsiveness: How leaders, governments and public organisations actually behave in responding to the needs and rights of citizens</p>
<p>15 dimensions of the original CAR Framework:</p> <ul style="list-style-type: none"> • Political stability and personal security; Economic and social policy management capability; Government effectiveness and service delivery; Revenue mobilisation and public financial management; Conditions for investment, trade and private sector development; Political freedoms and rights; Transparency and media; Political participation and checks; Rule of law and access to justice; Civil Society; Human rights and civil liberties; Pro-poor policy; Inequality, discrimination and gender equality; Regulatory quality; Corruption.

If reflecting on the suggestions of Roger and Hall (2003), that one of the key tasks of governance is to create a framework within which people with different interests can discuss and agree to cooperate and coordinate their actions, it would not be unreasonable to propose the MDGs as a third example of a water governance framework - particularly given the inter-related nature of water across the other MDG goals (AsDB, 2006). Albeit perhaps slightly tangential pieces of the puzzle and a somewhat tenuous link, given that no single agency has had definitive responsibility or budget to carve a global policy for water (Starr, 1991), in response water governance could be deemed essentially as an indicator to assess a country's progress in improving economic growth or reducing poverty (Cleaver et al, 2005).

Despite the effort in attempting to redress the balance of an increasing un-served population access to clean water and sanitation, through the setting of various targets, failure to reach the targets set prior to 2000 is a common theme. Much discourse exists

⁵⁹ CAR as developed by DFID for use by country offices to better understand governance operating environments.

on the whys and wherefores of these failings including in recent years challenges and failings of the MDG framework, as the latest series of global targets. The MDGs were to be a fresh start at resolving the issues surrounding the un-served population and in reality, until 2015, the level of the success of the MDGs will not be fully understood. One aspect that can be considered however, when reflecting on the MDGs, specifically, in respect of the water sector, is that the timing of the new label of 'water governance' corresponds with the timing of the MDGs. In turn this potentially makes it the basis of the closest thing to a global policy for water as is realistically possible. In turn the concept and guidelines of water governance is merely a monitoring and evaluation framework, for its attainment.

As we approach the end of the MDG period, a series of discussions around lessons learned from the MDGs and what comes next are currently being held and reported. What will be interesting to monitor, is to what extent the experiences of the MDGs and raising the profile of water governance will be used as a platform for the setting of targets, indicators and framework for post-2105.

A.2.3 Information governance origins and definitions

A review of the following four aspects of information governance, as reported through academic literature, was considered necessary: What is information governance?; How does information governance link to water governance?; How does information governance link to improved service delivery?; How does information governance link to M&E?

According to Kooper et al (2011), the concept of information governance was 'scientifically introduced' by Donaldson and Walker (2004) as a means "to support the work at the National Health Society on security and confidentiality arrangements to apply at multiple levels in electronic information services". Similarly in 2004, Kahn & Blair reflect compliance and information management suggesting a series of 'seven keys' used to create of culture of information management within an organisation (see Box A-4). However, the paper of Islam (2006), 'explores the link between information flows and governance', capturing many aspects of the role information has in terms of economic political and social influences and well-being, much earlier than 2003. The author discusses the theoretical importance given to information with respect to 'goods and services', spanning some 40-years and the role information has when used in decision making.

Box A-4 Seven Keys of Information Management Compliance (Kahn & Blair, 2004)

1. Good policies and procedures.
2. Executive level program responsibility.
3. Proper delegation of program roles and components.
4. Program communication and training.
5. Auditing and monitoring to measure program compliance.
6. Effective and consistent programme enforcement.
7. Continuous program improvement.

The work of Demsetz, (1967) and North (1981) are also referred to in her paper, in terms of being the ‘underpinnings of institutional development’ where benefits outweigh the costs. Her paper goes onto reflect on recent empirical evidence linking ‘responsiveness’ of public and private sector stakeholder activities with information provided by the media. Furthermore the work of Stiglitz (2002), Djankov et al (2001), amongst others, is also reported which examine the extent and way in which information is used and is influenced by the associated incentives of governments and private actors.

The role consumers have in terms of information governance is also discussed, such that they “will only demand information if it is perceived as useful” (Islam, 2006). In their own way, each of these references of work suggests one or more components of information governance. However, based on her own research findings, Islam concludes access to information positively relates to the quality of governance and that more transparent governments govern better, though the issue as to whether greater transparency promotes better governance remains open.

Another aspect of information governance, perhaps as a consequence of technological advancement and the far reaching openness and availability of data through web-based systems, is that of a number of associated challenges around data protection and management as examined by Bruening & Waterman (2010). Flowers & Ferguson (2010), also reflect on challenges. In their paper, those anticipated during the next decade include aspects such as “the right information at the right time; real-time data; barriers to information access; and knowledge transfer”.

These aspects, along with the potential gaps discussed by Islam (2006), are also discussed by Kooper et al (2011), who suggest that a ‘common and scientific’ approach to information governance is still wanting despite an increasing interest for such both

within and outside of an organization. According to the authors, information governance “involves establishing an environment and opportunities, rules and decision-making rights for the valuation, creation, collection, analysis, distribution, storage, use and control of information”. They go on to state “it answers the question ‘what information do we need, how do we make use of it and who is responsible for it?’”. Furthermore, their research examines and proposes four hypotheses for future research namely: “The optimization of the information value”; “The role of the receiver”; “The role of the governing actor and the governing approach”; “The role of the creator”; each of which resonate with questions around monitoring and evaluation activities.

Information Governance in the WASH sector

The review on information governance specifically in the water and sanitation sector produced minimal results. Whilst the term information governance may not yet significantly feature in articles relating to the WASH sector, there were a few references to organisational research acknowledging “difficulties in getting adequate information can prove detrimental to an organisation’s effectiveness in carrying out its mission” (Miller, 1992), which based on the findings of the previous sections, one could consider as challenges of information governance.

Specific links to ‘information governance’ and service delivery are also seemingly limited, again supporting the view of Kooper (2011) that further research in the area of information governance is outstanding. On reviewing the concept of information governance it is assumed as being relevant to monitoring and evaluation.

A.2.4 Value for Money (VFM)

Due to the change of emphasis, from considering whether M&E is providing value for money to examining whether M&E is fit for purpose, the sourcing of related literature for the term “value for money” was scaled back during the second round of structured literature review. Only two databases were used to source literature: Scopus and Google scholar. The researcher considered this approach sufficient to capture an overview of recent discourse from both academia and empirical evidence reported through grey literature.

Origins and Definitions

What is value for money and how is it perceived across the world? How is it translated from one language to another and what does it mean to government policy and

decision makers compared to tax payers or the individuals as recipients of development aid? For the purposes of this research the selected working definition of value for money first identified was that of the National Audit Office. They suggest 'good VFM' is "the optimal use of resources to achieve the intended outcomes" (NAO, n.d). Nevertheless, who defines what is considered optimal, particularly in respect of sector wide programmes with multi-donor funding and multi-stakeholder involvement. Furthermore, to what extent are influencing factors taken into consideration when assessing and whether intended outcomes have been achieved. In terms of international development, consideration could be given to whether the intended outcome is that which is written in a project document in quantitative terms or those subjective qualitative aspects based on whether one is sitting in an office thousands of miles away from the project site or an individual within a beneficiary community concerned about how long this newly 'delivered' water supply will last.

In addition, what is the time period allocated to classifying something as VFM? For example, is it within the implementation timeframe, a guarantee period or does it go beyond?

Despite the apparent increasing visibility of the term, one could question whether the 'VfM' is really so new. In 2011 (April), Rick Davies posted on his website – M&E News - an outline bibliography on VFM asking for people to update and contribute to. Since the original posting on 9th March 2011, which contained 6 direct references and a number of sub-references, within the space of only one month a further 4 had been added. As of July 2013, 24 references had been posted on the webpage - the earliest was dated as 2003 and the latest November 2012. Not one of the references was contained within academic literature.

This could lead one to believe that there is not only limited discourse existing on the subject, there is even less academic literature. However, analysis of just one website is not a representative sample and in contrast a general Google search of the term "value for money", in July 2013, filtered approximately 50 million references.

A more focused Google Scholar search in April 2011 of the term "Value for Money" provided approximately 2,680 references dating as far back as the early 1990's whereas in July 2011 undertaking the same search of the terms "Value for Money" and "Water and sanitation" provided approximately 1,190 references. This number increased by about 50% and totalled 1,790 in July 2013. Another search, focusing in on

the terms "Value for Money" and "Monitoring and Evaluation", resulted in over 4,000 references in July 2011, again increasing by approximately 50% to reach some 6,070 references in July 2013. Conversely these increases in articles give a perception that there is an extensive discourse on the topic and so, a comparison was sought between Google scholar and a comprehensive academic database – Scopus – for the term “value for money” and combinations with other terms, with the findings presented in Table A-5. The findings support the view that whilst there may be an increasing body of literature around ‘value for money’, it is limited in terms of being academically related to the water and sanitation sector.

In terms of understanding what is bringing the term ‘VfM’ to the fore, the researchers’ thoughts consider whether it is perceived as an indicator to ‘good governance’, or that it is in some way linked to the MDG’s. Alternatively, it may be a response to the economic crisis and civil society demands of the governments to provide VFM. On the other hand, as asked by Davies (2011), “is ‘Value for Money’ becoming anything more than a meaningless mantra? Sounding important, but in practice meaning something different to each and every one who hears it? And impossible to measure...?”.

The literature includes various articles that refer to some level of confusion amongst implementing partners and funders, on what the term means, how to measure VfM as well as its operationalisation (Nef consulting, 2010, BOND, 2011). Therefore maybe to understand what value for money stands for is to first consider whether it is a paradigm shift from ‘best practice’ or is it a new label for cost effectiveness. According to Haider (2010), VFM seems to have its roots in the audit profession and its appearance in wider circles has been in response to the population requiring their governments to be accountable for spending of taxes.

The research of Barnett et al (2010), highlights some of the work undertaken by the National Audit Office in the UK (see

Figure A-1), to develop a more comprehensive analytical framework and dispel some of the uncertainty. They also highlight the fact that ‘VfM’ is used by an increasing number of donors and multilateral agencies as part of their evaluation and appraisal systems and procedures.

Table A-5 Comparative analysis of two databases

	Scopus search	Google Scholar
	Jul-13	Jul-13
Value for Money	2,197	95,500
Value for Money & Water	48	28,000
Value for Money & Sanitation	2	4,730
Value for Money & Hygiene	5	7,770
Value for Money & Kenya	-	4,960
Value for Money & Kenya & Water	na	2,920
Value for Money & Kenya & Sanitation	na	1,130
Value for Money & Kenya & Hygiene	na	873
Value for Money & Uganda	5	3,900
Value for Money & England	125	37,600
Value for Money & Global	71	41,400
Value for Money & Monitor*	93	28,700
Value for Money & Evaluat*	593	na
Value for Money & Evaluate	na	34,200
Value for Money & Evaluat* & Water	8	na
Value for Money & Evaluate & Water	na	13,500
Value for Money & Fit for Purpose	6	556
Value for Money & Service Delivery	36	20,700
Value for Money & Service Delivery & Water	3	7,180
Value for Money & Regulat*	118	na
Value for Money & Regulate	na	12,100
Value for Money & Regulat* & Water	7	na
Value for Money & Regulate & Water	na	5,490

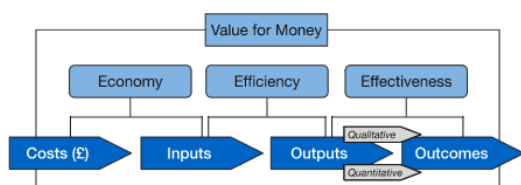


Figure A-1 NAO/Audit Commission Definition of VfM

(Source: Improvement Network accessed (11 March 2011))

By contrast, the ICAI (2011) has recently announced, as part of its first Work Plan 2011-2014 that they are still undecided on how to define the term 'value for money', given its complex nature. However they do envisage the inclusion of 'long-term impact and effectiveness'. Furthermore the ICAI are wanting to remain flexible in how to undertake and present the data collected through undertaking the review and therefore are not operating against a 'fixed template or checklist'. Although they go on to confirm that the reviews "...will consider whether objectives have been achieved with the optimal use of resources."

As part of the public consultation process several organisations (BOND, CIPFA, Fairtrade Foundation, Peace Direct), gave feedback on approaches to 'VfM'. They raised concern that in order for the reviews to be effective, the outstanding issue of not

having a clear definition for VfM needs to be resolved. In addition, Barnett et al (2010) identify two prime and currently used, forms of assessing 'VfM' (see Table A-6).

Table A-6 Current Examples of Assessing VfM in UK

Example One	Example Two
What: Auditing of performance management and measurement systems	What: Economic appraisal
Who: independent UK audit agencies: NAO, Audit Commission	Who: as outlined in HM Treasury's Green Book and adapted by Government Departments
How: Conducting regular (usually annual) audits of departmental systems, judging performance in key functions by using set criteria and evidence and arriving at an overall VfM judgement by comparing actual with planned performance and by using external benchmarks, e.g. against accepted good practice, trend analysis or alternative actions such as those employed by similar agencies.	How: Uses an appraisal process (usually formalised in a procedural template) to decide whether to invest in a proposed scheme or project. This is commonly deployed as a procedure for allocating resources and is based on assessing net present value (whether expected discounted additional benefits outweigh costs) and comparing various options, including the 'do nothing' option, to select the one that offer the best return on investment.

(Source: extracted from Barnett et al (2010))

As part of their research and review they conclude with an indicative conceptual framework as presented in Figure A-2. However, to what extent practitioners will be able to interpret, understand and translate it in to practical action has not necessarily been tested. The key components related to costs (inputs and activities) and to benefits outputs and outcomes, based on measures of economy, efficiency and effectiveness, modified by the enabling environment, risks and assumptions are reflected in other approaches such as the logical framework approach.

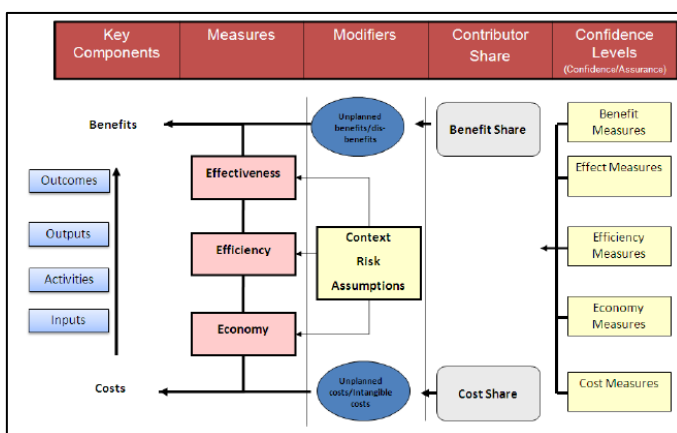


Figure A-2 VfM as a Conceptual Framework

(Source: Barnett et al, (2010))

The terms are also reflective of those associated with evaluation methods including impact evaluation which is another method receiving increasing airtime and interest as a 'critical must' in the international development arena. The add-ons to this conceptual framework are the components of 'contributor share' and 'confidence levels', where 'contributor share' considers how to "attribute costs and benefits" and 'confidence levels' refers to "...judgement,...reliability, relevance and robustness of the data sets.." used combined with sensitivity levels of "...VfM findings would be to changes in any assumptions made". In turn, making it sound similar to a risk and assumptions matrix.

As an alternative, Nef consulting illustrates 'VfM' can be understood in another way - through the figure below - and suggest that it is closely related to the process of Social Return on Investment – also recognised as an outcomes-based approach (see Figure A-2). Having identified a few conceptual frameworks which provide a theoretical basis, the next stage would be to understand better the following:

- How are these or any other 'VfM' framework understood by stakeholders and how are the frameworks operationalized?
- How does a stakeholder decide on the parameters and levels to deem a project 'value for money' - is it based on statistics - which can be manipulated or qualitative data which could be considered subjective?

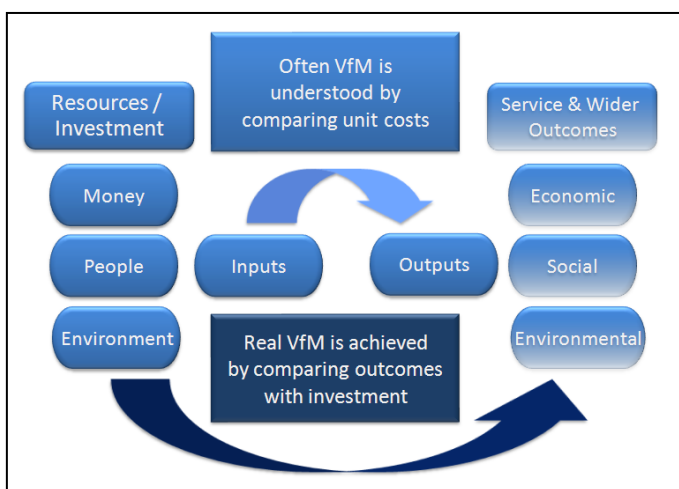


Figure A-3 An Alternative Conceptual Framework for VfM

(Source: Nef consulting (2010))

In 2011 and recognising the increasing confusion surrounding the relevancy and applicability of the concept of VfM within the development aid arena, the OECD published a consultation paper – 'Value for Money and International Development:

Deconstructing some myths to promote more constructive discussion'. Ultimately the main emphasis of the paper is to highlight that through demystifying the rhetoric of 'VfM', in the confines of development aid, the concept remains relevant in terms of contributing to 'good project management practice'. The paper recognises the complexity, challenges and limitations and does not attempt to set out how stakeholders, whether government entities or individual organisations should apply 'VfM'. Furthermore, the paper defines value for money as "the optimum combination of whole-life cost and quality (or fitness for purpose) to meet the user's requirement. It can be assessed using the criteria of economy, efficiency and effectiveness'.

Value for Money in the WASH sector

As previously detailed a Google scholar search presented approximately two thousand references to "Value for Money" and "water and sanitation". The articles include aspects of whether private, public partnerships provide 'VfM' (Grimsby, 2002 & 2005; Akitoby, 2007). Several were linked to the health sector (Mills & Kennedy, 1988; Bobadilla et al, 1994) whilst others consider various technological solutions (Paterson et al, 2007; Ray, 1985). Between those articles accessed via Google Scholar and the searches of academic databases and other grey literature sources, not one reference appeared to ask whether the monitoring and evaluation activities were providing value for money in the WASH sector. Despite all the searches, only a single article – Maddock, (1993) - related to agriculture and rural development projects, has been sourced questioning whether M&E activities provide value for money.

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Appendix B Data Collection Tools

B.1 Semi-structured interview one schedule

B.1.1 Information for Research Interviewees

Contact details of researcher:

Name:	Rachel Norman	Address:	Cranfield Water Science Institute School of Applied Science Vincent Building, Cranfield University Cranfield, Bedfordshire, MK43 0AL United Kingdom
Mobile:	+44(0)7753620408	Telephone:	+44(0)1234 750111
Email:	r.f.norman@cranfield.ac.uk	Ug/Ke Mob:	

Research project title

Understanding costs and uses of monitoring and evaluation in the WASH sector.

What is the project about?

The aim of this PhD research project is to understand better, costs and uses of monitoring and evaluation in the WASH sector. With a working hypothesis that states "monitoring and evaluation in the WASH sector in lower-income countries is not 'value for money', the goal of this research project is to develop a draft protocol in terms of cost and use for monitoring and evaluation.

What data am I trying to source?

Based on research carried out to date, limited scientific or empirical evidence exists on how much is being spent on monitoring and evaluation across the sector and whether the data generated is being effectively and appropriately used.

This study aims to collect, compile and analyse data in respect of how organisations, institutions at global, national and programme level are budgeting and spending on M&E; which tool, method and approach is being used and why; how the data that is generated is being used both internally and externally to the organisation.

Why am I asking you to participate?

The study has applied a purposeful sampling technique to select the stakeholders at each level. As part of that process, which includes scoping field visits to test interest and willingness of organisations to participate, your organisation is considered as a key stakeholder.

How am I asking you to participate?

The project comprises of three studies. In terms of Study One - whilst I am in Uganda/Kenya I would like to allocate one full working day to researching within your organisation. This would include:

- undertake a semi-structured interview of approximately 1.5hrs;
- time to access and compile data available within the organisation;
- talk to other staff as recommended.

I would like to use a Dictaphone during the semi-structured interview so as to obtain a more accurate account of our meeting. The use of the equipment will also allow more participation in the dialogue rather than being distracted by taking hand-written notes.

At any time during the interview you can request me to stop recording. Furthermore a copy of the transcribed document relating to the interview in which you participated will be provided to you for you to comment and for own information.

What will happen to the data and information you provide?

In accordance with University regulation as defined by the Science & Engineering Research Ethics Committee I will secure and store any data I obtain in accordance with the Data Protection Act 1998:

- use of password protection of files stored at Cranfield University and on my personal lap-top;
- information will be accessed only by myself and my supervisors in the School of Applied Science;
- in the event that any transcriptions of audio-recordings are outsourced, then a signed confidentiality agreement will be sought prior to engaging their services.

The information will be treated as follows:

- Confidentially: ensure the information is not identifiable to individuals
- Anonymity: individual interviewees remain anonymous;
- Use: ensure the information is used for the purpose agreed.

Right to withdraw from the study?

You are entitled to partially or fully withdraw at any time during the interview or project up to the point in which the data becomes unidentifiable among other pooled data for example:

Partial: this could be by asking that the recording equipment is turned off for a short period or for the entire interview preferring the comments to be made 'off the record'.

Partial: you may wish that you do not want your words fully quoted but will allow me to use the information to gain a broader understanding of the topic.

Full: this would mean that you do not want any information obtained through the course of the interview to be used under any circumstances. By requesting a full withdraw any data you have provided with be destroyed immediately.

If you have any concerns about your participation in this study then you can contact Dr Richard Franceys, Director of Global Water Policy and Management Programme, Cranfield University:

Email:	r.w.a.franceys@cranfield.ac.uk	Telephone:	+44 (0) 1234 754853
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Agreement to participate

By signing this document you confirm the following has been explained to you as set out in the 'Information to Participants' document:

- The aims and objectives of the research project;
- The right to withdraw from participation;
- Confidentiality will be protected;
- Receipt of a copy of transcribed version of the semi-structured interview (where applicable).

By signing this document you also confirm the following:

- I agree that the information I provide will be available for use in terms of the research project, educational or research purposes, including publication.

- I assign the copyright for my contribution to the School of Applied Science for use in education, research and publication;
- I understand that if I have any questions or concerns then I can contact either the PhD Researcher: Mrs Rachel Norman or her supervisor: Dr Richard Franceys.

Dr Richard Franceys		Mrs Rachel Norman	
Email:	r.w.a.franceys@cranfield.ac.uk	Email:	r.f.norman@cranfield.ac.uk
Telephone:	+44(0) 1234 754853	Telephone	+44 (0) 1234 750111
Signature:		Date	

B.1.2 Semi-structured interview schedule

Framework (Robson, 2002; Drever 2003):

- ✓ Introductory comments (verbatim script);
- ✓ List of topic headings and possibly key questions to ask under those headings;
- ✓ Set of associated prompts;
- ✓ Closing comments.

	Timing		Timing
Administrative	5 minutes	Section 1	15 minutes
Preamble	5 minutes	Section 2	15 minutes
		Section 3	15 minutes
		Section 4	15 minutes
Total time	1hr 25 minutes	Final Question	15 minutes

Administrative

Provide the 'Information to Participants' form and ask to sign.

Thank you for being willing to take part in this interview. As mentioned in the 'Information to Participants', in order to ensure the richness of our discussion and in order for me not be deviated by scribing notes, I would like to tape-record this interview. Once I have returned to the UK and completed the transcribing of the recording then I will send you a copy for your review and comment.

Preamble

As, mentioned on the phone/ mentioned when we last met /written in my email, I am interested in gaining a better understanding of whether monitoring and evaluation in the WASH sector in terms of service delivery, particularly in rural and peri-urban areas, is providing value for money. In other words - are M&E activities effective, economic and efficient?

And, having confirmed an interest and willingness to participate in this interview, I would be pleased to hear about your views on the topic, in terms of working for *the organisation*. *Wait for a response.....*

I have four key aspects I would like us to cover however, if time permits and you are happy to, then we can widen the discussion. The key aspects are:

- What are the influencing factors in terms of undertaking M&E activities?
- How do organisations decide on what to budget in terms of planning and implementing M&E?
- Do organisations believe that past or present approaches to M&E and data generated, positively impact on WASH sector service delivery?
- What are the views of the use of technology in terms of ensuring M&E provide VfM?

Section One: What are the influencing factors in terms of undertaking M&E activities?

Q1.1 With government and non-governmental organisations becoming increasingly accountable to civil society and international donors what, if any has been the impact on (insert) *the organisation* in terms of M&E requirements? *Wait for a response.....* **Prompts & probes**

Prompt: Accountabilities such as spending of taxes and charitable donations, issues of equity and human rights, global target setting.

Probe: Has your tool, method or approach, as an organisation, changed to undertaking M&E?

- If yes:
 - was this driven by a global (external) influences (MDG's / AMCOW CSO/ISO 245 series) or national (internal) legislative/policy change / individuals experiences?
 - if external has it led to either a legislation or policy change?
- If no:

- why not?

Probe: Have targets at the national/programme level been adjusted to reflect the changes in accountability requirements and if yes what has been the impact of these changes?

- increasing numbers of indicators?
- increasing frequency of undertaking M&E activities?
- streamlining or duplication of activities?

Q1.2 Are there any other influences outside of accountability that you would like to mention or discuss? (**Depending on time**)

Prompt: Other options could include:

- Corporate and social responsibility; Academic research; Regional influence; Available funds.

Probe: How do these factor against the influence of accountability, for the organisation, in terms of relative importance - time/money/resources.

Section Two: How do organisations decide on what to budget in terms of planning and implementing M&E?

Q2.1 Given the fact that very little data or guidelines seem to exist on what is considered an appropriate amount to be spent in terms of monitoring and evaluation activities how does *the organisation* decide how much and what to include as a cost in order to budget for such activities? *Wait for a response.....* **Prompts & probes**

Probe: Is there a separate lump-sum budget line item or are the costs embedded within general departmental costs / overhead?

Probe: What does *the organisation* use as a guideline to determine level of investment?

Prompt: For example:

- other sector/organisation spending?
- conditionalities or guidance from funding partners?
- national policy - if so do you know what drives or how these guidelines were developed?

Q.2.2 Do you think a guideline setting out the types of monitoring tools methods and approaches would help or hinder planning and budgeting processes within *the organisation*? *Wait for a response.....* **Prompts & probes**

Probe: Have you seen the World Bank document: Tools, Methods, Approaches?

Probe: Have you seen the ISO 24511: 2007 guideline for service delivery?

Section Three: Do organisations believe that past or present approaches to M&E and data generated, positively impact on WASH sector service delivery?

Q3.1 Do you have any examples of where the impact of M&E, undertaken by *the organisation*, has had a positive impact on service delivery? *Wait for a response.....* **Prompts & probes**

Prompt: for example where, either directly or indirectly, the information generated has been used internally or externally, by another organisation to bring about:

- increase in access to an improved water supply and or sanitation provision - service coverage;
- increase in availability of an affordable water supply - reduction in water tariff;
- addressed an issue of in-equity.

Q3.2 Has the global phenomenon of harmonisation and alignment helped or hindered the organisation in implementing M&E activities? *Wait for a response.....*

Prompts & probes

Probe: Has this had a knock-on effect in terms of service delivery?

- If yes:
 - encourage a full response - in what ways and why?
 - if negative - how have you as an organisation, or how do you intend to resolve the negative impact?
- If no:
 - why do you think there has not been any effect?

Section Four: What are the views of the use of technology in terms of ensuring M&E provide VfM?

Q4.1 In a world where technological advancement is evolving at an alarming rate and the use of machines rather than people are being used across many industries and

sectors, where do you envisage technology advancement can be best utilised in terms of aiding monitoring and evaluation activities in the WASH sector? *Wait for a response.....* **Prompts and probes**

Prompt: In terms of collection, analysis, data storage and dissemination?

Probe: What technology does the organisation currently use for monitoring and evaluation?

Probe: Are you aware of any technology that the organisation does not currently have access to which would improve the M&E activities

Final Question

Our discussion has been in the context of your working for *the organisation* and I was wondering whether there is anything else you want to say about this topic that I have not asked you, or whether you had any other comments as an individual or from experience with working in any other organisation. *Wait for a response.....*

THANK YOU FOR YOUR TIME

If upon reflection you have any other comments you wish to add, please do not hesitate to contact me via email, call whilst I am here in Uganda/Kenya. There will also be an opportunity to add comments to the transcribed document.

B.2 Semi-structured interview two schedule

The instructions for participants and interview schedule followed a similar structure as semi-structured interview one. The aspects covered under this second interview were as follows:

- Whether responsibilities of M&E are realistically assigned in the sector
- Which aspects of M&E should be prioritised to ensure the activity is 'fit for purpose'
- Whether current M&E practices in the sector are appropriate
- Whether M&E provides value for money

If time permitted then an additional area was discussed:

- Changes in response to post-2015 SDGs and the 'progressive realisation of Human Rights'.

B.3 Qualtrics e-Survey questionnaire

Q1.1 INSTRUCTIONS TO PARTICIPANTS The following survey is predominantly multiple choice questions and should only take between 10-15 minutes to complete. Contact details If you have any queries regarding this survey please do not hesitate to contact either me or my supervisor at: Researcher: Rachel Norman (r.f.norman@cranfield.ac.uk) Supervisor: Dr Richard Franceys (r.w.a.franceys@cranfield.ac.uk)

Q2.1 Please select one of the following organisations that you currently work for.

- Government (1)
- Development Partner (2)
- Non-governmental organisation (3)
- Independent Consultant (4)
- Private Company (5)
- Academia (6)
- Student (7)
- Other (please specify) (8) _____

Q2.2 In which region(s) do you predominantly work? (click all that apply).

- Latin America (1)
- East Africa (2)
- North Africa (3)
- West Africa (4)
- Southern Africa (5)
- Eastern Europe (6)
- Central Asia (7)
- South Asia (8)
- Australasia (9)
- Pacific (10)
- Global (11)
- Other (please specify) (12) _____

Q2.3 In which of the following sectors have you worked? (click all that apply).

- WASH (1)
- Health (2)
- Education (3)
- Agriculture (4)
- Rural Development (5)
- Post conflict environments (6)
- Other (please specify) (7) _____

Q3.1 The following two questions relate to Roles and Responsibilities where Monitoring and Evaluation are defined (by OECD/DAC, 2006), as: Monitoring - "A continuous

function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of on-going development interventions with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds." Evaluation - "The systematic and objective assessment of an on-going or completed project, programme or policy, its design, implementation and results. The aim is to determine the relevance and fulfilment of objectives, development, efficiency, effectiveness, impact and sustainability."

Q3.2 How often are you involved in the following monitoring activities?

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)
Monitoring framework development (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data collection (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data analysis (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reporting (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desk based reviews (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project site visits (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3.3 How often are you involved in the following evaluation activities?

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)
Evaluation planning (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Baseline surveys (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
End Term Evaluations (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact Evaluations (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4.1 The next two questions ask for examples of how you have used data generated from monitoring and evaluation activities. Please include the following details in each response: Country. Whether it was due to a monitoring or evaluation activity. What the change was that was actioned. What the result was, of that change, whether positive or negative.

Q4.2 Considering any country context, please provide an example of where you have changed something as a result of an internal monitoring or evaluation activity.

Q4.3 Considering any country context, please provide an example of where you have changed something as a result of an external monitoring or evaluation activity.

Q5.1 The following two questions relate to M&E information and guidelines generated from global organisations.

Q5.2 Please indicate whether you have used data or reports from any of the following.

	Yes (1)	No (2)
UNICEF/WHO Joint Monitoring Programme (1)	<input type="radio"/>	<input type="radio"/>
UN-Water GLAAS (2)	<input type="radio"/>	<input type="radio"/>
World Water Development (3)	<input type="radio"/>	<input type="radio"/>
AMCOW (4)	<input type="radio"/>	<input type="radio"/>
Sanitation and Water for All (5)	<input type="radio"/>	<input type="radio"/>
Water Monitoring Alliance (6)	<input type="radio"/>	<input type="radio"/>
UNSGAB (7)	<input type="radio"/>	<input type="radio"/>

Q5.3 Please indicate whether you have used any of the following guidelines.

	Yes (1)	No (2)
AfDB Handbook on Infrastructure Statistics (AfDB, 2011) (1)	<input type="radio"/>	<input type="radio"/>
Water Project Toolkit - Water Resources Management for Sustainable Development (EU, 2011) (2)	<input type="radio"/>	<input type="radio"/>
The Nuts and Bolts of M&E Series (WB, 2010-2011) (3)	<input type="radio"/>	<input type="radio"/>
Water supply and sanitation sector assessments: A guide for country-level action (UNICEF, 2009) (4)	<input type="radio"/>	<input type="radio"/>
BS ISO 24510-12:2007 Series: Activities relating to drinking water and wastewater services - Guidelines (5)	<input type="radio"/>	<input type="radio"/>
Data Quality Assurance Tool for Program-level Indicators (USAID, 2007) (6)	<input type="radio"/>	<input type="radio"/>
Doing Impact Evaluation Series No. 4: A guide to water and sanitation sector Impact Evaluations (WB, 2006) (7)	<input type="radio"/>	<input type="radio"/>
Water and Sanitation Indicators Measurement (USAID, 1999) (8)	<input type="radio"/>	<input type="radio"/>
Guidance manual on water supply and sanitation programmes (DFID, 1998) (9)	<input type="radio"/>	<input type="radio"/>
A Sanitation Handbook (UNICEF, 1997) (10)	<input type="radio"/>	<input type="radio"/>
Minimum Evaluation Procedures (WHO, 1985a) (11)	<input type="radio"/>	<input type="radio"/>

Q6.1 The next four questions are asking for your view on a series of statements relating to M&E.

Q6.2 Please indicate to what extent you agree or disagree with the following statements about monitoring.

	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)	Do not know (5)
All monitoring data collected is analysed (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All monitoring data analysed is used for the intended purpose (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Capacity and capability in monitoring needs strengthening internationally (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitoring needs to be professionalised through an accreditation system (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitoring should be a discrete activity detailed as a separate line with a separate budget item in any organisation, project or programme (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitoring should be embedded across the entire organisation, project or programme and not be separated out as a discrete budget item (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6.3 Please indicate to what extent you agree with the following statements about evaluation.

	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)	Do not know (5)
All evaluation data collected is analysed (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All evaluation data collected is used for the intended purpose (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capacity and capability in evaluation needs strengthening internationally (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluation needs to be professionalised through an accreditation system (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6.4 Considering the definition of 'Fit for Purpose' as "the extent to which data produced by a measurement process enables a user to make technically (and administratively) correct decisions for a stated purpose" (Thompson & Ramsey, 1995):

Q6.5 Please give your overall opinion of whether monitoring is 'fit for purpose' for use in the WASH sector globally.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)
- Strongly Agree (4)
- Do not know (5)

Q6.6 Considering the definition of 'Value for Money' as "the optimum combination of whole-life cost and quality (or fitness for purpose) to meet the user's requirement. It can

be assessed using the criteria of economy, efficiency and effectiveness" (OECD, 2011):

Q6.7 Please give your overall opinion of whether monitoring is providing 'value for money' in the WASH sector globally.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)
- Strongly Agree (4)
- Do not know (5)

Q7.1 The next few questions are country specific.

Q7.2 Do you currently or have you ever worked in Kenya?

- Yes (1)
- No (2)

Answer If Do you currently or have you ever worked in Kenya? Yes Is Selected

Q7.3 In answering Yes to whether you have worked in Kenya, you will now be asked a further 4 questions, specifically relating to Kenya.

Answer If Do you currently or have you ever worked in Kenya? Yes Is Selected

Q7.4 Please indicate what your primary use was of each of the following reports.

	To review the performance of a project or institution (1)	To track progress of service provision (2)	To inform a management decision (3)	To inform a policy decision (4)	Never used (5)	Other (6)
IMPACT 1 - 5 (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annual Sector Performance Reports (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NIMES (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public Expenditure Reviews (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Country Census and Surveys (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Answer If Do you currently or have you ever worked in Kenya? Yes Is Selected

Q7.5 Please indicate whether you have used any of the following guidelines.

	Yes (1)	No (2)
MPND Poverty & Environment Indicators (MPND, 2011) (1)	<input type="radio"/>	<input type="radio"/>

The Urban Projects Concept - An overview (WSTF, 2009) (2)	<input type="radio"/>	<input type="radio"/>
Water Resource Users Association development Cycle (WSTF, 2009) (3)	<input type="radio"/>	<input type="radio"/>
MPND National Reporting Framework of Indicators...(MPND, 2009) (4)	<input type="radio"/>	<input type="radio"/>
Handbook on Governing Responsibilities in Kenya (Office of the President, 2005) (5)	<input type="radio"/>	<input type="radio"/>
Drinking Water Quality & Effluent Monitoring Guideline (WaSREB, 2004) (6)	<input type="radio"/>	<input type="radio"/>

Answer If Do you currently or have you ever worked in Kenya? Yes Is Selected

Q7.6 Please give your overall opinion of whether monitoring is 'fit for purpose' for use in the WASH sector in Kenya.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)
- Strongly Agree (4)
- Do not know (5)

Answer If Do you currently or have you ever worked in Kenya? Yes Is Selected

Q7.7 Please give your overall opinion of whether monitoring is providing 'value for money' in the WASH sector in Kenya.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)
- Strongly Agree (4)
- Do not know (5)

Q8.1 Do you currently or have you ever worked in Uganda?

- Yes (1)
- No (2)

Answer If Do you currently or have you ever worked in Uganda? Yes Is Selected

Q8.2 In answering Yes to whether you have worked in Uganda, you will now be asked a further 4 questions, specifically relating to Uganda.

Answer If Do you currently or have you ever worked in Uganda? Yes Is Selected

Q8.3 Please indicate what your primary use was of each of the following reports.

		To review the performance of a project or institution (1)	To track progress of service provision (2)	To inform a management decision (3)	To inform a policy decision (4)	Never used (5)	Other (6)
Ministerial	Policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Statements (1)						
Government Annual Performance Reports (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uganda Water Supply Atlas (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annual Sector Performance Reports - General report (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annual Sector Review - Undertakings (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Answer If Do you currently or have you ever worked in Uganda? Yes Is Selected

Q8.4 Please indicate whether you have used any of the following guidelines.

	Yes (1)	No (2)
The Right to Water Manual & Trainers Guide (UWASNET, 2012) (1)	<input type="radio"/>	<input type="radio"/>
Advocacy Budget Tracking & Monitoring Manual for the Water and Sanitation Sector (UWASNET, 2012) (2)	<input type="radio"/>	<input type="radio"/>
Sectoral Specific Schedules/Guidelines 2012/2013 (MWE, 2012) (3)	<input type="radio"/>	<input type="radio"/>
National Statistical Meta Data Dictionary (UBOS, 2010) (4)	<input type="radio"/>	<input type="radio"/>
Sectoral Specific Schedules/Guidelines 2011/2012 (MWE, 2010) (5)	<input type="radio"/>	<input type="radio"/>
District Implementation Manual, Version 1 (MWE, 2007) (6)	<input type="radio"/>	<input type="radio"/>
Sanitation & Hygiene Promotion Programming Guidance (WSSCC & WHO, 2005) (7)	<input type="radio"/>	<input type="radio"/>

Answer If Do you currently or have you ever worked in Uganda? Yes Is Selected

Q8.5 Please give your overall opinion of whether monitoring is 'fit for purpose' for use in the WASH sector in Uganda.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)
- Strongly Agree (4)
- Do not know (5)

Answer If Do you currently or have you ever worked in Uganda? Yes Is Selected

Q8.6 Please give your overall opinion of whether monitoring is providing 'value for money' in the WASH sector in Uganda.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)

- Strongly Agree (4)
- Do not know (5)

Q9.1 Now for the last 2 questions.

Q9.2 Please indicate your age range.

- 25 or under (1)
- 26-40 (2)
- 41-60 (3)
- 61 and over (4)

Q9.3 Please indicate your gender.

- Male (1)
- Female (2)

Q10.1 Thank you for making time available to complete this survey. PLEASE PRESS THE FORWARD ARROW (>>) TO COMPLETE AND SUBMIT THIS SURVEY RESPONSE As a reminder, for background on the research, <http://wedc.lboro.ac.uk/resources/conference/35/Norman-R-1230.pdf> will give you access to the Briefing Paper presented at WEDC, 2011 and <http://www.irc.nl/page/78739> access to the Briefing Paper presented at the IRC Symposium earlier this year, 2013. If you would like further information on the research project, then please do not hesitate to contact me - Rachel Norman at r.f.norman@cranfield.ac.uk

Appendix C Data Processing and Analysis Tools

C.1 Combined Master Workbook headings

Generic headers across each document component analysis

Country	Year	Normalised Year	Stakeholder	Stakeholder Code	Department	Stakeholder Type	Stakeholder Sub Type	Stakeholder Level	Funding Type	Data Type Cluster	Data Type 1	Data Type 2	Reference Type	Reference No	Document Title
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Indicator analysis headers

WASH	Indicator Cluster Level 1	Indicator Cluster Level 2	Indicator Cluster Level 3	Composite Indicator	Indicator	Unit of Measure	Indicator Type 1	Indicator Type 2	Baseline	Actual data Yr	Actual	Target	Data Sources
------	---------------------------	---------------------------	---------------------------	---------------------	-----------	-----------------	------------------	------------------	----------	----------------	--------	--------	--------------

Purpose analysis headers

WASH	Actual Sub-header Purpose	Purpose Description (Intended use)	Ref to M&E	Product of M&E	Internal Purpose	External Purpose	Purpose Casley & Kumar	Purpose IPDET	Purpose Cotton & Bartram
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Cost analysis headers

WASH	Cost Description	Unit of measure	Cost Typology	Description	Budget Year	Budget or Income	Currency	Actual Year	Actual Expenditure	Data Source	Ideas/thoughts/observations
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Value for money headers

WASH	No. of references to Value for Money	No. of references to VFM (acronym)	Narrative Ref to VFM?	Context / Sector	Any Indicator of VFM?	VFM of M&E (Y/N)	Comments/Ideas/Thoughts
------	--------------------------------------	------------------------------------	-----------------------	------------------	-----------------------	------------------	-------------------------

Headers for transcript analysis

The same generic header used for document analysis was also used within the transcript analysis workbooks.

Influencing factors of undertaking M&E	Internal/External	Influence Cluster	How to budget for M&E	Cost Typology	%	M&E having an impact on WASH sector service delivery	Impact Cluster	Specific impact on SD	Role of technology	Technology Cluster	Tech - help or hindrance	Other	
Roles & Responsibilities	R&R Cluster	Description	Fit for Purpose - Component of M&E focus level and strengthening	FFP - fit	Description	Fit for Purpose - Component of M&E appropriate - can leave alone	FFP - yes	Description	Is M&E Value for Money?	VfM	SDGs - Contributed and /seen the proposed targets and indicators	Post 2015	Thoughts

Headers for Literature Review

Not all of the cells were populated for each article sourced and entered into the work book.

Search Category	DR-Doc Rev Folder	Code 1	Year	Author	Title	Source	Source Title	Search Term	Date Accessed	Purpose	Qty Page	Printed		
Aim	Findings	Critical Appraisal	Theme	Relevant points	Citation	RefWor	Further research							
Water	Sanitation	Hygiene	Other	What	Why	Cost	Use	How	VfM	Kenya	Uganda	Global	UK	Other

Headers for Data Reduction Analysis

Country	Data Type	Activity	Source	H/S/B Copy	Data Collection T	Audio recorded (Yes/No)	Duration of recording (hr.min.sec)	Reference	Number	Date accessed					
Date transcribe	Time taken to transcribe (h)	Date cleaned	Time taken to clean (hrs)	Date emailed to stakeholder	Response from stakeholder	Stakeholder I	Stakeholder II	Stakeholder III	Stakeholder Type	Stakeholder Sub-Type	Stakeholder Level				
Publication Year	Title	Pub. Type	M&E Definition	Feedback to SS1	Who - roles & responsibilities	What - Indicator data	Why - Purpose of M&E	How - TMA data	Cost - how much	Use - how and impact	VfM	Fit for Purpose - what needs enhancing	Fit for Purpose - what is working well	Completed validation	Contribution to Knowledge

C.2 Data record processing and extrapolation terms

For processing and identifying whether documents contain components of M&E, three core steps were taken when reviewing each data record:

1. Look at contents page to see whether any component exists.
2. Look at annexes, particularly for method, definitions, finance.
3. Use the search and find function on pdf and word documents for the terms below⁶⁰.

Component	Terms
Who	Role, responsibil (to allow for responsibility and responsibilities), institutional
What	Indicator, target, objective, output, result
Why	Purpose, aim, intend
How	Method, tool, approach, framework
Cost	Cost, finance, budget, resource
Use	Use
Definition	Definition, monitor, evaluat (to allow for evaluate and evaluation(s)), glossary
Value for Money	Value for money, VfM
Fit for Purpose	Fit for purpose, quality, appropriate

C.3 Clustering Options

A number of different clustering options were considered for the processing of the 'what' component data i.e. indicators and targets. Option One was to use an existing classification but was rejected for risk of bias. Option Two (Figure C-1) was also rejected, in this case for being too complex. Option Three was developed from an iterative process of inspection and judgement evolving from a single cluster using judgement and frequency and recurrence. However with over 5,000 indicator entries across the 3 cases, this proved a risk in terms of ensuring consistency and resulted in 80+ categories therefore was rejected. The second iteration considered three levels of clustering and resulted in a more manageable 9+ categories at level one, however, became too complex at the level two and three with 42+ and 60+ categories respectively and thus rejected. The third and final iteration as presented in Figure C-2, classifies indicators as either 'service', 'service provider' or 'sector', level one and then provides a further categorisation at a second and third level where appropriate. It is this

⁶⁰ Where documents were in hard copy format only, the search and find was complete by 'speed reading'.

final clustering process that all indicator entries have attempted to be categorised as reported within each of the case study results chapters.

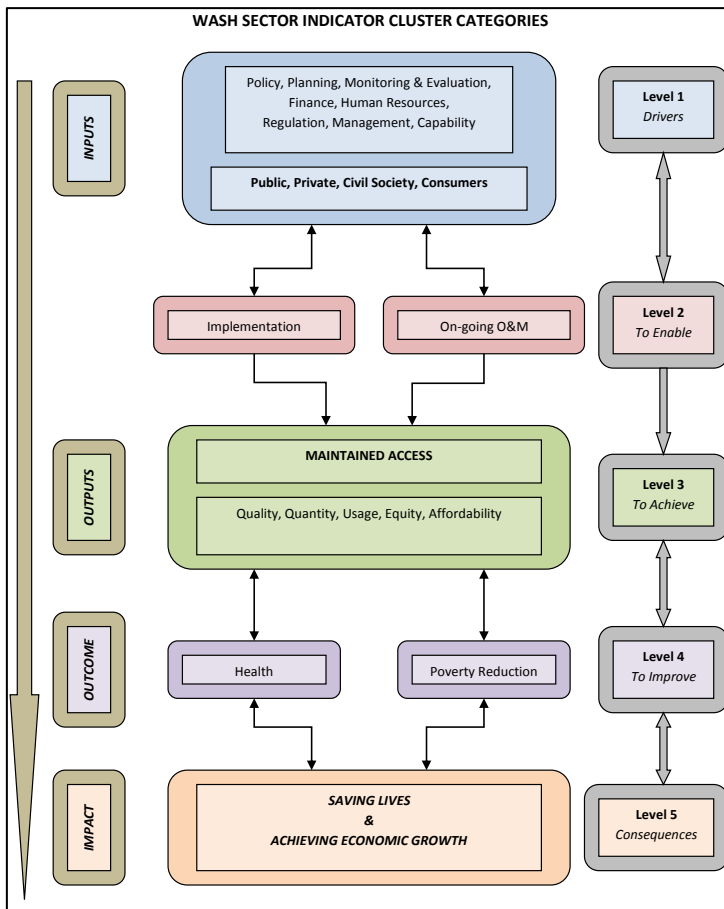


Figure C-1 Clustering framework – Option 2 – 5-levels

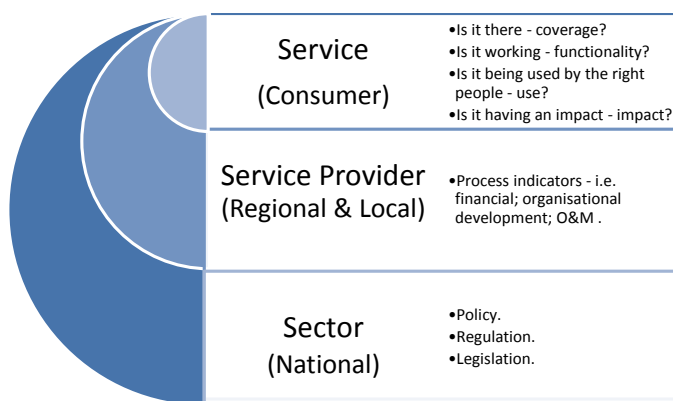


Figure C-2 Clustering framework – Option 3 - Final

Appendix D Global Case Study Analysis Excerpts

D.1 Data record analysis overview

Table D-1 Summary overview of data records sourced for Global case study

Stakeholder Code	Document Review	Key-Informant Interviews	Semi-structured Interviews	Total
A00			1	1
A01	22			22
A02	38			38
A03	28	1	1	30
A04	19			19
A05	29	1		30
A06	45			45
A07	25			25
A08	43			43
A09	31			31
A10				0
A11	22			22
A12	30	1	1	32
A13	21	3	4	28
A14	22			22
A15	27			27
A16	16			16
A17	11			11
A18	12			12
A19	8			8
A20	13			13
A21	10			10
A22	14			14
A23	7			7
A24	11			11
A25	18			18
A26	12			12
Other	41			41
Totals	575	6	7	588

Table D-2 Data record numbers and proportion by stakeholder type

Stakeholder Type	Documents	%	Sessions	%
Public	392	68%	3	23%
Civil Society Organisations	141	25%	9	69%
Other	42	7%	1	8%
Totals	575	100%	13	100%

Table D-3 Analysis of numbers of documents and indicator entries

Stakeholder Code	Status	Stakeholder Type	No. of documents sourced	No. of Documents with indicators	No. of Indicator entries	Additional Kenya Indicators	Additional Uganda Indicators	Aver No. of Indicator entries per document
A01	Data sourced	Public	22	1	0	16	21	37
A02	Data sourced	Public	38	14	90	391	392	62
A03	Data sourced	Public	28	6	135	2	22	27
A04	Data sourced	Public	19	4	108	0	0	27
A05	Data sourced	Public	29	9	392	0	0	44
A06	Data sourced	Public	45	6	101	8	5	19
A07	Data sourced	Public	25	7	237	6	6	36
A08	Data sourced	Public	43	8	208	0	0	26
A09	Data sourced	Public	31	13	26	72	72	13
A10	na	Public	0	0	0	0	0	na
A11	Data sourced	Public	22	10	106	0	0	11
A12	Data sourced	CSO	30	9	125	0	0	14
A13	Data sourced	CSO	21	0	0	0	0	na
A14	Data sourced	CSO	22	0	0	0	0	na
A15	Data sourced	CSO	27	2	55	0	0	28
A16	Data sourced	CSO	16	1	0	0	11	11
A17	Data sourced	Public	11	3	200	10	33	81
A18	Data sourced	Public	12	1	22	0	0	22
A19	Data sourced	Public	8	6	205	0	0	34
A20	Data sourced	CSO	13	4	106	0	0	27
A21	Data sourced	Public	10	0	0	0	0	na
A22	Data sourced	Public	14	6	61	14	10	14
A23	Data sourced	Public	7	1	26	0	0	26
A24	Data sourced	Public	11	0	0	0	0	na
A25	Data sourced	Public	18	1	7	0	0	7
A26	Data sourced	CSO	12	2	16	0	0	8
Other	Data sourced	Various	41	1	4	0	0	4
Totals			575	115	2230	519	572	

Table D-4 Analysis of indicator entries by WASH sub-sector

WASH Sub-Sector	No. of Indicator entries	% of total indicator entries
Water	1313	39.5%
Sanitation	839	25.3%
Hygiene	107	3.2%
Water & Sanitation	281	8.5%
Sanitation & Hygiene	55	1.7%
WASH	668	20.1%
Water & Other	11	0.3%
Waste	1	0.0%
Water for Production	34	1.0%
Other	12	0.4%
Total	3321	100%

D.2 Actual Years of Reported Indicator Data

Table D-5 Years of reported indicator data

Row Labels	No of docs	1980	1990	1991	1999	2000	2002	2004	2006	2007	2008	2009	2010	2011	2012	2013	2015	2018	2025	+5 years	1990-1995	1990-1996	1990-1997	2005-2009	2012/2015	3-years	5-years	Annual	na	nd	recent	TBD	Total	Aver. Entries per record	Number of columns			
1984	1																															16	16	16	1			
1985	2																												6				6	3	1			
1986	1																													19				19	19	1		
1992	1		4																															4	4	1		
1993	1			11																														11	11	1		
1996	1																					12												12	12	1		
1997	1																						12											12	12	1		
1998	2																						12											209	221	111	2	
1999	3																							12										34	46	15	2	
2000	4	2	16		12	16						2				6		5						12									104	163	41	8		
2002	1																																	3	3	3	1	
2003	1																																	2	2	2	1	
2004	4		18			12	18																											34	82	21	4	
2005	3						24																											29	53	18	2	
2006	10		18					30	13																									256	317	32	4	
2007	7						12			13																								119	144	21	3	
2008	10		88				3	6	98	7					27		14																29	1	2	288	29	11
2009	10									71	37	25																						118	251	25	4	
2010	13		48			48			4	1	96	2	81			7																	243	535	41	11		
2011	17		10								25	8	1			1	10																218	67	356	21	13	
2012	18		54			54					12		69		25																			282	50	553	31	8
2013	2		54			54								58			4																		170	85	4	
Year	2																																	23	34	57	29	2
Total	115	2	310	11	12	184	45	48	115	21	217	39	185	59	52	8	30	4	5	7	12	24	12	3	3	4	3	3	23	34	1707	171	1	24	3321			

D.3 Indicator value consistency analysis

A sample of 1990, 1995, 2000, 2005, 2010 and 2015 baseline, actual and target values were examined. The criteria used for the selection of indicators were:

- ✓ **Water; Service; Coverage**
- ✓ **Sanitation; Service; Coverage**
- ✓ **Water; Service; Use**
- ✓ **Sanitation; Service; Use**

Indicators and associated values were also categorised as such when referring to Kenya or Uganda data.

Water; Service; Coverage and Water; Service; Use

From 1313 entries directly relating to water and for all reported years of actual value data, 849 refer to service level indicators of which 452 (53%) refer to coverage, 22 (3%) refer to functionality, 353 (42%) refer to use and 22 (3%) to impact.

1990: 77 records were filtered, spanning the years 1992, 2000, 2004, 2006, 2008 and 2011. Three related to general data 36 reported data relating to Kenya and 38 related to Ugandan data. Comparable indicators were examined further. The values reported in Table 4-10 correspond to the comparable indicators of drinking water **coverage** (improved) for Kenya.

The values reported in Table 4-11 relate to comparable indicators for drinking water **coverage** (improved) for Uganda.

In terms of water, service and **use** clustered indicators, 42 reported against Kenya data and a further 42 reported against Uganda data. A selection of indicators relating to use of improved services were compared. For each case, the reported values were similar (see Table 4-12 and 4-13).

1995: no actual value data reported for this year in terms of coverage or use.

Table D-6 Kenya related data (1990 water coverage)

Demographic	Values reported	% variance
Rural	5 at 30%; 1 at 25%	5
Urban	4 at 91%; 1 at 90%; 1 at 89%	2
Both rural & urban/Total	1 at 48.6%; 4 at 45%; 1 at 41%; 1 at 40%	8.6
Not specified	1 at 43%; 1 at 40%	3

Table D-7 Uganda related data (1990 water coverage)

Demographic	Values reported	% variance
Rural	4 at 40%; 2 at 39%; 1 at 21%	19
Urban	3 at 80%; 1 at 79%; 2 at 78%; 1 at 60%	20
Both rural & urban/Total	4 at 44%; 1 at 26%; 1 at 21.1%	23
Not specified	1 at 44%; 1 at 43%	1

Table D-8 Kenya related data (1990 water use)

Demographic	Values reported	% variance
Rural	2 at 33%; 1 at 32%	1
Urban	2 at 92%; 1 at 91%	1
Both rural & urban/Total	1 at 44%; 2 at 43%	1

Table D-9 Uganda related data (1990 water use)

Demographic	Values reported	% variance
Rural	2 at 39%; 1 at 36%	3
Urban	1 at 79%; 2 at 78%	1
Both rural & urban/Total	2 at 43%; 1 at 41%	2

2000: 98 records were filtered, spanning the years, 2000, 2004, 2010, 2012 and 2013. Of the 98, 8 entries reported coverage data, whilst the balance 90 reported use data, furthermore, of the 98, 49 related to Kenya and 49 related to Ugandan data. Comparable indicators were examined further.

The values reported in Table 4-14 correspond to a selection of indicators of drinking water **coverage** (improved) for Kenya whilst the values reported in Table 4-15 refer to drinking water **coverage** (improved) for Uganda.

In terms of water, service and **use** clustered indicators, 45 reported against Kenya data and a further 45 reported against Uganda data. A selection of indicators relating to use of improved services were compared:

- Use of drinking water sourced – improved: total improved.
- Use of drinking water sourced (% of population) – total improved.
- % of population using improved drinking water sources 2000.

For each case, the reported values were similar (see Table 4-15 and 4-16).

2005: no actual value data reported for this year in terms of coverage or use.

2010: 39 entries were filtered spanning the years 2000, 2009, 2010, 2011 and 2012, of which 7 referred to **coverage** and 32 referred to **use**. Of the 7 coverage related entries, none were comparable and only one each for Kenya and Uganda had associated values: 42% and 63% respectively but did not specify a corresponding demographic. Of the 32 use entries 16 related to Kenya and the balance 16 to Uganda data. In neither case were there sufficient comparable entries however the values for rural, urban, total improved services were documented for each of Kenya and Uganda (see Table 4-18 and 4-19 respectively)

2015: All 18 entries that were filtered related to coverage data with 6 reporting Kenya and 10 reporting Uganda entries (see Tables 4-20 and 4-21).

Table D-10 Kenya related data (2000 water coverage)

Demographic	Values reported	% variance
Rural	1 at 31%	n/a
Urban	1 at 87%	n/a
Both rural & urban/Total	2 at 49%	n/a

Table D-11 Uganda related data (2000 water coverage)

Demographic	Values reported	% variance
Rural	1 at 46%	n/a
Urban	1 at 72%	n/a
Both rural & urban/Total	2 at 50%	n/a

Table D-12 Kenya related data (2000 water use)

Demographic	Values reported	% variance
Rural	2 at 43%; 1 at 42%	1
Urban	1 at 88%; 2 at 87%	1
Both rural & urban/Total	1 at 57%; 2 at 52%	5

Table D-13 Uganda related data (2000 water use)

Demographic	Values reported	% variance
Rural	1 at 54%; 2 at 53%; 1 at 47%	7
Urban	1 at 86%; 2 at 85%; 1 at 80%	6
Both rural & urban/Total	1 at 58%; 2 at 57%; 1 at 52%	6

Table D-14 Kenya related data (2010 water use)

Demographic	Rural	Urban	Both
Values	52%	82%	59%
% Variance	n/a	n/a	n/a

Table D-15 Uganda related data (2010 water use)

Demographic	Rural	Urban	Both
Values	68%	95%	72%
% Variance	n/a	n/a	n/a

Table D-16 Kenya related data (2015 water coverage)

Demographic	Target Values reported	% variance
Rural	66%	n/a
Urban	96%	n/a
Both rural & urban/Total	1 at 73%; 1 at 80%	7
Not specified	1 at 76%; 1 at 72%	4

Table D-17 Uganda related data (2015 water coverage)

Demographic	Target Values reported	% variance
Rural	2 at 77%; 1 at 71%	6
Urban	1 at 100%; 1 at 95%; 1 at 89%	11
Both rural & urban/Total	1 at 80%; 1 at 72%	8
Not specified	1 at 80%; 1 at 72%	8

Sanitation; Service; Coverage and Sanitation; Service; Use

The same approach was used for sanitation service coverage and use indicators as was used for water service coverage and use.

From 839 entries directly relating to water and for all reported years of actual value data, 704 refer to service level indicators of which 418 (59%) refer to coverage, 7 (<1%) refer to functionality, 275 (39%) refer to use and 4 (<1%) to impact.

1990: With 77 records filtered, related to coverage and 72 related to use.

In terms of those relating to coverage, 36 referred to Kenyan data, 38 referred to Ugandan data. Examining comparable indicators for Kenya, 18 of the 36 related to 'improved sanitation **coverage**' (see table xxx) and covered the years 1992, 2000,

2004, 2006, 2008, 2011. The values reported in Table cc show the 18 comparable indicators for drinking water **coverage** (improved) for Uganda.

In terms of water, service and **use** clustered indicators, 36 reported against Kenya data and a further 36 reported against Uganda data. A selection of indicators relating to use of improved services were compared.

The values reported in Table dd show the nine comparable indicators for Kenya with the values report in Table ee, show the nine comparable indicators for Uganda.

1995: no actual value data reported for this year in terms of coverage or use.

Table D-18 Kenya related data (1990 sanitation coverage)

Demographic	Values reported	% variance
Rural	1 at 81%; 2 at 44%; 1 at 40%; 1 at 37	44
Urban	1 at 94%; 1 at 49%; 1 at 48%; 2 at 18%	76
Both rural & urban/Total	1 at 84%; 1 at 42%; 1 at 41.5%; 1 at 40%; 2 at 39%	45
Not specified	1 at 84%; 1 at 26%	58

Table D-19 Uganda related data (1990 sanitation coverage)

Demographic	Values reported	% variance
Rural	1 at 87%; 2 at 41%; 3 at 29%	58
Urban	1 at 96%; 2 at 54%; 3 at 27%	69
Both rural & urban/Total	1 at 84%; 1 at 43%; q at 42%; 1 at 31.9%; 2 at 29%	55
Not specified	1 at 84%; 1 at 39%	45

Table D-20 Kenya related data (1990 sanitation use)

Demographic	Values reported	% variance
Rural	1 at 27%; 1 at 25%; 1 at 24%	3
Urban	1 at 27%; 1 at 26%; 1 at 24%	3
Both rural & urban/Total	1 at 26%; 2 at 25%	1

Table D-21 Uganda related data (1990 sanitation use)

Demographic	Values reported	% variance
Rural	1 at 40%; 2 at 26%	14
Urban	1 at 35%; 1 at 33%; 1 at 32%	3
Both rural & urban/Total	1 at 39%; 2 at 27%	12

2000: 86 records were filtered, spanning the years, 2000, 2004, 2010, 2012 and 2013. Of the 86, eight entries reported coverage data, whilst the balance 78 reported use data, furthermore, of the 86, 43 related to Kenya and 43 related to Ugandan data. Comparable indicators were examined further.

The values reported in Table CC correspond to the four indicators of drinking water **coverage** (improved) for Kenya, whilst the values reported in Table DD show the four indicators for drinking water **coverage** (improved) for Uganda.

In terms of water, service and **use** clustered indicators, 12 of the 39 reported against each of Kenya and Uganda were selected as comparable indicators:

- Use of sanitation facilities – improved.
- Use of sanitation facilities (% of population) – improved.
- Use of sanitation facilities (percentage of population) – improved.
- % of population using adequate sanitation facilities 2000.

2005: no actual value data reported for this year in terms of coverage or use.

Table D-22 Kenya related data (2000 sanitation coverage)

Demographic	Values reported	% variance
Rural	1 at 81%	n/a
Urban	1 at 96%	n/a
Both rural & urban/Total	1 at 86%	n/a
Not specified	1 at 86%	n/a

Table D-23 Uganda related data (2000 sanitation coverage)

Demographic	Values reported	% variance
Rural	1 at 72%	n/a
Urban	1 at 96%	n/a
Both rural & urban/Total	1 at 75%	n/a
Not specified	1 at 75%	n/a

Table D-24 Kenya related data (2000 sanitation use)

Demographic	Values reported	% variance
Rural	1 at 82%; 1 at 30%; 1 at 28%; 1 at 26%	56
Urban	1 at 96; 1 at 30%; 1 at 29%; 1 at 26%	70
Both rural & urban/Total	1 at 87%; 1 at 29%; 1 at 28%; 1 at 27%	60

Table D-25 Uganda related data (2000 sanitation use)

Demographic	Values reported	% variance
Rural	1 at 77%; 1 at 45%; 1 at 30%; 1 at 31%	46
Urban	1 at 93%; 1 at 37%; 2 at 33%	60
Both rural & urban/Total	1 at 79%; 1 at 44%; 1 at 31%; 1 at 30%	49

2010: 31 entries were filtered spanning the years 2010, 2011 and 2012, of which 5 referred to **coverage** and 26 referred to **use**. Of the 5 coverage related entries, none were comparable and only one each for Kenya and Uganda had associated values: 64% and 31% respectively but did not specify a corresponding demographic. Of the 26 use entries 13 related to each of Kenya Uganda data. In neither case were there sufficient comparable entries.

2015: Seven entries were filtered related to coverage data and none for use. The associated target values for Kenya and Uganda entries are presented in Tables E-26 and E-27.

Table D-26 Kenya related data (2015 sanitation coverage)

Demographic	Target Values reported	% variance
Rural	n/a	n/a
Urban	n/a	n/a
Both rural & urban/Total	n/a	n/a
Not specified	1 at 76%; 1 at 63%	13

Table D-27 Uganda related data (2015 sanitation coverage)

Demographic	Target Values reported	% variance
Rural	1 at 65%	n/a
Urban	1 at 64%	n/a
Both rural & urban/Total	n/a	n/a
Not specified	1 at 80%; 1 at 70%	10

D.4 Qualtrics survey analysis Question 5.2 and 5.3

Table D-28 Responses to survey Question 5.2

		Please select one of the following organisations that you currently work for.								Total
		Government	Development Partner	Non-governmental organisation	Independent Consultant	Private Company	Academia	Student	Other (please specify)	
Please indicate whether you have used data or reports from any of the following. - UNICEF/WHO Joint Monitoring Programme	Yes	3	4	6	3	0	0	1	1	18
	No	2	0	2	1	2	0	0	0	7
	Total	5	4	8	4	2	0	1	1	25
Please indicate whether you have used data or reports from any of the following. - UN-Water GLAAS	Yes	0	3	5	1	0	0	0	0	9
	No	4	1	4	3	2	0	1	1	16
	Total	4	4	9	4	2	0	1	1	25
Please indicate whether you have used data or reports from any of the following. - World Water Development	Yes	0	0	0	1	1	0	0	0	2
	No	4	4	7	3	1	0	1	1	21
	Total	4	4	7	4	2	0	1	1	23
Please indicate whether you have used data or reports from any of the following. - AMCOW	Yes	1	2	2	1	0	0	0	0	6
	No	3	2	7	3	2	0	1	1	19
	Total	4	4	9	4	2	0	1	1	25
Please indicate whether you have used data or reports from any of the following. - Sanitation and Water for All	Yes	1	2	4	1	1	0	0	1	10
	No	3	2	4	3	1	0	1	0	14
	Total	4	4	8	4	2	0	1	1	24
Please indicate whether you have used data or reports from any of the following. - Water Monitoring Alliance	Yes	0	0	1	0	0	0	0	0	1
	No	4	4	6	4	2	0	1	1	22
	Total	4	4	7	4	2	0	1	1	23
Please indicate whether you have used data or reports from any of the following. - UNSGAB	Yes	0	0	0	1	0	0	0	0	1
	No	4	4	7	3	2	0	1	1	22
	Total	4	4	7	4	2	0	1	1	23

Table D-29 Responses to survey Question 5.3

	Please select one of the following organisations that you currently work for.								Total	
	Government	Development Partner	Non-governmental organisation	Independent Consultant	Private Company	Academia	Student	Other (please specify)		
Please indicate whether you have used any of the following guidelines. - ADB Handbook on Infrastructure Statistics (ADB, 2011)	Yes	1	0	0	0	0	0	0	0	1
	No	4	4	8	4	2	0	1	1	24
	Total	5	4	8	4	2	0	1	1	25
Please indicate whether you have used any of the following guidelines. - Water Project Toolkit - Water Resources Management for Sustainable Development (EU, 2011)	Yes	1	1	1	0	0	0	0	0	3
	No	3	3	7	4	2	0	1	1	21
	Total	4	4	8	4	2	0	1	1	24
Please indicate whether you have used any of the following guidelines. - The Nuts and Bolts of M&E Series (WB, 2010-2011)	Yes	1	1	0	1	0	0	0	0	3
	No	4	3	8	3	2	0	1	1	22
	Total	5	4	8	4	2	0	1	1	25
Please indicate whether you have used any of the following guidelines. - Water supply and sanitation sector assessments: A guide for country-level action (UNICEF, 2009)	Yes	2	2	2	1	0	0	1	0	8
	No	2	2	6	3	2	0	0	1	16
	Total	4	4	8	4	2	0	1	1	24
Please indicate whether you have used any of the following guidelines. - BS ISO 24510-12:2007 Series: Activities relating to drinking water and wastewater services - Guidelines	Yes	1	2	1	0	0	0	0	0	4
	No	3	2	7	4	2	0	1	1	20
	Total	4	4	8	4	2	0	1	1	24
Please indicate whether you have used any of the following guidelines. - Data Quality Assurance Tool for Program-level Indicators (USAID, 2007)	Yes	1	1	0	0	0	0	0	0	2
	No	4	3	8	4	2	0	1	1	23
	Total	5	4	8	4	2	0	1	1	25
Please indicate whether you have used any of the following guidelines. - Doing Impact Evaluation Series No. 4: A guide to water and sanitation sector Impact Evaluations (WB, 2006)	Yes	1	1	0	0	0	0	0	0	2
	No	3	3	8	4	2	0	1	1	22
	Total	4	4	8	4	2	0	1	1	24
Please indicate whether you have used any of the following guidelines. - Water and Sanitation Indicators Measurement (USAID, 1999)	Yes	2	2	2	0	1	0	0	0	7
	No	3	2	6	4	1	0	1	1	18
	Total	5	4	8	4	2	0	1	1	25
Please indicate whether you have used any of the following guidelines. - Guidance manual on water supply and sanitation programmes (DFID, 1998)	Yes	1	1	2	2	0	0	0	0	6
	No	3	3	6	3	2	0	1	1	19
	Total	4	4	8	5	2	0	1	1	25
Please indicate whether you have used any of the following guidelines. - A Sanitation Handbook (UNICEF, 1997)	Yes	2	2	3	0	1	0	1	0	9
	No	2	2	5	4	1	0	0	1	15
	Total	4	4	8	4	2	0	1	1	24
Please indicate whether you have used any of the following guidelines. - Minimum Evaluation Procedures (WHO, 1985)	Yes	2	1	1	1	0	0	1	0	6
	No	3	3	8	3	2	0	0	1	20
	Total	5	4	9	4	2	0	1	1	26

Appendix E Kenya Case Study Analysis Excerpts

E.1 Data record analysis overview

Table E-1 Summary overview of data records sourced from Kenya case study

Stakeholder Code	Document Review	Literature Review	Key-Informant Interviews	Semi-structured Interviews	Total
B00			3	1	4
B01	11	14		1	26
B02	9				9
B03	19	1	3	1	24
B04	21		2	2	25
B05	7				7
B06	22		5		27
B07	10	1	3	1	15
B08	7		3	2	12
B09	3	2	1	2	8
B10	6		2	2	10
B11	14		1	2	17
B12	6		1	2	9
B13	1				1
B14	3		1		4
B15	1		2	2	5
B16				2	2
B17			1		1
B18			1	1	2
B19					0
B20	7			2	9
B21	2				2
B22	1				1
B23	4				4
B24	2		1	2	5
B25	2				2
B26	2				2
B27	1				1
B28			1		1
B29			2		2
B30	3				3
B31					0
B32	5				5
B33	1				1
B34	4	1			5
B36				1	1
Other	16				16
Totals	190	19	33	26	268

Table E-2 Data record numbers and proportion by stakeholder type

Stakeholder Type	Documents	%	Sessions	%
Public	190	91%	44	75%
Private	2	1%	9	15%
Civil Society Organisations	10	5%	6	10%
Other	7	3%	0	0%
Totals	209	100%	59	100%

Table E-3 Analysis of numbers of documents and indicator entries

Stakeholder Code	Status	Stakeholder Type	No. of documents sourced	No. of Documents with indicators	No. of Indicator entries	Aver No. of Indicator entries per document
B01	Data sourced	Public	25	12	210	18
B02	Data sourced	Public	9	6	55	9
B03	Data sourced	Public	20	4	107	27
B04	Data sourced	Public	21	10	294	29
B05	Data sourced	Public	7	2	15	8
B06	Data sourced	Public	22	1	25	25
B07	Data sourced	Public	11	6	135	23
B08	Data sourced	Public	7	3	154	51
B09	Data sourced	Public	5	0	0	0
B10	Data sourced	Public	6	1	4	4
B11	Data sourced	Public	14	2	48	24
B12	Data sourced	Public	6	3	17	6
B13	Data sourced	CSO	1	1	6	6
B14	Data sourced	Public	3	1	5	5
B15	Data sourced	CSO	1	0	0	0
B16	Data sourced	Private	0	0	0	0
B17	na	Private	0	na	na	na
B18	Data sourced	Private	0	0	0	0
B19	na	Private	0	na	na	na
B20	Data sourced	CSO	7	1	36	36
B21	Data sourced	Public	2	1	7	7
B22	Data sourced	Public	1	1	26	26
B23	na	Public	4	na	na	na
B24	Data sourced	Private	2	1	7	7
B25	Data sourced	Public	2	0	0	0
B26	Data sourced	Public	2	2	60	30
B27	Data sourced	Public	1	1	6	6
B28	na	Private	0	na	na	na
B29	Data sourced	Public	0	0	0	0
B30	Data sourced	Public	3	0	0	0
B31	Data sourced	Public	0	0	0	0
B32	Data sourced	Public	5	1	35	35
B33	na	Private	1	na	na	na
B34	Data sourced	Public	5	5	171	34
B35	na	Public	0	na	na	na
B36	Data sourced	Public	0	0	0	0
Other	Data sourced	Various	16	0	0	0
Totals			209	65	1423	

Table E-4 Analysis of indicator entries by WASH sub-sector

WASH Sub-Sector	No. of Indicator entries	% of total indicator entries
Water	574	40.3%
Sanitation	262	18.4%
Hygiene	8	0.6%
Water & Sanitation	421	29.6%
Sanitation & Hygiene	9	0.6%
WASH	95	6.7%
Sanitation & Pollution	1	0.1%
Health	5	0.4%
Water for Production	34	2.4%
Other	14	1.0%
Total	1423	100%

E.2 Actual Years of Reported Indicator Data

Table E-5 Indicator numbers by actual value year by published year

Year	Number of Docs	1989	1990	1994	1995	1996	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2024	2030	na	nd	TBD	Total	Average entries per record	No. of columns	
1998	2			11			8																							3	22	11	3	
2000	1					1			1										2											1	1	6	6	4
2001	1	1						2																								3	3	3
2003	3								2			4																		6	12	4	3	
2004	4								1			10				17	6							2						4	47	12	8	
2005	2																													23	23	12	1	
2006	2																													16	2	18	9	2
2007	7								2		1		3		10			2		5	13			30				5	3	28	102	15	11	
2008	9		4					2	4	2		4		6	40	1	11		10		81	6						2	8	8	189	21	15	
2009	9																24	21	1		7	5		10			4		59	43	174	19	9	
2010	9		14		14				14					14		1	25	57	6		12	24	36			1		9	70	10	307	34	15	
2011	9		6												6			4	133	5	17	1		6				61	77	316	35	10		
2012	6																		20	67	46	16	13		22					186	31	7		
TBD	1																													18	18	18	1	
Totals	65	1	24	11	14	1	8	4	24	2	1	18	3	21	62	19	68	84	172	77	176	52	49	48	22	1	4	77	161	219	1423			

E.3 Indicator value consistency analysis

A sample of data for the years, 1990; 1995; 2000; 2005; 2010; 2015, baseline, actual and target values was examined. The criteria used for the selection of indicators were:

- ✓ **Water; Service; Coverage**
- ✓ **Water; Service; Use**
- ✓ **Sanitation; Service; Coverage**
- ✓ **Sanitation; Service; Use**

Water; Service; Coverage; and Water; Service; Use

From a total of 574 indicator entries categorised as water, 397 relate to service level indicators of which 336 (85%) refer to coverage; 19 (5%), to functionality; 33 (8%) to use and 9 (2%) to impact.

1990: Two public sector stakeholders reported 1990 indicator data for coverage, during 2008 and 2011. A total of 5 indicators were categorised as rural (2), urban (2), rural and urban (1). Taking each of urban and rural in turn, the actual indicators and associated data values were examined. For urban, only two indicators were deemed the same however only one had a value:

- 2011 Water supply coverage 91% (AMCOW/WSP)
- 2008 Safe drinking water No data (MoPND)

On examining the data again, but in respect of 'service' and 'use', a single indicator reported the same value as for coverage:

- 2010 Use of drinking water (% population) – total improved 91%

Taking the same scenario but for rural, two indicators were deemed the same with the values only marginally different:

- 2011 Water supply coverage 32% (AMCOW/CSP)
- 2008 Safe drinking water 31% (MoPND)

On examining the data for 'service' and 'use', the single related value, reflected the values for 'service' and 'coverage':

- 2010 Estimated coverage – use of improved drinking water sources 32%

1995: No single indicator reports against 'service' and 'coverage' and only two indicators are reporting 1995 data for 'service' and 'use', with values disaggregated by rural and urban. Each are documented by the same stakeholder in the same year. Neither baseline values nor target values are provided.

2000: Three stakeholder groups report 2000 indicator data during 2000, 2003, 2004, 2007 and 2008. A total of one out of the six entries refer to national/both urban and rural; one for rural, one for urban with three additional as not-specified. The national related data:

- 2003 Proportion of population with sustainable access to an improved water source: 48% (MoPND)

Examining the entries that do specify the demographic, an assumption could be made that these are also national related data:

- 2007 Proportion of population with sustainable access to an improved water source: 32% (DFID)
- 2004 Halve the proportion of people without access to safe drinking water: 57% (MoPND)

Two baseline values are also given as 48% in 2003 and 45% in 2004. One target value is reported as 74%.

The Table F-7, presents the data for urban and rural specific indicators with the assumption that one of the un-specified also relates to an urban demographic, based on the indicator description.

Table E-6 Comparison of the year 2000 reported service coverage data

Year of Publication	Indicator	Urban	Rural
2008 (MoPND)	Safe drinking water	60%	31%
2000 (Plan International)	Water within less than a kilometre	44.2%	na

Only four indicators were filtered against the criteria of water, service and use and each were different measures or demographics and therefore not comparable.

2005: Only three indicators clustered as ‘coverage’ are reported for 2005 and reference different environments and therefore not relevant for comparable analysis for the purposes of this study. Only four indicators were filtered against the criteria of water, service and use and each were different measures or demographics and therefore also not comparable.

2010: Of the 15 entries reporting 2010 ‘coverage’ data, no single indicator was comparable in terms of description or demographic to another. Only one indicator reported 2010 data relating to service and use.

2015: The actual data available for 2015 is in the form of target data. Results are only for comparable 'coverage' indicator entries as no data was reported for 'use'. Out of the six entries filtered two could be deemed comparable:

- 2011 Water supply coverage (govt data): 76% (AMCOW/CSP)
- 2004 Halve the proportion of people without access to safe drinking water: 72% (MoPND)

Service, Coverage, Sanitation; Service, Use, Sanitation

From a total of 262 indicator entries categorised as water, 196 relate to service level indicators of which 140 (71%) refer to coverage; 8 (4%), to functionality; 47 (24%) to use and 1 (1%) to impact.

1990: A total of six indicator entries were filtered for sanitation, service, coverage, for 1990, reported by three stakeholders, across three years: 2008; 2010; 2011.

Two reported against national demographics, whilst two further entries were reported for rural and urban environments. National reported data:

- 2011 Sanitation coverage: 26% (AMCOW/WSP)
- 2010 Improved sanitation facilities (% population with access): 39% (WB)

Urban demographic:

- 2011 Sanitation coverage: 24% (AMCOW/WSP)
- 2008 Improved sanitation: No data (MoPND)

Rural demographic:

- 2011 Sanitation coverage: 27% (AMOCOW/WSP)
- 2008 Improved sanitation: No data (MoPND)

Neither baseline nor target values were reported. None of the eight filtered entries for the cluster of 'service' and 'use' were comparable.

1995: No comparable data is reported for 1995 in terms of 'coverage' or 'use' clusters.

2000: Of the five entries filtered for 'coverage', two were potentially comparable. The first clearly indicated as reporting national demographic, whereas the second remained un-specified:

- 2010 Improved sanitation facilities

- | | |
|---|---------------|
| (% population with access): | 41% (WB) |
| • 2003 Proportion of population with access to improved sanitation: | 81.1% (MoPND) |

None of the eight entries reporting service 'use' sanitation indicators for 2000 were considered comparable.

2005: Four indicators are reported for 'coverage' between two stakeholder groups across two years (2008 and 2010), however whilst all having associated reported values, none of the indicators are comparable. When filtering against 'use' data, one stakeholder reporting in one year – 2010 – was doing so against 8 different indicator descriptions therefore non-comparable.

2010: Of the four indicator entries for 'coverage' and four entries for 'use', in both cases, none were considered as comparable.

2015: Examining the six filtered indicator entries for 'coverage' (none reported in terms of 'use'), with targets for 2015 none were comparable based on indicator description or demographic.

E.4 Qualtrics survey analysis Question 7.4 and 7.5

Table E-7 Responses to survey Question 7.4.

		Please select one of the following organisations that you currently work for.								Total
		Government	Development Partner	Non-governmental organisation	Independent Consultant	Private Company	Academia	Student	Other (please specify)	
Please indicate what your primary use was of each of the following reports. - IMPACT 1 - 5	To review the performance of a project or institution	0	1	0	0	0	0	0	0	1
	To track progress of service provision	1	1	0	0	0	0	0	0	2
	To inform a management decision	0	1	0	0	0	0	0	0	1
	To inform a policy decision	0	0	0	1	0	0	0	0	1
	Never used	1	0	2	0	0	0	0	0	3
	Other	0	0	0	0	0	0	0	0	0
	Total	2	3	2	1	0	0	0	0	8
Please indicate what your primary use was of each of the following reports. - Annual Sector Performance Reports	To review the performance of a project or institution	0	0	0	1	0	0	0	0	1
	To track progress of service provision	1	1	0	0	0	0	0	0	2
	To inform a management decision	0	0	0	0	0	0	0	0	0
	To inform a policy decision	0	1	0	0	0	0	0	0	1
	Never used	1	1	2	0	0	0	0	0	4
	Other	0	0	0	0	0	0	0	0	0
	Total	2	3	2	1	0	0	0	0	8
Please indicate what your primary use was of each of the following reports. - NIMES	To review the performance of a project or institution	0	0	0	0	0	0	0	0	0
	To track progress of service provision	0	0	0	1	0	0	0	0	1
	To inform a management decision	0	0	0	0	0	0	0	0	0
	To inform a policy decision	1	0	0	0	0	0	0	0	1
	Never used	1	3	2	0	0	0	0	0	6
	Other	0	0	0	0	0	0	0	0	0
	Total	2	3	2	1	0	0	0	0	8
Please indicate what your primary use was of each of the following reports. - Public Expenditure Reviews	To review the performance of a project or institution	0	0	0	1	0	0	0	0	1
	To track progress of service provision	0	0	0	0	0	0	0	0	0
	To inform a management decision	0	0	0	0	0	0	0	0	0
	To inform a policy decision	1	1	0	0	0	0	0	0	2
	Never used	1	2	2	0	0	0	0	0	5
	Other	0	0	0	0	0	0	0	0	0
	Total	2	3	2	1	0	0	0	0	8
Please indicate what your primary use was of each of the following reports. - County Census and Surveys	To review the performance of a project or institution	0	0	0	0	0	0	0	0	0
	To track progress of service provision	0	0	0	0	0	0	0	0	0
	To inform a management decision	0	1	0	1	0	0	0	0	2
	To inform a policy decision	2	1	0	0	0	0	0	0	3
	Never used	0	0	2	0	0	0	0	0	2
	Other	0	1	0	0	0	0	0	0	1
	Total	2	3	2	1	0	0	0	0	8

Table E-8 Responses to survey Question 7.5

		Please select one of the following organisations that you currently work for.							Total
		Government	Development Partner	Non-governmental organisation	Independent Consultant	Private Company	Academia	Student (please specify)	
Please indicate whether you have used any of the following guidelines. - MPND Poverty & Environment Indicators (MPND, 2011)	Yes	1	0	0	1	0	0	0	2
	No	1	3	2	0	0	0	0	6
	Total	2	3	2	1	0	0	0	8
Please indicate whether you have used any of the following guidelines. - The Urban Projects Concept - An overview (WSTF, 2009)	Yes	1	0	0	1	0	0	0	2
	No	1	3	2	0	0	0	0	6
	Total	2	3	2	1	0	0	0	8
Please indicate whether you have used any of the following guidelines. - Water Resource Users Association development Cycle (WSTF, 2009)	Yes	1	1	0	1	0	0	0	3
	No	1	2	2	0	0	0	0	5
	Total	2	3	2	1	0	0	0	8
Please indicate whether you have used any of the following guidelines. - MPND National Reporting Framework of Indicators...(MPND, 2009)	Yes	0	0	0	1	0	0	0	1
	No	2	3	2	0	0	0	0	7
	Total	2	3	2	1	0	0	0	8
Please indicate whether you have used any of the following guidelines. - Handbook on Governing Responsibilities in Kenya (Office of the President, 2005)	Yes	0	1	0	1	0	0	0	2
	No	2	2	2	0	0	0	0	6
	Total	2	3	2	1	0	0	0	8
Please indicate whether you have used any of the following guidelines. - Drinking Water Quality & Effluent Monitoring Guideline (WaSREB, 2004)	Yes	1	2	0	0	0	0	0	3
	No	1	1	2	1	0	0	0	5
	Total	2	3	2	1	0	0	0	8

E.5 Analysis of the post-2015 agenda: indicators and consultations.

Table E-9 Proposed priorities as part of the post-2015 consultation by GWP

Term	Indicator	Search Terms	Frequency	%
Access	Periodic percentage increase	Access	148	10%
Quality (water & sanitation)	Potable water	Quality; campaign; aware; disease; diarr; cholera	79	6%
	Campaigns and awareness initiatives			
	Water borne disease prevalence			
Technology (abstraction & distribution)	Reduced levels of non revenue water	Technol; NRW; revenue; distance; quantity; manuals; plans; UFW; unaccounted; rain water; pipeline	115	8%
	Service levels related to access (in terms of distance and quantity)			
	Design manuals and plans			
Total number of indicator entries sampled			1423	

Table E-10 Analysis of indicators against selected Human Rights for water and sanitation terms

Human Rights Terms	Search terms	Frequency	%
Quality	Quality	57	4.0%
Accessibility	Access	148	10.4%
Reliability	Reliab; Hours; Function	41	2.9%
Affordability	Afford; Tariff; Price	18	1.3%
Sustainability	Sustain	22	1.5%
Human Right	Human Right	2	0.1%
Total number of indicator entries sampled		1423	

Table E-11 Contributions to SDG discussions

Involved with SDGs	Session numbers	Government	Development Partner	Academia	Private Company	NGO	Citizen	TBD
Yes	6		3			1		2
No	7	2	3			1		1
Limited	2	1			1			
na	42	12	12	2		4	3	2
nd	2				1			1
Total	59	15	18	2	9	6	3	6

Table E-12 Thoughts about the SDGs

Thoughts about SDGs	Session numbers	Who	What	Why	How	Cost	Use	MDG Lessons
Proposed too many	1		1					
Won't change; Human Right Indicator	1		1					
Think about indicators	1		1					
A few only appropriate	1		1					
Diluted wish list; Academics & Practitioner balance needed	1	1	1					
Not the main objective of Kenya	1			1				
Real consultation needed; Implications of cost; Compatible with national; 1st target setting	1	1				1	1	
Not likely to effect the Regulator	1	1						
Needs to be simple taking into account functionality & sustainability	1		1	1				
Discussion still at HQ level but will all have to align	1	1						
Parallel process of consultations	1	1						
Lessons from the MDGs; Think outside the box; Hygiene	1							1
Process rather than operational	1				1			
Lessons from MDGs; Global targets need to put in to local context; Should be clear by now - 2 years to go	1	1						1
MDG dept in Govt;	1		1					1
Small number of indicators								
Total	15	6	7	2	1	1	1	3

Appendix F Uganda Case Study Analysis Excerpts

F.1 Data record analysis overview

The following series of tables provide some of the raw data analysis to complement the results reported within Chapter Six – Case Study Uganda.

Table F-1 Summary overview of data records sourced for Uganda case study

Stakeholder Code	Document Review	Literature Review	Key-Informant Interviews	Semi-structured Interviews	Total
C00	0	0	0	2	2
C01	50	2	10	5	67
C02	26	0	1	1	28
C03	15	1	1	1	18
C04	42	15	1	5	63
C05	0	0	0	0	0
C06	20	0	1	2	23
C07	10	0	0	0	10
C08	17	0	1	0	18
C09	9	0	1	3	13
C10	5	2	1	2	10
C11	0	0	0	0	0
C12	3	0	0	1	4
C13	3	0	0	3	6
C14	16	0	1	3	20
C15	1	0	2	1	4
C16	1	0	0	0	1
C17	3	0	0	0	3
C18	6	0	0	1	7
C19	0	0	2	2	4
C20	4	0	1	0	5
C21	1	0	1	1	3
C22	14	1	0	2	17
C23	10	0	0	0	10
C24	1	0	0	0	1
C25	1	1	0	0	2
C26	na	na	na	na	0
C27	na	na	na	na	0
C28	na	na	na	na	0
C29	12	0	0	0	12
C30	na	na	na	na	0
C31	na	na	na	na	0
C32	na	na	na	na	0
C33	na	na	na	na	0
Other	23	0	0	0	23
Totals	293	22	24	35	374

Table F-2 Data record numbers and proportion by stakeholder type

Stakeholder Type	Documents	%	Sessions	%
Public	254	81%	37	63%
Private	1	0%	6	10%
Civil Society Organisations	46	15%	14	24%
Other	12	4%	0	0%
Individual	2	1%	2	3%
Totals	315	100%	59	100%

Table F-3 Analysis of numbers of documents and indicator entries

Stakeholder Code	Status	Stakeholder Type	No. of documents sourced	No. of Documents with indicators	No. of Indicator entries	Aver No. of Indicator entries per document
C01	Data source	Public	52	14	242	17
C02	Data source	Public	26	12	217	18
C03	Data source	Public	16	11	233	21
C04	Data source	Public	57	29	2446	84
C05	na	Public	0	0	na	na
C06	Data source	Public	20	13	437	34
C07	Data source	Public	10	7	237	34
C08	Data source	Public	17	8	96	12
C09	Data source	Public	9	3	97	32
C10	Data source	Public	7	2	16	8
C11	na	Public	0	0	na	na
C12	Data source	Public	3	3	20	7
C13	Data source	CSO	3	1	17	17
C14	Data source	CSO	16	11	927	84
C15	Data source	CSO	1	0	na	na
C16	Data source	CSO	1	0	na	na
C17	Data source	Public	3	2	11	6
C18	Data source	CSO	6	1	156	156
C19	Data source	Private	0	0	na	na
C20	Data source	CSO	4	0	na	na
C21	Data source	Private	1	0	na	na
C22	Data source	CSO	15	5	328	66
C23	Data source	Public	10	1	1	1
C24	na	Public	1	0	na	na
C25	Data source	Public	2	1	11	11
C26	na	Private	0	0	na	na
C27	Data source	Public	0	0	na	na
C28	Data source	Public	0	0	na	na
C29	Data source	Public	12	7	83	12
C30	na	Public	0	0	na	na
C31	na	Public	0	0	na	na
C32	na	Public	0	0	na	na
C33	na	Public	0	0	na	na
Other	Data source	Various	23	3	20	7
Totals			315	134	5595	

Table F-4 Analysis of indicator entries by WASH sub-sector

WASH Sub-Sector	No. of Indicator entries	% of total indicator entries
Water	2391	43%
Sanitation	928	17%
Hygiene	242	4%
Water & Sanitation	887	16%
Sanitation & Hygiene	82	1%
WASH	1015	18%
IWRM	2	0%
Other	48	1%
Total	5595	100%

F.2 Excerpts of the clustered indicator data

Table F-5 Overview of Service: Functionality indicators

Service; Functionality Clustered indicators - Uganda	Count of Indicator
# sub-projects with permanent maintenance mechanisms in place & operational	5
% functionality of water points	3
% of facilities in good mechanical condition i.e. all components in place and are working	4
% of facilities that are well maintained sources (clean drains, surround, fence, etc)	1
% of hand pumps functional - without mechanical problems	4
% of improved water sources that are functional at the time of spot check	45
% of improved water sources that are functional at the time of spot check (Golden Indicator 2)	1
% of improved water sources that are functional at the time of spot check (valley tanks & dams)	1
% of improved water sources that are functional at the time of spot checks	28
% of improved water sources that are functional at the time of spot-check (rural/water for production). Ratio of the actual hours of water supply to the required hours (small towns)	6
% of improved water sources that are functional at time of a given spot-check	1
% of improved water sources that are functional at time of spot check	46
% of improved water sources that are functional at time of spot-check	19
% of rural W&S facilities functional	2
% of rural water point sources functional	5
% of rural water point sources functional (GFS/shallow wells)	2
% of rural water point sources functional (GPS)	1
% of rural water point sources functional (shallow wells)	1
% of rural water point sources functional at time of spot check (Gravity Flow Scheme)	10
% of rural water point sources functional at time of spot check (Shallow Wells)	10
% of water facilities functioning	3
% of water point sources that are functional at the time of spot checks	1
% of water sources that are functional at the time of spot checks	48
% of water sources yielding as per design	2
% urban water supply functionality (Golden indicator 2)	1
% wells test pumped and have yield 700 litres/hour and above	1
Average functionality of 93 small towns	3
Average percentage of time systems functioning	1
Change in the non-functionality rate of WASH schemes	1
Functional water points	2
Functionality	3
Functionality % of improved water sources that are functional at time of spot-check	2
Functionality of existing water points	1
Functionality of rural W&S facilities increased	2
Functionality of rural water supply	8
Functionality of Water Facilities in Uganda	6
Functionality rate of water supplies systems (%)	2
Improved water sources that are functional at the time of spot checks increased	1
Increased percentage of rural water and sanitation facilities functional	1
Increased % and Number of schools with functional hygiene and sanitation related clubs and activities in target subcounties and districts	1
No. Of partners with functional water and sanitation programs	2
No. of water pump mechanics, schemes attendants and caretaker trained	1
No. Of wells test pumped	1
Number and type of repairs carried out per water source per year	2
Number of sub-projects to have permanent maintenance mechanisms in place	2
Number of sub-projects to have permanent maintenance mechanisms in place (such as functional O&M communities and/or maintenance funds)	5
Perceived (household) capacity to maintain or upgrade service	1
Percentage (%) of improved rural water sources that are functional at the time of spot check	1
Percentage of improved water sources that are functional at time of spot check	2
Percentage of improved water sources that are functional at time of spot-check	6
Ratio of the actual hours of water supply to the required hours (small towns)	1
Ratio of the actual hours of water supply to the required hours of supply	4
Reliability of water Supply Hrs/day	9
RWSS: Improved access to WSS and functioning systems in the north	1
STWSS: Functionality	1
Systems functional	1
Water source functionality	1
Water source functionality rates (Target- atleast 3% each year in target sub districts).	1
WS.1: % of improved water sources that are Functional at time of spot check	13
Grand Total	340

Table F-6 Overview of Service Provider: Consumer Relations indicators

Service Provider; Consumer Relations	Count of Indicator
% of effective response to customer complaints within 24 hours	2
% of men and women who are satisfied with sanitation services	1
% of men and women who are satisfied with water and sanitation services	1
% of men and women who are satisfied with water services	1
% satisfied with public service delivery	2
20% increase in user satisfaction in MWE statistics from 2008/09 to 2011/12	1
20% increase in user satisfaction in national statistics by 2011/12	1
Community engagement in the planning process	1
Consumer satisfaction	1
Customer satisfaction with services / products	1
Customer Service	2
Fewer complaints of WUG about contributions	1
Increased satisfaction with WSS services	1
Response to Customer Complaints (hrs)	9
Grand Total	25

Table F-7 Overview of Sector Indicators

Row Labels	2004	2006	2008	2010	2012	Total
% compliance of private operators complying with regulatory obligations					1	1
% compliance of Water Authorities with their obligations according to the performance contract					1	1
% of monitoring stations operated and maintained satisfactorily	1					1
% of water abstraction and discharge permits holders complying with permit conditions (note that data currently refers to permit validity only) - ground water abstraction				8		8
% of water abstraction and discharge permits holders complying with permit conditions (note that data currently refers to permit validity only) - surface water abstraction				8		8
% of water abstraction and discharge permits holders complying with permit conditions (note that data currently refers to permit validity only) - waste water discharge				8		8
% of water abstraction permits complying with permit conditions (ground water abstraction)					1	1
% of water abstraction permits complying with permit conditions (surface water abstraction)					1	1
% of water permits issued within the stipulated 90 days	1					1
% of water samples taken at the point of collection that comply with national standards	1					1
% of water samples taken at the point of water collection, waste discharge point that comply with national standards - Protected - e.coli			6			6
% of water samples taken at the point of water collection, waste discharge point that comply with national standards - Protected source - e.coli				8		8
% of water samples taken at the point of water collection, waste discharge point that comply with national standards - Treated - colour			6			6
% of water samples taken at the point of water collection, waste discharge point that comply with national standards - Treated - e.coli			6			6
% of water samples taken at the point of water collection, waste discharge point that comply with national standards - Treated drinking water supply - large towns: colour				8		8
% of water samples taken at the point of water collection, waste discharge point that comply with national standards - Treated drinking water supply - large towns: e.coli				8		8
% of water samples taken at the point of water collection, waste discharge point that comply with national standards - Wastewater - BOD			6			6
% of water samples taken at the point of water collection, waste discharge point that comply with national standards - Wastewater - BOD5				8		8
% of water samples taken at the point of water collection, waste discharge point that comply with national standards - Wastewater - Phosphorus			6	8		14
% of water samples taken at the point of water collection, waste discharge point that comply with national standards - Wastewater - TSS			6	8		14
% water discharge permit holders complying with permit conditions					1	1
% wells with acceptable physical and chemical quality		1				1
Compliance: % of water abstraction permits holders complying with permit conditions % of discharge permits holders complying with permit conditions (ground water abstraction)				2		2
Compliance: % of water abstraction permits holders complying with permit conditions % of discharge permits holders complying with permit conditions (surface water abstraction)				2		2
Compliance: % of water abstraction permits holders complying with permit conditions % of discharge permits holders complying with permit conditions (waste water discharge)				2		2
Improved compliance by NGOs and CBOs with the acceptable standards and practices in the water and sanitation sector			1			1
Institutional structures, procedures and standards for statistical development in place and functional in compliance with the existing legal framework and PNSD by 2012				1		1
No. Of wells that water samples were tested for physical and biological quality		1				1
Number of permit holders monitored to ensure compliance every quarter	1					1
Number of schemes effectively being regulated (including sanctions for non-compliance)					1	1
Permit holders complying to permit conditions - % abstraction permit holders complying with ground water abstraction permit conditions				1		1
Permit holders complying to permit conditions - % abstraction permit holders complying with surface water abstraction permit conditions				1		1
Permit holders complying to permit conditions - % abstraction permit holders complying with waste water permit conditions				1		1
Roadmap for the creation of an independent Regulation Authority and the Operationalization of regulation activities					1	1
Statistics Act in place by 2012				1		1
WS.3: Number of permit holders complying to permit conditions (overall)				2		2
WS.3: Number of permit holders complying to permit conditions (waste discharge)				2		2
WS.3: Number of permit holders complying to permit conditions (water abstraction)				2		2
Total	4	2	37	89	7	139

F.4 Indicator Value Consistency Analysis

A sample of data for the years, 1990; 1995; 2000; 2005; 2010; 2015, baseline, actual and target values was examined (see Table 6-X and 6-Y for document numbers). The criteria used for the selection of indicators were:

- ✓ **Water; Service; Coverage**
- ✓ **Sanitation; Service; Coverage**
- ✓ **Water; Service; Use**
- ✓ **Sanitation; Service; Use**

Water; Service; Coverage; and Water; Service; Use

From a total of 2391 indicator entries for water, 1853 relate to Service level of which 1483 (80%) refer to coverage, 312 (17%), to functionality, 57 (3%) to use and one to impact.

1990: Two public and one civil society stakeholders, reporting across four 10 documents covering the years 2005; 2009; and 2011, reported six indicator entries classified as Water, Service, Coverage. The values referred to rural (2) or urban (1) or both urban and rural (2) and in one case remained unclassified.

Taking each of rural and 'total' in turn, the actual indicators and associated data values were examined. For rural demographics the indicators were both reported in 2011, by different stakeholders, have slightly differently worded indicators but the same values:

- 2011 Coverage – water: 32% (WB)
- 2011 Access to improved water supply: 39% (ODI)

The combined demographics – both rural and urban – were reported in 2005 and 2011 by the same stakeholder and are slightly differently worded:

- 2011 Coverage – water: 43% (WB)
- 2005 Access to safe water (% population): 45% (WB)

No baseline or target values were reported for this set of criteria.

On examining the data using the criteria of Water, Service, Use a total of 57 indicator entries were filtered for all years, with 4 relating to 1990 actual data all of which were reported by a single global stakeholder in 2010. Two of the four related to urban environments and two related to rural, however, are not comparable as one set relates to household connections and the other to total numbers. As with the coverage data, none of the use data had corresponding baseline or target values associated with it.

1995: Only 3 indicator entries were filtered against the criteria of water, service and coverage and each were different measures and not comparable. These entries were reported by two different stakeholders, one government and one non-governmental organisation across 2005 and 2006.

Four indicator entries were filtered against the criteria of water, service, use and again each related to different measures or environments and therefore not comparable. These entries were reported by one global public stakeholder within the year 2010.

2000: For the criteria of water, service, coverage, 25 indicator entries reported by five public and one civil society stakeholders across the years 1999, 2000, 2003,2004, 2005 and 2009. Nine relate to urban, nine refer to rural, three to both urban and rural, three as non-specified and one as large urban centres. For urban indicator references with a similar description report the following:

- 2009 Proportion of population with access to improved water source: 87% (MFPED/UBOS)
- 2005 Water coverage: 54% (MFPED)
- 2005 Safe water coverage: 54% (MFPED)
- 2005 Safe drinking water coverage: 60% (MFPED)
- 2003 Service coverage water: 54% (NWSC)
- 1999 Access to safe water: 87% (UBOS)

A significant 33% variance exists between coverage data being reported for urban environments against 2000 data. A lesser variance (8%) exists between data reported for rural environments:

- 2009 Proportion of population with access to improved water source: 57% (MFPED/UBOS)
- 2005 Safe water coverage: 49.8% (MFPED)
- 2004 Access to safe water : 49.6% (MFPED)
- 2003 Water coverage: 49.8% (MFPED)
- 2000 Rural water coverage: 50% (MWE)
- 1999 Access to safe water: 51% (UBOS)

The consistency of reporting 2000 data values during 2003, 2004, 2005 can be attributed to the fact the reporting was completed by the same stakeholder. The

remaining two values were reported by two other stakeholders. No baseline or target values were reported alongside the data sets.

When analysing the water, service, use data for actual values reported for 2000, only one stakeholder was found to report against four such indicators none of which were comparable or reported against baseline or target values.

2005: In terms of the water, service, coverage category selection, some 81 indicator entries exist for urban (33), rural (24), both urban and rural (2), not specified (18) and water for production (4). A total of 19 out of the 33 indicator entries for urban demographic appear similar in terms of indicator description: four relate to target values and a further nine do not report any value, actual or target. The remaining six are reported as follows and all relate to data published in 2005:

- 2005 Access to safe drinking water (urban): 80% (MFPED)
- 2005 Water coverage: 60-65% (MFPED)
- 2005 Access to improved water sources : 80% (MFPED)
- 2005 Service coverage: 68% (MFPED)
- 2005 Service coverage – water: 68% (NWSC)
- 2005 Access to safe water (% population) 65% (WB)

The four target values reported are as follows:

- 2009 Access to safe water (% population): 100%
- 2006 % population within 0.2km improved water source: 70%
- 2005 % population with access to clean and safe drinking water: 80%
- 2003 Sustainable safe drinking water within easy reach of urban population: 80%

Each of the four values are reported by different stakeholders, however, the repeated values are by two government stakeholders, with the higher value reported by a development partner.

In examining the 24 rural indicator entries, 16 appeared similar in description of which five were target values and the remaining 11 presenting actual values:

- 2011 % population within 1.5km (rural) improved water source: 61.3%
- 2011 % population within 1km (rural) improved water source: 61%

- 2011 % population within 1km (rural) improved water source: 61%
- 2011 % population within 1.0km (rural) improved water source: 61%
- 2010 % population within 1.0km (rural) improved water source: 61%
- 2009 % population within 1.0km (rural) improved water source: 61%
- 2008 % rural people within 1.5km of improved water source: 61.3%
- 2007 % rural people within 1.5km of improved water source: 61.3%
- 2006 % rural people within 1.5km of improved water source: 61.3%
- 2005 Access to safe water (% population): 55%
- 2005 Access to safe drinking water (rural): 65%

There is inconsistency between the distances defined as part of the indicator and yet some level of consistency with the percentage values being reported. The two values reported in 2005 differ by 10 percentage points, with the lower value relating to a development partner stakeholder and the higher value to a government stakeholder. The target values reported are:

- 2009 Access to safe water (% population): 90%
- 2006 % population within 1.5km improved water source: 58%
- 2005 % population with access to clean and safe drinking water: 65%
- 2003 Sustainable safe water within easy reach of urban population:65%
- 2003 Water coverage: 65%

The higher value is reported by a development partner stakeholder and the lower values by two different government entities of which show for one of the two stakeholders a variance of 7%.

Only four indicator entries were filtered against the criteria of water, service, use and each related to different measures or environments and therefore not comparable.

2010: A total of 146 indicator entries result from the criteria of water, service, coverage and relate to a variety of demographics. Of the 146, 46 refer to an urban environment, 50 refer to a rural environment, only two indicator entries relate to both urban and rural with the balance (48) either not specified, large or small towns or water for production.

In terms of the urban environments, 17 entries appeared similar. Despite the variation in descriptor for the indicator, the majority of the actual values being reported remained consistent with the total variance of eight percentage points.

- 12/14 reported actual values of coverage as 67% (using government data).

- 1/14 reported the actual value of coverage as 74% (public sector).
- 1/14 reported the actual value of coverage as 75% (government data).

The year of publication however, remains limited at 2010 and 2011.

The variation in descriptors includes: Access to safe drinking water; % of urban people within 0.2km of an improved water source; Access to an improved water source; Access to an improved water supply in urban areas; Access to safe water; Service coverage – water; National safe water coverage (urban); Access to safe water within 0.2km; Access. The target values as reported by government entities are either 67% or 100% resulting in a 23 percentage point difference.

In terms of the rural environment, 12 of 13 indicator entries from 5 various stakeholders, appearing comparable had a consistent value of 65%, with the 13th, reported as 64%. The description of indicators include: % of rural people within 1km of an improved water source; % of rural people within 1.5km of an improved water source, Access to safe water, National safe water coverage, Access to improved water supply, Access. The three target values provided are also aligned at 65%. As with the urban data, the year of publications reporting the indicators and associated values remains limited at 2010 and 2011, with one target value reported in a 2009 publication.

Only six indicator entries were filtered against the criteria of water, service, use and each related to either different measures, environments or did not have a corresponding value and therefore not comparable.

2015: Each of the 88 entries filtered by water, service, coverage relate to targets with 14 entries requiring values either ‘to be set’ or where no data exists. Of the 88, 32 related to rural; 19 to urban; 7 to both urban and rural environments. A further 26 were non-specified and 4 related to water for production.

In examining the entries relating to urban environments, 17 of the 19 appear to be comparable, with 14 reporting target values. The values are reported across the years of 2005-2012 of which 15 report the target value as 100%, one as 90% and one no data. The variation in indicator descriptors include: % of population have access to clean and safe drinking water; Proportion of population with access to improved water source; Coverage – water; % of urban people within 0.2km of an improved water source.

For the 32 rural indicator entries, 23 seem comparable, having indicator descriptors as follows: Sustainable safe water within easy reach of all the rural population by the year 2015; % of population have access to clean and safe drinking water; Access to safe drinking water; Access to improved drinking water; Proportion of population with access to improved water source; Coverage – water; % of rural people within 1.5km of an improved water source; % of rural people within 1km of an improved water source. Of the 23 entries that span from 2003 to 2012, three report 100%; 17 report 77%, one at 70% and two at 62% making a 38 percentage point variance in target value.

For the criteria of water, service, use, three indicator entries were filtered for 2015 target value but relate to abstraction and permit data.

Sanitation; Service; Coverage; and Sanitation; Service; Use

From a total of 928 indicator entries for sanitation, 852 relate to service level of which 775 (91%) refer to coverage, 11 to functionality (1%), 66 (8%) to use. There are not any indicator entries relating to impact.

1990: One public sector, development partner, stakeholder published sanitation, service and coverage clustered data for 1990, in 2011. None of the indicators are comparable neither do they have corresponding baseline or target values.

Of the eight entries filtered for sanitation; service; use, four relate to urban and four to rural environments, all were reported by a single development partner and all in the same year – 2010 and none were comparable.

1995: No data is reported for sanitation, service and coverage for the year 1995 whilst eight indicator entries exist for sanitation, service and use however none are comparable.

2000: Four public sector stakeholders reported a combined total of 17 indicator entries for sanitation, service and coverage for the year 2000 of which five relate to urban and five to rural , with the balance either both urban and rural or unspecified. On closer inspection only two entries by a single development partner stakeholder, presenting national data, were in fact comparable ('Access to sanitation (% of population)') for 2004 and 2005 and had consistent values of 75%.

Of the eight entries filtered for sanitation; service; use, as with the 1995 data, four relate to urban and four to rural environments, all were reported by a single development partner and all in the same year – 2010 and none were comparable.

2005: A mix of four public sector stakeholders and two non-governmental organisations reported a combined 40 sanitation, service and coverage indicator entries – 15 rural; 16 urban and the balance 9 either not specified, schools, rural households or both urban and rural. Eight of the 40 were comparable as ‘access to improved sanitation’. A further 11 were comparable as ‘% of people with access to improved sanitation (households)’ and eight comparable indicator entries refer to ‘pupil to latrine/toilet stance ratio in schools’.

In examining the first of the categories ‘access to improved sanitation (% of population)’ only one of the four entries for urban populations had an actual value reported – 65%, in 2005. For rural populations, three actual values and one target value are reported as follows:

- 2009 Access to improved sanitation (% population) Target: 80%
- 2011 % population with access to improved sanitation Actual: 57%
- 2005 % Access to improved sanitation (% population) Actual: 56%
- 2008 % population with access to improved sanitation Actual: 57%

In further examining the indicator entries reported as % of people with access to improved sanitation households, the values appear to be fairly consistent with the broader rural data:

- 2000 Rural households with access to acceptable sanitation facilities
Target: 75%
- Various dates % population with access to improved sanitation (households)
Actual: 57%

In terms of sanitation, service and use, only eight indicator entries are recorded for 2005 - none of which are comparable.

2010: Of the 80 indicator entries of sanitation, service and coverage, 28 relate to rural, 26 relate to urban and the balance to either national, local government or non-specified categories. As with the 2005 reviewed actual value data, for 2010, there are two sets of indicator entries potentially different – ‘access to improved sanitation’ and ‘access to improved sanitation (household)’, however, when examining the values, for urban and

for rural, both sets of figures remain consistent at 77% and 70% respectively. In both cases three stakeholders report against the entries between the years of 2010 and 2011.

Target values for urban demographics are reported at 81%, whereas the target for rural is set at either 70% or 85%.

In terms of sanitation, service and use, two indicator entries are recorded for 2010 and are not comparable.

2015: A total of 47 indicator entries reported by four public sector and three civil society stakeholders relate to the sanitation, service and coverage clusters. Of the 47 entries, 16 relate to rural and 11 to urban of which 11 and 9 respectively are considered comparable. The balance 20, are split between both rural and urban, schools or remain un-specified.

In further examining the urban data the target value for 2015 remains consistent, across the years of 2008-2012, at 100 per cent whilst the those values for rural are consistent all bar one of 77% and reported between the years of 2008-2012. The anomaly of 100% is reported in the year 2000.

No indicator entries exist for sanitation, service and use.

F.5 Qualtrics survey analysis Question 8.3 and 8.4

Table F-9 Responses to survey Question 8.3.

		Please select one of the following organisations that you currently work for.							Total	
		Government	Development Partner	Non-governmental organisation	Independent Consultant	Private Company	Academia	Student		Other (please specify)
Please indicate what your primary use was of each of the following reports. - IMPACT 1 - 5	To review the performance of a project or institution	0	1	0	0	0	0	0	0	1
	To track progress of service provision	1	1	0	0	0	0	0	0	2
	To inform a management decision	0	1	0	0	0	0	0	0	1
	To inform a policy decision	0	0	0	1	0	0	0	0	1
	Never used	1	0	2	0	0	0	0	0	3
	Other	0	0	0	0	0	0	0	0	0
Total		2	3	2	1	0	0	0	0	8
Please indicate what your primary use was of each of the following reports. - Annual Sector Performance Reports	To review the performance of a project or institution	0	0	0	1	0	0	0	0	1
	To track progress of service provision	1	1	0	0	0	0	0	0	2
	To inform a management decision	0	0	0	0	0	0	0	0	0
	To inform a policy decision	0	1	0	0	0	0	0	0	1
	Never used	1	1	2	0	0	0	0	0	4
	Other	0	0	0	0	0	0	0	0	0
Total		2	3	2	1	0	0	0	0	8
Please indicate what your primary use was of each of the following reports. - NIMES	To review the performance of a project or institution	0	0	0	0	0	0	0	0	0
	To track progress of service provision	0	0	0	1	0	0	0	0	1
	To inform a management decision	0	0	0	0	0	0	0	0	0
	To inform a policy decision	1	0	0	0	0	0	0	0	1
	Never used	1	3	2	0	0	0	0	0	6
	Other	0	0	0	0	0	0	0	0	0
Total		2	3	2	1	0	0	0	0	8
Please indicate what your primary use was of each of the following reports. - Public Expenditure Reviews	To review the performance of a project or institution	0	0	0	1	0	0	0	0	1
	To track progress of service provision	0	0	0	0	0	0	0	0	0
	To inform a management decision	0	0	0	0	0	0	0	0	0
	To inform a policy decision	1	1	0	0	0	0	0	0	2
	Never used	1	2	2	0	0	0	0	0	5
	Other	0	0	0	0	0	0	0	0	0
Total		2	3	2	1	0	0	0	0	8
Please indicate what your primary use was of each of the following reports. - Country Census and Surveys	To review the performance of a project or institution	0	0	0	0	0	0	0	0	0
	To track progress of service provision	0	0	0	0	0	0	0	0	0
	To inform a management decision	0	1	0	1	0	0	0	0	2
	To inform a policy decision	2	1	0	0	0	0	0	0	3
	Never used	0	0	2	0	0	0	0	0	2
	Other	0	1	0	0	0	0	0	0	1
Total		2	3	2	1	0	0	0	0	8

Table F-10 Responses to survey Question 8.4

		Please select one of the following organisations that you currently work for.							Total	
		Government	Development Partner	Non-governmental organisation	Independent Consultant	Private Company	Academia	Student		Other (please specify)
Please indicate whether you have used any of the following guidelines. - The Right to Water Manual & Trainers Guide (UWASNET, 2012)	Yes	1	0	1	0	0	0	0	0	2
	No	3	1	3	0	0	0	0	0	7
	Total	4	1	4	0	0	0	0	0	9
Please indicate whether you have used any of the following guidelines. - Advocacy Budget Tracking & Monitoring Manual for the Water and Sanitation Sector (UWASNET, 2012)	Yes	0	0	1	0	0	0	0	0	1
	No	4	1	3	0	0	0	0	0	8
	Total	4	1	4	0	0	0	0	0	9
Please indicate whether you have used any of the following guidelines. - Sectoral Specific Schedules/Guidelines 2012/2013 (MWE, 2012)	Yes	1	0	1	1	0	0	0	0	3
	No	3	1	3	0	0	0	0	0	7
	Total	4	1	4	1	0	0	0	0	10
Please indicate whether you have used any of the following guidelines. - National Statistical Meta Data Dictionary (UBOS, 2010)	Yes	2	0	1	0	0	0	0	0	3
	No	2	1	3	0	0	0	0	0	6
	Total	4	1	4	0	0	0	0	0	9
Please indicate whether you have used any of the following guidelines. - Sectoral Specific Schedules/Guidelines 2011/2012 (MWE, 2010)	Yes	1	0	1	1	0	0	0	0	3
	No	3	1	3	0	0	0	0	0	7
	Total	4	1	4	1	0	0	0	0	10
Please indicate whether you have used any of the following guidelines. - District Implementation Manual, Version 1 (MWE, 2007)	Yes	0	0	2	1	0	0	0	0	3
	No	4	1	2	0	0	0	0	0	7
	Total	4	1	4	1	0	0	0	0	10
Please indicate whether you have used any of the following guidelines. - Sanitation & Hygiene Promotion Programming Guidance (WSSCC & WHO, 2005)	Yes	2	0	1	0	0	0	0	0	3
	No	2	1	3	0	0	0	0	0	6
	Total	4	1	4	0	0	0	0	0	9

F.6 Analysis of the post-2015 agenda: indicators and consultations.

Analysis of this data was carried out by taking each of the working group proposals in turn and through visual inspection extracting core terms that feature. Each of the core terms are then used to count, by using a word find function on excel, the frequency of use within the indicator entries. The analysis has separated out indicators specifically relating to any sub-sector details as highlighted within the key below. Table F-11 presents the numbers of indicators containing the various 'core' terms.

Table F-11 Analysis of indicator entries against search terms

Indicator	Search Terms	Frequency	%
Percentage of population using improved drinking water sources	improved water	489	9%
Percentage of population using improved sanitation facilities	improved sanitation	205	4%
Change in the non-functionality rate of WASH schemes	function; reliab; hours	528	9%
Extent of private sector involvement in WASH services	private	23	0%
Total number of indicator entries sampled		5595	

Other possible indicator entries relate to the search terms, but are not included as rely on certain assumptions of definition and interpretation, which the research has to date, highlighted as issues associated with inconsistency of reported data.

Table F-12 Analysis of indicator entries against human right terms

Human Rights Terms	Search terms	Frequency	%
Quality	Quality	237	4.2%
Accessibility	Access	647	11.6%
Reliability	Reliab; Hours; Function	528	9.4%
Affordability	Afford; Tariff; Price	6	0.1%
Sustainability	Sustain	12	0.2%
Human Right	Human Right	0	0.0%
Total number of indicator entries sampled		5595	

Table F-13 Contributions to SDG discussions

Consulted regarding the SDGs	Session numbers	Government	Development Partner	Government/Company	Umbrella	NGO	Citizen	(blank)
Yes	4	1			1	2		
Yes (Office); No (Individual)	2	1	1					
No	11	3	3	1	1	1		2
na	37	19	5		3	6	1	3
nd	4	3				1		
TBD	1						1	
Totals	59	27	9	1	5	10	2	5

Appendix G Degrees of Confidence

G.1 Degrees of evidence

To provide some guidance when writing and reading the assessment a 'degrees of evidence' table was prepared setting out levels of confidence associated with the various statements being made (see Table G-1).

Table G-1 Degrees of evidence

Degree of evidence	Quantitative	Qualitative
All	95-100%	Full agreement Conclusive Theoretical & empirical
Majority	51-94%	Strongly suggests Pretty confident Theoretical & some empirical or vice versa
Unresolved/either-way	50%	Inconclusive
Minority	6-49%	Questionable Doubtful Only limited theoretical or empirical
Nil/negligible	<5	No agreement